IOSR Journal of Nursing and Health Science (IOSR-JNHS)
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 11, Issue 6 Ser. IV (Nov. – Dec. 2022), PP 36-43
www.iosrjournals.org

Hospital-Related Factors Influencing Adherence to Self-Care Practices Among Type II Diabetes Mellitus Patients Attending Kakamega County Referral Hospital, Kenya

Naomi Kerubo Mbunya[1], Dr. Florence Habwe[2], Dr. Maureen Winga[3]&Mr Noa Nyaberi Mbunya[4]

[1]*MPH Student, DepartmentofPublic Health,MasenoUniversity,Kenya*
[2]*Lecturer, Department of Nutrition and Health,MasenoUniversity,Kenya*
[3]*Lecturer, Department of Educational Psychology,MasenoUniversity,Kenya*
[4]*Lecturer, EgertonUniversity,Kenya*

Abstract: *Diabetes mellitus (DM) is among the top four non-communicable diseases accounting for 74% of all deaths globally. Type II DM is the most prevalent and in Kenya is about 3.3%. Though incurable, if well managed individuals can live quality lives. Key to its management is adherence to recommended self-care practices to prevent complications and premature deaths associated with the condition. However, unsatisfactory adherence to self-care practice has been reported regardless of health education programs targeting the disease at the Kakamega County Referral Hospital. The primary objective of this study was to establish the hospital-related factors influencing adherence to recommended self-care practices.A cross-sectional study using a simple random sample of 145 patients selected from a total 198 patients was used.Further, 4 Key informants were sampledpurposivelyfrom a pool of 30 medical staff.Chi-square and multiple logistic regression were used to assess the association between independent and dependent variables for quantitative data.Content analysis aided qualitative data analysisHospital related factors were mostly associated with adherence to the recommended self-care practices at p =0.004. These factors included quality of healthcare services, physician patient relationship and delivery of key information. The study recommends that health care providers should provide quality healthcare services and at the same time maintain good relationship with patients. This can be achieved by encouraging healthcare providers to ensure they have effective and positive communication with patients regarding importance of adherence to recommended self-care practices.*

Keywords: *Hospital-Related Factors, Self-Care Practices, Type II Diabetes Mellitus Patients, Health Promotion, Adherence*

Date of Submission: 08-12-2022 Date of Acceptance: 22-12-2022

I. Introduction

Type II Diabetes Mellitus (T2DM) is a chronic disease whereby the body is unable to effectively use the hormone insulin to maintain blood sugars at normal levels (WHO, 2020). Though incurable, acceptance and adherence to prescribed self-care practices can enable individualslives quality lives (Nejaddadgar et al., 2017). The self-care practices includesroutines like balanced eating, regular physical activity, foot care, medication adherence and self-monitoring of blood glucose (American Diabetes Association, 2016). However, many diabetics find the self-care regimen confusing, challenging and demanding, most notably regarding food intake and physical exercise in addition to their prescriptions (Choo et al., 2015). These obstacles may arise due to the numerous personal, hospital and condition related circumstances that influence adherence to self-care behaviors.

It is estimated that at least 460 million adults have Type II Diabetes Mellitus globally (International Diabetes Federation (IDF), 2019). Africa is estimated to have 15.9 million adults living with Diabetes Mellitus which is a regional prevalence of 3.1%. Kenya is one of the 48 countries of the IDF African region. The prevalence of Diabetes Mellitus in Kenya is at 3.3%and the age adjusted death rate is 30.43 per 100,000 of population (WHO, 2020). Diabetes mellitus was the 10thleading cause of mortality in 2019 in Kenya (MoH, 2020). In the western region, Kakamega was the 8thleading County in diabetes mellitus morbidity in Kenya in 2019 (MoH, 2021). It is therefore important to assess the factors influencingadherence to recommended self-care practices for managing T2DM.

The World Health Organization has identified five distinct groups of variables that influence patient adherence to therapy: socioeconomic, medical team and system, medical condition, treatment, and patient-specific variables (WHO, 2020). Type II Diabetes Mellitus self-care behaviors are poorly adhered to in Sub-Saharan Africa, posing a danger to obtaining better health outcomes (Stephani et al., 2018). In Kenya,

investigations on conformity to recommended self-care activities among T2DM patients have focused on medication adherence and diabetes self-care knowledge (Mbutiti et al., 2016; Waari et al., 2018; Ndirangu, 2019; Wamucii et al., 2020). The precise assistance provided to patients with Diabetes Mellitus about their adherence behavior is reliant on the accessibility of medicines and the fundamentals of giving supporting evidence for prescribed therapies and self-care behaviors (Bonger, 2018). Effective diabetes treatment requires a comprehensive approach to care coupled with health education. Hospital- related variables that affect diabetes treatment include access to/distance from point of healthcare, the quality of healthcare services, the physician-patient relationship, and transmission of crucial information.

Distance influences the frequency with which patients visit clinics and on the overall management and treatment of diabetes (Oyelami et al., 2017). Mwaura et al., (2017) established that the distance between a person's house and a health facility consistently impacts the routines of clinic attendance, method of travel, and cost of transit for people with diabetes. The study examined the impact of distance to diabetic health services on self-care behaviors in Kakamega.

The quality of health care delivery must be enhanced, and this involves delivering equitable, timely, integrated, and efficient care that is safe, effective, and person centered (Ondieki, 2017). Clients and patients' compliance behaviors are influenced by the efficacy of the health care structure. For instance, creating a quality record-keeping system for patients is critical in determining non-compliance with clinic attendance requirements (those who fail to keep appointments or clinic check-ups). Consistent follow-ups, the patient's present state, and the frequency of medicine refills are critical for tracking a patient's adherence and thereby preventing problems via the implementation of appropriate measures for non-compliant patients (Atinga et al., 2018). A substantial correlation between health records management and service delivery was discovered in a cross-sectional research conducted at Kakamega County Referral Hospital (KCRH). The study was to ascertain the impact of health records maintenance on service delivery (Ondieki, 2017). The preceding studies were not explicit in their examination of how health care quality affects conformity to self-care routines in persons with Diabetes Mellitus, highlighting the need for more research.

It has been shown that the strength of a diabetic connection with his or her health care practitioner has a significant impact on patient self-care practice adherence (Lee et al., 2016). Patients who are happy with their healthcare professional stick to their treatment regimens more closely (Waari, 2019). It has been shown that the availability of assistance from healthcare practitioners is associated with patients attaining sufficient glycemic control (Powers et al., 2015). Physicians and patients must work together to provide effective diabetes treatment. Patients were happy with the treatment they got, according to research conducted to analyze treatment non-adherence and related variables among Type II Diabetes Mellitus patients visiting the diabetic clinic at KNH (Waari, 2019). Patient satisfaction with healthcare offered at the diabetes clinic was measured using a variety of parameters, including the whole clinic experience and satisfaction with the attending physician (Jalil et al., 2017).

Information dissemination may range from just informing someone of what they need to do to discussing the logic behind the advice and even investigating the patient's objectives and preferences before making treatment suggestions (Shiyanbola et al., 2018). Numerous studies have shown that up to 50% of people leave medical appointments unable to comprehend what their physician instructed them to do (Shiyanbola et al., 2018). Effective communication is critical for patient comprehension and compliance. In patients with diabetes, little is known about the link between physician communication and patient compliance with self-care behaviors; this is what this research sought to determine among T2DM patients at KCRH, Kenya. This study assessed hospital-related factors to try and address the risk identified by the first study done by Mutunga. Social Cognitive Theory served as the basis for this research, since it offers a valuable framework for comprehending the variety of variables that affect health and well-being. This research is critical for encouraging measures to enhance diabetic self-care habits among diabetics, especially those from low-resource areas, such as those who attend public hospitals.

Statement of The Problem

Adherence to recommended self-care practices is essential for the prevention of complications and premature deaths associated with Type II Diabetes Mellitus. However, unsatisfactory adherence to self-care practice in T2DM patients has been reported even with health education programs. In Kakamega County Referral Hospital, 62.03% of T2DM patients who attended monthly clinics scored 0% in performance of basic self-care practices over a period of 14 days (Mutunga et al., 2017). This is even though T2DM patients attending monthly clinics at the facility have a high degree of awareness of the condition. The cause of this sub-optimal adherence to self-care practice has not yet been established. Identification of factors influencing adherence to the self-care recommendations may be important for interventions required to achieve optimal adherence to self-care in T2DM management. It was specifically for patients attending clinic in KCRH.

II. Methodology

Research Setting and Design:

The research was conducted at Kakamega County Referral Hospital, Kakamega County in Western Kenya. The hospital has a total capacity of 448 beds and 80 cribs (Kakamega County Hospital, 2020). A cross-sectional research design was adopted and both qualitative and quantitative data were collected using a researcher administered questionnaire and interview guide respectively.

Target and Sample Population:

The study targeted T2DM patients attending out-patient diabetes clinics at KCRH. The hospital records indicates that on average,newly diagnosed cases of type 2 diabetics diabetes stand at 198 per month.A total of 145 respondents were used, 11 of whom opted out due to not providing informed consent or providing insufficient information. Yamane's (1967) formula was used to get this sample size.A simple random selection option was prioritized to select 145 T2DM patients for the study. The key informant interviews were conducted using a purposive sampling approach.They comprised the diabetes clinic's head medical officer, one nurse, one nutritionist, and one clinical officer.Those eligible for the study had to be T2DM patients in the clinic register, at least 18 years of age and consented. The critically ill and those with communication difficulties as well as non-consenting were excluded.

Data collection Instruments and Its Quality:

A researcher-administered questionnaire was used to collect quantitative data from the respondents. The questions were translated into either Kiswahili or other local dialect by research assistants for those who could not comprehend English.An interview guide was used to collect qualitative data from healthcare providers. The research instrumentswere piloted at Butere Sub-County Hospital among 15 patients who represented 10% of the study's sample size and three (3) key informants including a physician, a nutritionist, and a nurse working at the diabetic clinic. The reliability of the questionnaire was determined using Cronbach's alpha coefficient which was .824 and deemed sufficient. Consistency and relevance of the research instruments were verified.Expert judgment and opinion were sought to establish content validity of the research instruments and was found to be valid regarding relevance, clarity, simplicity and objective.

Measurement of Variables:

Dependent Variable (Adherence to Self-Care Practices Among Type II Diabetes Mellitus Patients)

Adherence to self-care practices regarding blood sugar levels monitoring, a low-sodium diet, regular exercise, weight monitoring, foot hygiene, medication and appointment keeping were measured using the "Diabetes Self-Management Questionnaire-Revised Scale" (Appendix V: section D). This has been successfully used to measure adherence in T2DM patients and establish adequate reliability (Schmitt et al., 2013). The tool comprised twenty statements with a 4-point scale (applies to me very much =3, applies to me much =2, applies to me somewhat =1 and does not relate to me =0 point) The participants were asked to specify their adherence status in the past two weeks (Drugs, diet, foot care and exercise), in the past month (Blood sugar levels and weight checking) and for the last 2 months (Appointment keeping). For each statement that applies to me very much [3], applies to me much [2], or applies to me somewhat [1], responses were combined and coded "1," but responses that do not relate to me [0] were coded "0." Each "1" earned one point, whereas "0" earned none. From previous studies conducted (Oluma et al., 2020), the cutoff point was used. The percentages were obtained by dividing the number of questions successfully answered by the total number of items in this parameter and multiplying by 100.Patients who scored 50% or more were classed as adherent, whereas those who scored less than 50% were classified as non-adherent to self-care methods.

Independent Variable (Hospital Related Factors)

These are existing factors in the hospital environment that make it easier or problematic for diabetics to undertake self-care. These included healthcare access, service quality, physician- patient relationships, and a failure to transmit crucial information. Five yes/no answer questions were asked in line with these variables.

Data Analysis and Presentation:

Data were analyzed both qualitatively and quantitatively. Descriptive and inferential statistics were used to analyze quantitative data. Descriptive statistics included percentages and frequencies. Inferential statistics such as chi-square and logistic regression tests were employed to determine the relationship between the independent and dependent variables using SPSS version 23.Qualitativedata were analyzed using content analysis. Interviews were transcribedand the output organized into various categories that were theme based. An in-depth analysis was carried out and findings was presented in form of narrations and verbatim quotations. Qualitative data findingswere mostly used in triangulating quantitative findings to improve validity and

reliability of the findings.

III. Results and Discussions

The research looked at the hospital characteristics that related to Type II DiabetesMellitus patients' adherence to self-care measures. Health care access, quality, patient-doctorinteractions and delivery of crucial information were among the characteristics evaluated in thisstudy.Patients with Type II Diabetes Mellitus who adhered to self-care methods in the hospital werestudied as a result of the study. There was a focus on factors such as patient-doctor interactionsandinformation deliveryin thisresearch.

Table1:DescriptiveStatisticsofHospitalRelatedFactors of Diabetic Patients Attending KCRH

Characteristic	Variable	Frequency	Percentage
Distance in km from therespondents 'hometothe	0-5km	76	56.7%
healthfacility	5-10km	45	33.6%
	Beyond10km	13	9.7%
	Total	**134**	**100.0**
QualityofHealthServices	Satisfied	78	58%
	Dissatisfied	56	42%
	Total	**134**	**100.0**
Physicianpatientrelationship	Satisfied	119	88.5%
	Dissatisfied	15	11.5%
	Total	**134**	**100.0**
Type II Diabetes MellitusHealthEducationonSelf-CarePractice	Everattended	127	94.8%
	Neverattended	7	5.2%
	Total	**134**	**100.0**
CommunicationofCritical	Yes	105	78%
Information	No	29	22%
	Total	**134**	**100.0**

Table 1shows that,56.7% of respondents were within a 5-kilometer radius of thehealth facility, 33.6% were within a 5-kilometer radius, and 9.7% were within a 10-kilometer radius. Most respondents (58 percent) said that the services they receivedwere of excellent quality, while 42 percent stated that they were dissatisfied. This was assessedby the participants' responses to whether they were happy with the health care providers'services. Diabetes mellitus health education sessions were attended by 94.8% of studyparticipants after diagnosis. Nearly 80 percent of the participants in this study reported they havebeeneducatedaboutthevalue ofself-careroutinesinthe treatmentofTypeIIDiabetesMellitus.
Aninterviewwitha keysourceyieldedthefollowinginformation:

> "*The hospital is responsible for poor adherence, particularly in public hospitals, which lacklaboratory consumables, written patient health education material, and other critical resources."We have instances when individuals are turned away or told to seek care elsewhere because weare unable to provide allof theirservices*."(Nurse,workingduration9years).

Anotherrespondentduringinterviewsaidthat:

> "*Communication of critical information and offering of quality service to patients is good when there are adequate staff*."(Nutritionist, workingduration6years).

Table 2: Hospital Related Factors and Adherence to T2DM Self-Care Practice usingPearsonChi-squaretest

Variable	Adherence(%)	Non-Adherence(%)	X^2	Df	*P*-value
AreYouAbletoAccesshealthcareproviders wheneveryouneedthem(Distance)					
Yes	45(88.2)	37(44.6)	7.910	1	**.005**
No	6(11.8)	46(55.4)			
Isthequalityofservicesofferedgood					
Yes	40(78.4)	38(45.8)	10.061	1	**.002**
No	11(21.6)	45(54.2)			
Isthephysicianpatientrelationshipgood					
Yes	43(84.3)	33(39.8)	10.157	1	**.001**
No	8(15.7)	50(60.2)			
Doesthehospitalcommunicatetoyoucriticalinformation					
Yes	36(70.6)	34(41)	7.286	1	**.007**
No	15(29.4)	49(59)			
Haveyoubeeninformedbyyourhealthprovidertheimportanceofself-carepractice					
Yes	40(78.4)	65(78.3)	10.061	1	**.002**
No	11(21.6)	18(21.7)			

KEY: **f** is Frequency; (%) is percentage, $\mathbf{X^2}$is Pearson Chi-square; **df** is the degrees of Freedomand***p***is the Probability

The Pearson Chi-square test of association showed connections between adherence to T2DMself-care routines and hospital-related characteristics. Table 2 reveals that, 45(88.2%) respondents who have access to healthcare professionals whenever they need thempractice self-care, compared to 6 (11.8%) respondents who lack access to healthcare personnel.The data indicated a strong correlation between adherence and healthcare provider accessibility(($X^2(1) = 7.910$, $p = .005$). Additionally, the findings showed that 40 (78.4%) respondents whothought that the quality of services provided was satisfactory adhered to self-care practices,compared to 11 (21.6%) respondents who indicated that the quality of services provided wasinadequate. The data indicated a significant relationship between adherence and service quality(($X^2(1)= 10.061$, $p = .002$).

Additionally, the findings showed that 43 (84.3 percent) respondents who reported having apositive connection with their healthcare providers practiced self-care, compared to 8 (15.7%)respondents who reported having a negative relationship with their healthcare providers. Therewas a substantial correlation between adherence and a positive physician-patient connection(($X^2(1) = 10.157$, $p=.001$). Additionally, the results indicated that 30(70.6%) respondents whoindicated that the hospital provided critical information regarding self-care practices adhered toself-care practices, compared to 15(29.4%) respondents who indicated that the hospital did notprovide critical information regarding self-care practices. The data indicated a strong relationshipbetween adherence and delivery of key information about self-care practices (($X^2(1) = 7.286$,$p=.007$).Finally, the results indicated that 40 (78.4%) respondents who indicated they hadbeen advisedby their health provider about the significance of self-care practice adhered to it, compared to 11(21.6%) respondents who indicated they had not been advised by their health provider about theimportanceofself-carepractice.Thedataindicatedasignificantrelationshipbetweenadherenceand health provider knowledge on the value of self-care practice (($X^2(1) = 10.061$, p=.002).

Table3: Logistics Model table for Hospital Related Factors

VariablesintheEquation	B	S.E.	Wald	df	Sig.	Exp(B)	95%C.I. forEXP(B)	
							Lower	Upper
Accessibility(yes)	.137	.505	.074	1	.786	1.147	.426	3.090
Quality(yes)	.512	.498	1.057	1	**.014**	1.668	.629	4.423
Relationship(yes)	.675	.443	2.316	1	**.008**	1.963	.823	4.682
Criticalinformation(yes)	.189	.476	.157	1	.692	1.208	.475	3.069
Self-careimportance(yes)	.678	.502	1.825	1	**.002**	1.971	.736	5.274
Constant	-.248	.281	.779	1	.377	.780		

a.Variable(s)enteredonstep1:Accessibility,Quality,Satisfaction,Education,Information.

In Table 3, characteristics associated to the hospital were found to differentiate those whopracticedself-carefromthosewhodidnot.Therewasan11.7-foldincreaseinself-carebehaviors among those who were able to access health care professionals whenever they neededthem (OR=1.147) compared to those who couldn't get the treatment they needed when theyneeded it.When asked "Is the quality of services supplied excellent," individuals who answered "yes" weretwice aslikelyasthose who answered"no"to maintainself-carehabits(OR=1.668).Participants who had a good connection with their doctors were twice as likely to exercise self-care asthosewhodidnot (OR=1.963)in termsof"physician patientrelationship."Do you have critical insights on self-care practices in T2DM from the hospital? Participants whosaid yes to the question "Do you have critical data on self-care routines in T2DM from thehospital?" were 1 time more likely to adhere to self-care practices compared to those who saidnoto thequestion (OR=1.208).The odds ratio (OR=1.971) showed that participants who had been told by their doctor about thesignificance of self-care routines in T2DM therapy were twice as likely toadopt self-care asthose who had not been told by their doctor (Have you been informed by your doctor about theimportance of self-carepracticein T2DMmanagement)?

Discussion

According to the findings, the Kakamega County Referral Hospital is just a 5km distance for most participants, while only a small percentage live more than 10km away. According to research done in Kenya, most persons with Type II Diabetes Mellitus (T2DM) are within a 5-kilometer radius of a health care facility (Barwecho, 2015; Wangai, 2013). In Burundi, Niyonsavye (2015) found the same findings. More participants were happy with the quality of the health care they received, according to the survey results. Fekadu et al., (2020) found that patients with Type II Diabetes at Wollega University Referral Hospital, Ethiopia, were happy with their healthcare. There was some dissatisfaction among patients with Type II Diabetes in Kuwait, however, according to Shiju et al. (2019). Participants were generally pleased with the physician-patient connection, according to the survey results. Patients' treatment adherence may be influenced by their physician-patient connection, according to these results (Schmidt, 2018). A better knowledge of which clinician characteristics

influence treatment adherence may improve patient outcomes, minimize T2DM complications, enhance patient quality of life, and reduce healthcare costs. This has profound implications for societal change." Self-care routines were taught to many of the participants. Other investigations, such as Kong and Cho (2020) and Thapa (2018), confirmed this finding. Despite this, Rajasekharan et al., (2015) found that many diabetic patients at a tertiary care hospital in Biratnagar, Nepal, did not attend instructional sessions. Most respondents said that the healthcare professional had given important information. Physicians were shown to interact with patients with diabetes mellitus in research by Smith et al. (2013). Many patients with lower levels of education may not be able to ask questions because they do not feel comfortable with the physician, or the physician does not communicate with them in an appropriate manner. Physician-patient communication is impaired by cultural differences (Keshavarzi et al., 2022).

There was a significant correlation between patient adherence and the availability of healthcare professionals ($p<0.05$). Access to a healthcare practitioner has been shown to enhancediabetic self-care habits, according to research (Gabay, 2015). With this partnership, patients are given the support and skills they need to achieve successful results in their battles with their illnesses (Freeman-Hildreth et al., 2019). Adherence and service quality were shown to be linked ($p=.002$, $p<0.05$) in the study results. Literature has shown that the quality of services and the adherence to diabetic mellitus self-care practices are linked positively (Capehorn et al., 2017). There was a significant link ($p=.001$, $p<0.05$) found between high levels of adherence and positive doctor-patient interactions. Patient–physician relationships have a considerable impact on self-care compliance in accordance with prior research (Bains & Egede, 2011; Pokhrel et al., 2019). To enhance adherence to self-care behaviors, physicians may use patient-reported outcomes to encourage patients, respond to their preferences, give psychological support and understanding of the discomfort associated with diabetes, and define a treatment objective. Adherence to self-care routines and the conveyance of crucial information were shown to be linked ($p=.007$, $p<0.05$). It is necessary that healthcare practitioners play an important role in disseminating important information about self-care routines, which has a substantial impact on patient adherence to self-care activities (Shrivastava et al., 2013). $p=.002$, $p<0.05$ showed a statistically significant correlation between adherence and health professional knowledge on the value of self-care practice. Adherence to diabetic self-care and understanding of its relevance were shown to have a statistically significant relationship (Kassahun et al., 2016).

Self-care behaviors were two times more likely to be adhered to by participants who thought the quality of the services they received was excellent. Health care should be safe, effective, patient- centered, prompt, efficient, and equitable (Kassahun et al., 2016). Patients with Type II Diabetes Mellitus who visit Kakamega County Referral Hospital were shown to be more likely to stick to their own self-care routines if the quality of treatment they received was high. Patients with Type II Diabetes Mellitus visiting Kakamega County Referral Hospital who were happy with the quality of health care services were more likely to adhere to self-care behaviors than those who were dissatisfied. Adherence may be improved if patients get safe, effective and individual-centered care that is timely, integrated, and efficient. Self-care plans were more likely to be adhered to by participants who had a positive connection with their health care providers (Kong & Cho, 2020). Patients with Type II Diabetes Mellitus who visit Kakamega County Referral Hospital have a better chance of adhering to self- care methods if they have a good connection with their doctors. Self-care behaviors were twice as likely to be adhered to by T2DM patients at Kakamega County Referral Hospital who were happy with their health care providers' services as those who were not. Patients are more likely to practice self-care if their healthcare practitioners spend enough time with them. Consequently, adherence to self-care behaviors among patients with Type II Diabetes Mellitus visiting Kakamega County Referral Hospital is strongly influenced by the quality of their relationships. Patients who were happy with their healthcare professional were more likely to stick with their treatment plan (Waari, 2019).

Self-care measures in T2DM were more likely to be adhered to by patients who had received written patient health education materials from the hospital. In T2DM management, self-care behaviors are twice as important as they were for participants who were educated by their health care professional of the value of self-care activities. The research also found that patients with Type II Diabetes Mellitus at Kakamega County Referral Hospital were more likely to adhere to self-care practices if they received health education materials on self-care practices. Patients with Type II Diabetes Mellitus who attended frequent counselling sessions and communicated key information were more likely to adhere to self-care methods than those who did not. Thus, patients who received health education materials were more likely to exercise self- care than patients who did not get them. Consequently, the availability of health education materials at KCRH has a considerable impact on the adherence of Type II Diabetes Mellitus patients to self-care practices. Patients are more likely to identify their health issues, grasp the therapy required, and change behaviors if they understand their diagnosis/condition (Travaline et al., 2015).

V. Conclusion and Recommendation

In line with the study's findings, Type II Diabetes Mellitus patients' conformity to self-care routines is strongly linked to hospital-related characteristics. The study established that quality of healthcare services, physician patient relationship and delivery of key information influence adherence to self-care practices among Type II Diabetes Mellitus patients. Therefore, health care providers should improve the quality of healthcare services and at the same time maintain good relationship with patients. This can be achieved by encouraging healthcare providers to ensure they have effective and positive communication with patients regarding the importance of adherence to recommended self-care practices.

Acknowledgement.

I shall be eternally grateful to the Almighty God since everything is possible because of Him. I'd want to take this opportunity to thank everyone who helped me write my dissertation. I would want to express my gratitude to my supervisors; Dr. Florence Habwe and Dr. Maureen Winga, the staff and patients at the diabetes clinic, as well as my statistician, for their unwavering support and advise.For their examination and acceptance of my application, I appreciate the Ethics and Research Committee of Maseno University/National Commission for Science Technology and Innovation/Kakamega County Referral Hospital.To my family and friends, thank you for your continual support and inspiration.

References

[1]. Atinga, R. A., Yarney, L., & Gavu, N. M. (2018). Factors influencing long-term medication non-adherenceamongdiabetesandhypertensivepatientsinGhana:aqualitativeinvestigation.PloSone, 13(3),e0193995.https://doi.org/10.1371/journal.pone.0193995

[2]. Bains, S. S., & Egede, L. E. (2011). Associations between health literacy, diabetes knowledge, self-care behaviors, and glycemic control in a low income population with type 2 diabetes. Diabetes technology & therapeutics, 13(3), 335-341.

[3]. Barwecho, M. J. (2015). Knowledge and practice of nutritionists in management of type 2 diabetes mellitus using honey: A case study of selected hospitals in Nairobi county (Doctoral dissertation, University of Nairobi).

[4]. Capehorn, M., Polonsky, W. H., Edelman, S., Belton, A., Down, S., Gamerman, V., ... & Alzaid, A. (2017). Challenges faced by physicians when discussing the Type 2 diabetes diagnosis with patients: insights from a cross-national study (IntroDia®). Diabetic Medicine, 34(8), 1100-1107.

[5]. Choo,C.,Tam,C.L.,Muniyandy,S.,&Kadirvelu,A.(2015). PersonalAttributions,EmotionManagements, Social. International Journal of Collaborative Research on InternalMedicine&PublicHealth. 32(1), 25-32.

[6]. Fekadu, G., Dereje, S., Dugassa, D., Bekele, F., Simegnew, D., Turi, E., & Gamachu, B. (2020). Type 2 diabetes mellitus patients' satisfaction with pharmacy services in Wollega University Referral Hospital, Western Ethiopia. IJS Global Health, 3(6), e28.

[7]. Freeman-Hildreth, Y., Aron, D., Cola, P. A., & Wang, Y. (2019). Coping with diabetes: Provider attributes that influence type 2 diabetes adherence. PloS one, 14(4), e0214713.

[8]. Gabay, G. (2015). Perceived control over health, communication and patient–physician trust. Patient education and counseling, 98(12), 1550-1557.

[9]. InternationalDiabetesFederation.(2015).IDFDiabetesAtlas,7thEd.InternationalDiabetesFederation.Brussels,Belgium.

[10]. InternationalDiabetesFederation.(2019).IDFDiabetesAtlas,9thed.InternationalDiabetesFederation.

[11]. Jalil, A., Zakar, R., Zakar, M. Z., & Fischer, F. (2017). Patient satisfaction with doctor-patient interactions: a mixed methods study among diabetes mellitus patients in Pakistan. BMC health services research, 17(1), 1-13.

[12]. Kassahun, A., Fanta Gashe, E. M., & Rike, W. A. (2016). Nonadherence and factors affecting adherence of diabetic patients to anti-diabetic medication in Assela General Hospital, Oromia Region, Ethiopia. Journal of pharmacy & bioallied sciences, 8(2), 124.

[13]. Kassahun, T., Gesesew, H., Mwanri, L., & Eshetie, T. (2016). Diabetes related knowledge, self-care behaviours and adherence to medications among diabetic patients in Southwest Ethiopia: a cross-sectional survey. BMC endocrine disorders, 16(1), 1-11.

[14]. Kassahun,T.,Gesesew,H.,Mwanri, L.,&Eshetie,T.(2016).Diabetesrelatedknowledge,self-care behaviours and adherence to medications among diabetic patients in SouthwestEthiopia: a cross-sectional survey. BMC endocrine disorders, 16(1), 28.https://doi.org/10.1186/s12902-016-0114-x

[15]. Keshavarzi, M. H., Safaie, S., Faghihi, S. A. A., & Zare, S. (2022). Barriers of physician-patient relationships in professionalism: A qualitative study. Journal of Advances in Medical Education & Professionalism, 10(3), 199-204.

[16]. Kong, S. Y., & Cho, M. K. (2020). Factors related to self-care in patients with type 2 diabetes. The Open Nursing Journal, 14(1), 11-18.

[17]. Mbutiti,A.M.,Makokha,A.O.,Mbakaya,C.,&Muthami,L.N.(2016).Factorsassociatedwithlevel of adherence to recommended self care practices among Type II Diabetes Mellituspatients in Nyeri provincial general hospital diabetes clinic, Nyeri, Kenya. InternationalAcademic Journal of Health, Medicine and Nursing, 1(1), 11-31.

[18]. MoH. (2020). Kenya National Strategy for the prevention and control of non-communicable diseases 2015 - 2020: Ministry Of Health-Kenya.

[19]. Mutunga-Mwenda, C. S., Wilson, A. L., Fatuma, A., & Maranga, A. K. (2017). Assessment ofknowledge on self-care practices by Diabetes Mellitus Type II attending Diabetes clinic atKakamegaCountyReferral Hospital. Journal of Health, Medicine and Nursing 45(12), 56-62

[20]. Mwaura, L.W.,Wandibba,S.,&Olungah,C.O.(2017).Effect ofdistanceonaccesstohealthservices among women with type 2 diabetes in a rural community in Kenya. AfricanJournalof DiabetesMedicine 25(1), 45-49

[21]. Ndirangu, L. N. (2019). Assessing Patients' Knowledge on Diabetes Self-care and the ClinicalOutcomeatKenyattaNationalHospital(Doctoral dissertation,UniversityofNairobi).

[22]. Ndirangu, L., & Karani, A. (2019). Patients'knowledge On Diabetes Self-Care and The ClinicalOutcome At Kenyatta National Hospital. International Journal of Social Science andTechnology, 4(3), 19-32.

[23]. Nejaddadgar, N., Solhi, M., Jegarghosheh, S., Abolfathi, M., & Ashtarian, H. (2017). Self-careand related factors in patients with type 2 diabetes. Asian Journal of BiomedicalPharmaceuticalScience,7(61), 6-10.

[24]. Niyonsavye, L. (2015). Knowledge, attitudes and practices on diabetic retinopathy among general practitioners in district and

regional hospitals in the north region of Burundi (Doctoral dissertation, University Of Nairobi).
[25]. Oluma, A., Mosisa, G., Abadiga, M., Tsegaye, R., Habte, A., & Abdissa, E. (2020). Predictors of adherence to self-care behavior among patients with diabetes at public hospitals in West Ethiopia. Diabetes, Metabolic Syndrome and Obesity: targets and therapy, 13, 3277.
[26]. Ondieki, F. (2017). Effects of health records management on service delivery: a case study ofKisii TeachingandReferralhospital.Journal ofHospital&MedicalManagement,3(01), 1-5.
[27]. Oyelami, F. I., Oshiname, F., Ekerete-Udofia, C., & Adelekan, A. L. (2017). Knowledge and Factors Associated with Treatment Compliance among Diabetes Mellitus Patients in Selected Hospitals in Ibadan, Oyo State, Nigeria. Journal of Advances in Medicine and Medical Research, 23(7), 1-8.
[28]. Pokhrel, S., Shrestha, S., Timilsina, A., Sapkota, M., Bhatt, M. P., & Pardhe, B. D. (2019). Self-care adherence and barriers to good glycaemic control in Nepalese type 2 diabetes mellitus patients: a hospital-based cross-sectional study. Journal of multidisciplinary healthcare, 12, 817.
[29]. Powers, M. A., Bardsley, J., Cypress, M., Duker, P., Funnell, M. M., Hess Fischl, A., ... & Vivian, E. (2015). Diabetes self-management education and support in type 2 diabetes: a joint position statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics. Diabetes care, 38(7), 1372-1382.
[30]. Rajasekharan, D., Kulkarni, V., Unnikrishnan, B., Kumar, N., Holla, R., & Thapar, R. (2015). Self care activities among patients with diabetes attending a tertiary care hospital in Mangalore Karnataka, India. Annals of medical and health sciences research, 5(1), 59-64.
[31]. Schmidt, C. (2018). Physician-Patient Relationships and Their Effect on T2DM Patient Treatment Adherence (Doctoral dissertation, Walden University).
[32]. Shiyanbola, O. O., Brown, C. M., & Ward, E. C. (2018). "I did not want to take that medicine": African-Americans' reasons for diabetes medication nonadherence and perceived solutions for enhancing adherence. Patient preference and adherence, 12, 409.
[33]. Shrivastava, S. R., Shrivastava, P. S., & Ramasamy, J. (2013). Role of self-care in management of diabetes mellitus. Journal of diabetes & Metabolic disorders, 12(1), 1-5.
[34]. Smith, K. J., Béland, M., Clyde, M., Gariépy, G., Pagé, V., Badawi, G., ... & Schmitz, N. (2013). Association of diabetes with anxiety: a systematic review and meta-analysis. Journal of psychosomatic research, 74(2), 89-99.
[35]. Stephani, V., Opoku, D., & Beran, D. (2018). Self-management of diabetes in Sub-SaharanAfrica:asystematicreview.BMCPublicHealth,18(1).https://doi.org/10.1186/s12889-018-6050-0
[36]. Thapa, D. (2018). Self-care activities among patients with diabetes attending a tertiary care hospital in Biratnagar, Nepal. Journal of Nobel Medical College, 7(1), 11-17.
[37]. Waari, G. K. (2019). Assessment of medication non-adherence and associated factors amongType II Diabetes Mellitus patients attending the diabetic clinic at Kenyatta National Hospital(Doctoraldissertation,JKUAT-COHES).
[38]. Waari, G., Mutai, J., & Gikunju, J. (2018). Medication adherence and factors associated withpoor adherence among Type II Diabetes Mellitus patients on follow-up at Kenyatta NationalHospital, Kenya. The Pan African medical journal, 29, 82.https://doi.org/10.11604/pamj.2018.29.82.12639
[39]. Wamucii,E.G.,Kiage,B.,&Kyallo,F.(2020).KnowledgeandSelf-CarePracticesAmongDiabetic Patients-A Case Study Of Thika Level 5 Hospital, Kenya. Journal of Health,MedicineandNursing, 5(5),25-43.https://doi.org/10.47604/jhmn.1180
[40]. Wangai, I. K. O. (2013). The Relationship between Type II Diabetes and Selected Modifiable Lifestyle Factors: A Case-Control Study at the Out-Patient Department of the St. Mary's Mission Hospital, Langata, Nairobi (Doctoral dissertation, University of Nairobi).
[41]. World Health Organization. (2016). Global report on diabetes. WHO.http://www.who.int/diabetes/global-report.Accessed 12Feb2018.
[42]. WorldHealthOrganization.(2020,June8).Diabetes.WorldHealthOrganization:WHO.

Naomi Kerubo Mbunya, et. al. "Hospital-Related Factors Influencing Adherence to Self-Care Practices Among Type II Diabetes Mellitus Patients Attending Kakamega County Referral Hospital, Kenya." *IOSR Journal of Nursing and Health Science (IOSR-JNHS)*, 11(6), 2022, pp. 36-43.