

Experiences and cultural beliefs of patients with diabetes: Lessons for nursing practice, education and policy

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ARTICLE INFO

Keywords:

Cultural beliefs
Physiological needs
Diabetes care
Qualitative investigation
Ghana

ABSTRACT

Background: In Ghana, traditional management and care of patients with diabetes is concentrated on the physiological needs of patients to the detriment of psychosocial factors and cultural beliefs impacting the condition. **Objectives:** This paper explores the impact of cultural practices and beliefs on the experiences of Ghanaian patients newly diagnosed with diabetes, and the implications for health care professionals providing diabetes care within Ghanaian health care settings.

Method: The exploratory descriptive to qualitative approach was employed whereby 27 patients, newly diagnosed with diabetes, accessed via the diabetes clinic provided a convenience sample. Data were collected through one-on-one in-depth semi-structured interviews. Data collection and analysis occurred simultaneously. Data were analyzed using content analysis.

Findings: Four major themes were identified: (1) participants' insight into diabetes mellitus (2) shared meanings attached to diabetes (3) coming to terms with a diagnosis of diabetes and (4) in search of treatment and 'cure'. **Conclusion:** A model of care, which recognizes and prioritizes the psychosocial determinants of health alongside the medical aspects of the condition is thought to be beneficial to patients, to healthcare professionals, nurse educators, and to the Ghanaian public.

1. Introduction

The prevalence of diabetes mellitus has escalated exponentially over past decades around the world. Global statistics indicate that an estimated 8.8% of adults were living with the condition in 2017. Moreover, it is projected that this figure will increase to 9.9% by 2045 if significant interventions are not taken by governments and other major stakeholders of health (Ogurtsova et al., 2017). In Ghana the general trend towards an increase in cases of diabetes mellitus in rural and urban areas has resulted in a prevalence among adults of 6.3% (Bawa et al., 2019), with 90–95% of all cases classified as type 2 (Danquah et al., 2012). This exponential rise is concerning since individuals living with diabetes mellitus have increased risk of mortality as well as morbidity compared with the general population (WHO, 2018).

In Ghana there has historically been and continues to be a reliance on medical models of treatment for patients with diabetes mellitus as with other long-term conditions, which tend to ignore psychosocial issues known to impact health outcomes (Nguma, 2010). As a result, health care professionals' daily interactions with patients rarely take account of

knowledge, understanding, health practices and beliefs, which impact the way in which patients experience ill health. While effective, evidenced-based medical care is central to good diabetes management, patients' beliefs and perceptions regarding diabetes are known to influence health seeking behaviours and subsequent compliance with treatment regimens (Korsah, 2015; Nguma, 2010).

In addition, from my personal observation as a nurse who has interacted with patients newly diagnosed with diabetes, they are confronted with many challenges including stigma of having diabetes as a deadly condition, and also perceive diabetes mellitus as a supernatural condition to mention a few which needs to be treated mystically. In a research carried out in Ghana, diabetes patients who failed to attend review appointments with their doctors following diagnosis of type 2 diabetes did so for reasons that their diabetes was considered not as an acquired disease as such, but more as "bonsam yare", which literally means devil or witchcraft-oriented disease, which thus requires spiritual treatment (Korsah, 2015p. 243). A belief such as this is consistent with Assimeng's (2010p.28) supposition that "treatment of spiritual diseases in Ghana are based on social analysis, a process in which the traditional

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<https://doi.org/10.1016/j.ijans.2021.100392>

Received 22 September 2020; Received in revised form 16 September 2021; Accepted 7 December 2021

Available online 16 December 2021

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healer seeks to analyze the possible causes and treatment of illness from social and spiritual realms". In the absence of attention to the psychosocial aspects of health and illness alongside appropriate and timely medical treatment, patients are less likely to experience holistic care. This traditional lack of focus on the psychosocial determinants of health and illness has meant subsequent research in Ghana around diabetes and its management has focused on incidence and prevalence, treatment options, resource implications lack of resources, staffing levels, and the burden of treatment costs (Darkwa, 2011; De Graft Aikins, Kushitor, Koram, Gyamfi, & Ogedegbe, 2014). Studies such as De Graft Aikins et al. (2014); De Graft Aikins, Anum, Agyemang, Addo, & Ogedegbe (2012b); and Owusu-Daaku and Smith (2005), which have considered psychosocial issues around chronic diseases, for example diabetes in Ghana, have failed to consider patients' beliefs, practices and perceptions about diabetes.

Barriers to the care of patients with diabetes have been widely covered in the literature. The focus of the literature appears concerned with the care of individuals with diabetes mellitus in order to promote self-management practices by patients' as well as self-management support from the health care providers. These are the key components or factors, which play a pivotal role in the care of patients living with diabetes and other chronic conditions (Barlow, Wright, Sheasby, Turner, & Hainsworth, 2002; Shrivastava, Shrivastava, & Ramasamy, 2013). One of the key factors in promoting self-management for patients and self-management support by health care professionals is diabetes patient education which empowers the patient to enable the practice of self-care (Rickheim, Weaver, Flader, & Kendall, 2002; Naik, Teal, Rodriguez, & Haidet, 2011). The concept of self-care in diabetes appears to have direct effect on blood glucose levels, glycated haemoglobin (HbA1c), blood cholesterol levels and blood pressure (Naik, Teal, Rodriguez, & Haidet, 2011), similar to an outcome in a diabetes empowerment training programme in which patients who were actively involved in the programme were observed to have healthier metabolic control matched with non-attendants (Ozer et al., 2003; Tankova, Dakovska, & Koev, 2001). Specifically, on psychosocial and cultural issues related to diabetes particularly in Africa, Abdulrehman, Woith, Jenkins, Kossmans and Hunter (2016) in Kenya identified putative causative factors of diabetes as consumption of too much sugar, consumption of ice water, increasing presence of toxic chemicals in foods such as pesticides, through vaccination. Cure for the condition was perceived to have happened to patients who used herbal treatments prescribed by herbalist and spiritualists (Abdulrehman, et al., 2016). In addition, most patients relied on friends, family members and spouses for help due to the fact that they had no health insurance to pay for cost of treatment, similar to what Nyamu, Otieno, Amayo, and McLigeo (2003) reported in which most patients with diabetes developed diabetes foot ulcers and other complications because they could not afford to pay for treatment cost. However, matters and questions around psychosocial care nested within cultural orientation among diabetes patients in Ghana seems not have been considered in their care.

In summary the literature reviewed thus far indicates individuals' health seeking behaviors are influenced by cultural attitudes, values and beliefs, particularly in the Ghanaian context, where a diagnosis of diabetes mellitus is likely to trigger a spiritual explanation, rather than one informed by knowledge of the condition per se. Moreover, this is due in part to a low educational attainment in the general population, which is known to impact knowledge and understanding of health and disease and subsequent health seeking behaviours. Individuals of different ethnic, cultural and/or social groupings in Ghana will hold a variety of cultural values, attitudes and beliefs relating to health and illness, which will vary dependent on the ethnic group they belong to. Understanding these cultural factors and how they are connected with the experience of health and illness assists health care workers to provide culturally competent and appropriate care for patients living with chronic conditions and diabetes in particular (Chesla, Chun, & Kwan, 2009). The study on which this paper is based illustrates the importance of

attending to cultural preferences, alongside more traditional medical treatment, in order to optimize positive health/illness experiences and outcomes, and to maximize potential for the delivery of holistic care for patients diagnosed with type 2 diabetes mellitus in Ghana.

1.1. Purpose of the research

This paper set off to investigate the impact of cultural practices and beliefs on the experiences of Ghanaian patients newly diagnosed with diabetes mellitus, and the implications for health care professionals providing diabetes care within Ghanaian health care settings.

2. Research objectives

1. To understand the range of holistic factors impacting care of individuals living with diabetes mellitus in Ghana
2. To examine cultural beliefs, which impact the care of individuals living with diabetes mellitus in Ghana
3. To understand, from the patient perspective how living with diabetes impacts care is experienced for people living with diabetes in Ghana
4. To offer healthcare professionals a better understanding of how to care for patients in Ghana diagnosed with diabetes mellitus.

2.1. Significance of the study

The inclusion of psychosocial and cultural aspects of care to the traditional medical care rendered to patients living with diabetes mellitus will be beneficial for positive outcomes in patients with diabetes.

3. Methods

3.1. Research design

An exploratory descriptive to qualitative approach was employed for this research.

3.2. Sample and sampling technique

Patients in receipt of a new diagnosis of diabetes mellitus were included in the study in order to maximize patient recall of past and current experience of having the condition, particularly recall of the moment of diagnosis. Participants who had been diagnosed within a 3-month period, and who were willing to participate were duly consented into the study. Patients in receipt of a diagnosis of diabetes mellitus extending longer than three months prior to study commencement and/or patients withholding consent to participate were excluded from the study. In all, 54 patients newly diagnosed with diabetes mellitus were identified via the attendance register of the diabetes patients' clinic. They were subsequently contacted by letters containing detailed information about the research, including an invitation to take part in the study and to be interviewed at a later date if agreed to be part. However, out of the 54 patients who were contacted, 42 patients with the condition responded to the invitation to take part in the research interviews. Permission to access patients via the attendance register was provided by the hospital authorities following site approval for the study.

All patients who met the inclusion criteria for the study were provided with a participant information sheet (PIS), which detailed the study, study requirements, and researcher details should additional information be needed. The study was considered to be low risk for participants; therefore, patients were asked to read the PIS and to respond within 24 h if they were willing to take part, at which point they were asked to sign a consent form. The consent form was witnessed and counter-signed by the researcher. Participants were then invited to take part in a semi-structured in-depth interview arranged for a mutually convenient time and place. Twenty-four (24) interviews took place in

the researcher's office in the hospital and three (3) at the homes of the participants. Participants who travelled to the hospital were reimbursed upon completion of interviews and prior to their departure from the hospital. The interview guide was developed in order to meet study aims.

3.3. Data collection

Interview data were collected using a specifically developed semi-structured interview guide which was developed based on the objectives of this research, prepared as an English language version. However, those who could not speak English were interviewed in the local "Twi" language by the researcher who is fluent in "Twi". To ensure consistency, the researcher did all the 27 interviews in English and Twi languages. Data were also transcribed by the researcher. The researcher translated the interviews in Twi into English. To ensure accuracy of translated data from Twi to English, back translation from English to Twi was done by a trained Twi teacher. Flexibility of language allowed the researcher to ask participants open ended questions and to probe issues of interest in participants own language (Stuckey, 2013; Diccico-Bloom, & Crabtree, 2006). Interview data were audio-recorded, with each interview lasting 45–60 min. Data collection continued for a 3-month period, from 1st August to 30th October 2009 until data saturation. There were no repeated interviews in this study to seek further clarification on certain issues from the research participants. Data saturation (Saunders et al., 2018) occurred on the 27th participant interview as no new data was forthcoming.

3.4. Data analysis

Content analysis was used to find and classify concepts from interview data. Content analysis takes into consideration the examination of the transcribed data by focusing on the ideas in each sentence, statement, phrase and meanings of specific words to determine key themes and subthemes (Bengtsson, 2016). In addition, the use of field notes in this research aided the researchers in understanding of the phenomenon, culture and social situation being studied. In simple terms the field notes served as a means of detailing needed contextual information which helped to understand clearly the context in which social situations occurred in this research (Tenzek, 2017). To ensure consistency, only one of the researchers was involved in coding of the transcripts. Saturation of data occurred on the 27th interview when no new information was forthcoming. The process of content analysis is demonstrated in Fig. 1.

3.5. Ethical considerations

Ethical and scientific approval was granted by an Institutional Review Board (IRB). Additional ethical permission was granted by the municipal health directorate in Ghana where the research was undertaken. Site approval was granted by the Ghanaian hospital where participants were accessed. The Diabetes Patients' Association (DPA) in the municipality where the hospital is situated and the study was carried out granted permission for the researchers to approach its members in the hospital for the study. Patients who could read and write the English language were provided with Participant Information Sheet (PIS) detailing the study, expectations of participants and researcher details for further information. However, the researcher explained the content of the PIS to the patients who could not read and write in the native Twi language. Upon agreement to participate in the study patients were asked to sign a consent form. Participants were assured of privacy, confidentiality and anonymity, informed of the right to withdraw from the study at any time, without the need to provide an explanation and assured their treatment would not be affected by withdrawal from the study. Participants were informed that biographical data would be separated from interview data to ensure no participant could be

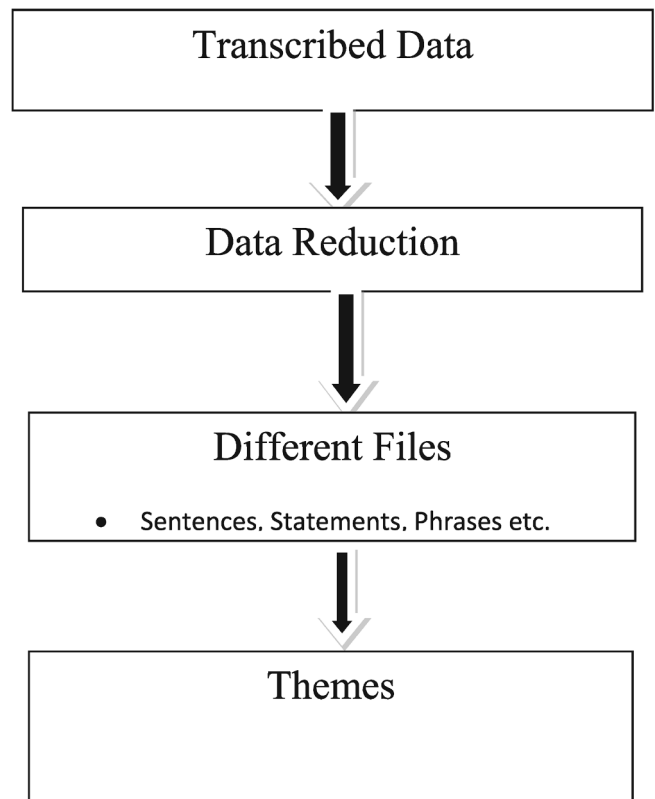


Fig. 1. Showing Processes of Developing Themes.

identified from interview transcripts. Pseudonyms were assigned to participants to safeguard anonymity. As part of measures to ensure rigor of this study, the interview guide was developed in line with the objectives of the research, during interviews participants were interviewed extensively to get detailed information and back translation was also done from English to Twi for interviews which were originally done in Twi. This was done to ensure accuracy of translation from Twi to English. In addition, clarifications were sought from the research participants on their responses which were not clear to the researchers.

3.6. Trustworthiness of the research process

In order to ensure trustworthiness of this study four (4) major strategies were considered by the researchers including the need to perform extensive interviews of the research participants for adequate and rich data. Piloting of 2 interviews were carried out to polish the final version of the interview guide. Additionally, selected research participants on individual basis to ensure privacy, who could read and write were offered the chance to read the transcribed data. This was intended to familiarize themselves to authenticate or confirm what were said at the time of interview sessions. Similarly, personal factors of the research participants were taken into account. For instance, the research participants who were not ready for interviews at particular times were allowed to reorganize their appointments times. These were deferred to other convenient times to suit both the research participant and the researcher.

4. Findings

The Table 1 indicates the details of 27 patients, newly diagnosed with diabetes mellitus who participated in this study. Four main themes were identified from content analysis of study data: (1) participants' insight into diabetes mellitus – These centred on perceived causes of diabetes mellitus by participants (2) shared meanings attached to

Table 1
Showing Patients Age, Gender and Type of Diabetes Mellitus of Study Participants.

No. of Participant (P) as Pseudonyms	Age (Years)	Sex (Male – M, Female – F)	Type of Diabetes (Type 1 DM – T1DM, Type 2 DM – T2DM)
P1	46	F	T2DM
P2	42	F	T2DM
P3	50	M	T2DM
P4	44	F	T1DM
P5	45	F	T2DM
P6	45	M	T2DM
P7	43	M	T1DM
P8	30	M	T1DM
P9	25	F	T1DM
P10	41	M	T1DM
P11	34	M	T1DM
P12	22	F	T2DM
P13	54	M	T2DM
P14	34	M	T1DM
P15	46	F	T2DM
P16	43	F	T1DM
P17	46	F	T2DM
P18	57	M	T2DM
P19	35	F	T1DM
P20	29	F	T1DM
P21	42	F	T1DM
P22	54	M	T2DM
P23	56	M	T2DM
P24	45	M	T2DM
P25	60	F	T2DM
P26	33	M	T1DM
P27	48	F	T2DM

diabetes – These focused on the social meanings attributable to diabetes mellitus as noted by the participants (3) coming to terms with a diagnosis of diabetes – These also centred on how the patients strived to cope with the condition on their own upon hearing of ‘bad news’ regarding the diagnosis of diabetes in a way of resolution and (4) in search of treatment and ‘cure’ - These were the pathways identified by patients for the treatments of the condition and possible cure following the diagnosis of the condition. Research participants were given codes such as P1, P2 and so forth up to the 27th participant.

4.1. Participants’ insight into diabetes mellitus

The perceptions around diabetes in this study focused on issues embedded within Ghanaian cultural understandings of supernatural origins of diabetes mellitus. Participants alluded to the fact that diabetes emanates from a spiritual realm and that treatment and overall management of this protracted condition should be aligned with magico-religious and mystic processes. One of the participants stated:

“The source of diabetes is spiritual, for instance through evil eye either from one’s family or even from a friend who is envious can cause the disease in a mystical way” (P22)

Similar expression was enunciated by a participant who was emphatic about spiritual care in diabetes:

“I believe that both the cause and treatment of diabetes should be linked together. You cannot separate the cause of diabetes from its treatment. It is spiritually caused so the treatment should also consider spiritual aspect of care” (P9)

Other perceptions concerning the onset of diabetes include a presumed association between onset of diabetes and adulterated or ‘soiled foods’. Adulteration of food from dangerous farming practices, such as the use of food storage chemicals as well as agro-chemicals was implicated:

“Our foods are poisoned, from chemicals of all sorts for keeping the food from going bad as well as those that are used in the farms to kill pesticides. Now every farmer uses fertilizer to grow crops unlike in the olden days, chemicals were not used for crops and storage”. So, diabetes is on ascendancy because of all these reasons, formerly it wasn’t like that, so there is a problem with our food these days” P (15)

Sugar consumption and its relationship with diabetes was an additional concern emerging from participant narratives. It appeared participants were anxious about consumption of sugar in the diet, and the ready availability of sugary drinks to purchase. Moreover, participants were able to make the link between sugar consumption and the onset of diabetes:

“These days, so many drinks are in the market with too much sugar content. It is not always that you can cook food to eat at home, for instance if you are traveling, you just have to buy from the shop a drink, but it is not only when you are travelling but in so many situations like wedding and outdoorings and many other occasions so it is like we take money to buy disease from sugary drinks” (P3)

One participant believed her diabetes originated from too many sugary drinks, while she was a student at college:

“I know definitely that I got the condition from the college because I used to drink too much of sugary products. After coming from studies during the late in the night, there is no option but to take a drink from the box and eat, which I did almost all the time” (P13)

Diabetes was also viewed as a contagious condition by participants, who believed the condition originated from “sleeping on the same bed with somebody who has the condition” or “walking across urine” voided by another person. One participant claimed to know diabetes had arisen in this manner:

“My understanding is that diabetes is infectious, because people from the same mother can get it because they are in the same house and even may be sleeping on the same bed so if one has the condition, it can be passed on to the next person so it is infectious. That is how I see it”. But if someone also passes over another person’s urine, such as walking over the urine passed by the other person who has diabetes, one can get diabetes” (P18)

4.2. Shared meanings attached to diabetes

Several meanings were attributed to diabetes by the participants, which relate to or signify the characteristics of the condition and its effect/impact on the person in different areas of daily life. For example, participants spoke of being branded as “sufferers” of diabetes and as individuals who have been “cursed” through their ‘bad demeanors’. One participant internalized diabetes in the words of other people as having been “cursed”:

“When you have diabetes, people say that you have been cursed due to one’s bad deeds. People see you differently because they think you have something wrong in your life, like doing something against your friend and it is a punishment or something like that” (P5)

Similarly, a further participant internalized diabetes as a curse:

“Living with diabetes is like you have been cursed because its manifestations are unpleasant, no time to do things that can please you small, always medications, so if not cursed why should I do all these” (P4)

The participant noted that family and community members who know that he has diabetes always refer to him as “someone who is always sick”:

“My sisters and some friends in our area there always say I am not a strong person because of the condition” (P18)

The various meanings attributed to diabetes, in other works external views about the condition appeared internalized by the participants, resulting in a reduced sense of emotional well-being, and a negative impact on overall quality of life.

4.3. Coming to terms with a diagnosis of diabetes

The reported social behavior and action immediately after receiving a diagnosis of diabetes was often expressed in terms of receiving 'bad news, but which appeared then to signify the beginnings of some resolution or coming to terms with the diagnosis. One participant described how coming to terms with the diagnosis as intrinsically linked to a deeply religious belief that God was in control:

"God is with me, I know that the challenges of this condition will be reduced by my Maker, I have to rely on God for my inspiration so I have to accept the condition and move on in life" (P2)

An alternative to the attribution of religious meaning to the diagnosis of diabetes, which permitted the participant to externalize the condition, another participant sought for meaning or explanation within her/his own hands or internal sphere of influence:

"I have been told that diabetes is very damaging and costly condition but once I have been informed about its characteristics and what it can do to me, I have to be extra cautious and see my doctors and other workers at the hospital from time to time" (P20)

4.4. In search of treatment and 'cure'

Though type 2 diabetes can be sent into remission, the participants were of the view that cure for diabetes is through three pathways, irrespective of the chronic nature of the condition. Cure pathways based on their perception included supernatural management, traditional treatment with herbs, scientific treatment at the hospital, or a combination of these approaches:

"Cure for diabetes is through spiritual way or through blending of hospital treatment and prayer camp procedures or medical care alone depending on your belief. If the condition is from bad spirits, then prayers for spiritual deliverance will work in that case. If it a hospital disease then the person will have to see the doctor, so it depends on you" (P12)

"Diabetes, you need double eyes to treat it, prayers or incarnations with hospital care or only prayers or hospital treatment only or combination of other things such as herbal, prayers and hospital care and things like that help in its management" (P24)

5. Discussion of findings

Most participants reported explanations of diabetes mellitus, which departed considerably from the biomedical or structural explanations of disease causality. However, this does not imply participants' theories of disease causation are unscientific or "illogic and irrational". On the contrary, participants noted the appearance of diabetes mellitus was connected to toxic food, and excessive intake of sugary products, which has some basis in fact. These findings are similar to interpretations on causal theories of diabetes noted by Mercado-Martinez and Ramos-Herrera, (2002). Similarly, a study focused on patients' personal accounts of having diabetes mellitus, found problems of everyday life (dietary sugar, stressful events) were considered as causative, in contrast to the received wisdom of the health care professionals (McGwin, 2010), whereby explanation for the condition is thought to be related to bacteria and/or viruses (National Institutes of Health (US), 2007). The findings of the current study are consistent with the lay perspectives and belief system of disease attributable causes (Kottak, 2008), emotional and naturalistic factors, and causative framework of diseases, which

relate to personal and environmental factors, social factors including interpersonal stress, destiny of persons, witchcraft activities and sorcery (Helman, 2001).

The most widely noted meanings experienced by participants as stigma included the perception of being labeled as "people who are always sick", "diabetes sufferers" and "persons cursed in society". These social meanings are consistent with the attribution of stamping and stigmatizing which define "valued-deprived identity" of the diabetes patient (Goffman, 1963), which explains similar social connotations of diabetes patients such as "poor me" due to other people's reactions to a diabetes patient, "social outcast" a person who was one time very healthy, "imperfect body" as a result of systemic alterations caused by the condition and "hatred of insulin" due to treatment-centred regime following diagnosis of diabetes (Nishio & Chujo, 2017), and other diabetes related social markings for diabetes as a character flaw related to poor diet, obesity, inactivity and laziness, burden on health care system and transmissibility of diabetes" (Liu et al., 2017). Most importantly, these social meanings attached to diabetes as a condition inform us the degree to which the disorder may affect the patient, such as systemically, emotionally and socially (Nishio & Chujo, 2017, Korsah, 2017) and as exemplified by Downe-Wamboldt, Butler and Coulter, (2006) the shared meanings assigned to illness and health are determined by persons and group of individuals who observe that specific disorder or health, influenced by their socio-cultural milieu.

Living with a chronic condition such as diabetes generates different reactions, for example being emotional or physical in nature (Silva et al., 2018). However, some patients are able to overcome the stresses and irritations of the condition (Lazarus & Folkman, 1984). Patients in this study, having gone through denial and feelings of uncertainty following diagnosis, accepted the diagnosis; coming to a point of resolution. Coming to terms with diabetes was in part based on the extent to which participants exhibited religious capital (belief in God) for coping, personal capital to manage diabetes, or social capital in engaging with advice to address other lifestyle factors, for example capacity to take more exercise, and pay attention to dietary advice. Collins, Bradley, O'Sullivan and Perry (2009) categorized under the extent to which individuals come to terms with and learn to live successfully with a diagnosis of diabetes as related to the ability to self-care, and the ability to call on self-care coping strategies. Participants in Johansson, Ekeberg and Dahlberg (2008) noted the need to reconcile with demands of diabetes that govern lives, which is analogous to adaptive processes, adjustment and coping with a chronic condition (Moss-Morris, 2013; Dekker, & de Groot, 2016).

The current study illustrates a clear need for attention to be paid to culturally specific care in addition to basic treatment modalities such as exercise, diet, monitoring and medication. It may be imperative to rethink the patients' attributable causes of diabetes, meanings attached to the disorder and their specific coping styles among other culturally defined behaviours. This will help come up with specific care systems and structures to offer culturally specific care to these patients. The provision of culturally sensitive care in combination with the dominant medical approach serves to first recognize the importance of the physical care of patient with diabetes, while at the same time recognizing the correlation between improved patient outcomes in terms of disease management and patient well-being. The findings from the current study point to the importance of a collaborative approach to patient care, based on the unique cultural values of people in which culturally competent care is supposed to be delivered to patients (Papps & Ramsden, 1996). This is what Papps and Ramsden (1996) noted under cultural safety and quality of healthcare where healthcare providers such as nurses and doctors need to recognize and respect the values and beliefs and other differences of persons under their care. Thus, cultural safety (Papps & Ramsden, 1996) is aimed at ensuring improvements in health of all patients or vulnerable groups irrespective of their backgrounds, beliefs, values, perceptions and general orientations. A classic example and an extension on the concept of collaborative care and for

that matter the need for cultural safety in healthcare is noted in some Australian Hospitals where Aboriginal healers, the Ngangkari treat patients collaboratively or alongside with doctors and nurses, in which the Ngangkari assist with the spiritual treatment of the condition (Dudgeon & Bray, 2017). This approach of patient care may be possible in Ghanaian hospital settings where the patient is positioned as central to treatment and management of the condition, based on the concept of co-creation of care is emphasized. This is an approach which is in direct opposition to the prevailing attitude characterized by the medical model, which sees the clinician as central to determining treatment options, often with little or no input from the patient, significant others and other healers who matter. Of note is the importance of recognizing and working with patients prevailing attitudes and beliefs about diabetes mellitus and also the need to work with patients on a culturally appropriate education programme focused on self-care and self-management.

6. Limitations of the study

In this research, the data analysis was performed manually which might have resulted in methodological blunders as compared with computer software data analysis method which appears to be reliable and cheap in terms of cost (Crawford, Leybourne, & Armott, 2000). However, it is noted that in qualitative data analysis participants' mannerisms and outlooks as well as other behaviors may not be captured by computer software. In view of this the researcher decided to use manual process of data analysis. The researcher being a nurse, it was possible that his biases could have affected the findings. However, the researcher bracketed all his presuppositions and also asked the participants flexible and open-ended questions for them to give detailed accounts of their experiences regarding the subject under investigation.

7. Conclusion

The study focused attention on the inadequacy of the current medically dominated model of diabetes care in Ghana, whereby there exists a distinct lack of emphasis on the psychosocial aspects of health and illness, including the values, attitudes and beliefs of individuals. Paying attention to culturally derived understandings of diabetes is important in terms of health outcomes and patient well-being. If individuals believe diabetes is derived from the spirit world then culturally sensitive knowledge and understanding is needed in order to promote self-care, which takes account of individuals' core beliefs, while at the same time promoting health seeking behavior. A model of care, which acknowledges psychosocial aspects of health and illness provides a framework, through which health professionals are assisted to provide culturally appropriate diabetes care.

8. Recommendations

1. Nurse Education

Nursing education in Ghana should take into account patients' personal culturally held beliefs about health and illness to ensure that nursing trainees inculcate skills and competencies on delivering cultural-oriented care to their patients and clients regarding chronic diseases in general and diabetes in particular. This may be realized when issues on belief systems regarding health and illness on chronicity of diseases, and patient care are included in the curriculum of nursing education. In addition, there may be the need to introduce cultural safety in nursing education in Ghana.

2. Health Professionals

The spirit of cultural safety in nursing requires that nurses take care of individuals irrespective of the things that make different or unique

from others such values, beliefs, religion and so forth. In these ways, the students may comprehend the socio-cultural behaviors of patients and clients and how to use them in patient care. The findings of this study inform health care providers to conceptualize diabetes care in Ghana by considering psychosocial issues of patients in their management in addition to the clinical care given by health care professionals. It is envisaged that the inclusion of psychosocial care to the traditional medical care rendered to patients living with diabetes mellitus will be beneficial for positive outcomes in diabetics. The ensuing recommendations are offered based on the findings of the study.

3. Collaborative Working

The findings suggest the need for collaborative care for patients with chronic diseases and diabetes in particular. The study suggests an interaction between clinical and traditional models of care for patients with diabetes and other non-communicable diseases. Thus, the need for health care professionals such as nurses to think through socio-cultural issues associated with diabetes in order to offer these patients comprehensive care influenced by cultural practices. For example, nurses need to reflect over their own cultural identity carefully and note the impact of their own culture on nursing care of patients. Thus, to recognize effective nursing as the need to offer care to individuals regardless of values and beliefs differentials as differences in beliefs between the nurse and the patient are likely to bring tensions and create negative interactions.

4. Patient and Public Education

In addition, this study suggests the need to intensify patient and public education about diabetes, having in mind the "inappropriate perceptions" about diabetes, such as its origins and meanings associated with it. Such education may make a change in health and illness behaviors of Ghanaians and Ghanaians in the diaspora, taking into account the need for collaboration between traditional and technical care, and avoiding tensions between them.

5. Health Authorities

Authorities in healthcare may need to embrace the concept of collaborative care in general and in particular the cultural safety in care and institute it as a health policy that should be respected by all healthcare staff in all healthcare settings to improve quality of care and enhance the overall health outcomes of patients.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

We acknowledge all the participants in this research. Without them data for this study would not have been possible.

None of the authors received financial support for this study which needs to be acknowledged.

Author contribution to the article

The first author conceptualized the study, collected and analyzed data, and took part in the interpretation of data, did the write-ups as well.

The second author took part in the data analysis, write ups, took part in the draft of the manuscript, offered constructive criticisms during the write-ups.

The third author took part in the write-ups, took part in the draft of the manuscript, offered constructive criticisms during the write-ups.

All the three authors agreed in common on this article for possible publication.

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