Knowledge and Practice of Self-management among Type 2 diabetes patients in Benin City, Nigeria

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# Faculty Disclosure

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Goals and Objectives

• Session goals:

➢ Health Promotion/Disease Prevention

• Objectives

➢ Participants will acquire information about Patients’ knowledge of Type 2 diabetes in Nigeria.

➢ Participants will become acquainted with patients’ practices as related to self-management of Type 2 diabetes in Nigeria.
Introduction

• Diabetes is a global problem, with varied prevalence and without geographical boundaries.
• Increase in incidence is recorded in both the developed and developing world with more burden on the low and middle income countries (International Diabetes Federation (IDF), 2013b).
• The global prevalence of diabetes in 2013 was 8.3% (IDF, 2013b).
• Approximately 382 million people were affected by diabetes globally (3% of the population undiagnosed) and with a projected increase to 592 million by 2035.

• The effect of it’s chronicity and cost manifests as burden on the individuals, families, nations and the world (World Health Organisation, 2012).
• Like other regions of the world, the sub-Saharan African region is struggling with communicable diseases such as HIV/AIDS, tuberculosis and non-communicable diseases such as diabetes (Marquez & Farrington, 2013).
According to the IDF (2014b), in the African region of WHO, Nigeria has the highest number of people living with diabetes with a prevalence rate of 5% (IDF, 2014b) and a high number of undiagnosed cases with an asymptomatic preclinical phase (Chinenye & Young, 2013).
• The estimated number of people living with diabetes was approximately 3.8 million, with 1.7 million undiagnosed in 2014 (IDF, 2014a).

• Knowledge of diabetes as a disease and its management is fundamental to enhance patients’ adherence to self-management.
• Self-management of diabetes depends on the patient’s ability to deal with issues associated with care of the disease which would lead to attaining quality life without complications.

• Self-management is a psychological and behavioural burden to the patients as the majority of the care is done by them (Anderson, 1985) cited in (Ciechanowski, Katon, Russo & Walker, 2014).
• This is a 24 hours daily activity which includes managed nutrition therapy, adherence to prescribed drugs, performing increased physical activity, self-monitoring of blood glucose, managing stress, rest, psychological management, and continuous monitoring of the health (ADAIE, 2008).
Problem

• There is high prevalence of Type 2 diabetes in Nigeria. Self-management can be useful in managing the disease.

• Patents’ knowledge and practices are important in designing a health education programme to address this malaise.

• This presentation therefore presents information in this regard.
Methods

Context and setting

• The study was a qualitative descriptive and explorative design to study the patients’ knowledge and practices of self-management of Type 2 diabetes. The study was conducted in two health institutions, a tertiary and a secondary government owned health facilities in Benin City, Edo State, Nigeria. Study was conducted between January 2014 and April 2014.
Sample

• Participants were purposively sampled at the consultant clinics during their routine consultations.

• Sampling continued until data saturation was reached which is the gold standard according to which the sample size in a qualitative study is determined (Guest, Bunce & Johnson, 2006).

• Patients with severe cognitive impairments were excluded.
Data collection

- Individual interviews were conducted using semi-structured pre-tested open-ended questions, which allowed for participant’s free expression of knowledge and self-management of Type 2 diabetes.
- The method also provided thick and rich data from the participants (Creswell, 2012).
Interviews

• Interviews were conducted by the researcher with questions focused on the participant’s knowledge of diabetes as a disease and self-management behaviours in relation to self-monitoring of blood glucose, diet, exercise, care of the feet and use of medications.
• The interviews were held in ‘Pidgin English’ which was spoken fluently by all the participants and took place within 30 – 45 minutes.

• All the interviews were tape recorded with the consent of the participants.
• Verbatim transcription of data was done in preparation for data analysis.
• descriptive coding technique by Tesch, 1990 cited in Creswell, 2009 which involved 8 steps was used for data analysis.
• Through inductive reasoning, patterns and categories emerged. Codes and categories were developed after rigorous analysis.
• An ethical certificate for the study was obtained from the Senate Research Committee of the University of the Western Cape. Permission to conduct study was obtained from the health facilities.

• Written and oral consent was obtained from the participants after a detailed information on the study had been given.
Results

• Participants were 30; 12 males and 18 females aged 40 - 65 years

• They were of varied occupations; educational background ranged from no formal through primary school education to university.

• Years of experience with Type 2 diabetes ranged from six months to 30 years,
• The majority of participants disclosed that they understood Type 2 diabetes as a disease superficially and tacitly and found the self-management of their diabetes challenging.
• A few of the participants gave a good description of diabetes as a process within the body:

• “It is lack of the activity of insulin in the body which controls the sugar level...”. (P 19)
• Participants based the disease’s description on the signs and symptoms they experienced.

• “This is when you pass urine excessively, at night 3 to 4 times, when you sustain injury it takes time to heal, when you eat a large quantity of rice and yam flour the blood sugar increases...”. (P 17)
• “...diabetes is a sickness that makes you pass excessive foamy urine because of the sugar substances contained in the urine...”. (P 13)
• Many of the participants referred to diabetes based on their psychological feelings or perceptions of the disease:

• “Diabetes is a deadly disease and I do not like it, I have never suffered it”. (P 2)

• “I was told that diabetes is a killer disease with excess sugar in the body...”. (P 6)
Causes and effects of type 2 diabetes

• Weight as a risk factor

- Weight can cause it too, so I am struggling to reduce my weight; the diet one eats is a cause too...”. (P 7)

- “I know that it is caused by hereditary, excessive weight and excess of carbohydrate[s]...”. (P 11)
• Heredity as a risk factor.

➢ “Diabetes is a disease that runs in the family in my own case, my father had diabetes; also our food could cause diabetes...”. (P 5)

➢ “My mother had diabetes, my brother had it as well, so maybe it is from my family, but my food attributed to it somehow. (P 18)
• Diet as a risk factor.

➢ “It is as a result of eating lots of carbohydrates. Diabetes patients do not have sufficient insulin to digest carbohydrates...”. (P 7)

➢ “People said eating too much sugar, taking alcohol and consuming sweet food...”. (P 22)
Complications

• Knowledge of complications could influence the adherence to self-management and reduction or delay in the development of complications.

• Many of the participants were aware of some of the complications; some were already experiencing these complications
Patients’ expressed complications

➢ “...it weakens the organs of the body, causes cataract[s] in the eye and poor vision because of the sugar substance...”. (P 13)

➢ “It could cause stroke, eye problem such as blindness and destroy something inside the body, wound does not heal...”. (P 18)

➢ “It can cause blindness; without my glasses I see blurredly...I have impotency...”. (P 21)
Symptoms of Type 2 diabetes

- Identified symptoms:
  - “The individual feels dizzy as the sugar overpowers the blood...”. (P 13)
  - “An individual with diabetes passes urine frequently, sometimes with swollen legs, sweating profusely...”. (P 18)
  - “fever, frequency in micturition, thirst and weakness...I was emaciated too and was not seeing properly”. (P 1)
Self-management of Type 2 diabetes

- Management consists of behaviour modification, a pharmacological component and self-management skills to adequately cope with living with the disease. Patients participation in their care is important as they monitor and manage their health.
Use of Diet

• These participants acknowledged the role of diet in the management of Type 2 diabetes:

  ➢ “Diabetes goes with food and vegetable. Food is very important. The recommended food is unripe plantain flour, to make plantain meal eaten with vegetable soup, wheat, semolina…” (P 13)

  ➢ “The diet is important; I eat unripe plantain, elubo, beans, moimoi, akara, water yam…” (P 21)
Diet

• Timing of diet is also emphasised in order to allow for digestion before retiring for the night. A patient who takes supper early stated:

➢ "...I was told about the diet and that I should take my supper before 5.30 p.m. to allow for digestion. If I eat later than 7 p.m. the diabetes will increase...". (P 17)
Increased physical activity and exercise

- Improves glycaemic control and prevent complications.

According to a patient:

“Exercise enables blood to circulate well so that sugar will not overpower you. I do walk or jog...I do exercise in my office when I am in the office...”. (P 13)
Exercise

- “I now take a walk in the evening...”. (P 5)
- “I am old, but I try to walk round my house...”. (P 8)

• The duration and intensity of exercise is equally important:
  - “I do a lot of exercise, like making long distance to see my mother...”. (P 17)
Self-monitoring of blood glucose

• Self-monitoring of patients’ health and blood glucose is crucial. Participants are taught to monitor for symptoms. A few of the participants responded that they monitored their blood glucose at home:

  ➢ “I have a glucometer which I use at home every week...”. (P 17)
  ➢ “I have a glucometer which I use to test my blood for sugar level. I carry out the test once or twice a week. I was taught how to test my urine to know the presence of sugar also, but we do not use that again...”. (P 22)
Blood glucose

• The majority of the participants did not monitor their blood glucose. They gave various reasons for not testing at home:

  ➢ “I only do the FBS when I come to the clinic as I cannot afford the machine. I test blood when I visit on clinic days. I do not test my blood at home...”. (P 13)

  ➢ “I only test it when I come to the clinic or when the doctor sends me to the laboratory...I do not have the machine...”. (P 16)
Testing time for Blood glucose

• Participants differ in their testing time. Some:
  ✔ Indicated testing weekly.
    ➢ “I have a glucometer which I use at home every week...”. (P 17)

  ✔ a few participants stated that they tested once a month.
    ➢ “I have the testing machine at home and I use it once a month and I also check at the clinic on appointment day... “. (P 26)
Medication

• The majority of patients thrive better with different forms of hypoglycaemic medication (ADA, 2014b).

➢ “The individual is given some drugs which helps in reducing the blood sugar...”. (P 13)

➢ “...doctors give me [a] prescription for about six weeks, which has been very helpful in treatment...”. (P 15)
Traditional medication

• Participants use their medications, but are inclined to supplement it with traditional medication:

  “I used native medicine for some years although I was still seeing my doctor. I told some people about my health status and some native herbs were prescribed, I used it and it seemed as if the drugs subdued it, but some did not have any effect so I decided to leave everything for God”... (P 10)
Faith-based healing

- This is another form of complementary and alternative medicine and it was used by some of the participants.

- "I believe in prayers and I know it is an attack which God will remove. I do not take my drugs regularly as I depend so much on prayer which is working for me...". (P 25)
Discussion

• Knowledge is generally not evident, but the consequences are evident through behaviours displayed (Hunt, 2003).
• Health talks in clinics.
• Having a close relative with a chronic illness can be a good source of health information (Whitford, McGee & O’Sullivan, 2009).
• The information may also arise from caring for someone with Type 2 diabetes.
Discussion (1)

• Diabetes complications affect multiple organs and reduce quality of life.

• A high proportion of Nigerian adults do not engage in physical activity (Abubakari & Bhopal, 2008; Oyeyemi, Oyeyemi, Jidda & Babagana, 2013).

• Adherence in developing countries has been reported to be poor (Ganiyu, Mabuza, Malete, Govender & Ogunbanjo, 2013).
Discussion(2)

- SMBG is related to improved glycaemic control (Franciosi, Lucisano, Pellegrini, Cantarello, Consoli, Cucco et al., 2011) and seen as a basic element of self-management for patients with Type 2 diabetes (Tomky, Cypress, Dang, Maryniuk, Peyrot & Mensing, 2008).
Discussion (3)

• In Nigeria, traditional medicine runs parallel to the modern health-care system but there is no integration (Federal Ministry of Health, 2005).

• Many rural area dwellers resort to traditional medicine (Opatola & Olabode, 2014).
Conclusion

• Most of the patients are experiencing complications of diabetes which could be as a result of their low knowledge and inadequate self-management.

• Some of the participants still use traditional medicine and faith based healing in their care which could invariably affect the outcome and prognosis of Type 2 diabetes.

• The self-management of diabetes with diet was with the use of few food stuffs
Recommendations

• Results obtained here when integrated with those from the full study indicated that use of the generated health education programme can be used successfully to manage Type 2 diabetes.

• Patients active participation in their care is a necessity.