

Influence of Prior Knowledge in the Management of Type 2 Diabetes Mellitus amongst Diabetic Patients Attending Endocrinology Clinic, Ahmadu Bello University Teaching Hospital, Shika, Kaduna State, Nigeria

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Abstract

Prior knowledge is essential in the management of chronic diseases such as type 2 diabetes mellitus. Prior knowledge is the experience that the learner already has before she/he meets new information. The objectives of this study were to explore prior knowledge among people living with type 2 diabetes mellitus and contradictions between prior knowledge and information received from Endocrinology Clinic, Ahmadu Bello University Teaching Hospital, Shika, Kaduna State, Nigeria. This study is primarily a qualitative study involving participants living with type 2 diabetes mellitus in Zaria, Kaduna State, Nigeria. Data were collected using a semi-structured interview guide with 18 patients who attended Endocrinology Clinic, Ahmadu Bello University Teaching Hospital, Shika, Nigeria. Findings revealed that prior knowledge of people living with type 2 diabetes mellitus in Endocrinology Clinic, Ahmadu Bello University Teaching Hospital, Shika, Nigeria contradicts the orthodox medical perspective. Participants' prior knowledge about type 2 diabetes is that once diagnosed, the person is liable to die early. Similarly, that wound in someone with diabetes can never heal. Also, diabetic patients' diet is restricted to only wheat and beans. Likewise, it is believed that drug adherence is insignificant in coping with chronic diseases such as type 2 diabetes mellitus. The study, therefore, recommends that since patients' prior knowledge and self-management are critical elements in managing chronic diseases, especially in Nigeria, there is a need to use Information Communication Technologies to explore prior knowledge of people living with chronic illnesses. This recommendation will reduce associated complications and develop an intervention that will be patient-oriented.

Keywords: Type 2 diabetes mellitus, Prior knowledge, Information, Endocrinology Clinic

Introduction

Nigeria, like other sub-Saharan African countries are experiencing a rise in type 2 diabetes mellitus (Chijoke, Adamu & Maikusidi, 2014; Nwankwo & Nwankwo,

2010; Okolie, Ehiemere, Ihenecho & Kalu, 2009). Type 2 diabetes mellitus is one of the primary causes of mortality in Nigeria. In sub-Saharan Africa, Nigeria has the highest number of people with diabetes, with an estimated 3.9 million people (or an extrapolated prevalence of 4.99%) of the adult population aged 20-79-year-old (Dahiru, Aliyu & Shehu, 2016). Nigeria is one of the 32 countries of the International Diabetes Federation African Region. Four hundred twenty-five (425) million people have diabetes in the world and more than 16 million people in the African Region. By 2045 it will be around 41 million. Chronic diseases care to extend beyond the hospital setting and have a high impact on the lives of those living with it. Chronic illness affects almost every aspect of a person's life, including life decisions, family, prior knowledge, and work, requiring a holistic care approach to promote quality of life (Harding, 2017). Caring for people with chronic diseases requires investigating their prior knowledge about the illness. It is essential to have an insight into patients' prior knowledge to develop an intervention for coping with chronic illness. Coping with chronic diseases can be very challenging, cumbersome, and a significant burden.

Problem Statement

Prior knowledge precedes effective management of a health condition. It is essential in achieving the desired health outcome. Prior knowledge is what is known to an individual about a situation or phenomena before exposure to information. Prior knowledge makes insight and predictions as easy as using a database by building infrastructure – infrastructure for inference. Type 2 diabetes mellitus is a significant cause of mortality and morbidity globally and in Nigeria. Several researches have been conducted on the management of type 2 diabetes mellitus. Despite these researches, complications remain prevalent among type 2 diabetes mellitus attending Endocrinology Clinic, ABUTH, Shika, Kaduna State, Nigeria.

Research questions

Two research questions were raised to address the problem of type 2 diabetes. The research questions include the following:

1. What is the prior knowledge of type 2 diabetic patients attending Endocrinology Clinic, Ahmadu Bello University, Shika?
2. How has information received from Endocrinology Clinic (EC) contradicted the prior knowledge of type 2 diabetic patients about diabetes mellitus?

Literature Review

Several studies have been conducted that investigated the role of prior knowledge in chronic diseases such as Type 2 diabetes mellitus management. The survey conducted by Sedek & Sarari (2019) on the knowledge of type 2 diabetes mellitus among adults with and without T2DM in Malaysia. The study compared

experience between an adult with or without in Universiti in Bangi, Malaysia. The study population consists of 101 diabetic respondents and 101 non-diabetic respondents. The study adopted a quantitative method; a questionnaire was used for data collection. The finding of the study revealed that knowledge about diabetes mellitus among those living with and those not living with the illness is good. It concluded that the information gained from the research could be used for designing a health intervention programme.

The study by Wildevuur, Thomese, Ferguson & Klink (2017) explored the use of information communication technologies to alleviate the pressure on health care systems exerted by the growing prevalence of chronic diseases. Information and communication technologies (ICT) are being introduced to enable self-management of chronic diseases by supporting partnerships between patients and health care professionals. The study used cancer patients as a case study. A research question guided the study; to answer what are the preconditions of ICT-enabled PCC in chronic disease management. The comparative analysis method was adopted for the study. Findings revealed that four user-related pre-conditions of ICT-enabled PCC: (shared) decision making, personalized ICT, health-related quality of life, and efficiency. The study concluded that four preconditions together could improve people's self-management of chronic diseases by strengthening the partnership between the patient and the healthcare professional.

Srisanthanakrishan & Shah (2016) investigated Knowledge and perception of diabetes among patients with type 2 diabetes mellitus attending rural health care centre, Tamil Nadu, India. The objective of the study was to assess the knowledge and perception of diabetes among patients with type 2 diabetes, attending the Rural Health Training Centre (RHTC), Vayalanallur, India. A cross-sectional study was conducted to assess the awareness about complications of diabetes among patients with type 2 diabetes, attending RHTC in Tamil Nadu. Forty-three participants gave written consent, and they were included. The study was conducted using a questionnaire through a one to one interview. The finding revealed that participants know diabetes mellitus. It concluded that knowledge about diabetes is fair; however, their practice on control of glycaemic levels needs to be improved.

Rushforth, McCrorie, Glidewell, Midgley & Foy (2016) explored the Barriers to the effective management of type 2 diabetes in primary care. The objective of the was to guide quality improvement strategies for type 2 diabetes by synthesising qualitative evidence on primary care physicians' and nurses' perceived influences on care. Content analysis of databases was conducted. Findings revealed that patients lack confidence in the knowledge of guidelines and skills, notably initiating insulin and facilitating patient behaviour change. Changing professional boundaries have resulted in uncertainty about where clinical responsibility resides. The authors concluded that training targeting

knowledge is necessary but insufficient to bring about significant change; approaches to improving diabetes care need to delineate roles and responsibilities.

Methodology

The qualitative research methodology was adopted to investigate the prior knowledge of type 2 diabetic patients attending the Endocrinology Clinic at Ahmadu Bello University Teaching Hospital (ABUTH), Shika. This study utilized social constructivism as a Metatheory using the interpretive paradigm. This is to represent the voice of the voiceless. The selection of participants was facilitated through ethical clearance granted by the Ethical Committee, Ahmadu Bello University Teaching Hospital. The researcher designed the consent form. Participants comprised of 18 types two diabetic patients attending Endocrinology Clinic, ABUTH, Shika. The sample size for the study was determined when saturation was reached. Participants were selected using purposive sampling. An in-depth interview was used for the data collection. It allowed the researchers to elicit information from the participants to answer the research questions.

Results and Discussion

Prior knowledge of diabetic patients before attending Endocrinology Clinic, ABUTH, Shika

This section consisted of the narratives of Type 2 Diabetes Mellitus patients in the study setting about their prior knowledge about diabetes before the commencement of Endocrinology Clinic (EC), ABUTH, Shika. Table 1 provides details about T2DM patient's prior knowledge before their exposure to EC.

Table 1- T2DM Patient's Knowledge about Diabetes Mellitus before Commencement of Endocrinology Clinic, ABUTH, Shika.

Research question	Categories	Subcategories	Frequency	Percentage
How has your prior knowledge contradicted your knowledge about diabetes	1.Mortality rate	1.1.Early death	2	11.11
	Group total		2	11.11%
	2.Diets	2.1. Eat beans and wheat	4	22.22
		2.2. carbohydrates diets	2	11.11

	2.3. eat beans and acha	2	11.11
	2.4 Others	2	11.11
Group total		10	55.55%
3.Glycaemic control	3.1.sugar intake	2	11.11
	3.2. insulin regulation	1	5.55
Group total		3	16.66%
4.wound management	wound care	1	5.55
Group total		1	5.55
5.weight management	Weight loss	2	11.11
	Body Mass index	1	5.55
	Monitor weight	1	5.55
Group total		4	22.22%
6. Herbal medicine	herbal drug regimen	1	5.55
Group total		1	5.55%
7. Exercise	Regular exercise	1	5.55
Group total		1	5.55%
Groups total		21	16.66

Source: Interview analysis, 2019.

The categories and subcategories are discussed as follows:

Category One Mortality Rate (2/18, 11.11%): This category consisted of narratives of participants' awareness of the mortality rate of people living with diabetes mellitus before starting the Endocrinology Clinic. This category has one subcategory; early death (2/16, 11.11%).

Category Two Diets (10/18, 56%): This category consisted of the narratives of the participants concerning their prior knowledge about the diets which a diabetic someone suffering from the disease is supposed to maintain. The category has four subcategories; eat beans and wheat (4/18, 22.22%), carbohydrate diets (2/18, 11.11%), eat beans, and acha -phonio millet (2/18, 11%); others (2/18, 11%).

Category Three Glycaemic control (3/18, 16.66%): This category highlighted the narratives of diabetic patients who partook in the study about their knowledge of sugar control before starting EC. This category consisted of two subcategories; sugar intake

(2/18,11.11%) and insulin regulation (1/18, 5.55%). Narratives of the participants are stated as follows starting with sugar intake;

Category Four Wound Management (1/18, 5.55%): This category consisted of the narratives of participants about diabetic wounds generally before being exposed to the physician's guidance at the Endocrinology Clinic. The researcher gathered from the participants that wounds do not heal at all. This finding is supported by the narrative of one of the participants. This category has only one subcategory; wound care (1/18, 5.55%).

Category Five: Weight management (4/18, 22.22%) category represents the view of diabetic patients in the study about their prior knowledge of the effect of weight in diabetes management. This category consists of three subcategories weight loss (2/18, 11.11%), body mass index (1/18, 5.55%), and weight monitoring (1/18, 5.55%).

Category Six: Herbal Medicine (1/18, 5.55%) category consisted of the narrative of a participant who confessed their awareness of the use of herbal medicine in diabetes management before EC. This category has one subcategory; herbal medicine regimen (1/18, 5%).

Category Seven Exercise (1/18, 5.55%): This category consisted of the narratives of the participants on the importance of exercise in living with type 2 diabetes mellitus before starting EC. The category has one subcategory; regular exercise (1/18, 5%).

Knowledge about Diabetes Mellitus after the Commencement of Endocrinology Clinic, ABUTH, Shika

This section captured the narratives of participants in the study setting about the knowledge they were exposed to after the commencement of the Endocrinology Clinic. Table 2 provides details about knowledge acquired through EC about diabetes.

Table 2: T2DM Patient's Knowledge about Diabetes Mellitus after Commencement of EC, ABUTH, Shika.

	Categories	Subcategories	Frequency	Percentage
1.	Eating moderately	Diet monitoring	4	22.22
		Dietary guidelines	5	27.77
		Dietary regulation	5	27.77
		Fruit consumption	4	22.22
		Taking maize with shaft	3	16.66
		Others	2	11.11
	Group total		23	94.44%
2.	Glycaemic control	Sugar intake	2	5.55
		Glycaemic control	2	5.55

	Group total		4	11.11
3.	Exercise	Regular exercise	3	16.66
	Group total		3	16.66
4.	Alcoholic consumption	Alcoholic consumption	1	5.55
	Group total		1	5.55%
5.	Wound management	Wound care	2	11.11
	Group total		2	11.11%
6.	Drug regimen	Drug regimen	1	5.55
	Group total		1	5.55%
7.	Loss of Sight	Loss of Sight	2	11.11
	Group total		2	11.11%
8.	Cognitive Dissonance	Confusion	1	5.55
	Group total		1	5.55%
	Groups total		37	29.36%

Source: Interview Analysis, 2019

Categories and sub-categories that emerged from the research question are discussed as follows;

Category One Dietary Monitoring (17/18, 94.44%) category consisted of the narratives of the diabetic patients who partook in the study about knowledge gathered after they started attending the Endocrinology Clinic. The category consists of five subcategories; eating moderately (4/18, 22.22%), dietary guidelines (5/18, 27.77%), dietary regulation (5/18, 27.77 %), fruit consumption (4/18, 22.22%), taking maize with shaft (3/18, 16.66%) and others (2/18, 11.11%). These subcategories are discussed in the following paragraphs.

Eating Moderately: This subcategory consisted of narratives of the participants about the quantity of food to eat at a sitting. The researcher found out from the participants that they got to know after their regular attendance at the Endocrinology Clinic, that they are not supposed to overeat at a sitting. That diabetic patient is supposed to eat in piecemeal. Narratives of some of the participants are captured thus; "I never knew a diabetic patient is not supposed to overeat till I started attending Endocrinology Clinic". Not overeating is emphasised for patients at the clinic; they are to eat a small portion at a sitting. This was revealed in one of the participant's narration; "Before I started attending the clinic, I did not know that I should eat with moderation. I am informed at the Clinic that I must not overeat at a sitting. I should eat small at a time".

"The information I received from the Endocrinology Clinic has helped me. This is because I think I can eat as I want; it was at the hospital that the doctor told me I could only eat a small portion at a time". Eating moderate encompasses dietary regulations. An individual living with diabetes must consume with moderation as well as monitor diet intake.

Dietary guidelines: This subcategory consisted of the narratives of diabetic patients who partook in the study on compliance with the food intake of a diabetic person. The researcher found that there is a lot of facts about diets that are not known to the participants until they got exposed to such information at the Endocrinology Clinic. Narratives of the participants pointed this out; "the doctor told me that I should eat small at a time. Also, I am told to avoid alcoholic drinks". "The information is the same as the ones I have before. Such as being careful with what to eat, for example, rice, maize, and fruits.

Nevertheless, there is more clarity on how to monitor what I eat. I am advised not to overeat at a sitting". It is revealed that though the information I heard before and after did not differ, there is more understanding because she started attending the Endocrinology Clinic. The essence of diet monitoring is to stick to the dietary regulation.

Diet regulation: This subcategory consisted of the narratives of the participants about knowledge gained about diet monitoring from the Endocrinology Clinic (EC). These centres on the need to seriously watch the types of foods they eat. The researcher found out that some of the participants thought they could eat any kind of food they desire, not until they started attending the EC. Revelations by some of the participants are captured in the following sentences. "I know I am not supposed to eat rice. However, when I started attending the clinic, I was informed I can take rice but with plenty of vegetables". "I got to know that I can take carbohydrate foods but with plenty of vegetables." To ensure that a perfect diet guideline is maintained, there is a need to monitor all intakes; dairy consumption inclusive.

Dairy Consumption: This sub-category revealed the knowledge of diabetic patients who participated in the study about the consumption of dairy products. The researcher found that participants had thought they could eat eggs as they desired. However, they were told otherwise at the EC that it is not right for a diabetic patient to take eggs. The narrative of a participant is captured to buttress this point; "it was after I started attending EC that I got to know that I am not to retake egg." As dairy consumption is to be avoided, some fruits are highly recommended for diabetic patients.

Fruit Consumption: This subcategory consisted of the revelations of the diabetic patients on the consumption of taking fruits by diabetic patients as instructed at the EC. The researcher found out that some of the participants said that they never knew that

they could take specific types of fruits. It was when they started attending routine EC that they realized that they could take some fruits. Narratives of some participants in the study are stated as follows; "before it was what I had been taking, and I am even getting tired of it. I am happy I know I can take fruits like watermelon, apple, and garden egg. The information has helped in coping with the diseases, especially eating problems I had been experiencing". "It was when I started attending EC that I learned that I could take fruits such as watermelon, garden egg, and apple. I thought a diabetic patient is not supposed to take them". The essence of fruit consumption in diabetes management is to enhance living a better life. Nevertheless, this can be achieved if the right type of food is taken. Maize meal can also be consumed with chaff.

Taking Maize with Chaff: This subcategory consisted of the narratives of the participants about maize consumption. The researcher found from the participants that they knew that being diabetic, they must not take maize. It was when they started attending the EC that their care providers informed them that they can consume maize, but must ensure the chaff of the maize is not removed. Expressions of some of the participants are stated as follows; "It is when I went to the clinic that I was told that I could take maize but without removing the chaff.""I should monitor my food intake, not overeating at once moreover, that I can eat maize without removing the chaff". Total dietary regulation encompasses many details, which are discussed in the other sub-categories.

Others: This category consisted of narratives of the participants who were specific on the information received at the EC on the types of food they can eat, which was not known to them before. The researcher found out that some of the participants are not aware that they can eat plantain and carbohydrates at all. However, information from the Endocrinology Clinic revealed that they could consume carbohydrates. Their narratives are captured as follows; Participant 3 stated that "That I can take *acha*, wheat, Bambara nuts but avoid sugar. I was told I could take plantain but unripe ones". Likewise, participant 7 revealed that "I got to know that I can take carbohydrates foods but with plenty of vegetables."

Category Two Glycaemic Control (4/18, 22.22%): The category consisted of the narratives of the diabetic patients who partook in the study about what they know on sugar control having being exposed to routine Endo lectures. There are two subcategories; sugar intake (2/18, 11.11%) and blood sugar monitoring (2/18, 11.11%). Narratives for these subcategories are as follows:

Sugar intake: This sub-category captured the knowledge of participants about sugar intake by individuals who have diabetes. The researcher found out that some of the diabetic patients who partook in the study persist in consuming sugar until they were told at the Endocrinology Clinic. They felt it is okay for them to continue to use sugar

in their meals. Their narratives are reported as follows; participant 3 revealed that "I was advised to avoid using sugar completely." Participant 4 said, "I learned that I should not take sweet things like sugar". The essence of avoiding sugar intake is to control the blood sugar level of a diabetic patient.

Blood sugar monitoring (2/18, 11.11%): This subcategory consisted of the narratives of diabetic patients who participated in the study. The researcher found that the participants do not know that it is essential to monitor their blood sugar. Furthermore, they never knew the first step to take when the blood sugar gets too low is to take a drink with a high level of sugar. Some of the narratives of the participants are captured as follows; "I got to know at the Endocrinology Clinic that when sugar is too low, one is asked to some sugary things to boost the sugar level" (participant 5). Participant 8 expressed her knowledge about blood sugar control from the Clinic; thus, "I get to know from the Endo clinic that when the sugar level is too low, one has to take a sugary thing or drink to balance it."

Category Three: Exercise (3/18, 16.66%): This category consisted of the narratives of participants in the study setting about the importance of exercises in diabetes management. The category has one sub-category; regular exercise (3/18, 16.66%). Narratives for the subcategory is reflected in the next paragraph.

Regular exercise: The researcher found out that participants are aware of the importance of exercise in diabetes management. Narratives of the participants relating to information revealed to them about exercise when they started attending the EC is, "It was at the clinic I got to know that exercise is vital for me." Similarly, a participant expressed with more clarity, "Though I am aware of the importance of exercising in managing diabetes before and after I started the EC, now there is much clarity. Also, the doctor said I should ensure that I exercise regularly to help me in my blood sugar control".

Category Four Alcoholic consumption (1/18, 6%): This category revealed the knowledge acquired by diabetic patients who participated in the study from EC on the consumption of alcohol. The researcher found that some people living with diabetes who consume alcohol drinks feel that they can continue taking it. They realized that they could no longer do so when they started attending EC, ABUTH, Shika. The narrative of one of the participants is captured as follows; "I am told by my doctor to avoid alcoholic drinks. I thought I could continue drinking alcoholic drinks. My friends told me that I could take just a bottle per day. Nevertheless, I know better now."

Category Five Wound management (2/36, 11.11%): This category consisted of the narratives of the participants on the information they became exposed to about wound management when they started attending Endocrinology Clinic. The category has one

subcategory; wound care (2/36, 11.11%). Narratives are discussed in the following paragraph.

Wound Care: This subcategory revealed the information that was made available to the participants at EC on how to handle wound by a diabetic patient. The researcher found out that some individuals among the participants never knew the wound could heal in someone living with diabetes mellitus. It was revealed to them through their care providers at the EC that wound will heal if adequately taken care of; the expression of some of the participants is as follows; "I got to know from the Clinic that a wound would heal with proper management." Similarly, a participant also stated that "I also got the information that a wound can heal with much attention at the clinic."

Category Six Drug Regimen: (1/18, 6%): This category captured the narratives of the participants about the need to use their drugs as stipulated by the care providers. The researcher found that diabetic patients who participated in the study were not aware of the need to use their medications as prescribed by their doctors. Participants revealed that "I thought I could use my drugs whenever I want, but I was told at the clinic that I have to take my drugs regularly if I want to get well."

Category Seven: Loss of Sight (1/18, 6%): category consisted of the information which the participants became exposed to when they started attending the EC about eye complications. It was revealed to the researcher through the participants that they never knew they could lose their sight as a result of being diabetic. Narratives of the participant about this are captured as follows; "When diabetes is not well controlled, it can lead to loss of sight." Also, that "doctors tell me the implication of everything such as if I do not control my sugar level, I can lose my sight."

Category Eight: Cognitive Dissonance (2/18, 11.11%): This category consisted of the narratives of the participants in this study about conflicting information they encountered at the Endocrinology Clinic. This category has one subcategory; confusion (2/18, 11.11%). The subcategory is discussed as follows:

Confusion: This subcategory captured the narratives of participants about the state of confusion, in which some of the participants find themselves due to contradictory information they encounter at the EC. The researcher found that some of the participants receive information that is contradictory to what they used to know about diabetes management from the EC. Instances, where the participants revealed this in their expressions, is captured in the following paragraph.

"I use to know that diabetic patients can only take wheat and beans alone. However, now we are informed at the clinic, we (participants) can eat almost all the types of foods but have to do with moderation. So I am confused about these sets of information". Similarly, it is revealed that "I was told that I can take orange but just one

or two but that I must not take pineapple. I should take an apple, carrot, cucumber, watermelon. Now I am confused because there are some fruits like orange. I know I am not to take. However, I am informed I can take one orange per day because my sugar level has been okay for over a long period".

Discussion of findings

Participants' prior knowledge before the commencement of EC, ABUTH, Shika

Participants identified seven areas with regards to their prior knowledge about diabetes management before attending EC, ABUTH, Shika. These are: diabetic patients will die early, people with diabetes can only take beans, and they believe the wound will not heal. Other areas identified include excessive weight loss, drug regimen, physical exercise, and conflicting information.

Table 3 – Participants' prior knowledge about diabetes mellitus before the commencement of EC

S/No	diabetes mellitus	Participants 'prior knowledge
1.	Early death	Participants believed that once diagnosed with diabetes mellitus, they will die early.
2	Diabetic diet	Diabetic patients can only take beans and cannot take anything sweet.
3	Diabetic wound	Participants that they believe wound in someone with diabetes cannot heal.
4	Weight	That anyone is living with diabetes mellitus will lose weight excessively.
5	Drug regime	Medications can be taken anytime.
6	Physical exercise	Do not know that physical exercise is essential for managing diabetes
7	Information for managing diabetes	Participants revealed that they are not aware that eating in a portion is very important.

Source: Interview Analysis, 2019.

Eight areas were identified as regarding knowledge acquired about diabetes management from the Endocrinology Clinic. Participants learned that being diagnosed with diabetes does not mean dying early, and a diabetic patient can eat anything. Exercising is essential for diabetic patients, Other areas identified are prescribed drugs are to be taken as indicated by care providers, having diabetes does not necessarily mean patients will lose weight, the wound can heal with proper attention, and that low blood sugar can be boost by taking sugary thing. Equally, participants said they knew

that it is important to exercise regularly, and diabetes can lead to loss of sight. Also, participants said they never knew that drinking alcoholic is terrible for diabetic patients. Furthermore, participants indicated that they are in a state of confusion in regards to information received about diabetic diets.

Findings of the Study

The findings of this study revealed that participants identified seven areas on which information received from Endocrinology Clinic contradicted their prior knowledge about diabetes mellitus. The areas they receive information are: on mortality rate, dietary regulations, wound management, weight management, herbal medicine, physical exercise, and conflicting information. Prior knowledge of diabetic Mellitus patients in Zaria metropolis is poor. Participants are exposed to information that does not foster the control, coping, and managing diabetes mellitus outside the Endocrinology Clinic. Prior knowledge of diabetic Mellitus patients in Zaria metropolis is that the mortality rate is high among people diagnosed with type 2 diabetes mellitus. The participants expressed that they were informed outside Endocrinology Clinic that once an individual is diagnosed with diabetes, lifespan is automatically reduced. Finding from this study revealed that participants believed that they thought they are liable to die early once been diagnosed with diabetes mellitus. Such information led to the loss of lives among DM patients. Similarly, type 2 diabetes mellitus patients in Zaria metropolis lack knowledge about diet regulations.

Finding in this study indicated that participants have no idea that diet is supposed to be monitored or regulated by a diabetic patient. Some of the participants stated that they believed that it is only wheat and beans that they can take. Similarly, they indicated that before the commencement of routine Endocrinology clinics, they thought a diabetic patient is supposed to avoid fruits and vegetables.

Furthermore, contradictions between prior knowledge of participants and knowledge acquired from Endocrinology Clinic were: the diabetic diet is not restricted to wheat and acha only but can eat anything in moderation. Also, that particular fruits and vegetables can be taken by diabetic patients. Participants indicated that believe the wound will never heal in a diabetic patient is wrong; the wound will heal with proper care. Participants expressed they knew after commencing the Clinic that sugar can be taken to control low blood sugar. Similarly, participants specified that they thought medications could be used when they like. However, participants now that it is necessary to use drugs as prescribed by the doctors. Also, participants expressed that they never knew of the importance of exercising in diabetes management; but attending EC revealed that regular exercise is vital for blood sugar control. Contradictions between prior knowledge of participants and what became known to them at the EC created confusion among the participants. They expressed that it is believed all along that diabetic patients should take only beans and acha, but now anything can be

consumed. This has created a state of confusion in participants in this study. As a result of conflicting information received at the Endocrinology Clinic, Participants stated that they do not know the information to believe.

Conflicting information among people coping with a chronic illness like type 2 diabetes results in rejection and non-use of health information. Participants revealed that it is previously known that it is only beans and acha that should be eaten. But presently, care providers advised that they can eat any type of food with a high percentage of vegetables. Also, fruits can be consumed by diabetic patients—conflicting information results in cognitive dissonance.

Cognitive dissonance is the discomfort experienced by persons who simultaneously hold two or more contradictory beliefs, ideas, or values. Conflicting information about diets led to the rejection of information among the participants in the study. Information rejection is the refusal to accept information due to disbelief or error. Participants indicated they would stick to what is known previously. New information or ideas are rejected or ignored as a result of prior knowledge, prejudices, cultural, or religious attitudes (Townsend, 2017).

Additionally, there is an innate human response of distrust in the information that gives a reluctance to accept new ideas. Participants indicated they do not support belief in being able to eat anything, thereby not accommodating further information into existing knowledge. Accommodation is the process in which people modify existing cognitive schemas to include new information (Piaget, 1997).

Studies (Carpenter, Geryk, Chen, Nagler, Dieckmann & Han, 2015; Carpenter, Elstad, Blalock & DeVellis, 2014; Elstad, Carpenter, DeVellis & Blalock, 2012; Vidal, Shavit, Fraser, Paul & Llibovici 2005; Eysenbach, 2003) have reported that conflicting health information is a growing problem worldwide. It is said that patients, providers, caregivers, and policymakers are expected to evaluate conflicting health information from different sources. They are expected to judge whether the information is credible and decide how to respond. Helping people process and evaluate conflicting health information is an increasingly pressing need in health care. Yet, for several reasons, this need remains mostly unmet. Studies of the prevalence, causes, and effects of conflicting health information have been limited. People may encounter conflicting information actively while searching for health information or passively, as recipients of unsolicited health advice. Conflicting health information originates from professional and lay sources, including the Internet, written materials, and personal testimonials. Conflicting health information is rooted in patients' prior knowledge.

Scholars' (Poureslami, Nimmon, Rootman & Fitzgerald, 2017; Al – Maskari, El – Sadig, Al – Kaabi, Afandi, Nagelkerke & Yeath, 2013; Odili, Isiboge & Eregie, 2011; Oliphant, 2010; Cochrane Collaboration, 2003; Eldredge, 2000) have emphasized the importance of prior knowledge in managing chronic diseases like type 2 diabetes mellitus. Prior knowledge is essential in managing chronic diseases such as diabetes

mellitus. Understanding the nature and impact of health literacy is a priority in health promotion and prevention of chronic diseases. Prior knowledge is a prerequisite required for thriving in any life challenges or situation. In the field of medical practice, large scale clinical trials, and systematic reviews of those clinical trials are regularly conducted in support of evidence-based medicine. This concept has equally been applied to the practice of medical librarianship.

In Library and Information Science (LIS), prior knowledge of diabetic can be linked with community analysis. Community analysis refers to the process of collecting information about library users. It is the process of identifying the characteristics of the user community (both users and non-users) and the environment in which they lived and assessing their needs of library and information services. While on the other hand, prior knowledge of people living with chronic diseases like type 2 diabetes mellitus is about gaining an insight into what is known to individuals about the condition. Both prior experience and community analysis are geared towards developing services that will enhance achieving set goals and objectives.

This finding implies that prior knowledge is essential in the management of type 2 diabetes mellitus; exposure to information that is not healthy for managing diabetes mellitus can result in dire consequences such as loss of sight, amputation, heart problems, and death.

Recommendations

Based on the findings of the study, the following recommendations were made

1. Diabetic education should be provided beyond the borders of hospital settings. Since it is evident that diabetic patients' prior knowledge plays a significant role in the management of diabetic complications;
2. Community health workers should be trained so that they can move from communities, and educate the populace about the management of type 2 diabetes mellitus.
3. Also, literature in local languages about the management of chronic diseases such as type 2 diabetes mellitus should be provided for easy understanding.
4. Similarly, radio programmes about diabetic complications and management should be intensified to assist diabetic complications in managing the illness effectively.

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