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CONSIDERATIONS FOR CARE OF PERSONS LIVING WITH TYPE 2 DIABETES IN A GHANAIAN HOSPITAL: LESSONS FROM HERMENEUTIC PHENOMENOLOGICAL ENQUIRY

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ABSTRACT

Diabetes is a chronic metabolic disease associated with hyperglycaemia as a result of disturbances related to carbohydrate, protein as well as fat metabolism owing to malfunctioning of the pancreas with particular reference to insulin production or secretion, action or both. Diabetes mellitus is a chronic medical disorder associated with abnormalities in glucose uptake. In Africa and Ghana in particular, it seems that diabetes mellitus is viewed as more than a biomedical disease as patients hold certain health beliefs and perceptions around the condition apart from what is known about the scientific causes and treatments of the disease. For instance, there are specific scientific treatments or protocol for diabetes which chiefly centres on medications, diet, exercise, monitoring of blood glucose and education. These routine medical care are important to enhance glycemic control of the affected persons to prevent complications associated with the disease. It is also known that based on scientific causes of diabetes, we clearly understand the scientific manifestations associated with the condition and how they are treated and managed. It has been observed that aside the rudimentary medical care and practices that are offered to diabetes patients there are held health beliefs and perceptions and similar related issues which need to be considered in the care of persons living with diabetes in Ghana. The main purpose of this study was therefore to explore factors which need to be considered in the care of individuals living with type 2 diabetes mellitus in a Ghanaian Hospital. The study employed twenty seven (27) newly diagnosed patients with type 2 diabetes mellitus between August and October 2009 at a hospital in Ghana. Through hermeneutic phenomenological approach to qualitative research, in-depth interviews were carried out in Ghanaian Twi language as well as in English. However, participants who could not speak English were interviewed in Twi and subsequently translated into the English by the investigator. The research data was analyzed using Creswell (1998) method of qualitative data enquiry. This approach provided a rich account of the important structures of the phenomenon under investigation. The findings identified to be considered in the care of type 2 diabetes patients centred on (a) traditional beliefs about the origins of diabetes mellitus (b) social connotations ascribed to diabetes mellitus (c) patients' responses/reactions to diagnosis of diabetes as well as resolution and (d) patients' perceptions/concepts of seeking cure for diabetes mellitus. These findings may offer healthcare providers a better understanding of how to manage holistically diabetes patients in Ghanaian context. In this sense it is noted that a biomedical care approach single-handedly may not enable healthcare providers to successfully manage and treat this protracted condition in Ghanaian people, nonetheless through the inclusion of an understanding of their health and illness beliefs and perceptions, the healthcare workers may understand what it is like for Ghanaian diabetes patients to live with diabetes, and how to offer them the needed support and care. This research creates a platform upon which healthcare providers may advance educational as well as informative programmes for patients living with diabetes in Ghana as well as the general Ghanaian population, to address misconceptions or inappropriate beliefs regarding diabetes in

Ghana and other important programmes of diabetes care, which may take into consideration the cultural context of Ghana. The findings may be imperative for nursing education in Ghana and diaspora, because curriculum development may need to consider these findings with regards to diabetes and other chronic conditions in general, so that nursing students will understand the social-cultural behaviours of patients during training and subsequently be able to offer appropriate and cultural sensitive care later in their professional life.

KEYWORDS: Care of Type 2 Diabetes Patients, Considerations for Diabetes Care, Diabetes and Hermeneutic Phenomenological Enquiry, Persons Living With Diabetes Mellitus

INTRODUCTION

Diabetes mellitus is a chronic medical disorder associated with abnormalities in glucose uptake. The condition is made up of 3 major types. These are type 1, type 2 and gestational diabetes mellitus. Type 1 diabetes occurs when the pancreas loses its capacity to produce insulin, which results in uncontrolled elevations of blood glucose [1]. Type 2 diabetes on the other hand develops when the body is not able to use effectively the insulin that the pancreas produces. In type 2 diabetes, insulin production is primarily or initially unaffected; nevertheless cell tissues become resistant to the action of insulin [1]. In reaction or response to the upsurge of blood glucose level, insulin levels rise and, for a period of time, compensate for insulin resistance. Subsequently, after a number of years there is eventual impairment to the pancreas due to an overburdening of cells in the pancreas. The third type of diabetes is the Gestational Diabetes Mellitus (GDM) defined as "any degree of glucose intolerance with onset or first recognition during pregnancy" [2]. This is because pregnancy is said to be diabetogenic as pregnancy induced hormones become antagonistic to the production and function of insulin [3].

Global prevalence of diabetes mellitus among adults aged between 20 and 79 years was 6.4% at the end of 2010 affecting 285 million adults, which was projected to rise to 7.7% constituting 439 million adults by the year 2030 [3]. In the same vein, it was reported by the IDF in 2013 that 382 individuals between the ages of 40 and 59 years had diabetes mellitus of which 80% of the affected persons were found in the developing countries [3]. Similarly, IDF noted that by 2035 the number of people aged between 40 and 59 years affected with the disease as noted above will rise to 592 million people with accompanying complications [3]. It is noted that the prevalence of type 2 diabetes in particular is on the rise as it forms about 90% of all diabetes cases worldwide [3]. The global picture of the prevalence of diabetes is not different from Ghana as 6.3% of Ghanaians are estimated to have the condition, with type 2 diabetes taking about 90-95% of total cases of diabetes [4, 5].

It seems that most of research studies which have been done in Ghana on chronic diseases in general and diabetes in particular have focused on perspectives on health and healthcare beliefs as well as issues on treatment practices, protocols, challenges associated with human resources and equipment and instruments besides prevention. For instance in 2012 De Graft Aikins and others set off to investigate the knowledge of respondents on diabetes as well as its causes and their treatment in general [6]. In their study several factors were linked with diabetes such as smoking and drinking strong liquor in addition to the consumption of toxic foods [6]. It was also noted that diabetes is caused by spiritual forces and for that matter treatment of diabetes in general should focus on spiritual interventions. This is analogous to what Twumasi [7] and Assimeng [8] had previously noted in their studies in Ghana that "treatment of spiritual diseases in Ghana are based on social analysis, a process in which the traditional healer seeks to analyse the possible causes and treatment of illness from

social and spiritual real" [7, p.28]. It is believed that in such circumstances, the traditional healer accomplishes or does certain procedures or sacraments and gets cleared of the spirit which is alleged to be instigating or eliciting the disease condition [7]. Similarly, Owusu-Daaku and Smith [9] investigated the health seeking behavior of Ghanaian women dwelling in London and Kumasi by means of snowballing approach. In London, 16 Ghanaian women who could speak either Twi or English language were considered to be part of the study whereas 18 women resident in Kumasi were sampled to take part in the study. Data were collected on one-on-one interviews and analyzed using content analysis. Findings indicated that Ghanaian women in London attributed chronic diseases such as diabetes and other diseases to lifestyle factors including stress, tiredness, poor diet, poor hygiene and lack of exercises [9]. In addition ageing and hereditary were considered responsible for chronic diseases in general [9]. On the other hand the women in Kumasi noted that chronic diseases come about as a result of poor diet secondary to poverty in addition to tiredness, ageing, hereditary reasons, stress, poor quality of drinking water and poor general hygiene among other factors [9]. It is thought-provoking to note that witchcraft as well as supernatural powers in general were mentioned by the participants in Kumasi as major causes accountable for diseases such as diabetes which do not respond to medical treatment the "scientific medicine" [9]. In the same way, factors such as "evil eye", "spiritual forces" according to Owusu-Daaku and Smith, [9] were found to play substantial role in the causality of disease conditions attributable to spirits such as diabetes, cancers, tuberculosis and HIV/AIDS to mention a few. The conditions attributed to spirits according to the Kumasi respondents are usually treated with prayers, reliance on the Supreme Being (God). Conversely, Ghanaian participants residence in London did not note that supernatural factors cause diseases, they however pointed out that such beliefs are associated with the people living in Ghana [9]. Both groups however established that Ghanaians in general adjourn in seeking health professionals' advice on time when there is disease condition until the condition becomes severe and "these are attributed to perceptions and actions in Ghana" [9, p. 73]. It may be important to note that the respondents in the two studies share common believes in the external factors including the supernatural powers being accountable for many diseases such as diabetes and that the management of such diseases conditions also exist in the spiritual realm [9, 6]. From the two studies, such perceptions were connected to participants who were dwellers in Ghana. These perceptions associated with mystical causes of chronic diseases may be owing to the cultural orientation in Ghana, as in many situations Ghanaians tend to link existences of events and situations as well as diseases and conditions to supernatural powers [10].

Initially, De Graft Aikins [11] found that diabetes was associated with too much consumption of sugary foods as well as eating contaminated foods with agro chemicals as people use agro chemicals to spray food crpos. In addition to what De Graft Aikins [11] identified, Korsah [5] also noted that diabetes is contracted when someone sleeps on the same bed with the affected person or when another person walks across affected person's urine. Similar findings have been identified from other parts of Africa. For instance, Rutebemberwa et al. [12] found that diabetes is transmitted to other people when the affected individual coughs in an open environment in addition to expending or sharing food utensils of the affected person, and siting nearby the affected individual [12]. In both Korsah [5] and Rutebemberwa et al. [12] studies, it is perceived that diabetes is contagious and can be transmitted to other people.

Other studies in Ghana have also focused on the treatment practices as well as protocols. According to Darkwa [13], on the prevalence of diabetes and it treatment and resources available in the management of the condition in the Cape Coast Metropolis, it was found that treatment modalities are based on medication, diet, exercises, monitoring of blood glucose levels and general education targeting the general population and persons living diabetes in particular. However, it was identified that limited number of healthcare professionals as well as in adequate supply of drugs and equipment exist

in the hospitals to manage the condition [13]. It was ironic to found that in all the seven health facilities studied in the Cape Coast Metropolis, none of them had neurologist [13].

Additional studies have also stressed the need for joint efforts of the various healthcare personnel such as diabetologists, ophthalmologist, neurologist and physician specialist as well as specialist nurses among others in the care of persons living with diabetes [14]. It is also imperative to recognize the role of other professionals such as nutritionists and dieticians in the management of diabetes mellitus through planning of meals appropriate for diabetic condition [14]. Aside the human resource factors important for the management of persons living with diabetes, other resources such as equipment and instruments are likewise essential. Such equipment and instruments include sphygmomanometers to measure blood pressure, electrocardiograph for measuring heartbeat, spectrophotometer for determining the glucose concentration in urine as well as glucometers for measuring the blood glucose levels [14]. However, a study on chronic non-communicable diseases and challenges of universal health by De Graft Aikins et al., [15] found that the rising burden of chronic non-communicable diseases in low and middle income economies like Ghana is associated with both human resources challenges as well as the limited supply of equipment and instruments required to take care of individuals suffering these conditions including diabetes mellitus [15].

Problem Statement

From the background, at least for Ghanaians living with diabetes mellitus, it seems that the condition is more than a biomedical disease as the health perceptions in general around the condition indicate that apart from the scientific causes and treatments, there are held beliefs in Ghana and Africa in general about the diabetes mellitus. We have noted specific scientific treatment or protocol for diabetes which takes into consideration medications, diet, exercise, monitoring of blood glucose and education [16]. These routine medical care are important to enhance glycemic levels of the affected persons in order to avoid complications associated with the disease, such as neuropathy, nephropathy, heart and vascular conditions as well as lower limb amputations to mention a few. In addition, what we do know is that based on scientific causes of diabetes, we clearly understand the scientific manifestations associated with the condition and how they are treated and managed in general [16].

In my interactions with persons living with diabetes during my years of practice as a professional nurse in a hospital, and also teaching in a nursing school at a university in Ghana, I have observed that the care rendered to diabetics are usually centred on medical care in general, for instance, the need for medications, exercises, appropriate diet, regular monitoring of blood sugar levels, general education on diabetes care focused on foot care, managing hypoglycemia, life style modification and taking care of the eyes to mention a few. Apart from these rudimentary or routine medical care and practices that we offer to diabetes patients, there may be health beliefs and perceptions and similar related factors which may be considered in the care of persons living with diabetes in Ghana. In this sense a biomedical care model alone may possibly not enable healthcare providers to successfully manage and treat this protracted condition in Ghanaian populace, however through the inclusion of an understanding of their health and illness beliefs and perceptions, the healthcare workers may understand the certainties of what it is like for Ghanaian diabetes patients to live with diabetes, and how to offer them the needed care. Hence, the need to explore factors which must be considered during the care of persons living with type 2 diabetes in a Ghanaian hospital using hermeneutic phenomenological approach to qualitative research.

Purpose of the Study

The main purpose of this study was to explore factors which need to be considered in the care of persons living with type 2 diabetes mellitus in a Ghanaian Hospital. These factors may impact or influence healthcare providers on the type of care essentially and really required to be rendered to the patients diagnosed with type 2 diabetes. Essentially, most of the care we give to these patients are elementary or basic in nature which focus on medication, advice on diet, exercise and foot care among a lot, without actually considering the patients' perceptions and concepts regarding diabetes mellitus in their care. The findings of this phenomenological investigation may therefore offer healthcare providers a better understanding of how to render comprehensive care to these patients diagnosed with type 2 diabetes mellitus in Ghanaian context.

Research Question

What factors are considered in the care of diabetes patients?

Significance of the Study

The findings of the study will provide healthcare providers information on factors that are to be considered essentially in the care of diabetes type 2 patients. For instance, the findings may give us directions on how to include patient held beliefs on health and illness in their care besides the routine care that are rendered to them. The findings may also be used by the Ministry of Health in Ghana, Ghana Health Service, the Nurses and Midwives Council for Ghana and similar health related bodies to formulate policies which may improve the care of patients with chronic conditions in general and diabetes in particular. The study findings may equally uncover other areas for future research associated with chronicity of diseases in broad terms.

Literature Review

Several studies have been done to identify factors which influence the care and management of diabetes patients. Specifically, these factors hover around facilitative as well as barriers to diabetes care and management in general. For instance, Rickheim et al., [17] found that diabetes patient education empowers them to adhere to diabetes treatment as the type of diabetes education offered to the patients equipped them to understand the realities of living with and managing the condition. In a similar research, Naik et al., [18] looked at the usefulness of diabetes education and patient empowerment approach for self-management of diabetes. It was noted at the end of the study that the patients who were involved in the diabetes education and empowerment training demonstrated greater understanding of diabetes as well as their individual values of glycated haemoglobin, HbA1c, blood cholesterol level, and blood pressure. They also showed better knowledge on target goals and emphasized the need to ensure empowerment based approach to diabetes care and management to obtain better outcomes in self-management of diabetes mellitus in the affected individuals. The findings of Rickheim et al., [17] and Naik et al., [18] are not different from what Ozer et al. [19] in a Turkish study with type 2 diabetes patients found that there were variances in well-being between respondents who took part and had not joined in a diabetes education training programme as the patients who participated in the training experienced better a metabolic control compared with non-attendants [19]. In the same vein, Tankova et al., [20], pointed out that structured training programme enhanced the quality of life as well as metabolic control of patients living with diabetes mellitus. All the four studies [17, 18, 19, 20] are considering patient education and training programmes for diabetes patients as empowerment strategies or approaches to augment patient well-being.

It has also been found that self-monitoring of blood glucose and regular measurement of blood pressure are imperative for the well-being of individuals living with diabetes mellitus [21]. Further, a study by Andrew [22] found that home or self-monitoring of blood glucose is a major element of active self-management of diabetes mellitus and that self-monitoring of blood glucose has demonstrated effective and active for patients with types 1and 2 diabetes mellitus. It may be possible for these patients to manage independently with their disease with self-monitoring of blood glucose which ultimately may lead to a better quality of life [23]. Self-monitoring of blood glucose as well as insulin administration or injection are considered indispensable for daily management and care of patients with diabetes mellitus. Self-monitoring of blood glucose is intended to collect data or information on blood glucose levels of patients at different periods of time that permit the patient for the judicious identification of high levels. This is one of the effective ways of managing patients with both type 1 and 2 diabetes mellitus who may be using insulin, as the information about the patients' blood sugar level is essential to regulate the insulin prescriptions or dosages, which may improve glycemic control and avoid complications [24].

It is also noted that culture influences healthcare practices of individuals and societies in general and therefore may affect diabetes outcomes. Members of many ethnic and social groups have specific attitudes, beliefs as well as values associated with health and illness. These cultural factors make the development of cultural competency in healthcare essential for every healthcare provider [25]. Understanding the culture of individuals may offer the healthcare providers better knowledge on how to render culturally appropriate care to patients living with diabetes and patients in general. For instance a study from Thailand indicates that Thai culture impacts diabetes perceptions and management as they believe that diabetes is perceived as a sugar and fat-related disease condition and that taking too much sugar and fat in diet may cause diabetes mellitus. The study emphasizes the need to have culturally appropriate care and management guidelines for diabetes patients and also to consider the importance of certain foods in the management of diabetes and sugar as well as fat in particular in the cause of diabetes mellitus [26]. Similarly, Korsah [5] in a qualitative research found that diabetes mellitus is caused when individuals consume too much sugary foods, eat contaminated or toxic foods including vegetables and fruits, and when someone sleeps on the same bed with a person with diabetes, as well as when a person walks across affected person's urine. These perceptions and beliefs are inappropriate and may offer us a better understanding of how to care for patients with such health and illness beliefs [5]. Additionally, similar misconception is associated with insulin administration for the treatment of diabetes mellitus as Caballero et al., [27] has pointed out that it causes blindness to diabetes patients after commencement of insulin therapy and continuous administration of insulin in diabetes patients may also lead to dependence [27]. Both Catherine et al., [25] and Korsah, [5] are qualitative studies which throw light on sugar as a causative factor for diabetes mellitus from the perspectives of their research participants. However, there are other factors which can cause diabetes mellitus which Korsah [5] identified but Catherine et al., [25] did not find. For instance, a person crossing the urine of diabetes patients and sleeping on the same bed with the affected patient may contract the condition, in which case diabetes is considered a contagious disease [11, 5]. It is only Caballero et al., [27] among the four studies reviewed in this section which has noted an adverse effect of insulin on vision of persons with diabetes mellitus. In my view, one issue that we need to consider as researchers is that there is a sense in what the research participants are saying in Caballero and colleagues' work in 2007. Probably, their assertion of insulin injection leading to blindness is based on their observations and experiences with patients who are put on insulin therapy for the treatment of diabetes. This assertion may need further investigations.

Another factor which may impact diabetes management is the social support which the patient may receive from friends, family members as well as healthcare providers. Social support covers numerous proportions which differently impact specific diabetes health-related results or outcomes as well as behaviours [28]. The effects of social support have been identified in quite a few studies. A qualitative study by Moser et al., [29] noted that self-management of diabetes is greatly influenced by health professionals' support and recommendations. This is because, understanding the procedures and processes that underlie self-care allowed diabetes expert nurses to offer diabetes appropriate counseling which goes beyond the education, manifestations management, compliance as well as metabolic control. Equally, participation in the care of diabetes patients by family care givers also led to a successful self-management as the family care givers enthusiastically took part in the mundane self-care activities of the affected patients. A similar study, though quantitative in nature among African Americans indicated that type 2 diabetes patients received primary support (43%) from their attending physician, followed by support from the other family members (20%) including the spouse and significant others [30]. The two studies Moser et al., [29] and Tang et al., [30] are different in terms of design, they however agree on social support as a crucial factor in diabetes self-care management, whatever form it takes, but what we do know is that satisfaction with social support may be a predictor of enhanced diabetes quality of life as well as blood glucose monitoring [30].

Being able to identify barriers to diabetes self-care management practices is essential in accomplishing optimal health outcomes for affected people [31]. A study conducted by Elizabeth et al., [32] indicates that self-management of diabetes has various impacts such as patient factors, health care staff factors as well as social and environmental factors. These issues need to be addressed to help patients in successfully dealing with their diabetes mellitus. A qualitative study by Onwudiws et al., [31] among low income minority type 2 diabetes patients showed that health information which were received from their healthcare providers were not clear as they were confusing, and not able to indicate the target blood glucose level as well as normal blood pressure. These served as key obstacles for improved self-management of diabetes mellitus. It is also important to note that knowledge is crucial in order for diabetes patients to manage their condition. Lack of knowledge ranks high in research studies examining the hurdles or barriers to self-management of diabetes mellitus. We do know that knowledge of diabetes care has been related to activities including compliance with medication, diet, exercise, blood sugar monitoring as well as foot care [28]. It is equally important to note that patients with low or poor knowledge of their disease conditions are likely to have challenges or difficulties in learning the advanced as well as innovative self-care skills required to improve glycemic control. Additionally, there is high probability for literacy as a factor to predict individuals who may profit from an intervention programme for self-care management [33]. It seems to me that the three studies [31, 33, 28] are all hovering around lack of knowledge as a barrier to a successful diabetes self-care management. The only difference in their presentation is that Onwudiws et al., [31] considered lack of clear information for the patients in diabetes management whereas Ahola [28] utilizes the knowledge level of patients as a factor in self-management and its effect on glycemic control. However Rothman et al., [33] stresses on literacy level of patients, a factor to predict patients who may benefit from self-care management programme. Further studies have also identified motivation as a barrier to diabetes self-management. There are two types of motivation, extrinsic and intrinsic [34]. For instance, extrinsic motivation encompasses engaging in an action in order to gain a reward, such as a type of motivation provided by health team members to their patients, whereas intrinsic motivation is determined by inner rewards which seems more important in active self-management practices. Examples of intrinsic motivation are depression, anxiety, apprehension, fatigue and loss of interest may affect how an individual patient may actively be involved in his or her self-

care. This is because such psychological manifestations as noted above may negatively affect how individuals take care of themselves as these may reduce their decision taking ability in diabetes care and management in general [34]. Ahola and Groop [34] have specifically looked at the effects of motivation and other psychological factors in particular as barriers for self-care management of diabetes mellitus.

We have noted from the reviewed literature that patient empowerment through health education as well as the level of knowledge and cultural orientation of patients may also impact diabetes self-care in either positive or negative manner. In addition, it has been identified that self-monitoring is a major element of active self-management of diabetes mellitus. Similarly, availability of social support from friends as well as significant others including family members may ensure positive outcomes in patients with chronic diseases such as diabetes mellitus. Equally, the literature indicated that internal motivational factors such as depression, anxiety, loss of interest and similar ones may negatively impact self-care of people living with chronic conditions such as diabetes mellitus. The review of the literature for this present study seems to suggest that most of the research studies done on factors influencing diabetes care and management in general were conducted in the western world. These factors were specifically identified in different settings where socio-cultural environment as well as other factors may be dissimilar from the Ghanaian context, hence the need to embark on this study in a Ghanaian hospital to explore factors which need to be considered in the care of individuals with type 2 diabetes mellitus.

METHODS

In this study hermeneutic phenomenological approach to qualitative research was employed. Hermeneutic or interpretive phenomenology suggests that human beings are portion or part of the world, and that individuals are not detached from their world [35]. Hermeneutic approach to qualitative research proses that "meanings are co-developed through our shared humanness and life experience" [35]. This suggests that in hermeneutic phenomenological research, it may be impossible for the researcher to separate him or herself from the research participants and that was exactly what I have done in this research study, as I have interacted with the patients in many years of my nursing practice. Kafle [36] has pointed out that hermeneutic phenomenological study centres on development of rich and in-depth account of the experiences of a phenomenon being explored. Hermeneutic phenomenology is used in this current study because it is realistic when research questions which try to find meanings of a phenomenon are inquired [35]. In addition, hermeneutic phenomenological approach to qualitative research was employed to study type 2 diabetics because, the method is concerned about subjective experiences of persons as well as group of individuals in which interpretation and explanation of lived experiences of a phenomenon is a primary purpose [36]. Therefore, hermeneutic phenomenological enquiry was able to reveal what needs to be considered in the management of diabetics from the lived experiences of type 2 diabetes patients in a Ghanaian hospital, and that bracketing myself as a researcher was not possible, as the researcher is a professional nurse in Ghana who has had previous connections or interactions with type 2 diabetes patients.

Sample and Sampling Procedure

A sample of 42 newly diagnosed patients with type 2 diabetes were recruited through convenience selection approach of patients who attended the OPD, on systematic basis at the diabetic clinic in a Ghanaian hospital. The names of newly diagnosed patients with type 2 diabetes mellitus were obtained from the OPD attendance register. Letters were written to 54 individual patients with type 2 diabetes to invite them to partake in this study, and being newly diagnosed confirmed that the participant would be in a position to remember all their early responses to the disease when it was

detected in the hospital. Out of the 54 patients, 42 responded to the letter and were ready to take part in the study. Patients with type 2 diabetes mellitus who had been identified or diagnosed by a physician within a period of three (3) months and was prepared or willing to take part in the study were included. They were also given information sheets as well as consent form to read to know the purpose and implications of the study. The patients who had read these documents and signed the consent form were finally invited for the interview in this research. However saturation of data occurred on the 27th participant out of the 42 respondents who retorted to the invitation to take part in the study.

Data Collection

Data was collected through the use of semi-structured interview guide. This approach allowed the researcher to ask open ended questions in order to ensure that conversation is centred on important issues pertinent to the problem being studied. Similarly, this method permitted the research participants freely and openly to converse with the researcher on issues from their own point of views on experiences they felt were essential to be discovered [37]. This method allowed more questions to be asked as well as permitting probing of questions based on the type of issues put forward by the researcher for clarification and further deliberations [37]. Flexibility on the part of the researcher is ensured by the use of the semi-structured interview guide as this format defines the speed or pace, tempo as well as flow of information from the respondents [38]. Open ended questions were employed by the researcher in order to get as much as needed information on the matters being studied. Information being given by the research participants was also examined by the researcher in order to point out areas which needed further clarification and extensive exploration to ensure that relevant areas of the issue being studied were fully covered. Interview of the research participants was done by the use of audiotape recorder after their permission had being obtained. They were interviewed between a minimum of 45 minutes and a maximum of one hour at a place of their choice. They were interviewed in both English and Twi languages (local Ghanaian language). The respondents who could not speak the English were conversed with in the Twi language, but it was later translated into English by the researcher. Data collection lasted for three (3) months between August and October, 2009. Data collection from the research participants continued until data saturation occurred at the 27th interview when no new information was forthcoming [39].

Data Analysis

Data in this study was analyzed using Creswell [40] content analysis approach and this was carried out simultaneously with the interviews. In this approach, verbatim transcribed data from the research respondents were read several times to get some thoughts or ideas, which were noted down as they came to the mind of the researcher. This was followed by a second step whereby sentences and statements, words and phrases from the respondents which described particular dimensions of the phenomenon under investigation were taken from each transcript. Meanings were then put together from important statements and ideas from the data were developed into research themes. Theme clusters were then developed out of which theme categories were advanced or evolved [41]. Findings were then presented in a rich graphic or descriptive format to depict the phenomenon under study from the informant’s lived experiences according to Creswell’s 1998 approach to data analysis. Finally, confirmation or validation of research findings was sought from the research participants to be sure of the information they had given to the researcher was exactly what was presented to the public [40]. Verbatim quotes from the participants’ narratives were then used as exemplars to represent what they were saying under each major and sub themes.

Ethical Considerations

The permission to carry out this research was obtained from the Research Ethics Committee of the Faculty of Health and Life Sciences of the De Montfort University in the United Kingdom. The ethical approval letter was obtained on the 23rd April 2008 with Reference Number 347. Authorization was also acquired from the authorities in Ghana where the research was done including acquiring of permission letters from the hospital and the municipal health directorate. Diabetes patients' consent to participate in the research was also sought after inviting and explaining the research to them on individual basis. In addition they were assured of privacy, confidentiality and anonymity and any recognizing evidence or information would not be incorporated in the transcribed transcript or any report or production of the research findings. In addition biographic data of the respondents was separated from the interview data to avoid any linkages between them. Pseudonyms were used to represent the research participants to protect their anonymity. They were also informed that their decision to take part or withdraw from the study would not affect their treatment in the hospital.

Findings

In this hermeneutic phenomenological approach to qualitative research, four main findings were discovered.

1. Traditional Beliefs about the Origins of Diabetes Mellitus

The traditional beliefs regarding the origins of diabetes mellitus were identified under four main groupings. These are mystical causes, consuming poisonous foods, consuming sugary foods as well as walking across a diabetes patients' urine or sleeping on the same bed with someone with diabetes mellitus.

Mystical Causes of Diabetes Mellitus

Participants of the study ascribed diabetes mellitus to mystical powers in many ways such as a result of the nefarious activities of witches through witchery. Other participants also noted that the condition was sold to him in an open market in a mystical way through buying and selling, which signifies diabetes as a 'bought disease'. In a similar way some of the respondents mentioned that diabetes mellitus may be contracted mystically when an individual is given food to eat by another person. In this sense the food is served as a medium through which diabetes mellitus is given out to the victim.

A participant noted that the condition was contracted through spiritual means. This was what he said:

"As for diabetes, one gets it when spiritual activities are carried out on individuals by witches and wizards as well as similar bodies".

Another participant who perceived that the condition was sold to him in an open market has this to say:

"This condition was sold to me in the market. In the market one can get everything to buy so in a spiritual way the disease was sold to me. The one who sold the disease to me is my devil because the person does not want me to live".

Similarly, a participant who thought that he got the condition from the food given to him by someone had this to say:

"As for me I had the condition from the food given to me by a family member. In a mystical way the disease was transferred to me through the food I got from that family member".

Consuming Poisonous Foods

The increasing incidence of diabetes mellitus was also attributed to toxic foods as a result of poor and harmful farming practices which have affected the quality of food stuffs we have in Ghana. For instance as a result of the use of agro-chemicals such as pesticides on food crops, there is apparent contamination of food stuffs including tomatoes, garden eggs, cucumber and lettuce to mention a few. It was noted by the participants that when prices of food go up, there is always increasing pressure on farmers to increase yield of food crops in order to increase their profit margins. In this way, farmers are motivated to use all sorts of poor farming practices to increase yield. These farming practices were perceived by the participants to lead to serious health conditions such as diabetes mellitus. One of the participants said this in connection with contamination of food stuff.

"*The food that we buy from the market have been contaminated because they use all sorts of chemicals to spray the farm crops. Even at times they employ some chemicals which will force the vegetable like tomatoes to ripe prematurely. When one eats such vegetables, it is likely to get diseases such as diabetes. Fertilizers are used these days to grow yam, cassava, cocoyam and the rest, so we are eating poisonous foods everyday".*

A participant mentioned that farmers are eager to get high prices for their farm produce when prices go high; hence they spray their farm crops to ripe prematurely.

"When demand for food stuffs go up, the farmers force their crops to ripe prematurely in order to get high profit margins. Crops like tomatoes, garden eggs, and similar ones can be forced to ripe, you sell at good price and get your profit".

Consuming Sugary Foods:

The research participants related diabetes mellitus to the consumption of too much sugar in diet. The participants used two Twi (local language in Ghana) terms which are employed simultaneously to show that there is a connection between sugar consumption and the development of diabetes mellitus. These are 'asikyire yare' (sugar disease) and 'asikafo yare' (disease for the wealthy) as the wealthy have money to buy sugary foods and therefore are likely to get diabetes mellitus. Some of the participants linked diabetes to sugar consumption in this way.

"The condition is 'askyire yare' because it is caused by too much consumption of sugar. When there is too much sugar in the body, it is diabetes, so if someone consumes too much sugar it settles in the blood and cause diabetes in people".

Another person had this to say in connection with the wealthy in society and their way of life in relation to diabetes development.

"People who eat very sweet foods such as beverages everyday may also get diabetes. Some of those people have money and can afford sweet foods every day. They are at high risk of getting the condition. That is why diabetes is called 'Asikafo Yare' because they have money to buy sweet things to eat and if you are not fortunate, you get the disease".

Walking Across a Diabetes Patients' Urine or Sleeping on the Same Bed with Someone with Diabetes Mellitus:

It was also perceived by the participants that 'walking across the urine' of someone with diabetes is likely to get

diabetes. In some Ghanaian communities it may be difficult to get public urinals as well as toilets and at such places when individuals have the urge to urinate, they do so openly. This means if a person with diabetes urinates and someone accidentally 'walks across the urine', the individual may get diabetes mellitus. People may have to walk long distances outside their houses nevertheless may not come across a communal toilet or urinal and therefore have the propensity to urinate anyplace unrestricted. Similarly, the participants also perceived that sleeping on the same bed with someone with diabetes may lead to diabetes mellitus. It this sense, diabetes was seen as an infectious condition which can be contracted by individuals. Two of the participants had this to say, first.

"I know that when you walk across someone's urine and the person has diabetes you can also get the condition. So you have to pray that you do not walk across urine of someone with diabetes".

The second participant also had this to say:

"Even if you sleep on the same bed with somebody with the condition it can be transmitted to you. It is a very bad condition because it can be transferred to you from one person to another".

2. Social Connotations Ascribed To Diabetes Mellitus:

The social terms ascribed to diabetes mellitus by the participants in this study were related to diabetes as a 'Cursed disease, Demonic disease, Bought disease, Witchcraft disease, Bad disease as well as Chronic disease'. These meanings attached to the condition tell us about the source of the condition, its nature, what it can do to the affected person and how it tags the diabetes patient. They are connected to the social, cultural, spiritual as well as religious beliefs of Ghanaians. Some of the participants noted the following.

"If you have diabetes, it means you are cursed, this is because the condition has no end. Lot of pains are associated with it and every day you have to take medicine either by injection or by mouth. People who have it are cursed".

"This condition is from the devil or the Satan, very bad disease and always you have to battle with it. Even it can be sold to people in the market, if you meet very bad person who is a devil to you can sell it to you in a mystical way. Family members who want your down fall can sell it to you so that you battle with the condition in your life". That is why it is called 'Nto Yare' (Bought Disease). The bad person sells it you, even your friend; a family member can do that to you".

Similarly, other participants mentioned the following:

"Witches and wizards can cause diabetes. When they give it people it becomes a chronic disease which never goes off in one's life".

"It is a bad disease, because it causes other problems in the body if the affected person does not go for treatment. That is why I am saying it is a bad condition". I have seen someone who got eye problems from diabetes because it was not treated".

3. Patient's Responses/Reactions to Diagnosis of Diabetes as well as Resolution:

At the beginning of patients' diagnosis of diabetes, there were developing processes of social behavior associated with patients' responses to the diagnosis of diabetes and how the patients subsequently came to terms with the condition.

For instance, some of the patients said that they were not worried of diabetes because their parents were diabetics. However, others were with the view that no one has had diabetes in their family, so diagnosis of diabetes was clearly disturbing. Patients' reactions were also based on their previous knowledge of diabetes mellitus through reading via internet and textbooks. The patients were nevertheless able to come to terms with the condition following the diagnosis in various ways. A participant reacted this way upon diagnosis.

"When I was diagnosed, I never became worried because both parents were all diabetics, so definitely I knew that I would get it in my life, so that day there was no problem at all when I was told by the doctor and the nurses. My father has lived with it for many years and there is was no trouble, so it is about management".

However, another patient reacted in a different way:

"Ah, no one has diabetes in my family, so when I got the news from the doctor, I was devastated. The whole of that week, I could not eat well, because I was thinking about my future, what would happen to me with this bad condition, but God is alive, will protect me from all evils".

Similarly, another reacted based on his previous knowledge about the condition through internet but had hope for the future:

"Me, I have read about the condition from the internet, I know some of its manifestations, very bad ones, so when I was diagnosed, based on what I have read already, I was somehow scared about what is likely to happen to me, however I know that if God is on your side, one can overcome the condition. Again if you accept the condition and attend hospital regularly, there will be no problems".

4. Patients' Perception/Concept of Seeking Cure for Diabetes Mellitus:

Despite the chronicity of diabetes mellitus, the patients remained optimistic that their diabetes would be cured either through God or mystical ways or through the use of biomedical therapy or amalgamation of two or three passageways noted above. This is what they mentioned.

"As for this condition if you want to survive, you need to look at God as well as the need to go for hospital treatment. At times one has to use special powers, one need to use spiritual powers to drive away the devil that causes it. In some situations you have to combine all the three ways to combat this condition, using God, spiritual powers as well as hospital treatment to tackle all corners, so that cure can take place".

"This is not only a hospital disease and so if you have it, you must see the people who have double eyes to see the causes of the diseases. Hospital management cannot cure it, if you need a cure, it is only the spiritual way".

These findings as noted above inform us about what we need to consider in the care of type 2 diabetics. The findings point to a particular direction, as they indicate some specific elements associated with type 2 diabetics which need to be addressed in their care. These important elements may be able to offer healthcare professionals a better understanding of how to give culturally specific care to these patients. The findings show that diabetes in Ghanaian context is more than a biomedical condition and therefore the use of biomedical model alone in its management may be limited, as the specific elements from the findings must be considered and addressed comprehensively during patients' care and management in general. As a professional nurse, teaching in the Nursing School and working with diabetes patients in the hospital wards for over 20 years, I have observed that most of the care rendered to patients are rudimentary, which linger around serving

medications, checking of vital signs, writing the 24 hour report, bathing and feeding patients as well as following specific protocols of treatments. We rarely consider these elements in the findings as noted above when it comes to patients' care which may be due to several reasons. From this study, I have come to realize that addressing these issues raised in the findings may go a long way to impact the outcome of diabetes care in a meaningful and positive manner. For instance we need to consider and address the inappropriate patients' concepts and perceptions of diabetes as it is perceived that the condition emanates from walking across the urine of diabetes patients or contracting diabetes by sleeping on the same bed with a diabetic. We also need to address inappropriate social meanings ascribed to diabetes by these Ghanaian diabetics as well as their negative reactions following diagnoses of the condition. I am certain that it is not only giving them the medication prescribed by their doctors and offering the services noted above but addressing their inappropriate folk beliefs identified in this study in a comprehensive approach may influence the outcome of their care. For instance following diagnosis of a patient, it may be the duty of the health professional to find out the individual's incongruous perceptions of the condition and identify suitable and fitting as well as culturally and personalized educational interventions to limit the negative effects of such beliefs on diabetes outcomes.

DISCUSSION

Findings from the study indicate that diabetes as a chronic condition is contracted by individuals mystically through the activities of witchcrafts by way of spiritual buying by the affected person or spiritually eating a particular food offered to the victim by another person. This is similar to what De Graft Aikins et al., [42] identified, as diabetes mellitus was thought to be associated with supernatural powers including witchery as well as necromancy or sorcery activities. In 2008, Kottack, categorized disease causation into three main domains, including personalistic, naturalistic and emotionalistic realms [43]. The naturalistic line of disease causations lays emphasis on the scientific approach to causality in which diseases are associated with microorganisms, whereas emotionalistic causes of diseases attribute diseases to factors such as anxiety, depression, and similar emotional factors [43]. However, personalistic disease attributable causes tend to look at supernatural factors such as witches, gods, persons, ghosts as well as inanimate objects to mention a few [43]. In the present study, the findings associated with diabetes causation from the perspectives of type 2 diabetes patients is similar to personalistic disease theory propounded by Kottack [43] in which diseases are believed to be caused by supernatural beings as well as individuals purported to be having spiritual powers to cause diseases to other people. In a similar way, Helman [44] noted 4 areas of disease causativeness. These are factors with the persons themselves, from the environment, social factors including interpersonal stress as well as supernatural factors such as destiny of individuals, witchcraft activities and sorcery few to mention [44]. In the same vein, personalistic approach to disease causation by Kottack [43] is comparable to supernatural factors of disease etiology by Helman [44] and De Graft Aikins et al., [42] and these concepts of disease causal theories by Kottack [43], Helman [44] and De Graft Aikins et al., [42] are built on by findings of the current study. This is because type 2 diabetes patients in the current study perceived that their condition was brought about by supernatural beings including witches and similar bodies. Other findings of the current study indicate that diabetes is brought about by individuals eating contaminated foods as a result of spraying food crops with agro chemicals by farmers, individuals consuming too much sugary foods, and walking across urine of diabetes patients as well as sleeping on the same bed with someone with diabetes mellitus. As we have noted in the above discussion, individuals in each culture have their own way of defining and describing illness and how the disease comes about. Cultural perceptions and beliefs held by patients with regards to illness in general strongly control their opinions, views as well as insights about the condition including its treatment and choices they make about the disease management in broad terms [45]. These current

findings about the causes of diabetes from type 2 diabetes patients' perspectives are culturally specific to Ghanaian patients but similar to the findings by the Chew, Tan and Ooi [45] in a Chinese disease categorization in which diseases were grouped based on their perception on disease causation [45]. For instance, Chinese hold belief that "too much heat" or "too much cold" in the body of an individual may lead to a disease condition. Similarly, "too much wind" in the abdomen of a person may also lead to "abdominal pain" or even a "joint pain". Further, eating specific diets such as "watermelon" may also allow "too much air to enter someone's body to cause diseases. In addition, consumption of ginger and garlic may also eliminate air from the human intestine to avoid diseases [45]. Though, these concepts of disease causation in Chinese sense are culturally different from the causes of diabetes in the current Ghanaian study as noted above, the two studies carry or convey analogous concepts of disease causation but with different diseases in mind, nonetheless all of them employ folk or traditional approaches in their explanations of disease causality or relationship. In other words, the causes of type 2 diabetes as perceived by Ghanaian diabetes patients, and perceived causes of certain disease conditions in Chinese spheres or circles convey and portray similar concepts in disease formation, they are however presented in different cultural sense.

The findings of the current study also include social terms ascribed to diabetes mellitus. These terms were connected to diabetes mellitus as a 'Cursed disease, Demonic disease, Bought disease, Witchcraft disease, Bad disease and Chronic disease'. These labels of diabetes patients are similar to what Metta et al. [46] found, in which diabetes was noted as 'a disease of the rich' as they can pay for and eat 'good food' and 'sweet things'. In a similar vein, diabetes patients were branded as having HIV/AIDS because of the severity of reduction in weight of the affected individuals [46]. This phenomenon has been reported in other African countries where patients with diabetes are stigmatized as having HIV/AIDS due to severe weight reduction [12, 47]. These perceptions or sensitivities may able to dishearten undiagnosed individuals from looking for medical treatment for fear and anxiety of being stigmatized and regarded as HIV/AIDS positive individual. In Denis-Antwi's [48], though not related to diabetes mellitus, similar meanings were given to patients with a chronic disease, as sickle cell patients were labeled as 'people with stunted structure'. On Chinese disease groupings by Flaw and Sionneau [49] branded diabetes as a satanic disease when management of diabetes in the western world was matched with the Chinese traditional medical care, and noted that diabetes mellitus has its origins from devil, gods and other supernatural powers. By comparative analysis, all the authors, Metta et el., [46], Rutebemberwa et al., [12], Gill et al., [47], Denis-Antwi [48] and Flaw and Sionneau [49] are talking about similar issues around branding of individuals using their disease conditions. Most importantly, these social meanings attached to these disease conditions tell us the extent to which the condition affects the individual and again inform us in some cases the source of the condition, what the condition can do to the affected person, and finally but not the least, how that condition may be treated [5]. This idea by Korsah [5] has been emphasized in Downe-Wamboldt, Butler and Coulter [50] that cultural as well as social inscriptions or meanings allotted to illness or health situation is determined by the individuals and community members who experience that particular condition based on their social and cultural experiences in addition to their educational background, economic status and psychosocial issues few to mention [50].

When people begin to adjust to a chronic non-contagious disease condition such as diabetes, may encompass some changes to individual's daily routines or way of life in general. This may be affecting everyday lives, distressing in nature and also difficult to handle. When individuals are diagnosed with chronic diseases such as diabetes mellitus, it generates numerous feelings, emotional reactions as well as imaginations which health professionals should recognize and comprehend. In this current study, reaction to diagnosis of diabetes mellitus was reported by patients in various ways. Their reactions were basically based on their experiences with the condition, as the findings indicate that the patients were

not worried upon diagnosis because their parents were diabetes patients. Others also noted that they were worried because none of their parents were diabetes patients, while the other findings indicated that patients were apprehensive because they had read about diabetes and they knew what was ahead of them. However, in their own ways, they were able to come to terms with the condition variously, first, evidenced by their reliance on God, second, accepting the condition as part of themselves, and thirdly, making remarks that their parents lived with the condition without troubles. The findings in Peres et al., [51], in a study to find the feelings of women after diagnosis of type 2diabetes showed that feelings as well reactions observed among these women just after diabetes diagnosis centered on “anger, rage, sadness, fear and fright” [51, p. 104]. It was however evidenced that over time the women became used to having a long-lasting disease like diabetes mellitus, as most of the women said that diabetes mellitus not at all any longer worried them, because it became part of them and had to accept it [51]. The reactions to diagnosis of diabetes as portrayed by Peres et al., [51] are similar to what Ijaz and Ajmal [52] identified among their diabetes respondent, which included diabetes interrelated stress, and seeming sternness or severity of the condition which hovered around “irritability, fear, depression, anger, weeping, tension, sadness, shock, regrets, hopelessness and denial, as well as “hopelessness and disappointment”. These reactions were elicited as these diabetes patients remarked that their diabetes manifestations continued to soar in spite of the regular treatments with insulin injections three times daily, which made them generally misery and unhappy [52]. In general sense Kubbler-Ross and Kessler [53], identified five stages of reaction by people and these include “denial, rage or anger, bargaining, depression and acceptance”. The reactions identified by both Pers et al., [51] and Ijaz and Ajmal, [52] are all emotive in nature, which agree with the general reaction category exhibited by patients and propounded by Kubbler-Ross and Kessler [53], but the patients’ reactions from Pers et al., [51], Ijaz and Ajmal, [52] and Kubbler-Ross and Kessler [53], are relatively different from what the diabetes patients showed in this current study. My impression seems to suggest that reaction to a diagnosis of a chronic disease like diabetes is individualized, based on the distinctive experiences of the patient but the general processes they go through is what has been presented by Kubbler-Ross and Kessler, [53], however it may not be every person who should move through these approved phases by Kubbler-Ross and Kessler, [53].

The hope for cure of diabetes in this study was perceived based on the patients’ reliance on the Supreme Being, God, as well as using the powers of other spirits, in addition to the use of hospital treatment can offer a cure to patients with diabetes. Awah [54] as well as De Graft Aikins [11] have noted that, it is through the spiritual powers of God and other gods that a chronic disease such as diabetes may be cured. Similarly, Awah [54] has pointed out that chronic conditions do not occur in Africa as traditional practitioners have the powers to cure all chronic conditions in Africa. In addition, it was perceived that if a lingering condition is cured and the signs and symptoms of the same condition resurface, that may be regarded as a fresh attack by the disease condition [54]. However, according to Hjelm and Atwine [55], it was noted among their diabetes participants that medical management failed in their care to cure diabetes, and that served as a major factor for them to shift to the traditional healers and spiritualists in the informal sector for treatment with herbs and similar substances in Uganda. This perception about the hope for cure of diabetes by the use of folk approach may be explained based on the individual’s beliefs about health and illness which influence natural and supernatural forces in causing diabetes mellitus, and subsequently the need for use of folk treatment to cure the condition [56]. As we have discussed above, it is imperative to observe that some diabetes patients seek help from the traditional sector to cure their diabetes mellitus which medical care is unable to manage [56].

The six authors, Awah [54] as well as De Graft Aikins [11], Hjelm and Nambozi [56] and Hjelm and Atwine [55], seem to indicate that traditional treatment and spiritual management of chronic diseases such as diabetes mellitus is

imperative in African situation. However, the patients in this current study in addition to what Awah [54], De Graft Aikins [11] and Hjelm and Atwine [55] recognized as traditional and spiritual treatments to cure diabetes, the respondents remarked that the cure for diabetes may also be derived from medical management.

RECOMMENDATIONS AND CONCLUSION

Implications for Nursing Education

The findings may be imperative in nursing education in Ghana and Ghanaians in the diaspora, because curriculum development may need to consider the perception of patients and clients with regards to chronic diseases like diabetes, as students undergo training, so that these students will understand the socio-cultural behaviours of patients and clients associated with chronic diseases in general. This will offer the students a better understanding of how to give needed and appropriate care to their patients as well as clients. For example, social meanings as well as causes of diabetes and patients' reactions to diagnosis were identified in this study which to a greater extent defines and determines patients' health seeking behaviours. When the students are able to identify these behaviours and perceptions of Ghanaian diabetes patients in course of their training, it will situate them in appropriate manner in order to care for these patients based on their ever varying demands in a socio-cultural complex or sensitive way.

Implications for Nursing Practice and Overall Service Dispensation

The findings may be important in Ghana because patients' belief systems in general inform nurses the need to offer the appropriate cultural sensitive care to their patients as well as clients. The findings indicate and inform nurses how they should support their patients even beyond patients with diabetes but include those with chronic diseases in general. In addition, the findings show that there is a relationship between biomedical and folk healthcare systems as the two systems are equally employed by patients in Ghana and the diaspora, and therefore there is the need to properly integrate the two for our patients. This may be possible when bottlenecks which interfere with their integration are closely examined and interventions identified. This may require a future research.

Implications for Inclusive Patient and Public Education

Bearing in mind these inappropriate beliefs and perceptions in connection with the causes of diabetes and social meanings ascribed to diabetes, as well as their reactions to diagnosis of diabetes by diabetes patients in Ghana, there is the need to intensify overall patient education on the diabetes. The author is with the view that such education should even go beyond diabetes patients patronizing and visiting the biomedical facilities including hospitals and clinics. Therefore, there is countless need to embrace the general population in the education regarding diabetes hovering on the clinical signs and symptoms, as well as informing the patients and the public in general the need to show themselves up in healthcare facilities for quick action to be initiated, for timely diagnosis and management.

In conclusion, this study has noted that the type of care rendered to diabetes patients in Ghana are typically focused on medical care in general, for instance, the need for medications, exercises, appropriate diet, regular monitoring of blood sugar levels, general education on diabetes care which centre on foot care, managing hypoglycemia, life style modification and taking care of the eyes to mention a few. However, apart from these fundamental or routine medical care and practices that are offered to diabetes patients, there are held health beliefs and perceptions of causes of diabetes, as well as social meanings attributed to diabetes mellitus, patients reactions following diagnosis of diabetes and patients' concept of cure of diabetes, in addition to similar related issues are imperative to be considered in the care of persons living

with diabetes in Ghana. In this sense it is argued that, a biomedical care model in particular may possibly not be enable to offer healthcare providers a meaningful and significant insights to efficaciously succeed in managing and treating this protracted disease among Ghanaians, conversely through the inclusion of their held health and illness beliefs and perceptions and reactions to diagnosis, the healthcare providers possibly will appreciate the convictions or certainties of what it is like to live with diabetes, and how to render them the required care.

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