ISRG Journal of Arts, Humanities and Social Sciences (ISRGJAHSS)

ISRG PUBLISHERS
Abbreviated Key Title: ISRG J Arts Humanit Soc Sci
ISSN: 2583-7672 (Online)
Journal homepage: https://isrgpublishers.com/isrgjahss
Volume – III Issue –IV (July-August) 2025
Frequency: Bimonthly

Psychosocial Care and the Management of Type 2 Diabetes among Patients at Nsambya Hospital

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| **Received:** 20.06.2025 | **Accepted:** 28.06.2025 | **Published:** 06.08.2025

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Abstract

The study aimed at assessing the utilization of psychosocial care in the management of type 2 diabetes in Nsambya Hospital. The objectives of the study were: 1) to determine the extent to which screening for psychological distress is utilized in the management of type 2 diabetes among patients in Nsambya Hospital; 2) to establish the extent to which social support is provided in the management of type 2 diabetes among patients in Nsambya Hospital; 3) to determine the extent to which promotion of self-esteem is provided in the management of type 2 diabetes among patients in Nsambya Hospital. In terms of the methodology, the study was cross sectional in nature using both quantitative and qualitative approaches of data collection. Out of 180 participants, 123 were sampled as the study respondents with 4 key informant interviews. The results of the study concluded that there was a very low screening level of psychological distress among patients with type 2 diabetes. Whereas patients had various forms of social support, peer support groups were lacking. And lastly there was a gap in the promotion of self-esteem among the type 2 diabetes patients.

Basing on the outcomes of the study, the conclusion is that screening for psychological distress is not a priority in the management of type 2 diabetes, peer support groups are inexistent in the course of care and that the promotion of self-esteem in patients is still lacking.

Therefore, from these findings the recommendations include inclusion of psychological screening in the care of patients with type 2 diabetes, provision of peer support groups for patients and scaling up self-esteem provision through empowerment programs.

Keywords: *Psychological care, Diabetes, Psychological distress, Social support, Self-esteem*

DOI: 10.5281/zenodo.16750145

1. Introduction

This study was intended to determine the level of utilization of psychosocial care in the management of type 2 diabetes among patients in Nsambya Hospital. According to the International Diabetes Federation (2015) "diabetes is one of the largest global health emergencies of the 21st century". Its occurrence is rising and expected to be 366 million by the year 2030 (Wild S et al 2004). The International Diabetes Federation (2013) estimated that in Africa which has 19.8 diabetics, over 75% of the cases are still undetected. Whiting DR et al. 2011 highlighted in the global estimates for type 2 diabetes that the most populated Africa countries such as Ethiopia, South Africa and Democratic Republic of Congo also have the majority of the type 2 diabetes further making the focus on the prevalence and incidence in Sub Saharan Africa important. Global estimates of diabetes indicate that all of diabetes related death, Sub Saharan Africa takes up to 77% among those under 60 years of age (International Diabetes Federation, 2017). As noted by Mayega et al. (2018), there has been a drastic increase in the cases of Diabetes with an estimation of 400,000 people living with the illness in Uganda.

Diabetes mellitus is a group of metabolic diseases characterized by chronic hyperglycemia resulting from defects in insulin secretion, insulin action, or both (American Diabetes Association, 2014). There are different types of diabetes as stated by the American Diabetes Association (ADA) in 1997 like type 1, type 2, other types, and gestational diabetes mellitus (GDM). Whereas there are various forms of Diabetes, Nathan (2015) noted that type 2 diabetes is the commonest mainly developing in among adults. This however does not deem the disease burdens of the other forms of Diabetes of no relevance. The morbidity and mortality is escalating especially under developed and developing nations (WHO, 2016). There has been a disparity in the age of those living with type 2 diabetes. As reported, 75% of the cases of diabetes are 45 years old and above while only 25% of adults below 44 years (WHO, 2014). This indicates that the significant age group which is most productive actually has the highest number of cases of type 2 Diabetes. This could also be due to the predominantly young population of Sub Saharan Africa. Third world countries of Sub-Saharan Africa like Uganda have a drastic increase of diabetes mellitus evidenced by a rise from 98,000 patients in 2000 to about 1.5 million in 2010 from a population of 30 million people (Nyanzi, et al., 2014).). However newer reports by Ugandan Ministry of Health show a variation of up to 1.4% of the population accounting 400,000 Ugandans (MOH, 2020). Besides the occurrence being at its highest, the mortality has also shown a similar trend. In 2017, approximately 5 million deaths were due to diabetes among individuals aged the 20-99 years (Cho, et al., 2018).

Having diabetes may result in diabetes-specific emotional problems, such as worries about complications, feelings of guilt or awkward social interactions with regard to self-care activities (Snoek, et al., 2000). Several diabetes guidelines have recommended that addressing psychosocial issues should be part of routine diabetes care, for example by using screening questionnaires (American Diabetes Association, 2016; IDF Clinical Guidelines Task Force, 2012). Chew et al. (2016) further postulated that type 2 diabetes Mellitus (T2D) is the most mentally exhausting chronic disease in adults because of the complex nature of its pathophysiology, causes and management. This implies that there is marked increase in the occurrence of psychological distress leading to depression, anxiety and stress. The general range of depressive disorders in diabetics is10% to 15% doubling the prevalence of depression in non-diabetics (Semenkovich, et al., 2015).

The management of type 2 diabetes requires a robust approach that combines both pharmacologic and non-pharmacologic interventions. In many settings the commonly used therapeutic regimens for T2DM are injection of insulin-like agents and oral administration of hypoglycaemic agents. However, Franz, et al., (2018) postulated that medical nutritional therapy and physical activity often considered as non-pharmacological treatments of T2DM have proven to be effective in the glycaemic control and other metabolic outcomes in such patients. Moreover, The CDC (2011) recommends that the incorporation of lifestyle changes as a key component in the management of diabetes. Sevild, et al (2020) noted that an individual with this illness is required to modify their lifestyle such as healthy eating, exercise, stop smoking, reduce weight and acquire healthy coping. These actions are monitoring blood glucose level, following a diet plan, maintaining foot care guidelines, engaging in physical activities, and taking medications either in the form of insulin or oral medications as indicated (Goodall, et al., 1991).

The initial discovery of Diabetes was in an Egyptian manuscript over 3000 years ago (Hegazi, et al., 2015) However; it was not until 1936 that the separation of Type 1 diabetes from Type 2 Diabetes was made to further differentiate the disease manifestation across the populations. The clinical symptoms of diabetes were first correlated with insulin tests that created the evidence that distinguished type 1 from type 2 diabetes by Himsworth (Himsworth, 1939).

In the 17th century, a leading member of the Royal Society and famous anatomist called Thomas Willis, described how *"diabetes is a consequence of prolonged sorrow"* (Willis , 1675).He further recognised that those who experienced "significant life stress, sadness or long sorrow" had a higher likelihood to suffer from diabetes (Lloyd, et al., 2012).

Diabetes distress is a term first proposed in the peer-reviewed literature by a group of psychologists and psychiatrists from the Joslin Diabetes Centre in 1995 (Polonsky, et al., 1995).

They identified diabetes distress as a concept that encapsulated the psychosocial adjustment challenges faced by people with diabetes. The Psychosocial Aspects of Diabetes (PSAD) study group of the European Association for the Study of Diabetes was formed with a mission to stimulate communication between researchers in the field of psychosocial aspects of diabetes, improve the quality of psychosocial research in diabetes; and stimulate the implementation of effective psychosocial interventions in diabetes care (PSAD, 1995). What started as a small group of enthusiasts has evolved into a multidisciplinary group of about 180 researchers from Europe, USA, Australia and South America, including psychologists, endocrinologists, nurses, diabetes educators, sociologists and epidemiologists, who have a common interest in the psychosocial issues of diabetes. However, in Uganda the area of psychosocial care has not been embraced due to the design of the healthcare system.

The diagnosis of diabetes has been described as a lifelong psychological burden on the person and his or her family (IDF, 2012). Nouwen ,et al .,(2010) noted that the chances of developing depression in type 2 diabetes mellitus doubles compared to the

DOI: 10.5281/zenodo.16750145

normal population. This could be because of similar biological risk factor or internal body processes. The body mechanisms have been noted as significant contributors such as the release of counter hormones, stimulation of sympathetic nervous system release, and altered inflammation state that can induce peripheral insulin resistance appears to be the main responsible for developing type 2 diabetes (Champaneri, et al., 2010). According to Petrie, et al., (2018) type 2 diabetes has the same risk factors like obesity, endothelial dysfunction, vascular inflammation and dyslipidaemia to other chronic illness such as heart diseases and hypertension. While type 2 diabetes has been connected to multiple physical illnesses such a heart diseases, hypertension, retinopathy and others, the comorbidities extend also to mental health disorders. Erkie, et al., (2013) postulated that the presence of depression among type 2 Diabetes outpatient attendees stood at 64.8%.

On the other hand type 2 diabetes can also be a risk factor for developing depression. Yi, et al, (2010) noted that the persistent low levels of glucose in diabetic patients affect the hypothalamic-pituitary-adrenal (HPA) axis causing endocrine disorders due to the secretion of cortisol which also relates to depression, stress and anxiety. There is evidence that depression increases the chances of diabetes up to 60% while diabetes rises the risk up of depression to 24 % (Khaledi, et al., 2019). Due to this high incidence of psychosocial challenges among type 2 diabetes patients, there is need to increase the screening and management at the primary level of care.

The study focused on assessing the utilization of psychosocial care among patients with type 2 diabetes in Nsambya Hospital. The chosen facility is one of Uganda's largest Private – Not- For -Profit health facilities that can be equated to the level of a regional referral Hospital. It has affiliations to Nsambya Training School and the post graduate medical school of Uganda Martyrs University. Given that in many clinical settings, interventions for combating psychosocial distress are not standard care (Fisher, et al., 2014), it is of relevance to examine the utilization of psychosocial care in a Ugandan context. Being a third world country with a poor health care system with a high level of poverty, there is a high likelihood that the psychosocial care is unheard of yet the effects can be witnessed in this group of patients. Ho RC et al. 2013 noted that there was a drop in productivity as well as employment loss on people with T2DM due to distress that creates a major economic challenge when living with this long term disease. This leads to low adherence to medication, poor health outcomes and an increased mortality due to the effects of having to type 2 diabetes.

The worldwide occurrence of diabetes stands at 10.5% and is anticipated to rise to 12.2% by 2045 speedily becoming a substantial health event of this generation (Sun, et al., 2021). Low, et al., (2014) noted that Type 2 diabetes mellitus (T2DM) has been known to have changed life experiences, altered self-esteem, challenged present existence and increased uncertainty about the future . These Psychological and social problems can impair the individual's or family's ability to carry out diabetes care tasks and therefore compromise health status (Anderson, et al., 2002). However, majority of the guidelines on diabetes care focus on the medical aspects of initial management without addressing the psychological needs of the patient (Kalra, et al., 2013).

The concerning ever rising cases of the type 2 Diabetes are estimated to grow up to more than 590 million cases by 2035 (Ozougwu , et al., 2013). This surge in the incidence of type 2 Diabetes makes it the condition and the various aspects associated to its management an issue of marked interest. Type 2 Diabetes has many complications which include development of mental health problems due to gaps in addressing psychosocial issues. These challenges can occur at different stages during the management of T2DM. Patients are likely to exhibit psychological vulnerability at diagnosis and when their medical status changes (e.g., the end of the honeymoon period), when the need for intensified treatment is evident, and when complications are discovered (American Diabetic Association, 2008). Goldney, et al., (2004) noted that these psychosocial problems can eventually develop into depressive or other psychological disorders that are associated with poor self-care behavior, poor metabolic outcomes, increased mortality, functional limitations, increased health-care cost, loss of productivity, and reduced QoL. It is preferable to incorporate psychological assessment and treatment into routine care rather than waiting for identification of a specific problem or deterioration in psychological status (Peyrot, et al., 2007).

Lipscombe, et al., (2015) noted that besides loneliness and risky lifestyle behaviors such as smoking, unhealthy diet, and sedentary lifestyle are more often present in people with T2DM suffering severe and prolonged psychological distress. Low levels of self-esteem have been associated with diabetes and diabetes management (Harris, 2003). The need for holistic care that addresses the fears, worries and demands of a chronic disease as type 2 diabetes is significant.

This approach emphasizes integrative, multidisciplinary care that combines the expertise of diabetes and mental health specialists with primary care providers to provide coordinated, comprehensive care (Chan, et al., 2009). Therefore, this study assessed the utilization of psychosocial care among patients with type 2 diabetes in Nsambya Hospital. The researcher provided respondents with self-administered questionnaires that assessed if they are screened for psychological distress, and then map out how the chosen variables of social support and self-esteem in regard to psychosocial care. This will be crucial to providing relevance to the enhancement of health services provided for the type 2 diabetes patients.

2. Literature Review

Utilization of screening for psychological distress during the management of type 2 diabetes

Psychological distress (PD) is a common mental health problem defined as a state of emotional suffering typically characterised by symptoms of depression and anxiety (Drapeau, et al., 2012). According to several studies, T2DM is associated with significant psychological impairments, particularly depression, anxiety, and stress (Young-Hyman, et al., 2016). Diabetes UK notes that in particular, diabetes distress is different from psychological distress, as the latter refers to a general state of emotional disturbance consisting of symptoms of depression and anxiety. On the other hand diabetes distress or diabetes-specific distress is a specific term that describes an emotional state where individuals experience stress, guilt or denial, and the burden of self-management due to diabetes itself. However, if such symptoms remain untreated, mild diabetes distress can result in severe diabetes distress and/or depression leading to Psychological distress (Arvidsdotter, et al., 2016).

Many studies have shown that traditional risk factors such as age, unhealthy habits, obesity, high-fat diet, smoking and excessive

DOI: 10.5281/zenodo.16750145

alcohol intake are associated with the development of T2DM (Boyle, et al.,2014), However, more recent evidence suggests that psychosocial distress also plays an important role (Kamble, et al.,2011). Even beyond the diagnosis, treatment failure and non-compliance has been cited to be associated to the psychological distress. Agardh, et al., (2003) noted this distress to be a contributor to Insulin resistance.

The demands of diabetes and the integration of complex self-management regimens into daily life have been shown to produce high levels of emotional distress, and to leave people feeling overwhelmed, frustrated, and discourage (Polonsky, et al .,2005) Hope for the future may be replaced with dread of complications from the disease and the adverse effects of medications which may result in frequent and disruptive effects such as restlessness, distress, anxiety, and depression Das-Munshi, et al., (2007).Eventually, all of these negative emotions may lead to the failure of adherence to health recommendations, medications, medical follow-ups (Rose , et al., 2002). This has an effect on the mental health of the sufferer of this chronic disease. Fisher, et al., (2010) further provided evidence there is that problematic diabetes self-management behavior is associated with psychological distress and, in turn, with poor glycaemic control.

Previous studies have shown that these psychological symptoms increase the risk of more negative outcomes related to diabetes, such as glycemic control and impaired cardiovascular functioning (Wagner, et al., 2012). This has a significant effect on the quality of life of the patients. Speight , et al., (2009)postulates that the quality of life of patients with this disease is seen in how they perceive the functionality of life socially, vocationally and within their households as opposed to hope and the aspects driven from physical, mental, spiritual, environmental and relational domains.

Psychological wellbeing has also been attributed to improvement in the outlook on life for patients with T2DM. Psychologically, when T2DM patients adhere closely to the advice to exercise regularly, this may encourage a sense of compliance and harmonious relationship with their healthcare professionals and significant others (West, et al., 2002). Beverly, et al., (2011) Although the clinician may not feel qualified to treat psychological problems utilizing the patient-provider relationship as a foundation can increase the likelihood that the patient will accept referral for other services

Indeed, authors have suggested integrating psychological and medical care to address psychological symptoms and unhealthy habits (ie, sedentary lifestyle, poor diet), which often accompany depression (anxiety, and stress, as they seem to implicate benefits regarding the disease itself (de Groot, et al.,2016) For instance, patients with this disease who have received psychological interventions have shown an increase in satisfaction with treatment (de Groot et al. 2006) People with T2DM also presented with more stress symptoms compared with individuals who do not have this chronic disease (Ansari, et al., 2011) According to Gabriel (2010), mental health conditions that occur in many individuals with chronic illnesses are usually unrecognized . However, in spite of the fact that the predicted numbers are high, the need for enhanced detection and treatment has been neglected with little efforts geared towards screening, research and preventative care (Hoy D, et al., 2012), thus the need to assess this function in diabetic care. Unfortunately, Psychological Distress often goes undetected in primary care since it may be masked by physical complaints and poly-symptomatology (Menchetti, et al., 2009).

However, although studies to date have shown promising results in the use of smartphone apps for diabetes management, there are inconsistent findings regarding the type of technological devices through which the best psychological instruments, developed as paper-and-pencil tools, should be delivered to achieve a more in-depth screening of patients' psychological distress and thereby better outline the psychological intervention (Lu,et al.,2016).

Utilization of social support in the management of type 2 diabetes

Social support can be defined as "an exchange of resources between (at least) two persons, aimed at increasing the well-being of the receiver. Other definitions of Social support refers to a psychosocial resource that is accessible in the context of interpersonal contacts and one's social network (Moak, et al., 2010). Social support is a psychosocial aspect that affects the adherence of individuals by giving them the required information, financial assistance, friendship and emotional support during their course if the diabetic management (Strom, 2012). The needs provide by social support exceed just companionship and shared learning. The forms of social support are categorised into companionship, emotional, tangible and informational support as postulated by Ford, et al., (1998). It is an essential aspect of the management of type 2 diabetes and can exist in different forms. Diverse sources can include spouses, family, friends and the community such as a workplace can provide social support which then influences their decisions regarding health matters among those with type 2 diabetes.

Psychological and physical health depend on the ability of the patient to thoughtfully plan and adhere to routines of diet, activity and medication regardless of competing life demands, life stressors or temporary moods (Elliott, 2001) However the Psychological stress with a helplessness reaction can lead to an activation of the hypothalamic-pituitary-adrenal axis, which results in high cortisol levels which in turn antagonize the actions of insulin (Trief, et al., 1998). Support may reduce the perception that a situation is stressful thereby decreasing neuroendocrine responses to stress (Björntorp, 1997)

Social support has a generally beneficial effect on relieving individual psychological pressure, inhibiting negative emotions, providing positive emotional experience and promoting mental health (Langford, et al., 2008)

Studies indicate that social support is essential in the successful treatment of type 2 diabetes (Keogh, et al .2011). It is a protective factor in diabetic control through support offered in the modification of physical, diet and information. As noted by Ozbay, et al., (2007), those who receive social support will have greater psychological ease and have ability to address their with health issues. Increase in social support for adults with diabetes has been associated with a decrease in emotional distress, and individuals with high levels of social support have reported better levels of well-being (Ramkisson, et al., 2017). The extensive behavioural modifications and adherence to a strict diet required in the management of type 2 diabetes require social support as an important factor (Trief, et al., 2004) . There is evidence from previous reviews that good outcomes from glycemic control, health habits and treatment outcomes are associated with social support (Rad, et al., 2013). Social support also has an impact on the emotional state of the patients. Cobo-Rendón, et al., (2020) postulated that once supported, appreciated, and cared for, patients

DOI: 10.5281/zenodo.16750145

acquire a positive attitude towards living with the long term disease.

As noted by the American Diabetes Association et al (2014) noted that individuals with type 2 diabetes patients have multiple physician visits per year with a vast pharmacologic intervention to control the disease progression as well as the life style modification which can greatly affect one's work life balance. This requires a level of support socially and economically for one to fully participate in the treatment regimen and also be present in the other aspects of life. Social support (from family and healthcare providers) is also very important for maintaining lifestyle changes and effective diabetes self-management (Karlsen, et al., 2014). The first form of social support is the family as per the findings of Figueira, et al., (2012). It can also be in other ways such as friends, health care providers and religious leaders as cited by Rintala. et al., (2013).Support from family and community in terms of emotional support and availability of time to buy medicines, cooking food and accompanying to visit health facilities enable people with diabetes to self-manage their diabetes (Dao. et al .,2019) The support from a social context is beneficial to improve diabetes self-management practices (King . et al., 2010), Rintala, et al .,(2013) noted that that Family support has been identified as the main source of support and plays an essential role in lifestyle changes and diabetes management. More so, the chronic disease burden of diabetes is considered to be a stressor with which the patient with diabetes is expected to cope with on a daily basis (Chida, et al., 2008). Further findings have categorized diabetes as a family disease as indicated by Funnell, et al. (2004) as the adverse effects of diabetes reduces life expectancy , increases financial burden on the individual and their family members as well as the community thus affecting the quality of life of the sufferer. . Family centered and peer-based interventions are all measures incorporated in the diabetes self-management support (Leggatt, et al., 2016).

On the other hand there are reports that limited social support significantly contributes to developing depressive symptoms. Various reports indicate that a stable emotional support from family is closely associated to a reduced occurrence of depression (Haines, et al., 2008).

Loannou, et al., (2019) observed that social support prevents individuals with diabetes against depression. This implies that without social support patients are more prone to developing depressive symptoms and adverse forms of type 2 diabetes. Liu, et al., (2013) observed that there was a phenomenal impact of social support in the diabetic self-care and quality of life. Patients can also learn how to cope positively to the illness and incorporate activities that can help in stress management (Ramkisson, et al., (2017). Overall, constructive and exclusive social support is vital in averting the emergence of depression and mental stress among those with T2DM.

Social support has been linked to healthy lifestyles among type 2 diabetes patients**.** Gallant, et al., (2003) social support has been shown to be positively associated with positive health modifications in lifestyle which are part of the diabetes management. This support can be in various forms not limited to face to face but also online. Online support groups administered to those with diabetes have proven beneficial to the treatment of diabetes (Almanea, et al., 2019).

As postulated by Tang, et al., (2017), the use of social networks helps individuals to meet their needs for social integration, self-esteem, shared learning and information through interacting with one .Other studies confirm the benefits of the psycho-social effects such as dialogues and conversations and social support online, whereas evidence on physical effects are somewhat limited .Where as social support is a major contributor for wellbeing among type 2 diabetes patients, Chen, et al., (2015) noted that lifestyle modification is by far the most essential measure for many patients. However this approach must be reinforced with other factors to increase its effectiveness. Goetz, et al. (2012) reported that social support helps with diabetes control and provides support for the necessary physical and dietary changes. As social support can occur in form of family, peers and community. This creates more emotional distress for the individual with type 2 diabetes. Further still the adherence to the treatment regimen and life style modification hugely depend on one's emotional state and physical health (Elliott, et al., 2001). Whereas some individuals find challenges with coping with type 2 diabetes, others have found good coping mechanisms (Karlsen, et al., 2002). Therefore, a form of social support should be a requirement to help the client in adjusting to the lifestyle and adhering to the treatment protocols.

Utilization of promotion of self-esteem in the management of type 2 diabetes

Self-esteem, defined as 'the degree to which an individual has a favorable or unfavorable opinion of himself and finds himself worthy or unworthy (Rosenberg, 1965). Self-esteem has been regarded as an essential part of building the individual's personality, and personality has been regarded somewhat immutable (McAdams, et al., 2010). The occurrence of a chronic illness such as type 2 diabetes which has numerous adverse effects such as T2DM can easily affect one's esteem.

The management of type 2 diabetes is robust and requires a lot of self-management. Self-management is the process of actively engaging in self-care activities with the goals of improving one's behaviors and well-being. Maintaining tight glycemic control through self-management can significantly reduce complications associated with diabetes (lancet, 1998).

Holman, et al., (2008) cited that the strict glucose control had an impact on the prognosis of those with type 2 diabetes. . Therefore, one must engage in activities that promote the observance of the glucose control. The National Institute of Diabetes and Digestive and Kidney Diseases (2007) further highlighted that hyperglycemia being a key factor for diabetes, individuals who modified their lifestyle would prevent developing diabetes within the next 10 years. However, Rustveld, et al., (2009) found that self-esteem was one of the main barriers to self-care management in diabetes care**.** Interestingly, most research on diabetes has found that a significant proportion of patients fail to engage in adequate self-management (Ho, et al., 2006).

The American Diabetes Association (2014) considers type 2 diabetes a chronic illness with severe complication. This implies that an individual with its diagnosis must learn and prepare to live with the illness. There exists vast evidence that lifestyle modification is a key factor in the reduction of the risk for adverse effects of type 2 diabetes as per the findings of Norris. et al., (2005). While one concept is the personal assessment of one's own self-worth and value, and the other relates to individual's perception of their own ability to perform certain specific tasks of

DOI: 10.5281/zenodo.16750145

behaviors, both of these constructs may influence individuals' motivations and ability to adjust to new situations (Caprara, et al., 2013). Evidence shows that self-esteem can be a key factor influencing health care behaviors (Jessor, et al., 2010).

Lifestyle adjustments are a key requirement for the management of the disease and central to the treatment plan. These include regular exercise, healthy diet, weight loss and cessation of smoking. Also, considering that physical activity has shown significant effects on the treatment of type 2 diabetes. In fact, Hu,et al .,(2005) noted that moderate to vigorous physical activity (MVPA) reduces the risk of all-cause and cardiovascular mortality among those with type 2 diabetes, independent of their BMI, blood pressure, total cholesterol level, and smoking status. Physical activity has been deemed an integral component in the diabetic care management because of the disease process of diabetes mellitus. This is because obesity and physical inactivity lead to insulin resistance by increasing the non-physiological deposition of fat in visceral, hepatic, and muscle tissues as per the findings of(Vissers, et al, 2013).

In contrast, Lentz CA noted that physical activity reduces insulin resistance directly by promoting free fatty acid oxidation and reducing lipotoxicity in skeletal muscle and liver. Sato, et al., (2003) further noted that exercise promotes the breakdown of glucose as the basal rate is enhances by the activity of the muscles up to glucose uptake 7 to 20 times leading to an increase in the sensitivity of insulin lasting up to 3 days. However for a client to engage in this rigorous exercise, they must be motivated and with a high self-esteem. Specifically, self-esteem has been highlighted as a potential protective factor in reducing the impact of stigma on emotional well-being, though there is conflicting evidence for the moderating effect of self-esteem on the impact of diabetes stigma (Kato, et al., 2017). This implies that a high self-esteem is a protective factor to the needed lifestyle modification in the diabetic care.

Moreover, living alone in a Western culture is regarded as a stigma and can interfere with individuals' self-esteem. Some of the effects of having T2DM include the diabetic foot ulcer which is complex to manage. As noted by de Jesus, et al., 2014, the emotional consequences of living with a diabetic foot ulcer are tremendous often leaving one with prominent feelings of powerlessness. Therefore, the promotion of self-esteem becomes a key aspect in the treatment of such a kind.

3. Methodology

This study adopted a cross-sectional design with quantitative and qualitative approaches.

This study was carried out in Nsambya Hospital located in Makindye Division of the Kampala City. It is a referral Private – Not – For – Profit that is run by the Catholic Church with a capacity of 440admission beds. The hospital has outpatient and inpatient services as well as specialized care in cancer, HIV, Diabetes and surgery with an affiliation to both Nsambya Hospital training School that offers training for health workers in nursing and laboratory. It is also a training campus for the post graduate medical school of the Uganda Martyrs University.

The study population consisted of both male and female diabetic patient at the Nsambya Diabetic Centre.

From the total population of 180, a sample of 122 was selected to participate in the study which of 58 male, and 64 female patients from Nsambya Hospital. Therefore, in obtaining the sample needed by the researcher the method of Morgan and Krejcie (1970) of determining sample size was employed;

$$S = \frac{NP(P)(1-P)}{NP-1(B/C)^2 + P(1-P)}$$

S= Sample size

NP= Population size

P= Population proportion magnitude yielding the maximum possible sample size

B= Sampling error which is 5% = 0.05

C= Level of confidence at 95%. The standard of confidence used by most researchers is 1.960.

$$S = \frac{NP(P)(1-P)}{NP-1(B/C)^2 + P(1-P)}$$

$$S = \frac{180(0.5)(1-0.5)}{180-1(0.05/1.960)^2 + 0.5(1-0.5)}$$

$$S = \frac{180 \times 0.25}{179(0.00065077) + 0.25}$$

$$S = \frac{45}{0.36648783}$$

S= 122

Table 3.1 below shows the sampling frame

Table 3.1 Sampling frame

Type of respondent	Population	Calculation	Sample size	Sampling techniques
Female	95	95 x 122=64 180	64	Simple Random Sampling
Male	80	80 x 122=54 180	54	Simple Random Sampling
Physicians	5	5 x 122= 4 180	4	Judgmental Sampling
Total	**180**		**122**	

Source: *Primary Data (2024)*

DOI: 10.5281/zenodo.16750145

The data collection instrument used in the study included the self-administered questionnaire and key informants interview.

The researcher obtained an introductory letter from the School of Graduate Studies and Research of the University of Kisubi authorizing her to collect data. This was taken to the executive director of Nsambya Hospital where the study was conducted.

Data were analysed descriptively and some inferential statistics computed. Qualitative data were analysed thematically mapping out related topic and themes which were then be put in different categories.

4. Findings

Table 4.1: Participation Rate

	Frequency	Percentage
Quantitative Targeted Respondents	122	96.0
Actual respondents	123	97.0
Qualitative target participants	4	3.0
Total	127	100

Source: primary data, (2024)

From Table 4.1, a sample of 127 participants were reached out to by the researcher. All the 123 respondents for quantitative data and the 4 participants for qualitative part in form of key informants participated in the study indicating a participation rate of 96.0% which is considered an excellent rate for the study as concurred by Sekaran (2003). This high response rate implies that the generalizations drawn from the sample gives a true picture of the study.

Socio-demographic Characteristics of the Respondents

This study examined the following socio-demographic characteristics of the respondents: gender, religion, age, tribe, marital status, employment status, level of education and place of residence of the respondents. The results are presented in Table 4.2.

Table 4.2: Socio-demographic characteristics of the respondents

	Frequency (n=123)	Percentage (%)
Age of Respondent		
18-30	2	2
31-40	7	6
41-50	20	16
51-60	55	45
>60	39	32
Total	**123**	**100**
Religion		
Catholic	56	46
Protestant	33	27
Muslim	23	19
Other	11	9
Total	**123**	**100**
Tribe		
Ganda	82	67
Other	41	33
Total	**123**	**100**
Marital status		
Married	82	67
Divorced/separated	11	9
Widowed	23	19
Single	7	6
Total	**123**	**100**
Employment status		
Employed	65	53
Unemployed	58	47
Total	**123**	**100**
Level of education		
Not educated	8	7
Primary education	23	19
Secondary education	40	33
Tertiary education	52	42
Total	**123**	**100**
Place of Residence		
Rural	32	26
Urban	91	74
Total	**123**	**100**
Sex		
Male	48	39
Female	75	61
Total	**123**	**100**

Source: Primary data (2024)

A total of 123 respondents participated in the survey. Table 4.2 displays the socio-demographic characteristics of the study respondents. In terms of gender, 61% of the participants were females while 39% were male. Considering age, 45% accounted for the age of 51-60 years, 32 % of the participants were over 60 years old, while 16% were between 41-50years. The rest represented age was of those between 18-30 years of age which accounted to only 2%.

Looking at tribe, the Ganda accounted for 67 % of the respondents leaving all other tribes merged together with 33%. In relation to place of residence, 74 % 0f the respondents were from urban areas while the rural areas accounted for 26%. In terms of level of education, 42 % had acquired tertiary education, 33% had secondary education, 19 % were of primary education while 7%

DOI: 10.5281/zenodo.16750145

accounted for the uneducated. Of all respondents 53 % were educated while 47% were unemployed as far as employment is concerned.

Screening of psychological distress carried out in the management of type 2 diabetes

The first objective of the study was to determine the extent to which the screening of psychological distress is carried in the management of type 2 diabetes among patients in Nsambya Hospital. The researcher wished to establish if the patients with type 2 diabetes were assessed for psychological distress during their medical care. To achieve this the researcher used a self-ration on psychological screening using 3 items on a Likert scale ranging from 1-strongly agree, 2-agree, 3-Neither agree or disagreed, 4-disagree to 5-strongly disagree. Agreement on each item was computed using the item means and standard deviations. The descriptive statistics there from are shown in Table 4.3

Table 4.3: Psychological distress Assessment

	Frequency (n=123)	**Percentage (%)**
The health workers often ask me if I find it difficult to enjoy daily activities.		
Neither Agree or Disagree	7	6
Disagree	36	29
Strongly Disagree	80	65
I have ever been screened for thoughts of wanting to end my life.		
Strongly Agree	3	2
Agree	1	1
Disagree	26	21
Strongly Disagree	93	76
I have ever been screened for feelings of unworthiness, loss of interest and		
Strongly Agree	4	3
Agree	1	1
Disagree	24	20
Strongly Disagree	94	76

Source (Primary data, 2024)

Respondents disagreed with the screening for psychological distress with only 3% agreeing that there was focus on their mental health. 76% strongly disagreed, while 20% disagreed. Overall, 96% were in disagreement with the provision screening for psychological distress in the management of type 2 diabetes.

Deeper analysis of the items of the variable shows that in regard to being screened for difficulty in carrying out daily life activities , none gave a positive response, 6% were not sure about it, while 29% disagreed and 65% strongly disagreed . Considering being screened for suicidal ideation, only 2% strongly agreed with 1% agreeing while 21% disagreed while an overwhelming 76% strongly disagreed to having been screened for suicide. More still, only 3% strongly agreed to being screened for feelings of unworthiness, 1% agreed, 20% disagreed while 76% strongly disagreed.

When asked about the screening of psychological distress among diabetes patients, one key informant explained that:

> "*At the moment, psychologically we don't cater for that part of care. We only screen for sugar levels, take vital observations such as height, weight and blood pressure. There after patients see the physician for a drug refill. Even the health education is about nutrition, glycemic control, danger signs in diabetes and nothing about mental health"*

From the perception of the key informants, the screening for psychological distress was not offered in the hospital because of the nature of the business. Secondly the connection between mental health and diabetes mental is known in theory but the integration in practice has not been implemented in the hospital.

However, one of the respondents explained that, '' *I usually refer clients that have diabetes complications require say amputation in case of diabetes foot for mental health assessment and counselling. Though we do not send all patients through that same protocol*"

Table 4.4 Total score of psychological distress assessment

	Min, Max	Mean, STD	Median
Total score of psychological distress assessment	5 15	13.9 1.7	14
Average score of psychological distress assessment	1.7 5	4.6 0.6	4.7

According to table 4.2 the mean is 13.9, with a standard deviation of 1.7 indicating that majority of the respondents were in disagreement with being screened for psychological distress. A lower standard deviation also indicates that there is a small variation in the agreement of the respondents with the variables. In line with the data from the respondents another key informant reported that, "*I usually refer clients that have diabetes complications require say amputation in case of diabetes foot for mental health assessment and counselling using the social workers."*

This further confirms the fact that there is a very chance that fewer patients are actually assessed while accessing medical care for diabetes.

Table 4.5 Psychological distress assessment carried out in the management of type 2 diabetes among patients in Nsambya Hospital

	Frequency (n=123)	**Percentage (%)**	**95% C I**
Assessed	4	3	**0.5-7.0**
Moderately assessed	5	4	**0.9-8.1**
Not Assessed	114	93	**8.7-9.7**

Source Primary Data 2024

DOI: 10.5281/zenodo.16750145

According to the findings, only 3% of the patients reported being assessed, while 4% were moderately assessed while 93% were not assessed at all. This indicates that an overwhelmingly majority of patients are not screened for psychological distress. It is also important to note that 4% of patients had been moderately assessed for psychological distress.

Table 4.6 Extent of Psychological distress assessment among different demographic characteristics

	Assessed	Moderately assessed	Not assessed	Chi square	p-value
Age of Respondent					
18-30	1(0)	1(20)	5(4)	16.015	**0.042***
31-40	1(25)	3(60)	16(14)		
41-50	0(0)	1(20)	54(47)		
51-60	2(50)	0(0)	37(32)		
>60	1(0)	1(20)	5(4)		
Religion					
Catholic	1(25)	1(20)	54(47)	11.930	0.064
Protestant	1(25)	1(20)	31(27)		
Muslim	0(0)	2(40)	21(18)		
Other	2(50)	1(20)	8(7)		
Tribe					
Ganda	3(75)	3(60)	76(67)	0.225	0.894
Other	1(25)	2(40)	38(33)		
Marital status					
Married	2(50)	4(80)	76(67)	6.971	0.324
Divorced/separated	0(0)	0(0)	11(10)		
Widowed	1(25)	0(0)	22(19)		
Single	1(25)	1(20)	5(4)		
Employment status					
Employed	2(50)	3(60)	60(53)	0.118	0.943
Unemployed	2(50)	2(40)	54(47)		
Level of education					
Not educated	0(0)	0(0)	8(7)	3.852	0.697
Primary education	1(25)	1(20)	21(18)		
Secondary education	0(0)	1(20)	39(34)		
Tertiary education	3(75)	3(60)	46(40)		
Place of Residence					
Rural	1(25)	1(20)	30(26)	0.102	0.951
Urban	3(75)	4(80)	84(74)		
Sex					
Male	2(50)	3(60)	43(38)	1.209	0.546
Female	2(50)	2(40)	71(62)		

Source Primary Data 2024

DOI: 10.5281/zenodo.16750145

In the analysis of psychological distress and the demographic variables, only age with a p value of p = (0.0420) was statistically significant. The other values due to having higher p values than 0.05 were not statistically significant.

Extent of social support provided in the management of type 2 diabetes

The second objective of the study was to establish the extent to which social support is provided in the management of type 2 diabetes among patients in Nsambya Hospital. With this objective, the respondents were asked if they were receiving any form of social support. To achieve this objective, the researcher used a self-rating of 7 items based on a likert scale ranging from 1-strongly Agree, 2-agree, 3-Neither agree or Disagree, 4-Disagree to 5-Strongly disagree. .Agreement on each item were computed using mean and standard deviation

Agreement on each item was computed using the item means and standard deviations. The descriptive statistics there from are shown in Table below.

Table 4.7: Social support assessment provided in the management of type 2 diabetes among patients in Nsambya Hospital

	Frequency (n=123)	Percentage (%)
I have someone special around me when in need		
Strongly Agree	39	32
Agree	52	42
Neither Agree or Disagree	4	3
Disagree	21	17
Strongly Disagree	7	6
I get the emotional help and support that I need		
Strongly Agree	53	43
Agree	34	28
Neither Agree or Disagree	11	9
Disagree	14	11
Strongly Disagree	11	9
I receive the information that I require for my treatment		
Strongly Agree	29	24
Agree	43	35
Neither Agree or Disagree	33	27
Disagree	16	13
Strongly Disagree	2	2
I get the emotional help and support I need from my family		
Strongly Agree	49	40
Agree	41	33
Neither Agree or Disagree	9	7
Disagree	18	15
Strongly Disagree	6	5
I have a special person who is a real source of comfort to me		
Strongly Agree	52	42
Agree	38	31
Neither Agree or Disagree	1	1
Disagree	24	20
Strongly Disagree	8	7
I am a part of a group of similar people undergoing treatment that offers support.		
Strongly Agree	5	4
Agree	3	2
Disagree	42	34
Strongly Disagree	73	59
The health workers provide me with all the resources that I need		
Strongly Agree	11	9
Agree	41	33
Neither Agree or Disagree	57	46
Disagree	11	9
Strongly Disagree	3	2

Source Primary Data

Respondents largely agreed that they had different forms of social support.32% of them strongly agreed that they had physical support while 42% agreed that they had that form of support. However, 6% disagreed that they had physical support while 17% disagreed to this type of support. In terms of emotional support, 40% strongly agreed to receiving emotional support, 33 % agreed to getting this support while 15% disagreed and 5% strongly disagreed.

However, majority of the participants never belonged to a group that provides social support.59% strongly disagreed to belonging to a group with people that have the same condition that offers group support, 34% disagreed to this item while only 6% reported to have a peer support group.

One of the key informants stated that, ‘*’ there is no form of social support is given to the patients, we only concentrate on the medical side of care and nothing else.”*

Another key informants also reaffirmed that, *“at the moment we don’t provide any form of social support for type 2 diabetes. Type 2diabetic patients are always in a hurry to go back and do their businesses and are not willing to stay longer in the hospital.”*

The view of the key informants further relates to the undecided response form the participants when asked if they receive enough resources from the health workers. 46 % of the participants neither

DOI: 10.5281/zenodo.16750145

agreed or disagreed with the resources received from the health workers

Table 4.8 Social support assessment scale

	Min, Max	Mean, STD	Median
Total score of social support assessment	7.0,32	18.1,5.9	17.0
Average score of social support assessment	1.0, 4.6	2.6, 0.8	2.4

According to table 4.8 the mean is 18.1, Standard Deviation of 5.9 and median of 17 indicating that majority of the respondents were in agreement to having a form of social support. The standard deviation is low at 5.9 indicating that there is no major variation with the responses of the participants.

Table 4.9 Social Support assessment carried out in the management of type 2 diabetes among patients in Nsambya Hospital

	Frequency (n=123)	Percentage (%)	95% C I
Social Support provided	65	53	43.6-61.9
Moderate social support provided	47	38	29.6-47.4
No social support provided	11	9	4.6-15.4

Source Primary Data

Overall, as shown in table 8, majority of the respondents have a form of social support which accounts to 53% who have social support, 38% with moderate social support and 9% with no social support at all.

It is important to note that even the 9% would have a form of social support if the hospital provided group peer support groups.

Table 4.10 Extent of social support assessment among different demographic characteristics

	Social Support provided	Moderate social support provided	No social support provided	Chi square	p-value
Age OF Respondent					
18-30	0(0)	2(4)	0(0)	8.624	0.375
31-40	5(8)	1(2)	1(9)		
41-50	9(14)	10(21)	1(9)		
51-60	28(43)	23(49)	4(36)		
>60	23(35)	11(23)	5(45)		
Religion					
Catholic	30(46)	22(47)	4(36)	7.176	0.305
Protestant	20(30)	12(25)	1(90)		
Muslim	11(17)	9(19)	3(27)		
Other	4(6)	4(8)	3(27)		
Tribe					
Ganda	40(61)	34(72)	8(72)	1.631	0.442
Other	25(38)	13(28)	3(27)		
Marital status					
Married	54(83)	26(55)	2(18)	32.663	<0.001
Divorced/separated	0(0)	8(17)	3(27)		
Widowed	9(14)	8(17)	6(54)		
Single	2(3)	5(10)	0(0)		
Employment status					
Employed	36(55)	25(53)	4(36)	1.369	0.504
Unemployed	29(45)	22(47)	7(64)		
Level of education					
Not educated	5(8)	2(4)	1(9)	32.664	<0.001

DOI: 10.5281/zenodo.16750145

Primary education	15(23)	7(15)	1(9)		
Secondary education	17(26)	18(38)	5(45)		
Tertiary education	28(43)	20(43)	4(36)		
Place of Residence					
Rural	13(20)	15(32)	4(36)	2.684	0.261
Urban	52(80)	32(68)	7(64)		
Sex					
Male	25(38)	19(40)	4(36)	0.080	0.961
Female	40(62)	28(60)	7(64)		

Source: primary data, 2024

In the analysis of social support and the demographic variables, both marital status and educational level with p values of 0.001 indicating that they are statistically significant. The other values were not statistically significantly because of p values higher than 0.05.

Extent to which promotion of self-esteem is provided in the management of type 2 diabetes

The third objective of the study was to determine the extent to which promotion of self -esteem is provided in the management of type 2 diabetes among patients in Nsambya Hospital. In order to accomplish this objective, the researcher begun by computing the item means showing the average agreement on a set of 4 items. The items were anchored on a 6-point Likert scale ranging between Strongly agree (1), agree (2) Neither agree or disagree (3), Disagree (4) and Strong Disagree (5). The findings are shown below

Table 4.11: Promotion of self-esteem scale

	Frequency (n=123)	**Percentage (%)**
I am encouraged to live consciously and focus on the positive view of life		
Strongly Agree	31	25
Agree	47	38
Neither Agree or Disagree	25	20
Disagree	11	9
Strongly Disagree	9	7
I have accepted myself regardless of the illness		
Strongly Agree	27	22
Agree	22	18
Neither Agree or Disagree	29	24
Disagree	20	16
Strongly Disagree	25	20
Efforts have been made in line of treatment to enable me have self-responsibility		
Strongly Agree	24	20
Agree	39	32
Neither Agree or Disagree	44	36
Disagree	11	9
Strongly Disagree	5	4
I have been empowered to manage myself and whatever comes with the illness		
Strongly Agree	26	21
Agree	35	28
Neither Agree or Disagree	31	25
Disagree	26	21
Strongly Disagree	5	4
I have been helped to live a purposeful life despite having diabetes		
Strongly Agree	24	20
Agree	26	21
Neither Agree or Disagree	30	24
Disagree	31	25
Strongly Disagree	12	10
I have a strong believe in myself because of how the health workers have empower		
Strongly Agree	19	15
Agree	33	27
Neither Agree or Disagree	50	41
Disagree	13	11
Strongly Disagree	8	7

Source Primary Data

Participants responded different to the items offered in the assessment on the extent of promotion of self-esteem during the management of T2DM. In case of having a positive view of life

DOI: 10.5281/zenodo.16750145

25% strongly agreed while 38% agreed to the same. However 20% were undecided indicating neither agree nor disagree with 7% strongly disagreeing and 9% disagreeing?

As far as self-acceptance despite having a chronic illness 20% strongly disagreed, 16% disagreed while 24% were still undecided. However 22% strongly agreed to this parameter with 18% of them agreeing. In regard to efforts towards having a sense of self responsibility, 36% were not sure while 4 strongly disagree with 9% being in disagreement. However 20% strongly agreed to have a sense of self responsibility as well as 32% agreeing to this item.

21% of the respondents strongly agreed to being empowered to manage whatever comes with the illness, 28% agreed to the same while 25% were unsure, 21% disagreed with 4% being in strong disagreement. In terms of purposeful living 20% were in strong agreement, 21% in agreement, 24% were undecided, 25% disagreed while 10% strong disagreed.

Further analysis also indicates an interesting 41% of respondents unsure of the health workers impact towards the promotion of their self-esteem. Whereas 15% were in strong agreement, 27% agreed with the item yet 11% disagreed and 7% strongly disagreed.

However one of the key informant indicated *that, "during health talks we encourage the patients to take care of themselves. Every Monday the diabetic clinic starts with a health talk in which we talk about how to live with diabetes and the patient are encouraged to ask questions. But because some have been long term patients, they come late when the sessions have already been conducted. Also, the sessions are not mandatory which means that some patients may miss out''*

Another key informant said*, "The influx of patients does not allow us to spend a lot of time with the patients as others complain of long waiting times.''*

This indicates that due to the little time patients spend with their health workers, little attention is given to them in regard to promotion of self-esteem.

All in all, with this variable it is important to note that a significant number of respondents indicated to be unsure of many of the items. This indicates that promotion of self-esteem is offered to an average extent.

Table 4. 12: Scores of self-esteem promotion

	Min, Max	Mean, STD	Median
Total score of self-esteem assessment	6 28	15.9 5.8	17
Average score of self-esteem assessment	1 4.7	2.6 1.0	2.8

Source Primary data 2024

According to the descriptive statistics above, the mean is 15.9, Standard Deviation of 5.8 and median of 17 indicating that majority of the respondents were in agreement to having promotion of self-esteem carried out however the results also indicate that there more respondents who are not satisfied with the level of self-esteem promotion being offered as will be shown in the table with the extent of self-esteem promotion. The standard deviation is low at 5.8 indicating that the responses are within range with no big variations in the distribution of the data.

Table 4. 13. Extent of self-esteem promotion

	Frequency (n=123)	**Percentage (%)**	**95% C I**
Promotion of self-esteem done	49	40	31.1-49.1
Promotion of self-esteem moderately done	63	51	42.1-60.3
No promotion of self esteem	11	9	4.6-15.4

Source Primary Data 2024

In accordance to the table above, 40% of the respondents have proper promotion of self-esteem offered to them, 51% have moderate promotion of self-esteem while 9% of the respondents have no promotion of self-esteem. This shows that still there is need to scale up the promotion of self-esteem in the management of type 2 diabetes.

Table 4.14. Extent of Self-esteem promotion among different demographic characteristics

	Self-esteem promoted	**Moderate self-esteem promoted**	**No self-esteem promoted**	**Chi square**	**p-value**
Age of Respondent					
18-30	0(0)	2(3)	0(0)	7.676	0.466
31-40	4(8)	3(5)	0(0)		
41-50	10(20)	7(11)	3(27)		
51-60	20(41)	32(51)	3(27)		
>60	15(31)	19(30)	5(45)		
Religion					
Catholic	22(45)	28(44)	6(55)	4.259	0.642
Protestant	16(33)	16(25)	1(9)		
Muslim	7(14)	14(22)	2(18)		

DOI: 10.5281/zenodo.16750145

Other	4(8)	5(8)	2(18)		
Tribe					
Ganda	31(63)	44(70)	7(64)	0.586	0.746
Other	18(37)	19(30)	4(36)		
Marital status					
Married	41(84)	34(54)	7(64)	18.976	0.004
Divorced/separated	0(0)	11(17)	0(0)		
Widowed	5(10)	14(22)	4(36)		
Single	3(6)	4(6)	0(0)		
Employment status					
Employed	28(57)	34(54)	3(27)	3.282	0.194
Unemployed	21(43)	29(46)	8(73)		
Level of education					
Not educated	4(8)	3(5)	1(9)	2.633	0.853
Primary education	10(20)	11(17)	2(18)		
Secondary education	13(27)	22(35)	5(45)		
Tertiary education	22(45)	27(43)	3(27)		
Place of Residence					
Rural	9(18)	20(32)	3(27)	2.573	0.276
Urban	40(82)	43(68)	8(72)		
Sex					
Male	23(47)	20(32)	5(45)	2.884	0.237
Female	26(53)	43(68)	6(55)		

Source Primary Data 2024

According to the analysis of promotion of self-esteem and the demographic variables, only marital status with p value of 0.004 is statistically significant. All the other demographic variables were not statistically significantly because of p values higher than 0.05.

5. Discussion

According to the data generated by this study, there is a very low utilization of screening for psychological distress in the management of patients with T2DM in Nsambya Hospital. According to the findings, only 3% of the patients reported being assessed, while 4% were moderately assessed while 93% were not assessed at all. This indicates that an overwhelmingly majority of patients are not screened for psychological distress. It is also important to note that 4% of patients had been moderately assessed for psychological distress. Similar findings were reported by Barnacle et al. (2016) that there was no detection of poor mental health symptoms among diabetic patients. Yet multiple studies report an association of psychological damage mainly manifesting as depression, anxiety or stress among these patients as per the findings of Young-Hyman,et al (2017). Similarly, Mikaliūkštienė, et al (2014) noted that while there is routine checkup of the clinical symptoms and complications of T2DM for patients by the health workers, in many cases psychological distress is unattended to. This exposes the patients to having a low quality of life instead of embracing the disease and its proper management. It has been reported that individuals whose psychological challenges are addressed demonstrated better outcomes in regard to their management (de Groot, et al 2006).

The analysis also showed that health workers did not prioritize the screening for psychological distress. This could be due to training and the lack of treatment guidelines offered by the hospital. Previously it has been a known fact that actually there is low screening rates during the management of patients. In agreement with the findings, Osborn, et al (2010) noted that majority of the health workers treating diabetic patients were reported not to have screened patients for psychological distress while only a handful routinely used a validated screening tool. This is in line with the analysis only 3% of the patients had been assessed for psychological distress in Nsambya Hospital. Further details from other countries show that the concern is universal and not only in Uganda. For instance, Johansen, et al. (2014) noted that in Denmark health workers had knowledge deficits, inadequate mental health professionals to send patients, often challenged with inquiries on psychological issues which affected the integration of the service to the care of patients. Further still, the providers never felt obligated to address any mental health symptoms and thus it did not see the need to change how they treat their patients

DOI: 10.5281/zenodo.16750145

(Johansen, et al. 2014). This could account for the low screening in health facilities.

Patients have a role to play in the screening as noted by key informants who stated that clients have a tendency to come late after the health education has already been offered. In contrast to this revelation, it was indicated that patients liked the care about their mental wellbeing from their providers as noted by Gonzalez et al (2011). Similar findings from Burke et al 2006 postulated that there was a need from patients for adequate time with their doctors that could facilitate space for addressing their mental health concerns. This would be a good step for the patient- physician relationship which would promote lots of self-disclosure from patients in regard to their psychological wellbeing.

Therefore, routine screening for psychological distress could be very beneficial in the management of type 2 Diabetes.

The study findings revealed that a considerable percentage of patients had social support in various forms ranging from physical support, emotional support, informational support, health worker support except peer group support. This was evidenced from high percentages, mean and a lower standard deviation. Overall, as per the results of the study majority of the respondents at 53% had social support, 38% with moderate social support and 9% with no social support at all. Similar findings by Berkman (1985) revealed that social support has been recognized to be of great importance in the management of disease but in contrast Griffith , et al.(1990) noted highlighted that social support had not been held in high regard in the management of T2DM. In contrast with the findings of this study Heisler M (2010) noted that a number of individuals with type 2 diabetes have challenges with obtaining social support from family relations. This would call for provision of other means of social support in particular peer support groups.

Unfortunately, the majority of the participants never belonged to a group that provides social support.59% strongly disagreed to belonging to a group with people that have the same condition that offers group support, 34% disagreed to this item while only 6% reported to have a peer support group. Studies recommend group that have similar conditions such as an illness, age as a moment that can foster shared learning that helps members to gain insight on their condition (Borek, 2018). In contrast with the findings. Hernandez, et al. (2020) noted that there are more peer support programs in under developed countries because of the health system design that promotes that level of care. In the same vein, Majjouti, et al. (2022) explained that the prioritization of peer groups in under developed health care system is attributed to the scarcity of human resources for health. Despite the fact that there is a lot of peer support groups that have a profound effect on the management of the disease, the study findings reveled that the service was largely inexistent.

Group settings foster self-disclosure and belonging among the members of a given group. It was noted that these engagements enable members to learn from their friends, the shared experiences make whatever looks extra ordinary to become ordinary thereby promoting the way one sees him or herself (Odgers -Jewell,et al 2017). Further still more benefits of group support includes the enhancement of mental wellbeing, self-management and clinical outcomes Van, (2005). It is also well documented by Wientjens, (2008) that individuals in a group give each other advice, information, and morale more than what the health workers can provide to patients. Malpass (2009) revealed that peer support groups can be a vehicle for change through informational sessions in which members share experiences from each other, jointly acknowledge the effects of the disease and lifestyle change. However, other studies affirm the significance of the health care providers in providing leadership to this cause (Costello, 2013). This puts the role of the health workers in the spotlight in the promotion of peer support groups.

The study also revealed that 46 % of the participants neither agreed nor disagreed with the resources received from the health workers implying that they were unsure if their health workers were a source of social support. However, in contrast to these findings Stewart MJ (2000) highlighted that health care providers provided different forms of social support to patients in form of information, psychological and encouragement. Similar findings were in support of health workers being a source of support for T2DM patients as noted by Tang TS et al (2008) that over 40% of patients recognized their doctors as the foremost source of social support.

Therefore, any form of social support is important in the progress of the patients however emphasis should be put on forming peer support groups.

The study results showed that only 40% of the respondents had promotion of self-esteem offered to them. However over 60% were not fully satisfied with the level of promotion of self-esteem. This is indicated as 51% who had moderate self-esteem promotion while 9% had none at all. As per the findings of the study, the levels of promotion of self-esteem is still wanting. Self-esteem promotion has been found to be a core element in the management of type 2 diabetes and enhanced through empowerment. The WHO defines empowerment as “a process through which people gain control over decisions and actions affecting health” and it should be considered as both an individual and a community process (WHO,2016).The process of empowerment leads to promotion of self-esteem through providing problem solving ,raising the belief in one’s self and self-determination.

As per the findings of the study, the levels of promotion of self-esteem is still wanting. In relation to this, Funnell, et al (2011) also asserts that diabetic patients were found not to be empowered. Empowerment is the process that produces self-esteem for proper self-management in diabetes care. In the same vein, Ribeiro, et al. (2017) postulated that Self-esteem is an important measure for psychological health and degree of wellbeing in life. In fact, Chew, et al. 2015 further found that self-esteem is among the challenges encountered by diabetic patients as they navigate the new normal of having a chronic illness. A lack of self-esteem results into self-neglect, self-stigma, feelings of worthlessness and denial which negatively impact the prognosis of the condition. Various studies have demonstrated that the presence of self-stigma in a person with type 2 diabetes diminishes the quality of life thereby affecting self-efficacy and self-esteem (Pasmatzi, et al .2016).

The study also revealed that 41% of the participants were unsure if the health workers empowered them to live with the disease while 18% were in disagreement to recognizing any form of empowerment. Similar findings from Anderson, et al. (2002) revealed that the diabetic patients largely take on their own care leaving health professional to provide only specialized medical care in form of medication and treatment .However, in contrast, Hubley, et al. (2006) highlighted that self-esteem is actually promoted by health professional through motivating the diabetic patients to learn to how take care of themselves. This is carried out

DOI: 10.5281/zenodo.16750145

through educational programs as highlighted by the one of the key informants. In the same vein, Karimy, et al. (2013) found that through patient education programs targeting to positively influence their lives. Similar findings were found in this study as per the reports of the key informants when they mentioned that health education sessions take place every morning. In support with the findings, Chaudry (2019) noted that the knowledge received by patient at the health facility is important in helping individuals with type 2 diabetes to have a better quality of life. Self-esteem should be promoted so as to empower the patients. Therefore, efforts need to be aligned for improvements in the promotion of self-esteem through empowerment.

6. Conclusion

The study concludes that there is a very low level of screening for psychological distress in the management of type 2 diabetes Mellitus in Nsambya Hospital.

The study findings conclude that there are forms of social support that patients with type 2 diabetes receive such as physical support, emotional support, informational support however there is no form of group support offered by the hospital. The study results conclude that to a great extent, there is still a gap in the promotion of self-esteem in the management of type 2 diabetes Mellitus in Nsambya Hospital.

Due to the various conclusions made above from the study findings, the study recommends the following;

The first objective recommends the hospital should scale up the screening for psychological distress among patients with type 2 diabetes through availing simple screening tools that can be used by lower cadre health care professionals. In addition, health workers need to be trained on the role of mental health in the management of type 2 diabetes.

In regard to the second objective, there should be a provision for peer support groups among the patients in collaboration with the hospital where they can share experiences and encouragement as well fostering shared learning among the patients and health workers.

Finally, in relation to the third objective, self-esteem needs to be enhanced in the care of type 2 diabetes patients through designing structured empowerment sessions alongside the health education program.

7. Data, materials and/or code availability

All datasets upon which this study results were generated are readily available upon realistic request through the corresponding email of the author.

8. Funding

There was no funding awarded for this study. All expenses were catered for by the author.

9. Declaration of competing interest

The author declare no conflict of interest as regards to this study.

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DOI: 10.5281/zenodo.16750145