

## **SELF-CARE PRACTICES AND CONTROL OF DIABETES MELLITUS AMONG DIABETIC ADULTS IN GENERAL HOSPITAL IKOT EKPENE, AKWA IBOM STATE.**

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### **ABSTRACT**

*Self-care practice is very essential in the control of diabetes mellitus among diabetic adults at home and in the Hospital, self-care practice is individual decision to look after individual's own health efficiently. The study aimed to examine self-care practices, assess the practices of diabetes mellitus control and examine factors influencing self-care practices and control of diabetes mellitus among diabetic adults in General Hospital, Ikot Ekpene, Akwa Ibom State, as no such research has been carried out in the area. The study design that was employed is descriptive survey. Sample for the study comprised a total of 121 adult diabetic patients, selected from 174 (37 inpatients and 137 out-patients) receiving treatment at the hospital through random sampling technique. Data was collected using a structured questionnaire with a reliability of 0.96 and analysis using chart frequencies and percentages. The hypothesis was tested using chi-square analysis. The Results of the study revealed that the majority of the respondents practice self-care and control of diabetes mellitus properly, with over 79.2% always monitoring their blood glucose level. Lack of money, lack of time to perform regular exercise, lack of support and high penchant for food were factors affecting self-care practice and control of diabetes mellitus. Also, a significant relationship was observed between self-care practice and control of diabetes mellitus. Based on the findings it was recommended that hospital managements, health workers including nurses in general should strategize towards educating married men and women about the importance of proper self-care and control of diabetes mellitus.*

**KEYWORDS: Self-Care, Practice, Control, Diabetes Mellitus, Adult**

### **INTRODUCTION**

Self-care practice is taking care of oneself in order to remain healthy and be free from diseases. Also self-care practices and control of diabetes mellitus are sets of behavioral practices used by individuals suffering from diabetes in order to manage and control the diabetes on their own. Such practices include monitoring blood glucose, eating a healthy diet, quitting smoking,

foot-care, fiber intake, tooth-care, eye-care, stress management, remaining physically active, adherent to the treatment regime, taking the medication on time and reducing risk behaviors. All over the globe, people are suffering from chronic diseases, even though some of these diseases are non-communicable, they are debilitating and have high economic cost. Example of such diseases are diabetes, hypertension, and HIV among others. (ref) Diabetes mellitus is a group of metabolic disorder characterized by hyperglycemia as a result of effects in insulin secretion, action or both (Hinkle&Cheever,2018). It is a public health problem due to its increased incidence and prevalence.

Diabetes is a chronic illness that requires a holistic approach in terms of care to prevent both acute and long –term complications. Diabetes contributes to high mortality rate. The global prevalence of diabetes among adults over 18 years of age has risen from 4.7% in 1980 to 8.5% in 2014. In 2015, an estimation of 1.6 million deaths were directly caused by diabetes.(ref) Another 2.2 million deaths were attributed to high blood glucose in 2017, currently diabetes around the world in 2021 is 537 million adults (20-79 years) living with diabetes, (world Health Organization,2021). Some of the factors that contribute to complications and resulting in death are lack or inappropriate self-care practices, inappropriate control practices, poor nutritional habit and lifestyle.

Diabetes mellitus is common among elderly people. The condition has no permanent cure but could be managed through adherence to medical treatment and regimen or advice. Medically, nutritional therapy is extremely important for diabetic patients and pre-diabetic patients so that adequate glycemic control can be achieved. Unfortunately, diabetic patients do not adhere to dietary advice from nurses or medical doctors. Even diets that may increase blood glucose level are taken by individuals diagnosed with diabetes. This results in high mortality rate among diabetic patients. With these alarming statistics, this was research aimed at examining the self-care practices and control of diabetes mellitus among diabetic adults in General Hospital, Ikot Ekpene.

## **STATEMENT OF PROBLEM**

One of the major global cause of mortality is diabetes mellitus, the condition is mostly predominant among adults. The disease can hardly be cured but could be managed with appropriate practice of self-care, control and avoiding diets that could trigger the diseases. Even though diabetes mellitus can be managed, many patients do not comply with advice from nurses and doctors. They do not monitor their blood sugar level regularly; they do not do exercise regularly, and above all, they eat diets that complicate the disease. The rate of complication such as diabetic foot ulcer, diabetic coma, diabetic retinopathy and hypertension as a result of the condition is so high that the researcher wonders whether they carryout self-care practices through dietary restriction in order to control their blood glucose level. This research will examine the self – care practice and control of diabetes mellitus among adult diabetics in General Hospital Ikot Ekpene, Akwa Ibom State

## **OBJECTIVES OF THE STUDY**

The general objective of this study was to examine self-care practices and control of diabetes mellitus among diabetic adults in General Hospital, Ikot Ekpene, Akwa Ibom State.

**The other Specific Objectives were to.**

- Assess the practices of diabetes mellitus control among diabetic adults in General Hospital, Ikot Ekpene, Akwa Ibom State.
- Examine the factors influencing self-care practices and control of diabetes mellitus among diabetic adults in General Hospital, Ikot Ekpene, Akwa Ibom State.

**OVERVIEW OF SELF-CARE PRACTICE AMONG DIABETIC ADULTS**

A descriptive community based cross-sectional study that examined self-care practice amongst diabetics in urban community was conducted by Kushwaha, Kumari and Kushwaha (2016). (ref) Results of the study showed that most of the diabetics (65.2%) rarely got their blood sugar level tested. The study also found out that despite good adherence to medication, the diabetics were lacking behind in other lifestyle modifications like diet, exercise foot care and regular checking of blood glucose. These findings correspond with a study by Ojo (2013), (ref) who carried out an investigation into the level of compliance with diabetes mellitus treatment regimen among in-patients and out-patients in University Teaching Hospital Using Instrument of data collection was self-administered questionnaire. Data were analyzed using descriptive statistics. Findings revealed that majority of the respondents had high score in the self-care practice for diabetes. Over 70 percent check their blood sugar level regularly and avoid sugary food.

**FACTORS INFLUENCING SELF-CARE PRACTICE AND CONTROL OF DIABETES**

El-Sayed (2015) conducted an assessment to identify the association between nutritional status and dietary pattern of type II diabetic patients. (ref) Bioelectric impedance analysis was used to estimate body composition. Findings from the study revealed that most of the study participants were either overweight or obese and that might be due to their inadequate nutrition and unhealthy dietary patterns which may be attributable to low-educational level as well as low-income level. Blood glucose level, **lipid profile** and **blood pressure** are influenced by the dietary habits and types of food consumed. Economic status and higher education were significantly associated with the practice of control of blood sugar level and diabetes control. The participants were either overweight or obese and that might be due to their inadequate nutrition and unhealthy dietary patterns.

## METHODOLOGY

The research design used for this study was descriptive survey; the design was adopted because it describes vividly problems or situation as in natural setting without any manipulation of independent variable. The target population of this study consist of total number of one hundred and seventy -four (174) diabetic patients (37 inpatients and 137 outpatients) receiving treatment at General Hospital, Ikot Ekpene. A sample size of 121 respondents were drawn from the population using Taro Yamane’s formula.(ref) A simple random sampling technique was used to select respondents from the already existing strata of different wards/units in the hospital. The instrument used for data collection for the study was a researcher made questionnaire, ‘Titled Self -Care Practices and Control of Diabetes Mellitus among Diabetic Adults in General Hospital Ikot Ekpene, Akwa Ibom State (SCPCDMADA)’. The questionnaire was made up of four (4) sections with twenty-two (22) items as follows; Section A, Socio-demographic data (7 items), Section B, Self-care practices (5 items) Section C; Control of diabetes among adults (5 items), Section D; Factors influencing self-care practices and control of diabetes mellitus among diabetic adults General Hospital, Ikot Ekpene. Close ended questions with rating scale of four point likert of Strongly Agree(SA) Agree (A), Disagree (D) and Strongly Disagree (DS) used for the questionnaire. The instrument validity was ascertained and the reliability of the instrument was ascertained through a pilot study conducted on twelve (12) diabetic patients from Cottage Hospital, Ukana, Essien Udim. Using Pearson product moment correlation co-efficient formula, the reliability yielded  $r = 0.96$ . Data was collected by administering questionnaire to the respondents. Based on the information obtained from the questionnaire, the result was compiled, coded and analysed using a descriptive statistical method of frequency tables, percentages, and mean. The hypothesis was tested using chi square.

## RESULTS

### Socio-Demographic Data

**Table 1:**

**Socio-Demographic Data (n = 121)**

VARIABLES	FREQUENCY	PERCENTAGE (%)
<b>Gender</b>		
Male	68	56.2
Female	53	43.8
<b>Total</b>	121	100.0
<b>Age</b>		
20 – 30 years	6	5.0
31 – 40 years	27	22.3
41 – 50 years	41	33.9
51 years & above	47	38.8
<b>Total</b>	121	100
<b>Marital Status</b>		

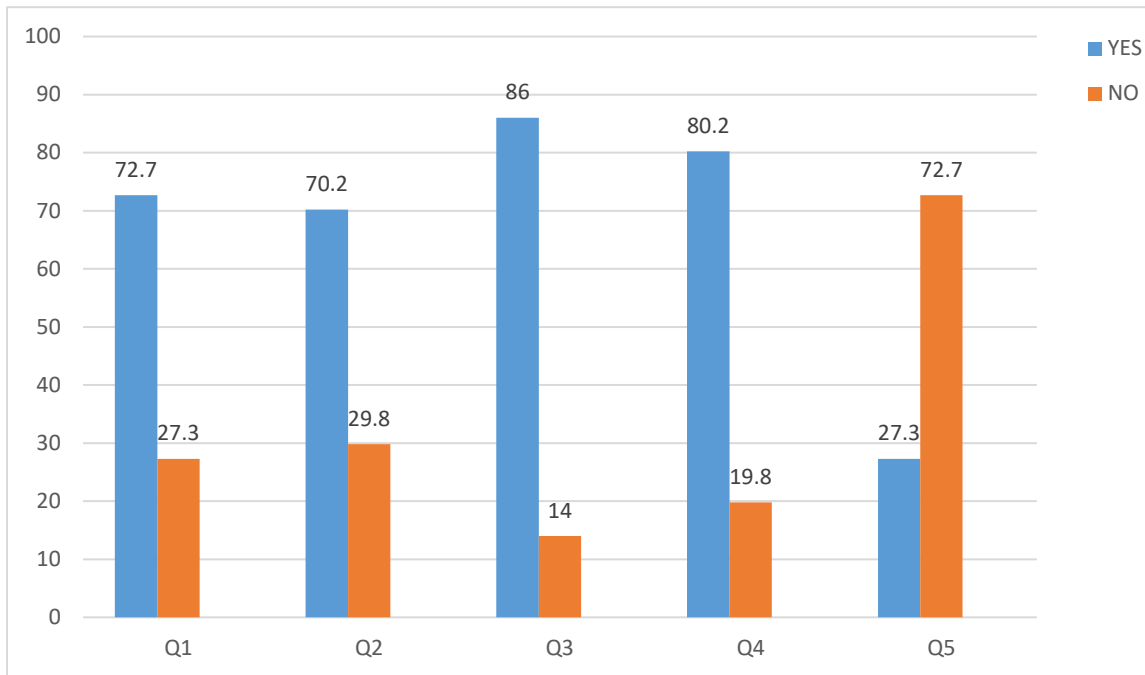
Married	78	64.5
Single	32	26.4
Divorced	4	3.3
Widow(er)	7	5.8
Total	121	100.0
<b>Educational Qualification</b>		
Primary Education	11	9.1
Secondary Education	61	50.4
Tertiary Education	49	40.5
Total	121	100.0
<b>Occupation</b>		
Civil Servant	43	35.5
Farmers	32	26.4
Business/traders	31	25.6
Artisans	15	12.4
Total	121	100.0
<b>Religion</b>		
Christians	115	95.0
Muslims	1	0.8
African Traditional Religion	5	4.1
Total	121	100.0

The results of Socio-demographic data presented in Table 1 showed that most of the respondents, 68 (56.2) are males. Also most of the respondents, 47 (38.8%) were aged 51 years and above; 41 (38.8%) respondents were between 41 – 50 years; 27 were aged 20 – 30 years. Regarding the marital status, majority of the respondents, 78 (64.5%) were married, single respondents were 32 (26.4%) divorce were (3.3%) while 7 (5.8%) were widows and widowers.

Furthermore, most of the respondents 61 (50.4%) had secondary education; those who attained tertiary education were 49 (40.5%), while 11 (9.1%) respondents attended primary education. Most of the respondent, 43 (35.5%) were civil servants, 32 (26.4%) were farmers, 31 (25.6%) respondent were into business and trading while 15(12.4%) were artisans. Lastly, majority of the respondents 111(95.0%) were Christians, 1 (0.8%) was a Muslim, while 5 (4.1%) respondent were African traditional religion worshippers.

**Figure 1:**

**Extent of Self-Care Practices Among Diabetic Adults In General Hospital Ikot Ekpene, Akwa Ibom State.**



**Figure: 1 A Multiple Bar Chart Showing the extent of self-care practices among adult diabetics**

- Q1** I always control my stress level
- Q2** I always monitor my blood glucose level
- Q3** I always avoid sugary diets
- Q4** I always eat diets that contain less cholesterol
- Q5** I do exercise regularly

The results in Figure 1 revealed that 88 (72.7%) respondents agreed that they always control their stress level, but 33 (27.3%) respondents did not. Eighty-five (72.2%) respondents agreed that they always monitor their blood sugar level, but 36 (20.8%) respondents did not. Also 104 (86.0%) respondents agreed that sugary food may be responsible, but 17 (14.0%) disagreed. Ninety-seven (80.2%) respondents asserted that they always eat diets that contain less cholesterol, but 24 (19.8%) did not. Lastly, 33 (27.3%) respondents affirmed that they do exercise regularly but 88 (72.7%) respondents did not.

**Table 2:**

**Control of Diabetes among Diabetic Adults**

S/N	VARIABLES	RESPONSES				
		Agree	%	Disagreed	%	Mean
	<b>In order to control spiked high blood glucose (diabetes)</b>					
1.	I always drink plenty water to keep my body hydrated	105	86.8	16	13.2	0.4
2.	I increase my dietary intake of fibres (e.g. vegetables, legumes & fruits)	96	79.3	25	20.7	0.4
3.	I always reduce the rate of my carbohydrate intake	83	68.6	38	31.4	0.3
4.	I monitor my blood glucose level close and regularly	121	100.0	0	0.0	0.4
5.	I reduce stress by resting and sleeping a lot	114	94.2	7	5.8	0.4

The results in Table 2 revealed that all the respondents monitor their blood sugar level closely and regularly when they experience spiked in diabetes. Majority of the respondents, 114 (94.2%) control diabetes by reducing stress and getting plenty of rest and slept, but 7 (5.8%) respondents do not. Also, majority of the respondents, 105 (86.8%) control diabetes by drinking plenty of water to keep their bodies hydrated, but 16 (13.2%) respondents do not. In addition, 96 (79.3%) respondents control diabetes by increasing their dietary intake of fibres (e.g. vegetables, legumes and fruits) but 38 (31.4%) respondents do not. Lastly, 83 (68.6%) respondents control diabetes by reducing their rate of carbohydrates intake, but 38 (31.4%) respondents do not.

**Table 3:**

**Factors influencing self-care practice and control of diabetes among diabetic adults in General Hospital Ikot Ekpene, Akwa Ibom State.**

S/N	VARIABLES	RESPONSES				
		Agree	%	Disagreed	%	Mean
1.	I find it difficult to check and monitor my blood glucose level due to lack of money.	77	63.6	44	36.4	0.3
2.	Due to the nature of my work I do not have time for exercise	99	81.9	22	18.1	0.4
3.	The diets I am recommended to eat is expensive so I cannot afford it	73	60.3	48	39.7	0.3
4.	I don't have support from anybody that is why I find it difficult to care for themselves and control diabetes	81	66.9	40	33.1	0.3
5.	I like to eat healthy food that is why it is difficult for me to control diabetes	75	62.0	46	38.0	0.3

The results in Table 3 revealed that 77 (63.6%) of the respondents find it difficult to check and monitor their blood sugar level due to lack of money, but 44 (27.3%) respondents do not. Ninety-nine (81.9%) respondents do not have time for exercise due to the nature of their work, but 22 (18.18%) respondents do. Also, 73 (60.3%) respondents agreed that the diets recommended to be eaten is expensive so they cannot afford it, but 48 (39.7%) disagreed. Eighty-one (66.9%) respondents asserted that they don't have support from anybody that is why they find it difficult to control diabetes, but 40 (19.8%) did not. Lastly, 75 (62.0%) respondents stated that they like to eat healthy food that is why it is difficult for them to control diabetes, but 46 (72.7%) respondents did not

Result in Figure 1 revealed 85 (72.2%) respondents agreed that they always monitor their blood glucose level, but 36 (20.8%) respondents did not. Also, 104 (86.0%) respondents agreed that they always avoid sugary food, but 17 (14.0%) disagreed. Lastly 33 (27.3%) respondents affirmed that they do exercise regularly but 88 (72.7%) respondents did not due to lack of time.

Results in Table 2 revealed that all respondents monitor their blood sugar level close and regularly when they experience spiked diabetes (high blood glucose). In addition, 96 (79.3%) respondents control diabetes by increasing their dietary intake of fibres (e.g. vegetables, legumes and fruits but 38 (31.4%) respondents do not.

Results in Table 3 revealed that 73 (60.3%) respondents agreed that the diets they recommended to eat is expensive so they cannot afford it, but 48 (39.7%) disagreed. 81 (66.9%) respondents asserted that they don't have support from anybody that is why they find it difficult to control diabetes, but 40 (19.8%) did not. Lastly, 75 (62.0%) respondents stated that they like to eat healthy food that is why it is difficult for them to control diabetes, but 46 (72.7%) respondents did not

**Table 4:**

**Chi-square analysis of relationship between self-care practice and control of diabetes mellitus among diabetic adults in General Hospital Ikot-Ekpene, Akwa Ibom State (N =121)**

Self-care Practice	Control of Diabetes		Total	df	Sig	X <sup>2</sup> Crit	X <sup>2</sup> Cal	Decision
	Proper	Poor						
Proper	84	8	92	1	0.05	3.84	23.4	Rejected
Poor	15	14	29					
Total	99	22	121					

**Significant at 0.05; df = 1, X<sup>2</sup>Crit = 3.84; X<sup>2</sup> Cal = 23.4**

The result of Chi-square (X<sup>2</sup>) analysis in Table 4 revealed that the calculated value of 23.4 is higher than the critical value of 3.84 at 0.05 level of significant with 1 degree of freedom. The result is therefore significant.

**DISCUSSION**

The findings of the study revealed that majority of the respondents practice self-care for diabetes mellitus properly. These were demonstrated by the fact that over seventy – two (72.7%) of the respondents always check their blood sugar level; 79.2% monitor their blood sugar level always; and 86.0% always avoid sugary food. Also 80.2% respondents always eat diets that contain



less cholesterol; but only 27.3% respondents do regular exercise. Diabetic parents are always advised to check their blood sugar level regularly, do regular exercise and avoid sugary foods. They are also advised to eat diets that contains less cholesterol. When these recommendations are adhered to, their sugar level will stabilize. However, the findings also showed that most of the diabetic (65.2%) rarely got their blood sugar level tested. 29% diabetics did not engage in any form of exercise even once a day

### **CONTROL OF DIABETES AMONG DIABETIC ADULTS IN GENERAL HOSPITAL IKOT EKPENE AKWA IBOM STATE**

The findings of the study revealed that majority of the respondents practiced proper control of diabetes mellitus properly. All the respondents (100.0%) monitor their blood glucose level closely and regularly when they experience spiked diabetes; 94.2% respondents control diabetes by reducing stress and getting plenty of rest and sleep 86.8% drink plenty of water to keep their bodies hydrated; 79.3% increase their dietary intake of vegetables, legumes and fruits; while 68.6% respondents reduce their rate of carbohydrates intake. In order to control the spiked high blood sugar, diabetic parent is always advised to drink plenty of water to keep their bodies hydrated, reduce stress by getting plenty of rest and sleep, increase their dietary intake of vegetables, legumes and fruits and reduce their rate of carbohydrate intake. The findings correspond with a study by Ayo (2017) who's cross sectional study of diabetic patients revealed that majority of the respondents had high level of compliance with control regimen for diabetes. (ref) Majority of the respondents (69.4%) reduce the rate of carbohydrate intake and avoid sugary food.

### **FACTORS INFLUENCING SELF-CARE PRACTICE AND CONTROL OF DIABETES AMONG ADULT DIABETES**

The result of this study further revealed that self-care practice and control of diabetes mellitus is influenced by several factors. The findings revealed that 63.6% of the respondents find it difficult to check and monitor their blood sugar level due to lack of money; 81.9% respondents have no time to perform regular exercise 60.3% find recommended diets to be expensive 66.9% do not have support; while 62.0% respondents find it difficult to control diabetes due to their penchant for food. The finding agrees with findings by Abbasi, et al (2018), which showed that occupation and attitude yo control practice had significant correlations with practice level. (ref)

### **RELATIONSHIP BETWEEN SELF-CARE PRACTICE AND CONTROL OF DIABETES AMONG ADULT DIABETES**

The study revealed a significant relationship between self-care practice and control of diabetes mellitus among diabetes adults in General Hospital Ikot-Ekpene, Akwa Ibom State. Adult diabetics who practice self-care properly are more likely to practice control properly; but diabetic clients who practice self-care poorly will likely practice control poorly. The findings correspond with that of Abbasi et al (2018) which revealed that adherence and compliance to self-care advice promotes control of diabetes mellitus. (ref)

### **IMPLICATIONS OF FINDINGS TO NURSING**

The nurses should strategize towards educating adult diabetic on the importance of proper self-care control practices. Nurses will also educate the general public on the need to always

practice self-care and control of diabetes properly in order to stay healthy. Nurses should provide social and financial support to the lower class diabetic adult.

## CONCLUSION

In conclusion, although diabetes mellitus has no permanent cure, it can be controlled through proper self-care and control practice. This study has revealed that majority of the respondents practiced proper self-care and control of for diabetes mellitus properly. Despite proper self-care and control, several factors affect the practice which include lack of money. Lack of time to perform regular exercise, lack of support and high penchant for food. Hospital management, health workers and nurses should strategize towards education adult diabetic about the importance of proper self-care and control of diabetes mellitus.

## RECOMMENDATION

**Based on the findings of the study the following recommendations are suggested:**

- Hospital managements, health workers and nurses in general should strategize towards educating adult men and women about the importance of proper self-care and control of diabetes mellitus. Diabetic patients who find it difficult to practice self-care due to lack of time through regular exercise should be encourage to do frequent exercises. endeavor to create time.
- Government, non-governmental organizations and support groups should provide diabetic patients with the necessary support and assistance since it was observed that lack of support was affecting self-care and control practice.
- “Health is wealth” they say; therefore, diabetic patients who cannot practice self-care and control due to high penchant for food should try to put their health first by adhering to dietary advice for diabetic mellitus.

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