



Self Care Practices And Influencing Factors On Management Of Diabetes Mellitus Among Patients With Type 2 Diabetes Mellitus In A Hospital.

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ABSTRACT

Introduction: Type 2 Diabetes Mellitus is a growing public health concern in India that requires consistent and multifaceted self-care practices influenced by various demographic and psychosocial factors to prevent the complications. **Aim:** To assess the self-care practices and identify the influencing factors among patients with type 2 diabetes mellitus. **Objectives:** 1) To assess the self-care practices on management of diabetes mellitus among patients with type 2 diabetes mellitus. 2) To assess the influencing factors on management of diabetes mellitus among patients with type 2 diabetes mellitus. 3) To find out the relationship between self-care practices and influencing factors on management of diabetes mellitus among patients with type 2 diabetes mellitus. 4) To find out the association between selected demographic variables on management of diabetes mellitus among patients with type 2 diabetes mellitus and their self-care practices. 5) To find out the association between selected demographic variables on management of diabetes mellitus among patients with type 2 diabetes mellitus and their influencing factors. **Materials and methods:** This descriptive study included 100 patients with type 2 diabetes mellitus attending the outpatient department of a hospital at Kanyakumari District. Participants were selected through convenient sampling technique. Data collection was done using a structured questionnaire that included demographic and clinical variables, a 20-item self-care practice scale for self-care practices (5-point Likert), and a 40-item checklist on influencing factors on management of diabetes mellitus. **Findings:** Among the participants, 45% demonstrated good self-care practices, 38% had average adherence, and 17% reported poor self-care practices on management of diabetes mellitus. Regarding influencing factors 70% of participants reported highly favourable influencing factors for self-care and 30% exhibited highly unfavourable factors on management of diabetes mellitus. **Conclusion:** The findings highlighted the need for targeted educational interventions, social support systems, and tailored diabetes management programs to enhance self-care behaviors and glycaemic outcomes.

Keywords: patients with type 2 diabetes mellitus, self-care practices, influencing factors.

INTRODUCTION

Diabetes mellitus is a metabolic disorder characterized by chronically elevated blood glucose level along with disruptions in fat, protein, and carbohydrate metabolism. Type 2 diabetes is the most commonly diagnosed type of diabetes, accounting for more than 90% of cases. Rapid urbanisation, poor diet, sedentary lifestyle, and obesity have led to a sharp rise in type 2 diabetes, now affecting not only older adults but also children, adolescents, and young adults. **(International Diabetes Federation, 2021)**

Diabetes mellitus affects multiple organ systems due to chronic hyperglycaemia and poor glycaemic control, leading to widespread metabolic dysregulation. These changes contribute to severe complications, placing a heavy burden on individuals and health care systems. In the United States, diabetes mellitus is the leading cause of end-stage renal disease, non-traumatic lower-extremity amputations, and adult blindness. People with diabetes face a significantly increased risk of cardiovascular disease, the primary cause of morbidity and mortality in this population. **(Powers et al., 2022)**

The prevalence of diabetes among adults aged 20-79 years has reached approximately 589 million globally and is expected to surge 853 million by 2050, reflecting the urgent need for enhanced prevention and management strategies. **(Khan et al., 2020)**

The global prevalence of diabetes has nearly doubled in recent decades. In 2022, 14% of adults aged 18 years and older were living with diabetes, compared to 7% in 1990. Among adults aged 30 years and older, 59% were not receiving medication for it in 2022, with treatment coverage particularly low in low-income and middle-income countries. **(World Health Organization, 2023)**

The diabetes epidemic in India has escalated markedly, with the number of affected individuals rising from approximately 33 million in 2000 to 72 million in 2021. Projections indicate that this figure may further increase to about 125 million by 2045. While population ageing and reduced mortality rates are recognized as major contributors to this growing disease burden, recent evidence suggests a progressive decline in the mean age at onset of type 2 diabetes, indicating a shift towards younger populations. **(Nanditha et al., 2024; Sharma et al., 2024)**

Based on a Pan-India representative sample of 51,315 non-diabetic adults aged 45 years and above, 41.2% were found to be at high risk of developing type 2 diabetes. In comparison to the Indian Council of Medical Research - India Diabetes (ICMR–INDIAB) study, which surveyed 113,043 individuals aged 20 years and above, reported a prevalence of 32.4% at high risk of diabetes. **(Anjana et al., 2023)**

Effective self-care practices are fundamental to optimal diabetes management. Self-care encompasses multiple domains, includes dietary management, regular physical activity, adherence to prescribed medications, blood glucose monitoring, problem-solving skills and risk-reduction behaviors such as foot care, and healthy coping strategies. **(American Diabetes Association, 2022)**

Complications from the disease are numerous and serious, including diabetic retinopathy, peripheral neuropathy, nephropathy, cardiovascular diseases, diabetic foot, and peripheral artery diseases. Prevention of these chronic complications or alleviation of symptoms is the main goal of diabetes mellitus treatment. **(Powers et al., 2022)**

Since diabetes mellitus has emerged as a major public health challenge worldwide, the burden in India is particularly critical, with millions already affected and a substantial proportion at high risk of developing the disease. Despite the well-established importance of self-care practices in preventing complications and improving quality of life, evidence shows that these practices are often neglected or inadequately followed. Recognizing these gaps, the researcher was motivated to study self-care practices and the factors influencing them, with the aim of generating insights that can guide to formulate interventions and contribute to more effective diabetes management strategies.

Need and Significance of the Study

Diabetes, is a long-term disease where the blood sugar level stays high because the body does not make enough insulin or cannot use it properly. It can affect people of any age, gender, or place, and is one of the leading causes of illness and death worldwide. Type 2 diabetes, which accounts for more than 90% of all cases, develops mainly due to a mix of hereditary and lifestyle factors. It is influenced by genetic factors and is closely associated with obesity and lack of physical activity. **(Hossain et al., 2024)**

Diabetes self-care (DSC) is a vital component in the effective management of diabetes mellitus, as it plays a significant role in achieving optimal glycaemic control and preventing diabetes-related complications. Self-care encompasses a set of activities that individuals initiate and perform independently to maintain their health and well-being. It is not merely a routine task but a lifelong commitment that demands persistence and responsibility. However, adherence to self-care practices remains a challenge for many individuals, as it requires active engagement in several domains, including regular blood glucose monitoring, dietary modification, consistent physical activity, cessation of addictive behaviors, adherence to prescribed medications, and appropriate foot care. **(Joshi et al., 2022)**

The burden of diabetes and its associated complications is rising rapidly in India. Despite its importance, self-care practices in diabetes management are often neglected or inadequately followed, resulting in adverse health outcomes. Several factors have been identified as influencing self-care practices among individuals with diabetes. These include younger age, early years of diabetes, rural residence, male gender, presence of comorbidities, low level of awareness, poor self-esteem, socioeconomic constraints, and inadequate family support. **(Chaudhuri et al., 2025)**

Education and literacy are consistently associated with improved practices across domains such as diet, monitoring, exercise, and foot care, whereas lower levels of education and socio-economic status act as barriers by limiting access to resources and awareness. Knowledge and awareness regarding the disease

and its complications strongly predict adherence, while lack of understanding hampers effective management (Banumathi, et.al, 2024)

Singh C.S., & Solanki, (2025) conducted a cross-sectional study on self-care practices among 142 patients with type 2 diabetes mellitus attending the Chronic OPD at the urban health training centre, Mumbai. The majority of participants were female (73.9%) and the mean age was 53 years (SD = 10.81). Among self-care domains, medication adherence was the most followed, with 81.08% of males reporting adherence. The study also found that uncontrolled diabetes was more common among females (44.76%) and that obesity was more prevalent in the female subgroup (26.67%). Foot care practices were notably poor, with only 12.67% of participants reporting regular foot checks. Blood sugar monitoring was satisfactory among 69.71% of participants.

Banumathi, et.al, (2024) conducted a cross-sectional study on self-care practices among patients with type 2 diabetes mellitus in a tertiary care hospital at Chengalpattu reported that the overall self-care practices were poor, with only 34% of participants demonstrating adequate self-care. The majority of patients exhibited poor oral hygiene (78.7%), inadequate foot care practices (67.1%), and insufficient physical activity (65.2%). In contrast, medication adherence (98.7%) and blood glucose monitoring within the past three months (86.7%) were followed by nearly all patients.

The investigator observed during her clinical experience that patients with type 2 diabetes mellitus often face challenges in-consistently while adhering to essential self-care practices such as dietary modification, physical activity, medication compliance, and foot care. Multiple influencing factors such as socio-demographic variables, cultural beliefs, access to resources, and awareness, may hinder effective diabetes management. These barriers can increase the risk of poor glycemic control, long-term complications, and reduced quality of life.

In response to these concerns, the investigator was motivated to conduct a descriptive study focusing on assessing self-care practices and identifying the influencing factors. By systematically evaluating these aspects, the study aims to provide evidence-based insights that can guide targeted interventions, strengthens patient education, and ultimately improves diabetes self-management and thereby enhances overall health outcomes.

Statement of the Problem

A descriptive study to assess the self care practices and influencing factors on management of diabetes mellitus among patients with type 2 diabetes mellitus in a hospital at Kanyakumari district.

Objectives of the study

- To assess the self-care practices on management of diabetes mellitus among patients with type 2 diabetes mellitus.

- To assess the influencing factors on management of diabetes mellitus among patients with type 2 diabetes mellitus.
- To find out the relationship between self-care practices and influencing factors on management of diabetes mellitus among patients with type 2 diabetes mellitus
- To find out the association between selected demographic variables among patients with type 2 diabetes mellitus and their self-care practices on management of diabetes mellitus
- To find out the association between selected demographic variables among patients with type 2 diabetes mellitus and their influencing factors on management of diabetes mellitus

Research Methodology

The conceptual framework of this study was based on the Rosenstock's health belief model. A quantitative research approach with a descriptive research design was adopted to assess the self-care practices and influencing factors among patients with type 2 diabetes mellitus. The study was conducted at the outpatient department of Catherine Booth Hospital, Putheri, Kanyakumari District. A total of 100 patients were selected using non-probability convenient sampling technique. Informed written consent was obtained from all the participants. Ethical clearance was secured from the Ethical Committee of St. Xavier's Catholic College of Nursing Research and Development Committee-Institutional Review Board and prior permission was obtained from the managing director of the hospital.

The inclusion criteria for the study consisted of patients diagnosed with type 2 diabetes mellitus for at least six months, aged 30 years and above, who were willing to participate and capable of understanding either Tamil or English. Data were collected using a structured questionnaire for demographic and clinical variables, 5 point Likert scale for self-care practices and checklist for influencing factors in three sections through structured interview schedule. Section A captured both demographic and clinical information regarding patients with type 2 diabetes mellitus in terms of age, gender, marital status, employment status, family monthly income, area of residence, duration of diabetes, type of treatment, and presence of comorbidities. Section B consisted of a 20-item self-care practices scale, rated on a 5-point Likert scale ranging from 1 (Never) to 5 (Always), which assessed self-care practices among patients with type 2 diabetes mellitus. Scores were categorized as poor (20–49), average (50–74), and good (75–100) self-care practices. Section C included a 40-item checklist on influencing factors across demographic, clinical, psycho-social, lifestyle, healthcare access, and social support domains, with responses marked as “Yes” or “No.” The total score was categorized as favourable (21–40), and unfavourable (0–20).

Data collection was conducted through direct structured interview, which facilitated accurate responses, particularly among participants with limited literacy. The collected data were analysed using descriptive statistics (frequency, percentage, mean, and standard deviation) to summarize the demographic and clinical variables, self-care practice scores, and influencing factors. To examine the relationship between self-care practices and influencing factors, correlation co-efficient analysis was performed. Chi-square tests were

used to assess associations between selected demographic variables and the levels of self-care practices and influencing factors.

Major Findings

The findings of the study were presented based on the objectives.

Demographic Variables

The majority of participants 26 (26%) were between 51-55 years, followed by 22 (22%) between 46-50 years age, females 53 (53%) slightly outnumbered males 47 (47%), most of the participants were married 78 (78%), and a considerable proportion had secondary education 30 (30%), with 24 (24%) having an undergraduate degree and 10 (10%) having pursued post-graduate education. Regarding employment status, 30 (30%) were unemployed, while 28 (28%) were employed as full-time and 22 (22%) were homemakers. In terms of monthly family income, 35(35%) earned less than ₹15, 000, and 30 (30%) belonged ₹15, 001-30,000 range. Urban residents 55 (55%) formed the majority and most of the participants 85 (85%) were living with their families, while 8 (8%) lived alone. Notably, 40 (40%) of the participants reported a history of unhealthy habits such as smoking and alcohol consumption

Clinical Variables

Clinically, the highest number of participants 38 (38%) had been diagnosed with diabetes for 1-5 years, followed by 30 (30%) who had diabetes for 6 - 10 years. In terms of BMI, 44 (44%) had normal weight, while 30 (30%) were overweight and 20 (20%) were obese. Common co-morbidities included hypertension 35(35%) and hyperlipidaemia 20 (20%), while 18 (18%) reported no incidence of co-morbid conditions. The majority 80(80%) were on allopathic treatment, and a smaller percentage used traditional systems like ayurvedic, siddha, and naturopathy. When assessing diabetes status, 58 (58%) of participants had uncontrolled diabetes (RBS 180 mg/dl), while 42 (42%) had their blood sugar under control.

The first objective of the study was to assess the self-care practices on management of diabetes mellitus among patients with type 2 diabetes mellitus.

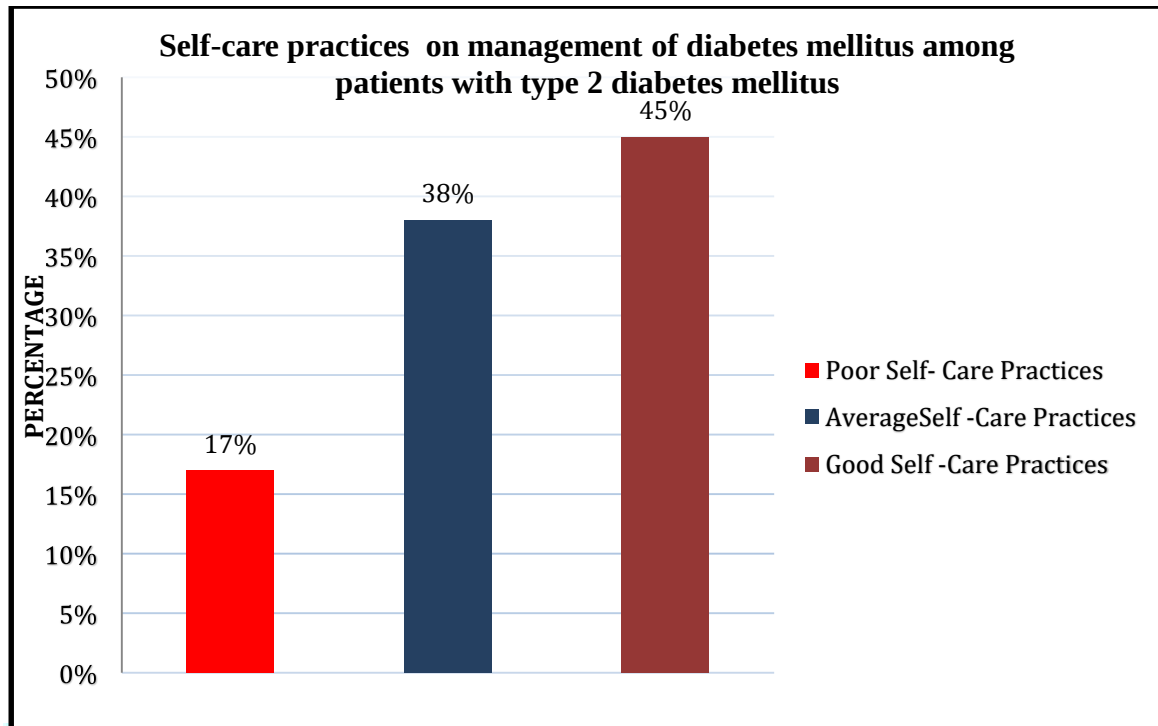


Fig. 1: Percentage distribution of self-care practices on management of diabetes mellitus among patients with type 2 diabetes mellitus

Figure 1 reflects the analysis self-care practices on management of diabetes mellitus among patients with Type 2 diabetes mellitus. In present study, 45(45%) of the patients demonstrated good self-care practices, 38 (38%) showed average self-care practices, and 17 (17%) had poor self-care practices. These findings were consistent with a cross sectional study conducted by **Singh et al., 2023** on self-care practices among 142 patients with type 2 diabetes mellitus in India, reported that 37% of the participants demonstrated good self-care practices and more than half (63%) of them had poor diabetic self-care practices. Hence the study findings highlights, while a considerable proportion of patients maintain effective self-care practices, a significant number still demonstrate only average or poor levels of self-care, emphasizing the continued need for education and intervention programs to improve diabetes self-management.

The second objective of the study was to assess the influencing factors on management of diabetes mellitus among patients with type 2 diabetes mellitus.

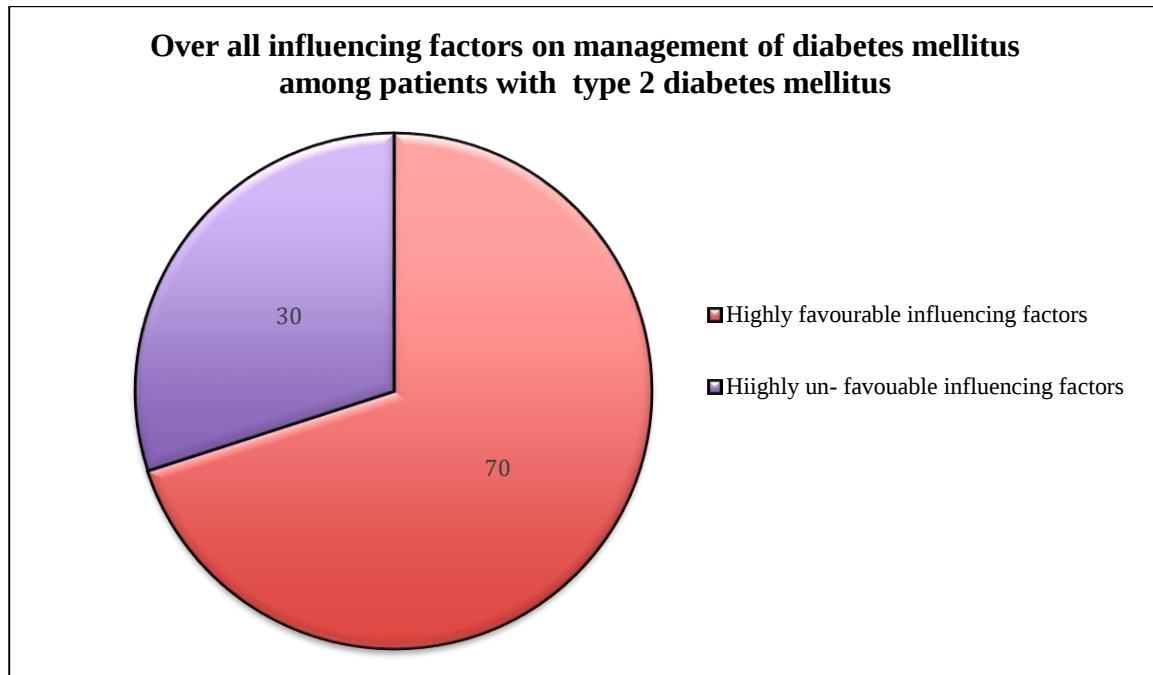


Fig. 2: Percentage distribution of influencing factors on management of diabetes mellitus among patients with type 2 diabetes mellitus

Figure 2 describes the analysis of overall influencing factors on management of type 2 diabetes mellitus among patients with type 2 diabetes mellitus. In this study 70 (70%) of them had a highly favourable influencing factors and 30 (30%) had highly un-favourable influencing factors.

These findings are congruent with the observations of **Durai V. et.al. (2021)** on self-care practices and factors influencing self-care among type 2 diabetes mellitus patients in a rural health center in India, revealed that compliance was comparatively better for physical activity (46%) and medication adherence (57%), whereas only 25.5% adhered to dietary modifications and about one-fourth practiced proper foot care. The study further highlighted that patients who maintained dietary modifications and good drug compliance had significantly lower HbA1c levels ($\leq 7\%$) ($P < 0.05$). Thus socio-economic status and educational factors play a crucial role in influencing diabetes self-care, especially in rural populations. They emphasized the need for enhanced patient education, improved healthcare access, and social support to improve adherence to self-care behaviours.

Table: 1 Item wise percentage distribution of influencing factors on management of diabetes mellitus among patients with type 2 diabetes mellitus.

S.No.	Influencing Factors	Frequency (f)	Percentage (%)
A. Demographic Factors			
1	Age above 40 years	100	100%
2	Female gender	53	53%
3	Married	78	78%
4	Educated (at least primary)	86	86%
5	Employed or with regular income	48	48%
6	Living in supportive family setup	92	92%
7	Living in an urban area	55	55%
B. Clinical Factors			
8	Diabetes for more than 5 years	50	50%
9	Using insulin therapy	30	30%
10	Has comorbidities (e.g., BP, cholesterol)	40	40%
11	Has experienced diabetes complications	25	25%
12	Monitors blood glucose regularly	60	60%
C. Knowledge and Awareness			
13	Aware of the meaning of Diabetes Mellitus	80	80%
14	Knows about blood sugar targets	70	70%
15	Knows importance of medication adherence	85	85%
16	Understands the role of diet and exercise	75	75%
17	Knows symptoms of high or low blood sugar	65	65%
D. Psychosocial Factors			
18	Feels motivated to manage diabetes	70	70%
19	Experiences stress related to diabetes	40	40%
20	Has support from family or friends	90	90%
21	Has mental health concerns (depression/anxiety)	35	35%

S.No.	Influencing Factors	Frequency (f)	Percentage (%)
22	Believes lifestyle changes can help	80	80%
E. Lifestyle and Behavioral Factors			
23	Follows a diabetic-friendly diet	60	60%
24	Eats more fruits and vegetables (4–5 servings/day)	55	55%
25	Exercises at least 3 times a week	50	50%
26	Avoids sweets and sugary drinks	65	65%
27	Does not smoke or use tobacco	85	85%
28	Limits or avoids alcohol	80	80%
29	Takes medications regularly	90	90%
30	Checks feet and skin for injuries regularly	70	70%
F. Health system and access			
31	Can access healthcare when needed	95	95%
32	Receives diabetes education from providers	75	75%
33	Gets medications and strips easily	85	85%
34	Has regular follow-up appointments	80	80%
35	Satisfied with healthcare provider support	88	88%
G. Social support and literacy			
36	Family reminds or takes care of health routines	90	90%
37	Can read and understand prescription labels	85	85%
38	Can use glucometer independently	75	75%
39	Has someone to talk to about diabetes	80	80%
40	Can seek and follow advice from healthcare providers	90	90%

The above table describes the item-wise percentage distribution of influencing factors on management of diabetes mellitus among patients with type 2 diabetes mellitus. With regard to demographic factors, all of them 100 (100%) were aged above 40 years, while 53 (53%) were females. A majority, 78 (78%), were married, and 86 (86%) had completed at least primary education. Less than half, 48 (48%), were employed and has a regular family monthly income. Most of them, 92 (92%), are living in a supportive family setup, and 55 (55%) were residing in urban areas.

Regarding clinical factors, 50 (50%) of them had diabetes mellitus for more than five years. Insulin therapy was used by 30 (30%) of them, 40 (40%) had co-morbidities such as hypertension or high cholesterol, and 25 (25%) had experienced diabetes complications. Blood glucose monitoring was practiced regularly by 60 (60%) of them.

Knowledge and awareness were relatively high. Eighty (80%) of them were aware of the meaning of diabetes mellitus, 70 (70%) knew about blood sugar targets, 85 (85%) understood the importance of medication adherence, 75 (75%) were aware of the role of diet and exercise, and 65 (65%) recognized the symptoms of high or low blood sugar.

In psycho-social factors, 70 (70%) of them felt motivated to manage their diabetes mellitus, whereas 40 (40%) experienced stress related to their disease condition. Support from family or friends 90 (90%) was reported. Mental health concerns such as depression or anxiety were present in 35 (35%), and 80 (80%) believed that lifestyle changes could improve their health.

Lifestyle and behavioral factors were varied among them. Sixty 60 (60%) followed a diabetic-friendly diet, 55 (55%) consumed at least 4–5 servings of fruits and vegetables daily, and 50 (50%) exercised at least three times a week. Avoidance of sweets and sugary drinks are reported by 65 (65%), 85 (85%) did not smoke or use tobacco, and 80 (80%) limited or avoided alcohol. Medication adherence 90 (90%) was high, and 70 (70%) checked their feet and skin regularly for injuries.

Regarding health system access, 95 (95%) of them could access healthcare when needed. Diabetes mellitus education from providers was received by 75 (75%), medications and glucometer strips were easily available to 85 (85%), 80 (80%) attended regular follow-up. Finally, social support and literacy factors 70 (70%) were also notable. Ninety (90%) participants had family reminders or support for health routines, 85 (85%) could read and understand prescription labels, 75 (75%) could use a glucometer independently, 80 (80%) had someone to discuss about diabetes mellitus and 90 (90%) could seek and follow the advices from healthcare providers when needed.

These study findings are supported by **Rana et al. (2023)**, who investigated the psychological predictors of adherence to self-care behaviors among patients with type 2 diabetes in North India. The mean age of participants was 53.5 (± 3.68) years, with 41.4% classified as overweight and 16.7% as obese (BMI > 30). Regarding self-care practices, 51.2% of participants checked their blood glucose using a monitor, and 39.5% kept a record of it. More than two-thirds of participants (84%) took the correct dose of insulin and diabetes medication on diabetes mellitus. Adherence to prescribed diet regimens was observed in 56.7% of them, while 65.4% followed meal/snack instructions from their physician. Very few 1 (1%) maintained food records, and only 11.7% carried quick-acting sugar to manage unexpected hypoglycemic episodes. Approximately 73% adhered to routine follow-ups, while 38.% followed exercise recommendations. 96% reported never reading food labels before consumption. These findings highlighted the gaps in adherence to dietary monitoring, exercise, and hypoglycemia preparedness, emphasizing the need for enhanced patient

education, structured support, and practical strategies to improve diabetes self-care behaviors of diabetes mellitus.

Table: 2 Domain-wise frequency and percentage distribution of favourable and un-favourable factors among patients with type 2 diabetes mellitus.

S.No.	Domains	Favourable influencing factors		Unfavourable influencing factors	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
A.	Demographic Factors	6	85.8	1	14.2
B.	Clinical Factors	2	40	3	60
C.	Knowledge and Awareness	5	100	0	0
D.	Psychosocial Factors	3	60	2	40
E.	Lifestyle and Behavioral Factors	8	100	0	0
F.	Health System and Access	5	100	0	0
G.	Social Support and Literacy	5	100	0	0

The above Table.2 discussed the domain-wise distribution of favourable and un-favourable influencing factors. In the demographic factors, 6 (85.8%) factors were identified as favourable influencing factors, while 1 (14.2%) was un-favourable influencing factors. In the domain of clinical factors, only 2 (40%) factors were found as favourable influencing factors, whereas 3 (60%) factors were un-favourable influencing factors. In terms of knowledge and awareness, all 5 (100%) factors belonged to favourable influencing factors, with no un-favourable influencing factors recorded. Regarding psycho-social factors, 3 (60%) factors were favourable influencing factors and 2 (40%) were un-favourable influencing factors. Under lifestyle and behavioural factors, all 8 (100%) factors were assessed as favourable influencing factors. Similarly, in the domains of health system and access and social support and literacy, all 5 (100%) factors in each had favourable influencing factors, with no un-favourable influencing factors reported.

The third objective of the study was to find out the relationship between self-care practices and influencing factors on management of diabetes mellitus among patients with type 2 diabetes mellitus

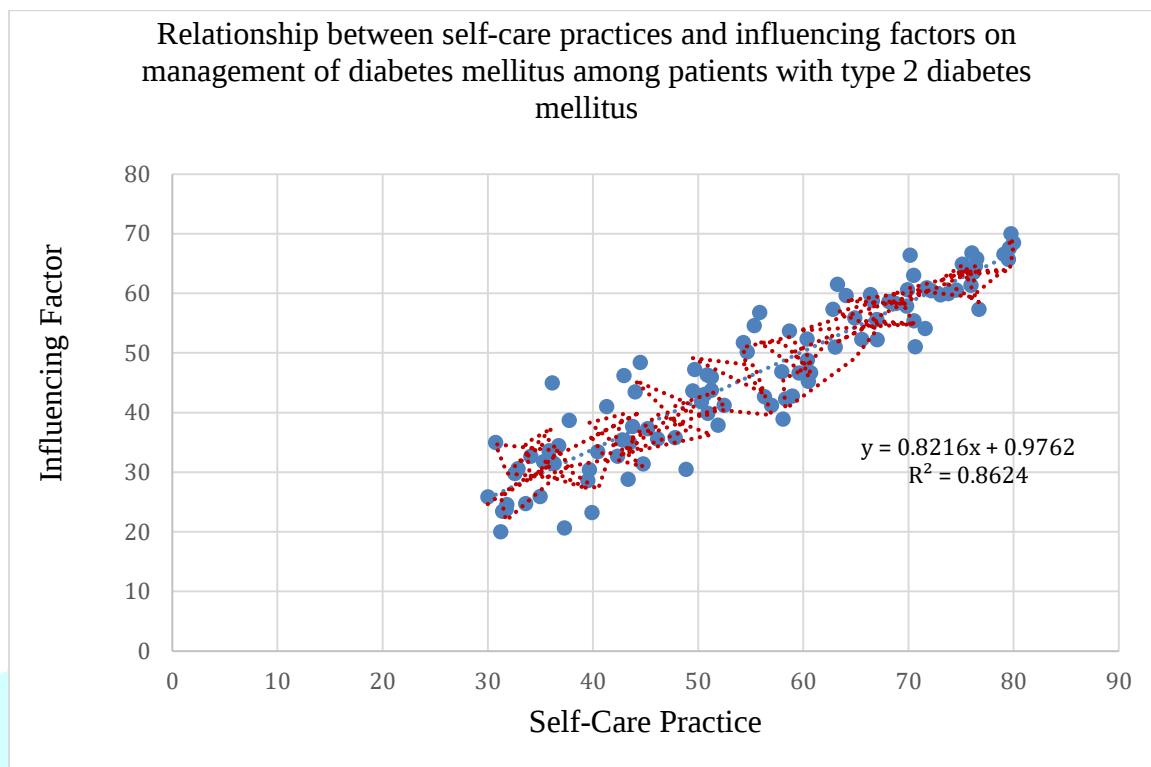


Fig: 3: Relationship between self-care practices and influencing factors on management of diabetes mellitus among patients with type 2 diabetes mellitus

The above figure explains the relationship between self-care practices and influencing factors among patients with type 2 diabetes mellitus. In the present study, Karl Pearson's co-relation, co-efficient test showed a strong positive and statistically significant relationship between self-care practices and influencing factors on management of type 2 diabetes mellitus among patients with type 2 diabetes mellitus ($r = 0.956$, $p < 0.001$).

These findings were consistent with a cross-sectional study conducted by **Jafari et al. (2024)** on 300 patients with type 2 diabetes mellitus, which demonstrated that diabetes health literacy had a significant positive correlation with quality of life ($r = 0.438$, $p < 0.001$), whereas depression ($r = -0.380$, $p < 0.001$), anxiety ($r = -0.355$, $p < 0.001$), and stress ($r = -0.423$, $p < 0.001$) showed significant negative correlations. Life satisfaction also had a positive relationship with quality of life ($r = 0.265$, $p < 0.001$). The high correlation value suggests that participants with better socio-economic status, educational status, and lifestyle-related support systems were more consistent in adhering to self-care measures such as diet modification, physical activity, medication compliance, and foot care. These findings statistically confirm that influencing factors exert a substantial impact on the level of self-care practices among patients with type 2 diabetes mellitus on management of type 2 diabetes mellitus.

The fourth objective of the study was to find out the association between selected demographic variables and their self-care practices on management of diabetes mellitus among patients with type 2 diabetes mellitus

The association between selected demographic variables and self-care practices among patients with type 2 diabetes mellitus was analysed using the chi-square test. The results revealed that age ($\chi^2 = 3.82$, $df = 4$, $p = 0.43$), gender ($\chi^2 = 2.71$, $df = 2$, $p = 0.26$), marital status ($\chi^2 = 5.10$, $df = 3$, $p = 0.16$), employment status ($\chi^2 = 7.95$, $df = 6$, $p = 0.24$), area of residence ($\chi^2 = 2.54$, $df = 2$, $p = 0.28$), and history of unhealthy habits ($\chi^2 = 1.88$, $df = 2$, $p = 0.39$) did not show any statistically significant association with self-care practices ($p > 0.05$). However, a significant association was observed for educational status ($\chi^2 = 22.84$, $df = 8$, $p = 0.003$), family monthly income ($\chi^2 = 14.62$, $df = 6$, $p = 0.023$), and type of family ($\chi^2 = 9.72$, $df = 4$, $p = 0.045$), indicating that these demographic factors significantly influence self-care practices among patients with type 2 diabetes mellitus.

These findings were congruent with an Iranian study conducted by **Darvishi et al., on (2024)**, revealed that educational status ($\chi^2 = 22.84$, $p = 0.003$), family monthly income ($\chi^2 = 14.62$, $p = 0.023$), and type of family ($\chi^2 = 9.72$, $p = 0.045$) were significantly associated with self-care practices. These findings highlighted that education, income, and residence strongly influences diabetes care and outcomes, supporting the present study's observation that educational status, family monthly income, and type of family were significantly associated with self-care practices among patients with type 2 diabetes mellitus.

The fifth objective of the study was to find out the association between selected demographic variables on management of diabetes mellitus among patients with type 2 diabetes mellitus and their influencing factors.

The chi-square analysis of demographic variables with influencing factors showed that educational status ($\chi^2=18.92$, $df=8$, $p=0.015$), monthly family income ($\chi^2=16.75$, $df=6$, $p=0.010$), area of residence ($\chi^2=7.42$, $df=2$, $p=0.024$), and type of family ($\chi^2=9.85$, $df=4$, $p=0.042$) had a statistically significant association, indicating that these factors were influenced by the respondents' socio-demographic characteristics. On the other hand, age ($\chi^2=4.36$, $df=4$, $p=0.36$), gender ($\chi^2=2.88$, $df=2$, $p=0.24$), marital status ($\chi^2=6.10$, $df=3$, $p=0.11$), employment status ($\chi^2=8.33$, $df=6$, $p=0.21$), and history of unhealthy habits ($\chi^2=5.21$, $df=2$, $p=0.074$) did not show any statistically significant association with influencing factors.

Nursing Implications

Nursing Practice

- Nurses shall assess patients' self-care practices and provide individualized, culturally sensitive counselling to address barriers related to education, income, residence, and family support.
- Community health nurses shall strengthen continuity of care by extending follow-up services through home visits, health camps, and telehealth, particularly for rural and low-income populations.

Nursing Education

- Nursing curricula shall emphasize diabetes self-care management, lifestyle modification, and patient education skills using simulation and case-based learning.
- Continuing nursing education programs shall focus on evidence-based updates in diabetes management and effective counselling strategies such as motivational interviewing.

Nursing Administration

- Nurse administrators shall establish structured diabetes education programs and multidisciplinary collaborations to enhance patient support and outcomes.
- Policies shall prioritize resource allocation for patient education materials in local languages and the organization of diabetes support groups within hospital and community settings.

Nursing Research

- The study provides a basis for further research to evaluate the effectiveness of tailored educational and behavioural interventions in improving diabetes self-care among diverse demographic groups.
- Longitudinal and comparative studies across rural and urban populations shall be conducted to understand how influencing factors affect self-care behaviors and to develop targeted interventions.

Recommendations

- Future studies shall be conducted with larger and more diverse participants across multiple districts and states to enhance the generalizability of findings on self-care practices and influencing factors among patients with type 2 diabetes mellitus.
- Experimental or quasi-experimental studies shall be designed to evaluate the effectiveness of tailored interventions such as caregiver training, stress management workshops, and resilience-building programs on improving diabetes self-care practices and family support on type 2 diabetes mellitus.

Conclusion

The present study was conducted to assess self-care practices and influencing factors among patients with type 2 diabetes mellitus and to explore their relationship with selected demographic variables. The findings revealed that less than half of the participants demonstrated good self-care practices, while a considerable proportion showed only average or poor adherence, underscoring the persistent gaps in diabetes self-management. Influencing factors such as education, income, residence, and family support were shown to play a crucial role, with over one-third of participants reporting highly favourable support systems. A strong positive correlation was found between self-care practices and influencing factors. Chi-

square analysis further established that educational status, family monthly income, area of residence, and type of family were significantly associated with both self-care practices and influencing factors, whereas other demographic variables such as age, gender, and marital status were not significant. Consequently, the study highlights valuable evidence for nurses, educators, administrators, and policymakers to design targeted strategies aimed at improving diabetes self-management and, ultimately, better health outcomes among patients with type 2 diabetes mellitus.

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Conflict of interest statement

The author/ researcher declares that there are no conflicts of interest concerning this research work or its publication.

Ethical statement

The study was conducted after obtaining ethical approval from the Ethics committee of St. Xavier's Catholic College of Nursing Research and Development Committee-Institutional Review Board.

References

- American Diabetes Association. (2022). Standards of medical care in diabetes—2022. *Diabetes Care*, 45(Supplement_1), S1–S264. <https://doi.org/10.2337/dc22-Sint>.
- Anjana, R. M., Pradeepa, R., Deepa, M., Datta, M., Sudha, V., Unnikrishnan, R., Mohan, V. (2011). Prevalence of diabetes and prediabetes (impaired fasting glucose and/or impaired glucose tolerance) in urban and rural India: Phase 1 results of the Indian Council of Medical Research–INDIA DIABetes (ICMR–INDIAB) study. *Diabetologia*, 54(12), 3022–3027. <https://doi.org/10.1007/s00125-011-2291-5>.
- Banumathi, P. G., Sujatha, S., Monica, F., & Keerthana, G. (2024). A cross-sectional study on self-care practices among type 2 diabetes mellitus patients attending Makkalai Thedi Maruthuvam clinic in a tertiary care hospital in Chengalpattu district. *International Journal of Current Pharmaceutical Review and Research*, 16(6), 118–127. <http://www.ijcpr.com/>.

- CS, R., Singh, V., & Solanki, M. J. (2025). Self-care practices among type II diabetics in urban field practice area of a medical college, Mumbai: A cross-sectional study. *The Evidence*, 3(1), 1–7. <https://doi.org/10.61505/evidence.2025.3.1.111>.
- Durai, V., Samya, V., Akila, G. V., Ramesh, A., Subramanian, A., & Dhanalakshmi, M. D. (2021). Self-care practices and factors influencing self-care among type 2 diabetes mellitus patients in a rural health center in South India. *Journal of Education and Health Promotion*, 10, 151. https://doi.org/10.4103/jehp.jehp_269_20.
- Hossain, M. J., Al-Mamun, M., & Islam, M. R. (2024). Diabetes mellitus, the fastest growing global public health concern: Early detection should be focused. *Health Science Reports*, 7(3), e2004. <https://doi.org/10.1002/hsr2.2004>.
- International Diabetes Federation. (2021). *IDF diabetes atlas* (10th Ed.). International Diabetes Federation.
- Joshi, J., Patel, P., Gandhi, S., Patel, N., & Chaudhari, A. (2022). Factors influencing adherence to self-care practices among patients of type 2 diabetes mellitus from Saurashtra region of Gujarat: A conclusive research. *Journal of Family Medicine and Primary Care*, 11(10), 6395–6401. https://doi.org/10.4103/jfmpe.jfmpe_473_22.
- Powers, A. C., Niswender, K. D., & Evans-Molina, C. (2022). Diabetes mellitus: Diagnosis, classification, and pathophysiology. In J. L. Jameson, A. S. Fauci, D. L. Kasper, S. L. Hauser, D. L. Longo, & J. Loscalzo (Eds.), *Harrison's principles of internal medicine* (21st ed., pp. 2858–2879). McGraw Hill.
- World Health Organization. (2023). **Diabetes**. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/diabetes>.