Research Article *Open Access*

Journal of Progressive Medicine and Health Care

DOI: *doi.org/10.63721/25JPMHC0102*

Knowledge, Attitude and Perception of Diabetes Mellitus among Elderly Outpatients in Faith Mediplex Hospital Benin, Edo State

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Citation: Akpojaro Ejovi, Elusoji Christiana I, Ohanme Eugene Ohams, Ogbinya Oliver, Munge Mary F,, et al. (2025) J. of Pro Med and Hea Care 1(1), 1-08. WMJ/JPMHC-102

Abstract

Diabetes mellitus is a significant global health issue and a leading cause of death in developing countries, particularly Nigeria. Characterised by persistent hyperglycemia due to insulin deficiency or resistance, diabetes can lead to complications that adversely affect patients' quality of life. This study aimed to assess the knowledge, attitudes, and perceptions of diabetes mellitus among outpatients at Faith Mediplex Hospital. A descriptive cross-sectional design was employed, involving 135 outpatients selected through purposive sampling. Data were collected using a structured, interviewer-administered questionnaire, which was pretested for clarity in another mission hospital. The statistical analysis was conducted using SPSS version 22, summarising data with descriptive statistics including mean, standard deviation, frequency, and percentage, with a significance level set at $p<0.05$. Ethical clearance was obtained from the Research and Ethics Committee of Benson Idahosa University, with permission secured from the chief medical director of Faith Mediplex and informed consent from participants. Results indicated that 76% of respondents had good knowledge of diabetes mellitus, while 24% had poor knowledge. Most participants engaged in preventive practices, such as physical activity, regular blood glucose checks, medication adherence, and healthy dietary choices. Many viewed diabetes as a serious health concern that requires early detection and increased awareness. The study highlights gaps in diabetes education and the impact of attitudes on self-care behaviours, aiming to enhance education strategies and promote effective management practices among diabetes patients in the hospital and beyond.

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Submitted: 15.05.2025 **Accepted:** 22.05.2025 **Published:** 03.06.2025

Keywords: Diabetes Mellitus, Knowledge, Attitude, Perception

Introduction

Diabetes mellitus is a significant global health issue and a leading cause of mortality in developing nations, particularly Nigeria. Diabetes mellitus is an endocrine illness characterised by insufficient insulin production, resulting in metabolic disturbances of carbohydrates, proteins, and fats, marked by hyperglycemia, degenerative vascular alterations, and neuropathy. Despite significant variations in diabetes incidence across different nations, the global rate has usually risen. The International Diabetes Federation (IDF) forecasts indicate that the global population of individuals with diabetes is anticipated to rise from 366 million in 2018 to 552 million by 2030. The World Health Organisation estimates that diabetes directly caused almost 1.5 million deaths in 2021, with over 80% of these fatalities occurring in low- and middle-income nations.

Approximately 80% of individuals with type 2 diabetes mellitus originate from developing nations. Various variables, including genetics, ageing, and lifestyle, contribute to the development of type 2 diabetes mellitus, with diagnoses often associated with obesity. More than 90% of individuals with diabetes mellitus have type 2 diabetes, which is linked to certain endocrine abnormalities. The condition has catastrophic effects on individuals with diabetes, healthcare systems, the economy, and society as a whole. By 2030, diabetes is projected to be the sixth greatest cause of mortality globally. The incidence of diabetes in Africa is 4.9%, affecting around 19.8 million persons on the continent.

There has been a rise in the usage of anti-diabetic medications, including sulfonylureas, biguanides, and dipeptidyl peptidase-4 inhibitors, for the management of type 2 diabetes mellitus. Nonetheless, the majority of these anti-diabetic medications exhibit restricted effectiveness and several adverse effects, including drug resistance, weight gain, oedema, and elevated risks of secondary failure. Diabinese is used as a supplementary treatment with food and exercise to enhance glycaemic management in persons with type 2 diabetes mellitus. Efficient self-management is crucial for patients with type 2 diabetes to attain and sustain optimum blood glucose regulation, avert acute complications, and diminish the chance of long-term problems. Inadequately controlled diabetes may result in severe health complications, including cardiovascular disease, renal disease, neuropathy, and retinopathy.

Research has shown a lack of awareness about diabetes among diabetic patients in Sub-Saharan Africa. Knowledge of diabetes impacted diabetes management, but health attitudes also influenced diabetes treatment. Diabetes knowledge and health beliefs are cognitive elements influencing diabetes management. Effective diabetes care requires both medical interventions and a thorough comprehension of the illness by patients. Knowledge, attitude, and perception are crucial in shaping people' understanding and management of their situation. Comprehensive understanding of diabetes and its care enables patients to make educated choices about nutrition, exercise, medication compliance, and blood glucose monitoring. A favourable attitude towards diabetes and a realistic understanding of its effects might enhance psychological well-being and improve adherence to treatment protocols. Numerous research have investigated the knowledge, attitudes, and perceptions of diabetes mellitus across various demographics. Nonetheless, further study is required, particularly concentrating on the outpatient demographic inside private healthcare institutions. Comprehending the levels of knowledge, attitudes, and views of diabetes mellitus among outpatients might assist healthcare practitioners

in formulating targeted interventions and educational initiatives.

This study aims to assess the knowledge, attitude, and perception of diabetes mellitus among outpatients attending Faith Mediplex Hospital Benin, Edo State.

Methodology

The study was carried out among 135 elderly outpatients diagnosed with diabetes attending Faith Mediplex Hospital calculated using Taro Yamane's formula. Faith Mediplex Hospital is a mission hospital that renders secondary health care services. A descriptive cross-sectional study design was used and a purposive sampling technique was used to select study participants until the sample size was gotten. A structured interviewer-administered questionnaire was used to collect information from the participants after undergoing pretesting for clarity in another mission hospital. The questionnaire has five sections, open and closed ended questions will be asked. The questionnaire will be pretested in St Philomena to structure the questionnaire. Reliability will be gotten using Cronbach Alpha Statistical analysis. Data analysis was performed using statistical package for social science (SPSS) version 22. Data was summarized using descriptive statistics of mean, standard deviation, frequency and percentage was used to describe the data. P value was set at $p<0.05$ at 95% confidence interval. Ethical clearance was gotten from the Research and Ethics Committee of Benson Idahosa University. Permission was gotten from the chief medical director of faith mediplex and participants informed consent was obtained.

Results

Table 1: Demographic Characteristics of the Respondents (N=135)

Variable	Attributes	Frequency	Percent (%)
Age (years)	18 – 28	12	8.89
	29 – 38	22	16.30
	39 – 48	67	49.63
	49 – 58	29	21.48
	59 and above	5	3.70
Sex	Male	57	42.22
	Female	78	57.78
Religion			
	Christianity	92	68.15
	Islamic	33	24.44
	Others	10	7.41
Nationality	Nigerian	135	100.00
	Foreigner	0	0.00
Ethnicity	Yoruba	10	7.41
	Esan	44	32.59
	Binin	62	45.93
	Igbo	11	8.15
	Others	8	5.93
Income per month is approximately:	below ₦10,000	15	11.11
	₦10,000-30,000	16	11.85

	₦31,000-50000	58	42.96
	above ₦50,000	46	34.07

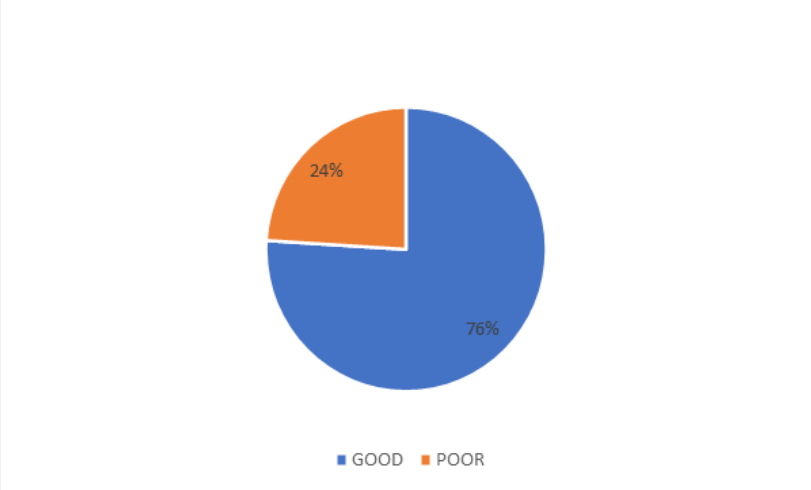
Majority 67 (49.63%) of the respondents are within the age range of 39-48, 78(57.78%). The respondents were predominantly females 92 (68.12%). With regards to respondent's ethnicity 62 (45.93%) are from Binin, 58 of the respondents representing 42.96% earn between N31,000 to N50,000 per month.

Table 2: Knowledge of Diabetes among the Respondents (N = 135)

Variables	Options	Frequency	Percent (%)
Diabetes means that my blood glucose (blood sugar) is too high?	Yes	122	90.37
	No	10	7.41
	I don't no	3	2.22
Is diabetes Hereditary?	Yes	96	71.11
	No	22	16.30
	I don't no	17	12.59
Is diabetes Infectious?	Yes	29	21.48
	No	101	74.81
	I don't no	3	2.22
Diabetes is a serious disease but I can learn how to manage it?	Yes	88	65.19
	No	35	25.93
	I don't no	12	8.89
Cuts and wounds on person suffering diabetes heal more slowly?	Yes	88	65.19
	No	29	21.48
	I don't no	18	13.33
Unmanaged diabetes can cause heart attack and stroke?	Yes	122	90.37
	No	8	5.93
	I don't no	5	3.70
Prevention, control and drugs for diabetes are for life?	Yes	92	68.15
	No	35	25.93
	I don't no	8	5.93
Is exercise beneficial for control of diabetes?	Yes	98	72.59
	No	32	23.70
	I don't no	5	3.70
Is dietary modification beneficial for control of the disease?	Yes	115	85.19
	No	11	8.15
	I don't no	9	6.67
Not smoking or taking alcohol is a beneficial self-care practice?	Yes	109	80.74
	No	16	11.85
	I don't no	10	7.41
Diabetes cannot be cured?	Yes	110	81.48
	No	22	16.30
	I don't no	3	2.22

Table 2 shows the percentage distribution of knowledge on diabetes among the respondents. Majority of the respondents (N=122, 90.37%) reported that diabetes means that their blood glucose (blood sugar) is too high, 96 (71.11%) diabetes is hereditary, also majority 101 of the respondents representing 74.81% reported that diabetes is not infectious, 88 (65.19%) diabetes is a serious disease but can be manage, 88 of the respondents representing 65.19% stated that cuts and wounds on person suffering diabetes heal more slowly, 122 (90.37%) unmanaged diabetes can cause heart attack and stroke. It was reported by 92 (68.15%) that prevention, control and drugs for diabetes are for life, 98 (72.59%) reported that exercise is beneficial for control of diabetes, 115 of the respondents representing 85.19% reported that dietary modification is beneficial for control of the disease, 109 (80.74%) reported that not smoking or taking alcohol is a beneficial self-care practice, furthermore, 110 (81.48%) stated that diabetes cannot be cured.

Figure 1: Level of Knowledge



Majority of the respondents (76%) had good knowledge on diabetes mellitus while about 24% of the respondents had poor knowledge about it.

Table 3: Attitude towards Practice of Diabetes Prevention (N = 135)

Variable	Attributes	Frequency	Percent (%)
Do you engage in regular physical activity?			
	Always	105	77.78
	Often	23	17.04
	Never	7	5.19
Do you check your blood glucose levels?	Always	110	81.48
	Often	14	10.37
	Never	11	8.15
Do you take medications as prescribed by your healthcare provider?	Always	126	93.33
	Often	7	5.19
	Never	2	1.48
I always keep my appointment even when I am feeling well?	Always	99	73.33
	Often	26	19.26
	Never	10	7.41
I make healthy food choices and stay physically active every day?	Always	99	73.33

	Never	4	2.96
I have learnt to make the best use of my condition?	Always	121	89.63
	Often	12	8.89
	Never	2	1.48

Table 3 above shows the percentage distribution of responses on attitude towards diabetes among the respondents. From the table above, it is disclosed that 105(77.78%) of the respondents always engage in regular physical activity, 110 (81.48%) always check their blood glucose levels, 126 of the respondents representing 93.33% always take their medication as prescribed by health care provider, 99 (73.33%) of the respondents always keep to appointment even when they are feeling well, 99 (83.33%) of respondents always make healthy food choices and stay physically active everyday. 121 of the respondents representing 89.63% have learnt to make the best use of the condition.

Table 4: Perception of Diabetes among the Respondents (N= 135)

Variables	Attributes	Frequency	Percent (%)
Do you believe diabetes can be managed effectively with proper medical care and lifestyle changes	Strongly agree	113	83.70
	Agree	12	8.89
	Disagree	9	6.67
	Strongly disagree	1	0.74
If a parent is diabetic the children have a higher chance of being diabetic.	Strongly agree	86	63.70
	Agree	34	25.19
	Disagree	12	8.89
	Strongly disagree	3	2.22
Physical activity or exercise is very important in managing diabetes?	Strongly agree	119	88.15
	Agree	12	8.89
	Disagree	3	2.22
	Strongly disagree	1	0.74
Raising awareness about diabetes is essential to prevent and manage the condition?	Strongly agree	118	87.41
	Agree	11	8.15
	Disagree	4	2.96
	Strongly disagree	2	1.48
When obesity, overweight and lack of exercise are detected earlier, diabetes can be delayed and prevented?	Strongly agree	86	63.70
	Agree	34	25.19
	Disagree	12	8.89
	Strongly disagree	3	2.22
The disease makes me feel helpless?	Strongly agree	112	82.96
	Agree	34	25.19
	Disagree	5	3.70
Diabetes is a serious health issue?	Strongly agree	121	89.63

	Agree	12	8.89
	Disagree	2	1.48

Table 4 shows perception of diabetes among the respondents. Majority 113(83.70%) of the respondents believe diabetes can be managed effectively with proper medical care and lifestyle changes, 86 (63.70%) strongly agree that If a parent is diabetic the children have a higher chance of being diabetic, 119(88.15%) strongly that physical activity or exercise is very important in managing diabetes, also majority 118 (87.41%) strongly agree that raising awareness about diabetes is essential to prevent and manage the condition. Majority 86(63.70%) strongly agree that when obesity, overweight and lack of exercise are detected earlier, diabetes can be delayed and prevented. Also 122 (82.96%) respondents reported that the disease always makes them feel helpless, 121 (89.63%) of the respondents reported that diabetes is a serious health issue.

Discussion

The study's findings indicated that a significant majority of older outpatients (76%) had a strong understanding of diabetes. Twenty-four percent of the responders had inadequate knowledge. This parallels an earlier research in Ethiopia that indicated substantial knowledge. This contrasts with a prior research that identified a knowledge gap on diabetes among diabetic patients in Sub-Saharan Africa. Amissah also claims that diabetes awareness is significantly lacking among diabetic patients in Nigeria. The research site is situated in an urban region, where a significant percentage of residents possess high socioeconomic level, and a considerable number of diabetic urban inhabitants use private hospitals. Diabetes education equips patients with enhanced understanding of the condition and fosters skills that encourage self-care, which, with medical intervention, facilitates the attainment of metabolic control objectives and the adoption of a healthy lifestyle. Individuals with little or average knowledge of diabetes had an increased risk of elevated HbA1c values. Systematic diabetic education may influence metabolic control indices, illness knowledge, and the adoption of suitable behaviours for diabetes management.

The majority of responders participate in diabetes prevention strategies, while less than one-quarter do not. This resembles a research conducted in Saudi Arabia, which revealed that participants engaged less often in the consumption of fatty foods, participated in physical exercise, and monitored their blood pressure to mitigate the risk of diabetes. A plausible explanation for this research is that individuals with elevated socioeconomic level exhibit favourable health-seeking conduct. The responders have a history of diabetes and are now undergoing therapy. A recent Ethiopian research revealed that two-thirds of individuals had information about diabetes mellitus (DM), roughly half exhibited optimistic attitudes, and one-third demonstrated commendable practice behaviours. The patients' inadequate comprehension of the condition and its self-management often leads to therapeutic failure. Knowledge and skills are necessary to cultivate a positive attitude, which is crucial for diabetes management and will subsequently alleviate stress associated with the condition and its treatment. The majority of respondents saw diabetes as a significant health concern that renders them powerless. This parallels the results of a research conducted in northeastern Ethiopia.

Consequently, comprehending people' perspectives and convictions is crucial for formulating measures to avert, manage, and enhance knowledge of the health dangers associated with this condition. Comprehending patients' beliefs of prevention and management significantly impacts self-management and the adoption of healthy behaviours. A significant disadvantage of this research is that it was confined to a private institution.

Conclusion

This study found that one fourth of the respondents still have poor knowledge of diabetes, good preventive practice and still perceive that diabetes is a serious health issue. Addressing patient's knowledge, perception of illness control and their actual health behaviour necessitates continuous evaluation and monitoring to guide the plan of care that is culture- and gender-sensitive [1-18].

Funding
This was a self funded research study

Conflict of Interest
The Authors declared no conflict of interest in the study

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