Original Research Article

ROLE OF FAMILY SUPPORT, SPIRITUALITY AND SELF-EFFICACY IN TYPE 2 DIABETES SELF-CARE IN GREATER ACCRA REGION, GHANA

ABSTRACT

Aims: The purpose of this study was to examine the relationship between family support, spirituality and self-care in Type 2 Diabetes patients in the Greater Accra Region, Ghana. It also aimed at determining whether self-efficacy would moderate the relationship between spirituality, family support and self-care.

Study Design: A cross sectional study was adopted and 270 diabetes patients were conveniently sampled. The data was collected using questionnaire such as FACIT-sp, DSMQ, SDS and S4-Mad.

Results: Spirituality correlated with self-care ($r = .151$, $p < .05$). Also, family support correlated with self-care among T2DM patients ($r = .237$, $p < .01$). Self-efficacy moderated the relationship between family support and self-care ($\Delta R^2 = .031$, $\beta = .254$, $p < .05$). However, self-efficacy did not moderate the relationship between spirituality and self-care ($\Delta R^2 = .002$, $\beta = -.358$, $p > .05$).

Conclusion: Self-efficacy, spirituality and family support are critical in diabetes self-care. It is therefore beneficial that health care providers incorporate psychosocial interventions into health care delivery.

Key words: Family support, spirituality, Type 2 diabetes, self-Care

1.0 Introduction

Type 2 Diabetes (T2DM), also known as Non-Insulin Dependent Diabetes Mellitus, occurs as a result of irregular physiological responses to insulin production and uptake, including insulin resistance at the level of the cell membrane [1]. According to Walsh and Crumbie [2], the basic problem is that either there is increased peripheral resistance to the action of insulin or the islets of Langerhans gradually diminish their insulin output or there is a combination of decreased insulin secretion and increased insulin resistance. The beginning of T2DM is often slow, and patients could live with the condition for a couple of years before diagnoses. T2DM has psychological, social and health implications and it is the most common type of diabetes which accounts for 90% of diabetes cases [3]. Accordingly, International Diabetes Federation [IDF] [4] added that T2DM accounts for 85% to 95% of diabetes cases in low-income countries. It is a disease that occurs among older adults; however, children, adolescents and young adults have increasingly reported the disease and this is often due to lack of physical activity, poor eating habits and nutrition, obesity and growth [4]. Past history of gestational diabetes mellitus (GDM) and the exposure of the unborn child to high blood glucose and smoking have been identified as a significant adjustable risk factor. Furthermore, excessive consumption of sweets and beverages

high in sugar content is also an associated risk factor [5,6,7]. Hörnsten [8] posits that the cause of T2DM is multifactorial with a substantial genetic component but the disease is also associated with environmental and life style changes. Other factors include inadequate intake of fruits, vegetables, whole grains and dietary fibre, and high intake of energy as saturated fat [4]. T2DM is characterized by slow healing of wounds, tiredness, repeated fungal infections, numbness in limbs, frequent urination and increased thirst.

Diabetes T2DM can result in various complications if not given the needed attention. These complications may be medical, psychological as well as social in nature. The medical complications include hypoglycaemia, ketoacidos, nephropathy, neuropathy, diabetic foot ulcers, macrovascular comorbidities, dyslipidaemia, hypertension, metabolic syndrome, retinopathy and blindness [9]. Also, the psychological complications include depression and anxiety [10]. As a result of the distress, patients are unable to take care of themselves and effective diabetes management behaviours become difficult to achieve and even harder to maintain, which suggests that people with diabetes especially T2DM require urgent and needed support to attain proper self-care.

Self-care is defined by Orem [11] as the practice of activities for the maintenance of life, health and well-being, carried out by the individual for his or her own benefit. However, these activities may be imposed by others such as health care professionals or family members. These behaviours could be related to life-style (smoking cessation, preparing healthy food, and coping with stress) or the medical regimen (taking medication as prescribed) so adaptation is often needed to accommodate changing conditions. Anderson et al. [12] argued that self-care in diabetes is an important factor to keep the disease under control and about 95% of self-care usually carried out by the affected individual or their families consists of self-monitoring of blood glucose (SMBG), nutrition, physical activity, and compliance to medication.

Social support is one of the well-documented psychosocial factors influencing physical health outcomes [13]. Studies of social support on chronic disease have found social support essential to self-management [14,15]. Chio [16] found that sufficient social support was correlated with high diabetes self-care ability. Social support may come from family, peers and friends, professional or community. Similarly, Kwakye et al. [17] found that support from family, community members and health care provide a productive force which enhances the psychosocial care of diabetes patients. Family and friends social support (FSS) can either facilitate or threaten Diabetes Self-Management [18]. Family and friends are often a part of the patient's everyday life; thus, it is projected that they play a significant role in assisting people with diabetes and may influence the extent to which T2DM patients adhere to diabetes management [19]. Most often social support for persons with chronic disease includes emotional encouragement and instrumental help with monitoring blood glucose, taking medications, foot and eye care, following meal plans, and increasing physical activity [20,15]. However, behaviours such as nagging, critical comments and over protection from family members have been found to have negative effects on self-management [21]. A recent systematic review found that there are considerable gaps and inconsistencies in research about social support and its effects on diabetes management [22].

Additionally, spirituality has also been found to help people cope with a wide range of illnesses or variety of stressful situations. These include people dealing with general medical illness such as diabetes [23]. In 120 studies conducted on spirituality and well-being, 82% of the studies

reported positive relationships between spirituality and well-being [24]. On the contrary, another study reported a negative relationship between spirituality and well-being [25]. Spirituality, although identified as relevant [26], has not been explored in detail globally [27]. The story is not different in Ghana as the phenomenon has not been adequately explored. The complications of diabetes are not only medical, so most people rely on their individual resources such as spiritual beliefs, prayers, fasting and spiritual essence to cope with the illness. In Ghana, most people with chronic illness like diabetes often visit one prayer camp or the other for help. Unmet spiritual needs, especially if they involve spiritual struggles, can adversely affect health and may increase mortality independent of mental, physical, or social health [28]. Also, spiritual beliefs affect patients' medical decisions and can influence compliance with treatments and self-care. Therefore, when these spiritual needs are not understood and incorporated into the care of diabetic patients, a lot cannot be achieved.

Research shows that one's own beliefs of efficacy function as an important determinant of motivation, affect, thought and action [29]. Since its conception, self-efficacy has been applied to different contexts [30] and related to better health, better self-development and greater social integration. Again, one's beliefs about one's self can act as a moderating variable in relationships. These beliefs have been considered in other areas within organisational psychology, showing for example the moderating effects of self-esteem on the results of teamwork [31]. However, not much is known about how beliefs of efficacy moderate the relationships between family support, spirituality and diabetes self-care in the Ghanaian society. This has necessitated the call for public concern about the illness as well as government policies and measures to reverse the trend. Again, the few studies in Ghana and other parts of Africa suggests that diabetes patient's adherence to self-care behaviours is still low despite its significance [32]. Considering the gaps and inconsistencies in literature concerning the relationship between family support, spirituality and self-care in T2DM and given that little is known about how social support and spirituality impacts self-care in T2DM in Ghana, there is the need to conduct research to investigate the relationship. There is also the need to examine specifically family support in diabetes self-care since few studies have been carried out on informal social support compared to formal support.

Thus, the study seeks to examine the following hypothesis:

$H_{1:}$ Spirituality will positively correlate with self-care among T2DM patients.

H_1: Family support will be positively correlated with self-care.

H_1: Self-efficacy will moderate the relationship between family support and self-care.

H_1: Self-efficacy will moderate the relationship between spirituality and self-care.

2.0 MATERIALS AND METHODS

2.1 Research Design

A cross-sectional design was adopted and participants were made up of T2DM patients seeking treatment at some health facilities in Greater Accra region.

2.2 Recruitment of Participants

A sample of 270 was selected using the convenient sampling technique. To be selected for the study, participants must be a T2DM for not less than six months, and must be aged 18 years and above. The participants were made up of 81.1% females 18.9% males. Eighty three respondents representing 30.7 % were in the age group of 58-67years, 24.4% were in the age range of 48-57 years, while 23% were aged between 68-77 years. Those within the ages of 38-47 were 8.9%, 6.3% (78-87 years), 5.9% (28-37 years) and 0.7% (18-27 years). Most of the respondents were above 50 years and in their late adulthood stage. Concerning the educational level, 81.5% had low level of education and 18.5% respondents had high level of education. Again, 51.5% were married while 4.8%, 14.4% and 29.3% were found to be single, divorced, separated and widowed respectively.

2.3 Study Instrument

The data collection instruments included the Functional Assessment of Chronic Illness Therapy-spiritual well-being scale (FACIT-sp) developed by Brady, Peterman, Fitchett, Mo and Cella [33]; Diabetic Self-Management Questionnaire (DSMQ) by Schmitt et al. [62]; Self-efficacy for Diabetes Scale (SDS) also developed by the Stanford Patient Education Research Center [34]; and Social Support Scale for Self-Care in Middle-Aged Patients with T2DM (S4-Mad) developed by Naderimagham, NiknamiEmail, Abolhassani, Hajizadeh, and Montazeri [35].

Questionnaires were pre-tested with 26 diabetic patients. The analysis of the pre-tested questionnaires using SPSS version 20.0 showed an overall Cronbach alpha of $\alpha = .941$ for the whole Social Support Scale for Self-Care in Middle-Aged Patients with T2DM scale. Again, the pre-test indicated a good reliability of $\alpha = .715$ for Self-Management Questionnaire (DSMQ). The self-efficacy scale as well produced a reliability of $\alpha = .81$. Based on comments from participants in the pre-test, some minor changes were made to arrive at the final questionnaire used for the study. Changes to the draft questionnaire comprised rewording some of the questions for clarity and comprehension, and correcting few typographical errors.

2.4 Data Analysis

After data collection, all questionnaires were stored in files and access restricted to the researcher. Data from the questionnaires were double-checked and cleaned before entered onto a computer by the investigator. Data was then entered onto International Business Machines of Statistical Package for Services Solutions version 20 (IBM SPSS, 2020). Data cleaning was done to check for any error during the data entry. Frequencies and percentages were calculated for all socio-demographic factors. Hypothesis 1 and 2 were tested using Pearson Product Moment Correlation Coefficient. Hypothesis 3 and 4 was analysed using Hierarchical Multiple Regression.

3.0 RESULTS AND ANALYSIS

The preliminary analysis involves testing for normality, reliability and computing descriptive statistics for the variables studied. The results displayed in Table 1 indicated that the data was normally distributed as the test for normality produced Skewness and Kurtosis figures between -1 and +1. This indicated that the variables were all normal and can be used for parametric analyses [36]. Descriptive statistics of the predictor and criterion variables (means and standard deviations) were computed. Inter-correlations among the variables were also computed using

Pearson Product Moment Correlation and the coefficients together with the Cronbach alpha of the scales used. The Cronbach alpha value of the whole scale was .84. Cohen [37] suggests that Cronbach alpha values of 0.7 and above are adequate for use in psychological research. The subscales for this study had Cronbach alpha values ranging from .74 to .89 (Table 1).

Table 1: Descriptive Statistics and Normality of the Study Variables (N=270)

	Min	Max	Mean	SD	Skewness	Kurtosis	Alpha Values
Spirituality	4.00	72.00	32.56	6.89	-.25	.83	.78
Self-Efficacy	20.00	80.00	59.22	11.66	-.60	.24	.85
Family-Support	30.00	111.00	54.27	16.37	.54	-.14	.74
Self-Care	11.00	36.00	21.17	3.49	.28	.12	.89

Table 2: ***Correlations among Variables***

		1	2	3	8
1	Spirituality	-			
2	Self-Efficacy	.34**	-		
3	Family-Support	.19*	.24**	-	
4	Self-Care	.15*	.14*	.24**	-

**p<.01, *p<.0

Hypothesis 1: Spirituality will positively correlate with self-care among T2DM patients

This hypothesis was tested using Pearson Moment Correlation Coefficient. As shown in Table 3, spirituality is positively related to self-care ($r = .151$, $p < .05$). We therefore fail to reject the hypothesis. The finding therefore supports the proposition that spirituality positively correlate with self-care among T2DM patients.

Table 3: Relationship between Spirituality and Self-Care

Variable	N	Mean	Std. Dev.	Df	R	P
Spirituality	270	32.56	6.89	268	.151	.007
Self-care	270	21.17	3.49			

Hypothesis 2: Family support will be positively correlated with self-care

As indicated on Table 4, the relationship between family support and self-care is positive and significant [$r = .237$, $p < .01$).We therefore fail to reject the hypothesis. Thus, the second

hypothesis which stated that family support would be positively correlated with self-care was supported.

Table 4: Relationship between Family support and Self-Care

Variable	N	Mean	Std Dev.	Df	R	P
Family S.	270	54.27	16.37	268	.237	.000
Self -care	270	21.17	3.49			

Testing for the moderation

To test hypotheses 3 and 4 that seek to find out whether self-efficacy moderate the relationship between family support and self-care, and the relationship between spirituality and self-care, the procedure proposed by Baron and Kenny [38] for testing moderation effect using hierarchical multiple regression was used. According to Baron and Kenny, [38] a common framework for illustrating moderating effect from both correlational and experimental perspectives is possible using a causal path analysis. The three causal paths as illustrated in Figure 1 below (a, b, and c) was used. This involves fed into the criterion or dependent variable (DV), self-care: the effect of the IV (family support and spirituality) on the DV (self-care) (path a), the effect of the moderation variable (self-efficacy) on the DV (self-care) (path b), and the interaction or product of these two paths on the DV (path c). The moderator hypothesis is supported if the interaction term (path c) is significant [38]. With respect to the interaction term, the independent and the moderating variables were centred to reduce the effect of multicollinearity [39]. In centring, the mean value of the variable was subtracted from the individual scores of the variables.

Figure 1

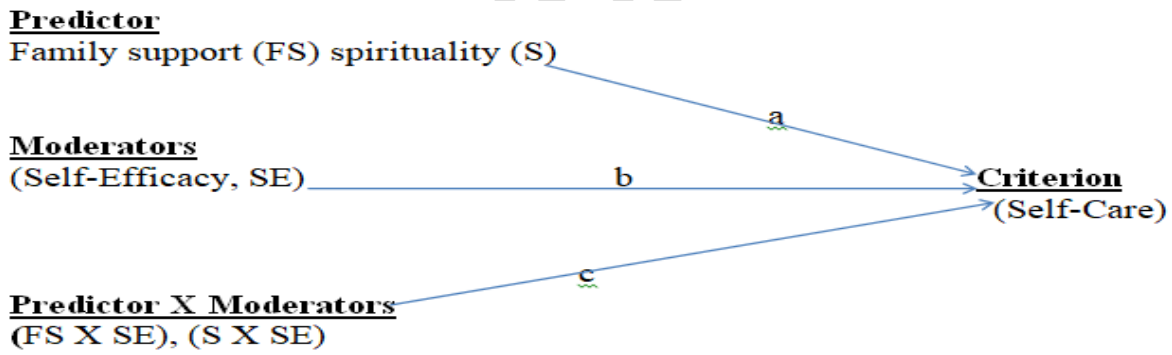

Fig 1: Path diagram of moderation model (Baron & Kenny, 1986)

Hypothesis 3: Self-Efficacy would moderate the relationship between family support and self-care.

To test this hypothesis 3, the hierarchical regression in which three distinct steps are stipulated was conducted. The main effect of family support was entered first, the main effect of self-efficacy (moderator) was entered second, and the interaction term (family support and self-efficacy) was entered third. [39] The basic requirement for testing for moderation effect is that there should be a relationship between the predictor variable(s) and the criterion variables [40] and this was met as illustrated in Table 2. The result of the moderation analyses is shown in Table 5.

Table 5: ***Results of Hierarchical Multiple Regression Analyses for the moderation effect of Self-efficacy on the relationship between family support and self-care***

Model		B	Std. Error	B	t
Step 1	(Constant)	18.424	.718		25.66**
	Family Support	.051	.013	.237	3.99**
Step 2	(Constant)	17.109	1.162		14.72**
	Family Support	.046	.013	.216	3.54**
	Self-Efficacy	.026	.018	.188	1.43*
Step 3	(Constant)	15.738	3.972		3.96**
	Family Support	.071	.069	.332	1.02*
	Self-Efficacy	.049	.066	.164	.74
	Family support*Self-Efficacy	.041	.112	.254	1.06*

R^2= .046 for step1, R^2= .063 for step 2, R^2= .094 for step 3, ΔR^2=.056 for step 1, ΔR^2=.008 for step 2, ΔR^2=.031 for step 3, $^{**}p < .01$ $^{*}p < .05$

The step 1 of Table 5 indicated that family support had a significant influence on self-care (β = .237, $p < .01$). The second step also indicated that self-efficacy explained a significant increase in variance of self-care (ΔR^2 = .018, β =.188, $p < .05$). From the third step of the regression analysis, the interaction term between family support and self-efficacy explained a significant increase in variance in self-care (ΔR^2 = .031, β = .254, $p < .05$). We therefore fail to reject the hypothesis. Thus, the third hypothesis which stated that self-efficacy would moderate the relationship between family support and self-care was supported.

Hypothesis 4: Self-efficacy would moderate the relationship between spirituality and self-care.

To test hypothesis 4, the hierarchical regression in which three distinct steps are stipulated was also conducted. The main effect of spirituality was entered first, the main effect of self-efficacy (moderator) was entered second, and the interaction term (spirituality and self-efficacy) was entered third [39]. The basic requirement for testing for moderation effect that there should be a relationship between the predictor variable(s) and the criterion variables [40] was met as illustrated in Table 2. The result is shown in Table 6.

Table 6: ***Results of Hierarchical Multiple Regression Analyses for the moderation effect of Self-Efficacy on the relationship between Spirituality and Self-Care***

Models		B	Std. Error	β	t
Step 1	(Constant)	18.685	1.018		18.35
	Spirituality	.076	.031	.151	2.49*
Step 2	(Constant)	17.469	1.281		13.64
	Spirituality	.059	.032	.117	1.83*
	Self-Efficacy	.030	.019	.100	1.55
Step 3	(Constant)	13.880	4.649		2.98
	Spirituality	.173	.146	.342	1.19
	Self-Efficacy	.092	.080	.308	1.15
	Spirituality*Self-Efficacy	-.196	.244	-.358	-.80

R^2= .023 for step1, R^2= .032 for step 2, R^2= .034 for step 3, ΔR^2=.023 for step 1, ΔR^2=.009 for step 2, ΔR^2=.002 for step 3, *$p < .05$

Assessing the results in Table 6, the step 1 indicated that spirituality had a significant influence on self-care (β = .153, $p < .05$). From the second step, self-efficacy did not explain a significant increase in variance of self-care (ΔR^2 = .009, β =.100, $p > .05$). The third step of the regression analysis revealed that the interaction term between spirituality and self-efficacy did not explain a significant increase in variance in self-care (ΔR^2 = .002, β = -.358, $p > .05$). Thus, the fourth hypothesis which stated that self-efficacy would moderate the relationship between spirituality and self-care was not supported.

4.0 Discussion

Family support and spirituality are psychosocial factors that have been associated with optimum self-care. Every individual at a point in time rely on his/her spiritual essence or family for support. The hypothesis that spirituality will correlate positively with self-care was supported. This means that the more people are spiritual the more they engage in self-care practices. The current finding is confirmed by a study by Polzer and Miles [41] who found that spirituality played a significant role that influenced diabetes self-management among African Americans with diabetes. Similarly, the finding is supported by 98 (82%) studies which found positive relationships between spirituality and well-being [42]. Again, the current study is supported by a study in which positive association was found between spirituality and a healthier diet [43]. The study result is also confirmed by a meta-analysis involving 37 studies. Twenty five of these studies reported significant positive relationship between spirituality and greater exercise or physical activity. This finding however is incongruent with a study by Chio [16]. Chio cited by Abrahim [44] in a systematic literature review on factors contributing to self-care among T2DM patients found that patients who were more spiritual had poor self-care than those loose or non-spiritual patients. Meaning more spiritual T2DM patients do not adhere or engage in self-care practices instead they resort to prayer and other spiritual beliefs. Additionally, the finding is inconsistent with a study that found that more spirituality was associated with poor self-care and poor coping abilities among T2DM patients [45]. The positive relationship between spirituality and self-care is explained by Mazlom, Afkhami-Ardekani and Dadgari [46] to be the identification of God or divine power as a source of power, hope and inspiration for the diabetics

in their self-care and management. Again, the significant relationship could be explained by the fact that when diabetics are spiritual they have strong meaning in life. This meaning helps them accept their condition as a trail which must be fought and won. This mind-set helps them to engage in appropriate self-care. This is confirmed by a study in which sense of meaning helped patients cope with their disease, reframed their lives and had an optimistic look on life and a "fighting spirit" against their disease [47]. Similarly, an obvious explanation for the relationship is that when people have strong reasons for living (career, children, and family) they are more likely to take steps or engage in practices (glucose monitoring, diet, and exercise) that would prolong their lives. Given a meaning of spirituality as belief or connectedness with your creator, engaging in little prayer or being prayerful or having meaning in life, we can conclude that prayer, meaning, belief connected to higher being helps the diabetic patient rise above the physical limitations of the disease. Zinnbauer et al. [48] defines spirituality as either having a relationship with God or a higher power, or having a personal belief system in God or a higher power. This literature-based definition and participants' experience of spirituality seemed similar. Patients had some spiritual essence which could be due to the fact that they are all experiencing personal crisis (illness). This is confirmed by several studies which indicated that people's spirituality or religious faith increases when experiencing personal crisis due to illness. Again, according to Jung [49], individuals in their midlife (40-59) begin to typically turn inward to explore the more aspect of themselves.

The second hypothesis that family support would be positively correlated with self-care was supported. This finding support previous studies where a positive relationship was observed between family support and self-care behaviour in adults with non-insulin dependent diabetes [50]. This is consistent with a study among women with gestational diabetes in which adherence to dietary recommendations was strongly associated with familial social support [51]. Also, the finding is in line with a study by Fisher, Chesla and Staff [52]. In their study, strong family and social support appear to have a positive impact on Glycemic control and or self-management behaviour. This shows that the more diabetics receive support from their family, the more likely they engaged in self-care practices. This finding is in agreement with the Ecological model which presents health as an interaction between the person and their ecosystem such as the family, community and physical environment. There is a reciprocal influence in that people are affected by their ecosystem and likewise people affect their ecosystem [53]. The family as part of the ecosystem is a system where the care, protection and development of individuals are facilitated. This model assumes that the individual efforts at behaviour change will be more likely to succeed within supportive environment such as the family. These environments have collective and cumulative impact on well-being. The Orem self-care theory also supports the current findings. The Orem's self-care theory is based on the assumption that all clients have the capacity to act in order to maintain their health and treat themselves in case of sickness or injury [11]. It is however a complex activity but improves through daily practices and requires help, assistance and guidance from others such as health professionals and family. Orem in her theory emphasizes that an individual's self-care ability and self-care behaviour is influenced by basic conditioning factors, such as the individual's family system. A functional component of a family system is family support which helps to maintain a healthy lifestyle. Again, Carter [11] emphasizes that basic conditioning factor such as family system factors influence self-care. According to the findings of this present study there is positive correlation among T2DM self-care and family support. Meaning the more support is received or provided; the more self-care activities are performed by diabetics [16].

Additionally, the positive relationship between family support and self-care could be explained by the African-centred worldview, where Africans believe that all elements of the universe (people, animals and inanimate object) are viewed as interconnected. Since they are dependent upon each other, they are, in essence, considered as one so that the human being is never an isolated individual but always the person in the community [55]. The community defines the person. As Mbiti [55] puts it "I am, because we are; and since we are, therefore I am". The collective nature of human beings entails collective responsibility for what happens to individuals. "Whatever happens to the individual happens to the whole group and whatever happens to the whole group happens to the individual" [55]. This shows that what affect patients affect the entire family so self-care becomes a collective responsibility. Again, the ties of kinship may have created and facilitated the family members' commitment towards the participants and their self-care. If family members are financially sound, they may be eager and readily available to offer support to the patient with diabetes [56]. This in turn affects self-care.

The third prediction that the relationship between family support and self-care will be moderated by self-efficacy was supported. The findings are consistent with a study by Kaşıkçı and Alberto [57]. Their study revealed statistically significant positive relationships between family support and self-care behaviour ($r = 0.302$; $p = 0.01$) and between self-efficacy and self-care behaviour ($r = 0.186$; $p = 0.01$). There was also a statistically significant positive relationship between family support and self-efficacy ($r = 0.412$; $p = 0.01$). Furthermore, the finding is congruent with the Biopsychosocial-spiritual theory [58]. According to the model, an interaction between various factors results in optimal health and not a single factor. In addition, Potter and Zauszniewski [59] conducted a correlational cross-sectional study using a survey format to examine 47 community-based adults with rheumatoid arthritis. When social, emotional, and physical stressors were examined individually, the individual items did not predict general health perception, but when taken together, a significant effect on health perception was observed. This means that the interaction between family support and self-care is influenced by self-efficacy. Contrary to the current finding, Williams and Bond [60] reported that social support was not a predictor of self-care among 94 diabetics when the effects of self-efficacy were controlled. This finding can be explained by the fact that self-efficacy serves as a bridge that propels an individual to take action. Thus, people's confidence (belief) that they can carry out a task (self-care) coupled with the support from family increases their self-care ability.

The fourth prediction that the relationship between spirituality and self-care will be moderated by self-efficacy was not supported. This means that self-efficacy could not influence the relationship between spirituality and self-care. The lack of relationship is explained by the idea that spirituality alone may help some individuals to "gain a sense of control over their lives and take action. The finding was inconsistent with the Biopsychosocial-spiritual theory [59]. According to this model, illness and health result from the interaction between biological, psychological, spiritual and social factors. This suggests that for an individual to achieve optimal self-care it requires interaction of various factors. Several other factors must play a significant role to enable people achieve adequate self-care in dealing with T2DM.

5.0 Conclusions

It is established that T2DM patients who are more spiritual are more likely to care for themselves. It also revealed that the more support diabetics receive from their family, the more they care for themselves. Thus, more availability of social support is more likely to increase self-

care among patients. The association between family support and self-care is moderated by self-efficacy. This shows that a person's belief in his capability could also contribute to social support influencing self-care. However, self-efficacy does not influence the relationship between spirituality and self-care. Patient's confidence (belief) that they can care for themselves can actually influence their capabilities to care for themselves. Finally, self-efficacy, spirituality and family support are critical in diabetes self-care. It is therefore beneficial that health care providers incorporate psychosocial interventions into health care delivery.

6.0 Recommendations

This study has important implications for current policies and programs that are designed to improve self-care among diabetics. Self-care interventions that are sorely medical and do not include psychosocial intervention may not achieve optimum management of diabetes. It is therefore recommended that Ghana Health service and Ministry of Health spearhead the drawing of a comprehensive diabetes management programme that would incorporate psychosocial variables. Furthermore, holistic approach should be adopted in the management of the diabetes condition. That is, an approach to health care delivery known as the biopsychosocial involving healthcare professionals with varied expertise such as doctors, nurses, psychiatrists, clinical psychologists and dieticians as recommended by Kwakye [61].

Again, spiritual leaders should be included in the management of diabetes to address the spiritual needs of diabetics since respondents in this study identify themselves with a particular form of religion, and this show the importance respondents attach to religion. This will compliment health professionals' effort. Spiritual leaders, counsellors, social workers and health workers are recommended to organise workshops that help the patient explore their spiritual essence so they can transcend beyond their condition. The Ghana Diabetes Federation should intensify education on diabetes to create awareness and help patients engage in healthy practices.

Ethical Approval

Institutional and ethical approval was obtained from the University of Cape Coast Institutional Review Board of the School of Graduate Studies and Research and the selected hospitals before the commencement of the study. This was to ensure that the study was ethically sound and did not violate the rights and privacy of the vulnerable participants.

Consent

Informed consent was obtained from each eligible participant after they had been provided with information sheet containing detailed information about the study.

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