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THE CHALLENGES TO SELF-CARE AMONG TYPE 2 DIABETIC PATIENTS AT KABWOHE HEALTH CENTER IV. A CROSS-SECTIONAL STUDY.

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ABSTRACT.

Background:
Diabetes is a chronic metabolic condition characterized by high blood glucose (or blood sugar) levels that, over time, cause significant damage to the heart, blood vessels, eyes, kidneys, and nerves. The most common is type 2 diabetes, which mainly affects adults and arises when the body develops insulin resistance or fails to produce enough insulin. The study aims to assess the challenges to self-care among type 2 diabetes patients at Kabwohe Health Center IV.

Methods:
The study employed a cross-sectional study with qualitative methods among 18 participants who were selected using a purposive non-probability sampling technique. Recordings of the discussion were done using two recording devices to provide backup for the interviews and data analysis was done where responses were transcribed in verbatim then to English by the research team, coded, and categorized into themes and meaning drawn from the themes.

Results:
Patients with diabetes experienced significant negative consequences on their lives following a diabetes diagnosis and were afraid of diabetic complications. The access to resources and services, and the impact of illness are the themes that emerged as challenges to self-care among type 2 diabetes patients. Access to resources and services included sub-themes like logistical difficulties, costly food, and waiting for appointments. The impact of illness included subthemes like the impact activities of income generation and the effect on sexual activity.

Conclusion:
Resources and illness adaptability were the challenges identified. Before a patient with diabetes can do self-care, learning the basics of the condition is very important.

Recommendation:
Practitioners ought to have unique measures and guidelines for each patient diagnosed with diabetes and the earlier the information is given to these newly diagnosed patients the better outcome of self-care of diabetes.

Keywords: *Self-care, Type 2 diabetic patients, Kabwohe Health Center IV*
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BACKGROUND.

According to WHO, 2022, Diabetes is a chronic metabolic condition characterized by high blood glucose (or blood sugar) levels that, over time, cause significant damage to the heart, blood vessels, eyes, kidneys, and nerves.
The most common is type 2 diabetes, which mainly affects adults and arises when the body develops insulin resistance or fails to produce enough insulin. Type 2 diabetes has become increasingly common in countries of all income levels during the last 30 years. Type 1 diabetes, also known as juvenile diabetes or insulin-dependent diabetes, is a chronic illness in which the pancreas generates little or no insulin on its own.

For people living with diabetes, access to affordable treatment, including insulin, is critical to their survival. (WHO,2022)
Diabetes affects an estimated 537 million persons aged 20 to 79 in 2021. The total number of people living with diabetes is projected to rise to 643 million by 2030 and 783 million by 2045.3 in 4 adults with diabetes live in low- and middle-income countries. Almost 1 in 2 (240 million) adults

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living with diabetes are undiagnosed. NIT (2022). Diabetes is expected to cause 416,000 deaths in the IDF Africa Region by 2021.

Uganda is one of the 48 countries in the IDF African region. 537 million people have diabetes in the world and 24 million people in the Africa Region and this figure is estimated to increase to 33 million by 2030 and 55 million by 2045. In Uganda, the prevalence of diabetes in adults is 3.6% and the total number of cases of diabetes in adults is 716,000.

Patients with diabetes are often recommended to follow healthy living with regular self-care practices in diet, exercise, care of the foot, and regular blood glucose monitoring to reduce the progression and development of complications associated with diabetes (Ishwari Adhikari & Santosh, 2021). A study done in India found diabetes-related self-care practices followed to include good dietary behavior, good exercise behavior, good monitoring behavior, and good drug adherence at 29.8%, 30.3%, 44.2%, and 56.3%, respectively (Arulmohi et al., 2017). Participants who followed the general self-care practices and specific diet showed good glycemic control when compared to adults with poor self-care activities in the general diet and specific diet. (Saumika et al., 2019).

The Diabetes Control and Complications Trial definitively proved that tight glycemic control could reduce the risk of onset and progression of retinopathy, nephropathy, and neuropathy in patients with type 1 diabetes (Gubitosi-Klug, 2014). Despite known clinical benefits associated with diabetes self-care activities, several studies report poor adherence to recommended diabetes-related self-care practices with a study, (75.9%) of diabetes patients did not adhere to the recommended diet management, (83.5%) did not adhere to self-monitoring of blood glucose level, while 18 (4.3%) of the respondents did not adhere to the prescribed medications. (Bonger et al., 2018).

Some quantitative studies have examined patient knowledge levels and self-care practices and revealed gaps in knowledge regarding diabetes among people with diabetes in Uganda. A study by (Nakidde et al., n.d.) explored the existing diabetes self-care knowledge and practice and factors affecting people living with diabetes in South Western Uganda. Broadly, 44% of the participants scored below the set cut-off (> 70%) for adequate self-care knowledge, and a big number, 65% had inadequate diabetes self-care practice in the previous week.

Evidence synthesized from a randomized trial design showed that self-care educational interventions are effective in achieving desired clinical outcomes for people with diabetes; for example, a significantly higher percentage of participants at high risk for T2D achieved a reduction in HbA1c of at least 3 mmol/mol in Uganda and a higher percentage of glycemic control in a study by (Guwatudde et al., 2022). There are a few published qualitative studies that address the self-care experiences of people with type 2 diabetes from southwestern Uganda. Exploring experiences of self-care among patients with type 2 diabetes yields new knowledge regarding self-care among this population and will also help to prioritize type 2 diabetes management targets specific to the self-care needs of diabetic patients at Kabwohe Health Center IV. Therefore, the study aims to assess the challenges to self-care among type 2 diabetes patients at Kabwohe Health Center IV.

METHODS.

The methodology described is similar to the one published by (Rodrick Tugume and Andrew Natwijuka (2024)

Study Design.

This study employed a phenomenological study design and employed qualitative methods of data collection. This phenomenological design allowed the researcher to obtain enough data only on the first contact with the respondents in a short period.

Study setting.

The study will be conducted at Kabwohe Health Center IV (KHC IV). KHC IV is a government health center situated in the central Sheema district along Mbarara – Kasese road and it offers outpatient treatment, medical services, and obstetric services. This health center is headed by a physician in charge

Study Population.

The study population consisted of diabetic patients who had been diagnosed five years prior and were present at the health center during the data collection period.

Sample Size.

The sample size involved all 18 participants according to phenomenological studies.

Sample size determination.

The study sample size was determined by the principle of saturation where a collection of data was stopped after there was no new information from the respondents (Vasileiou, K.,2018)

Sampling Technique.

The study employed a purposive non-probability sampling technique. A non-probability sampling technique where the subjects were selected because of the researcher's judgment to participate in the study.

Sampling procedure.

Participants for the in-depth interviews were purposively selected from the health center. Participants were identified from the triage area and subjected to in-depth interviews after receiving their services from the health center.

Selection Criteria.

Inclusion criteria.

The study included diabetic patients who had been diagnosed for at least five years and were present at the health center diabetic clinic during the study period and willing to participate.

Exclusion criteria.

The study excluded those patients who were unable to speak and respond to questions, those who were critically ill, and those who were not willing to participate.

Research Instruments.

An in-depth interview guide with open-ended questions was used to collect data which was adapted from a study by (R. M. Ansari et al., 2019a)

Data collection procedure.

After obtaining a letter of approval from the Nursing department at Bishop Stuart University Ruharo campus, the researcher presented it to KHC IV and sought formal approval from the health center IV in charge. An approval letter from the in charge was presented to the head of the diabetic clinic. The researcher identified eligible participants. An oral presentation about the aim of the study, voluntary participation, and confidentiality was given. The researcher with the help of research assistants clarified whatever the respondents had not understood. Data was collected from the willing eligible participants who consented.
An in-depth interview guide was conducted seeing one at a time. The interview took approximately 30 minutes to 1 hour The responses were recorded with a voice recorder and a notebook for participant clarification of the information given

Validity of the study.

Trustworthiness was ensured by the four principles of trustworthiness described by Lincoln and Guba (1985) in Brink, et al., (2012). Guba's model was used for the trustworthiness of qualitative research to establish and maintain overall trustworthiness. The model has been used extensively by qualitative researchers.

Confirmability.

All data was kept safe for further analysis and provided enough substantiation that the findings and their interpretation are grounded in the data by making use of verbatim participant quotations.

Credibility.

To maintain the credibility of the study during data collection we applied the technique of peer debriefing and member checks. Member checking was done during the interviews by asking the participants whether they understood the questions by rephrasing and summarizing. Peer debriefing was done by reviewing the interview transcripts with the supervisor

Dependability.

Guba and Lincoln (1985) suggested the definition of dependability as the extent to which similar results would be attained if the study were repeated. To support dependability, the researcher ensured that the methods were described in sufficient detail by maintaining a step-by-step "audit trail". The researcher had all raw data stored so that it would be available for review if requested. The supervisor functioned as an auditor to make sure that the information given by the participants was accurately captured. The details of the interviews were recorded using a recorder, documented, and sent to the supervisor for verification.

Transferability.

Transferability refers to the analogy of generalizing and the ability to relate the findings to other contexts or other participants (Cope, Diane 2014). Generalization was not the aim of this qualitative research, but a detailed understanding of the participants' experiences and challenges. To improve transferability, a purposive sample was used. Purposive sampling maximizes the range of information by a conscious selection of participants in terms of their attachment to the phenomenon under investigation and other background characteristics

Data Storage.

Recordings of the discussion were done using two recording devices to provide backup for the interviews. Field notes were recorded for every in-depth interview as backup information to support the recording. The notes were labeled and dated according to the health center where it was carried out the day when it was carried out, and the socio-demographic details of the respondents were included in the notes. Both recordings and the field notes were stored safely for further reference and analysis.

Ethical Considerations.

The proposal was approved by the supervisor after which an approval letter was obtained from the head of the department

Confidentiality was respected throughout the study, and Utmost privacy and confidentiality were ensured. The anonymity of the respondents was ensured by ensuring that the audio does not carry any personal information anywhere. The participants were told that they would have no direct benefit from the study. However, some questions would provoke some emotional or psychological feelings related to intrusion into someone's private life.

RESULTS.

Two themes emerged access to resources and services the impact of illness

Impact of illness.

Participants noted negatively the impact of diabetes on their activities of daily living which mostly centered on sexual activity and tasks that generated income for these participants. Two sub-themes emerged; -

(a) ***Impact activities of income generation.***

Most participants pointed out how diabetes affected their ability to earn money in comparison to the time before the diagnosis

'Stopped me from digging' **{**PP1, female 12/07/2022}

"Stopped me from digging I used to be a big person with energy but now you see how I am(small) and even there is no blood in my body, no muscle, in fact, I, I became wasted" {PP6, female 12/07/2022}

"how I used to work I no longer because now I do to do anything that makes me tired and it even reduced the money I used to make, and I now am here as my friends are working (meaning hospital)" {PP 11; male 12/07/22}

Data Analysis.

The thematic data analysis was done where responses were transcribed in verbatim then to English by the research team, coded, and categorized into themes and meaning drawn from the themes.

Ruharo BSU and then presented to the health center in charge of Kabwohe Health Center IV for site clearance. Informed consent was obtained from the willing Participants, who were free to withdraw their participation at any time during data collection.

"*diabetes, for example, reduces your intake and they also say that you include vegetables and fruits in your diet"* (pp15 male 19/07/22)

"diabetes reduced my energy; I was weighing 98 kgs and now am in 65/ 67" (pp17 male 19/07/22)

"Now what you need to know is that you have to be cautious about getting an injury because a diabetic wound doesn't recover fast, that's my fear because I have a boda boda and am always worried about falling or someone knocking me" (pp17 male 19/07/22)

(b) **Impact on sexual activity.**

Some participants were worried about maintaining their families and their ability to copulate.

"*When I was healthy, I tried to do everything I could, but now it's not quite what it used to be. For instance, instead of doing three rounds in bed, I now only do one and then sleep off."* {PP 11, male 12/07/22}

"We decided to cease having affairs, I mean copulation because my husband and I both had diabetes and I saw that he was lacking in sexual vitality." {PP12; female 12/07/22}

"There is a lot to talk about like I had told you that you find you are not doing well conjugal rights and you are there; you don't have sexual energy to work …." **{**PP14 male 19/07/22}

*"for men, you cannot be happy on the side of family and conjugal issues and you lose appetite, and because you are sickly you cannot do your work daily", {*PP15; male 19/07/22}

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"*eeeehh, it reduced my sexual energy because they say, when it kills your manhood, it doesn't heal? It reduces the sexual energy*" **{**PP16; male 19/07/22}

"my sexual energy reduced" {pp17 male 19/07/22}

"Diabetes initially caused me to lose my sexual ability, and now that I stabilized, I only do one round, and even I have joint pain and insomnia." {PP18, male 19/07/22}

"The biggest burden it has placed on me is my inability to conduct sexual activity with my wife; I lack vigor and strength." {PP18; male 19/07/22}

Access to resources and services.

In this final theme, participants were generally dissatisfied with their access to services and felt their health needs were not met locally. Participants complained about several inconveniences in accessing services, such as waiting for appointments, costly food, and logistical difficulties such as transport and drugs which were the four sub-themes

(a) Transport.

Participants stated drugs were obtained per month and the transport was costly to maintain per month as they visited the health center

"*at times I have no transport because every time I come here I have to have spent 20,000 and we come every once a month and I see they disturb me a lot when I don't even have a source of income, I see it difficult"* {PP2, female 12/07/2022}

"What disturbs me is first money for monthly transport to go to the hospital" {PP4 male 4/12/07/22}

"*The issue is that a bunch of matooke costs 2500 Ugandan Shillings at home, while my transport here costs 10,000 Shillings, and returning costs the same. In addition, you have workers to pay*." ppt 18; 19/07/22

(b) Drugs.

Participants identified the money as a major hindrance as every patient receiving drugs has to pay Ugandan shillings 10,000 per month to obtain drugs for the next month.

"The biggest concern that diabetes has brought into my life is the concern that I won't be able to afford the priced medications since I don't have the money. and what will l do in the future if the money disappears and I can't find someone to give me roughly Ugandan shillings 10,000 for the medications." PP3, {female 12/07/2022}

(c) Diabetic needs.

Some participants identified vegetable food as costly and very difficult to maintain in their diet while others stated the costly behavior of diabetics prevention of wounds.

"It's about money because, for instance, we have Yaka electricity at home, which shuts down if you don't load power and leaves you without power for the entire night." {PP3;, female 12/07/2022}

*"Most of the time, it's the money since we don't get all these drugs for free and the transportation because we live far from the health center."***{**PP 14; 19/07/22}

"I believe it has to do with money because diabetes is expensive and you find that your family also needs money, but you lack the stamina to work to obtain it…." {ppt 16, male 19/07/22}
"If this hospital was not there we would not be there" … **{**PP 09 female; 12/07/22}

(d) Waiting for appointments.

Participants were disgruntled with the time taken at the health center to obtain the drugs.

"For instance, we arrived at this location (meaning facility) at 8:00 a.m. and we're still here at noon, and we're weak people. The time we spend here causes stress, as I've been saying. For example, I don't like sitting here and I detest it, so when I have money I go and buy drugs." {PP 5 12/07/22}

DISCUSSION.

Challenges of self-care among patients living with diabetes at Kabwohe Health Center IV.

Impact of illness.

The results of this theme demonstrated that patients with diabetes experienced significant negative consequences on their lives following a diabetes diagnosis and were afraid of diabetic complications. In other words, people who have diabetes must manage both their physical and emotional requirements. Impact on activities that generate revenue and impact on sexual activity were the two key sub-themes in which illness was viewed. Consistent with the study are studies (Wu et al., 2019) (Mathew et al., 2012)which found

that patients experienced both emotional and physiological issues and had to learn to maneuver through them. A similar outcome was reached in a study by (Bukhsh et al., 2020), which identified obstacles such as the cost of health care, disease, and co-morbidities as key factors in self-care.

Access to resources and services.

Several challenges to self-care emerged from this study. These challenges include financial constraints, physical limitations, fearing food, and transport. Unintentional non-adherence to medicine due to financial constraints and being over-occupied with a job (Bukhsh et al., 2020). Several participants explained that they had to negotiate household food choices to protect their health and prevent the worsening of their conditions. However, some viewed it as a constraint to the family. Despite these difficulties, patients frequently search for alternatives because they always attempt to obtain medications for two months or longer so that they may save money on travel, even when these are the same people who need to have their blood sugar levels checked per visit. This means that healthcare policy formulators have to be inclusive of diabetic patients as they face an all-around challenge of accessing basic services like drugs due to these barriers. A similar outcome was observed in a study conducted by (Bukhsh et al., 2020), which identified financial resources, busyness, and unaffordability as important barriers to self-care.
A similar finding was also obtained in a study done by (Shirazian et al., 2016) which showed access to resources from family as another barrier to diabetes self-care.

CONCLUSION.

Resources and illness adaptability were the challenges identified. Before a patient with diabetes can do self-care, learning the basics of the condition is very important.

RECOMMENDATIONS.

Practitioners ought to have unique measures and guidelines for each patient diagnosed with diabetes and the earlier the information is given to these newly diagnosed patients the better outcome of self-care of diabetes.

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LIST OF ABBREVIATIONS.

WHO: World Health Organisation.
NIT: Northern Lowa Therapy

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