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RESEARCH ARTICLE

PERCEIVED PSYCHOSOCIAL DISTRESS OF PEOPLE LIVING WITH DIABETES MELLITUS IN SELECTED TERTIARY HOSPITALS IN OSUN STATE, NIGERIA

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Abstract

Background/Aims: Diabetes mellitus is one of the four types of Non Communicable diseases (NCDs) resulting in more than 30 million deaths annually. Its prevalence is alarmingly increasing worldwide with approximately 425 million adults living with and 352 million at risk of developing diabetes in the 21st century. There is a paucity of literature on the psychosocial implications of diabetes in people living with the disease. This study aimed to determine the perceived psychosocial distress of diabetes mellitus among people living with diabetes in two selected hospitals in Osun state.

Methods: A descriptive cross-sectional study was adopted for the study. Convenience sampling was used to recruit 145 patients; structured questionnaires were utilized to elicit information from the participants. The chi-squared test was used to test the association between psychosocial distress in diabetes and compliance with therapeutic regimen

Results: The mean age of participants was 61.8, majorly male, married 66.9%, 31.0% hadtertiary education, and 38.6% were employed by others. Furthermore, 66.9% were married, and 62.8 % have been managing diabetes for more than 10years. The perceived level of psychosocial distress was high, 75.5% had high interpersonal distress, 44.8% had a high emotional burden, 43.4% had high physician-related stress and 34.5% were high on the distress-related domain and these high psychosocial implications of diabetes had a significant negative effect on the patients' compliance to therapy.

Conclusions: The study concluded that psychosocial distress is high and these had a significant negative effect on the patients' compliance to therapy. The study recommended the inclusion of pre and post-test counseling services to support patients living with diabetes.

Introduction:-

The Sustainable Development Goals advocate a healthy world population, reduced mortality, and a safe environment among others, by 2030. In the face of this, diabetes is a global health problem, that will affect 552 million people by 2030. [1]Diabetes mellitus is the commonest endocrine-metabolic disorder characterized by chronic hyperglycemia giving rise to the risk of microvascular (retinopathy, nephropathy, and neuropathy) andmacrovascular (ischaemic heart disease, stroke, and peripheral vascular disease) damage [2] with associated

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reduced life expectancy and diminished quality of life. Diabetes Mellitus is a chronic metabolic disease that potentially causes debilitating and life-threatening complications that demand a lifestyle change with implications about wellbeing[3]. It is a chronic disease that occurs as a result of high blood glucose for which there is yet no cure and one of the major causes of disease morbidity throughout the world [4] but, the illness can be managed to improve life expectancy and quality of life[5, 6]Efficacious and improved management systems to treat diabetes have been developed, majority of these patients do not achieve an optimal blood glucose control which may be due to some psychosocial factors, thus affecting the mortality and morbidity of the patients. [7, 8]A qualitative study explored the perceived barriers among Hispanic immigrants with diabetes and their family members. [9] The Hispanic immigrants with type 2 diabetes (n=36) and family members (n=37) were recruited in the southeastern United States for a family-based intervention study of diabetes-self management. Barriers to diabetes self-management themes identified by participants with diabetes were in three major themes categorize: suffering from diabetes, difficulties in managing the disease, and lack of resources/support. In France, a study accessed the level of adherence among 1214 patients with type 2 diabetes based on psychosocial characteristics. The psychosocial determinants of non-adherence were chance locus of control (P = 0.02); lack of trust in physicians (P = 0.010); and pessimism (P = 0.021). Patience, obedience, cautious behavior, optimism, trusts in physician, and constancy of habits were associated with adherence. [10]

The prevalence of type 2 diabetes has been increasing high, especially in developing countries and in populations undergoing modernization[8, 11]reported that the prevalence in Nigeria varies from 0.65% in rural Mangu (North) to 11% in urban Lagos (South) and data from the World Health Organization (WHO) suggests that Nigeria has the greatest number of people living with diabetes in Africa [3]. The current prevalence of DM in Nigeria is not known but estimated at 8%-10%. [6]In a cross-sectional descriptive study in Jaffna District. The prevalence of diabetes mellitus was 16.4% (95% CI: 13.3- 19.9); in males 19.6% (95% CI: 14.6-25.4) and in females 13.9% (95% CI: 10.1-18.5). [2]In a systematic prevalence review and metaanalysisthe overall pooled prevalence of DM was 5.77% (95% CI 4.3–7.1). The pooled prevalence of DM in the six geopolitical zones of Nigeria were 3.0% (95% CI 1.7–4.3) in the north-west, 5.9% (95% CI 2.4–9.4) in the north-east, 3.8% (95% CI 2.9–4.7) in the north-central zone, 5.5% (95% CI 4.0–7.1) in the south-west, 4.6% (95% CI 3.4–5.9) in the south-east, and 9.8% (95% CI 7.2–12.4) in the south-south zone[12]

Over the decades, there have been burgeoning research interests and shreds of evidence suggesting the important role of psychosocial factors in diabetes self-management [13] Studies in Nigeria have shown that people with diabetes live in a society that may not understand their condition and lack of this awareness is a barrier to the management of the disease[6]. Lack of awareness makes the demand for self-care very burdensome, frustrating, and overwhelming. Lack of knowledge for proper management of diabetes affects the physical, psychological, and social aspects of everyday life.In a community based diabetes assessment study in Ogun state, [14]It was reported that the management of diabetes requires lifelong daily adherence to dietary and exercise plans, frequent blood glucose monitoring, and adherence to medications.[15] Furthermore, several studies have focused on the effect of psychosocial factors on the quality of life and outcome of care of patients, grossly neglecting the patients' compliance to therapy which is a precursor to the outcome of care.[10, 16] Also, there is sparse information on the level of knowledge of diabetic patients about the risk factors associated with diabetes and in the prevention of its complications. This study, therefore, attempts to evaluate the perceived psychosocial implications of diabetes at selected hospitals in Osun state Nigeria. The findings of the study will create awareness of the psychosocial effects of diabetes mellitus on patients and improve the quality of education that is given to the patients by health workers. In addition to these, the study will contribute to the available literature on psychosocial implications of diabetes mellitus in Diabetic patients, and inform policymakers on issues that affect Diabetic patients.

Methods:-

A descriptive study was designed to depict the psychosocial implications of diabetes amongst patients in two selected tertiary hospitals in Osun state. The researchwork was carried out in selected hospitals inOsunstate, and inland in the South-West geopolitical zone in Nigeria. It is bounded in the North by Kwara State, in the East partly by Ekiti State and partly by Ondo State, in the South by Ogun State and in the West by Oyo state, and it is about 9,251km2 area. There are two Teaching Hospitals in Osun State and the two tertiary health facilities were used for the study. This study adopted availability sampling due to the nature of the respondents. They were few. This study adopted 145 respondents which were based on 73.3% of the study population which was adjudged representative. This study employed the use of a pretested structured questionnaire called the Diabetes Distress Scale with Cronbach's alpha coefficient of 0.75 for data collection. The data for this study was through the primary source. The

researcher administered questionnaires to the respondents who responded to the questions. Ethical approval was obtained from the Osun State Ministry of Health's Ethical Review Committee. Furthermore, before participating in the study, the purpose of the study was explained to potential participants and informed consent sought. Data collected from the questionnaires were analyzed using SPSS. Both descriptive statistical techniques (percentages and frequency) and inferential statistical data (chi-square) were used to report the findings as discussed in the results section.

Results:-

The mean age of the sample (N=145) was 61.8, 64.8% (n = 94) of the participants were male. On average, the participants were married 66.9% (n = 97), level of education 31.0% (n = 45) had tertiary education and 38.6% (n = 56) were employed by others. Furthermore, 66.9% (n = 97) were married, 62.8 % (n = 91) have been managing diabetes for more than 10years and majority 75.2% (n = 109) claimed to have thread mill at home for exercises.

Table 1:- Sociodemographic characteristics of the respondents.

VARIABLES	FREQUENCY (n=145)	PERCENTAGE (%=100)
Sex		
Male	94	64.8
Female	51	35.2
Age (in years)		
Below 40	3	2.1
45 – 50	11	7.6
50 – 60	40	27.6
Above 60	91	62.8
Marital status		
Married	97	66.9
Separated/Divorced	18	12.4
Widowed	30	20.7
Educational qualifications		
No Formal Education	13	9.0
Primary	23	15.9
Secondary	64	44.1
Tertiary	45	31.0
Occupational status		
Unemployed	41	28.3
Employed by others	56	38.6
Self-employed	48	33.1
Religion		
Christianity	81	55.9
Islam	51	35.2
Others	13	9.0
Do you have a thread mill at home for daily exercise?		
Yes	109	75.2
No	36	24.8
Since when have you been managing diabetes?		
Less than 1 year	3	2.1

1–5years	18	12.4
6-10years	33	22.8
More than 10 years	91	62.8

The perceived psychological implications of diabetes among the respondents, using the distress-related domain. 35.2% reported that they had a feeling of being overwhelmed by the demands of living with diabetes. 68.3% expressed that they had a feeling that they were not sticking closely enough to a good meal plan. 35.2% indicated that they had a feeling that they would end up with serious long-term complications no matter what they do. 34.5% pointed out that they had a feeling that they were not testing their blood sugars frequently enough. Also, feeling diabetes is taking up too much of their mental and physical energy every day.

Results of the emotional burden subscale revealed 37.2% of the respondents reported that they were not feeling motivated to keep up with their diabetes self-management and were not confident in their day-to-day ability to manage diabetes. Further, 66.2% indicated that they were feeling that they were often failing with their diabetes routine. However, 60.7% expressed that they never felt angry, scared, and/or depressed when they thought about living with diabetes but, 39.3% expressed some level of psychological distress managing diabetes. On the physician-related distress subscale, 33.8% reported that they were feeling that their doctor doesn't know enough about diabetes and diabetes care, 34.5% reportedly had the feeling that their doctor doesn't take their concerns seriously enough while 40% pointed out that they had the feeling that they did not have a doctor who they could see regularly enough about their diabetes. Also, 66.2% reportedly had the feeling that their doctors do not give clear enough directions on how to manage their diabetes.

Furthermore, on the diabetes-related distress subscale, 35.2% reportedly had the feeling that friends or family did not give them the emotional support that they would like. Almost all of the respondents (93.1%) expressed that they had the feeling that friends or family did not appreciate how difficult living with diabetes could be. Also, 82.1% reported that they had the feeling that friends or family were not supportive enough of self-care efforts (e.g., planning activities that conflict with patient scheduling, encouraging patients to eat the "wrong" foods). Lastly, 87.6% expressed that they had the feeling that diabetes controlled their life.

Table 2:- Distress-Related Domain.

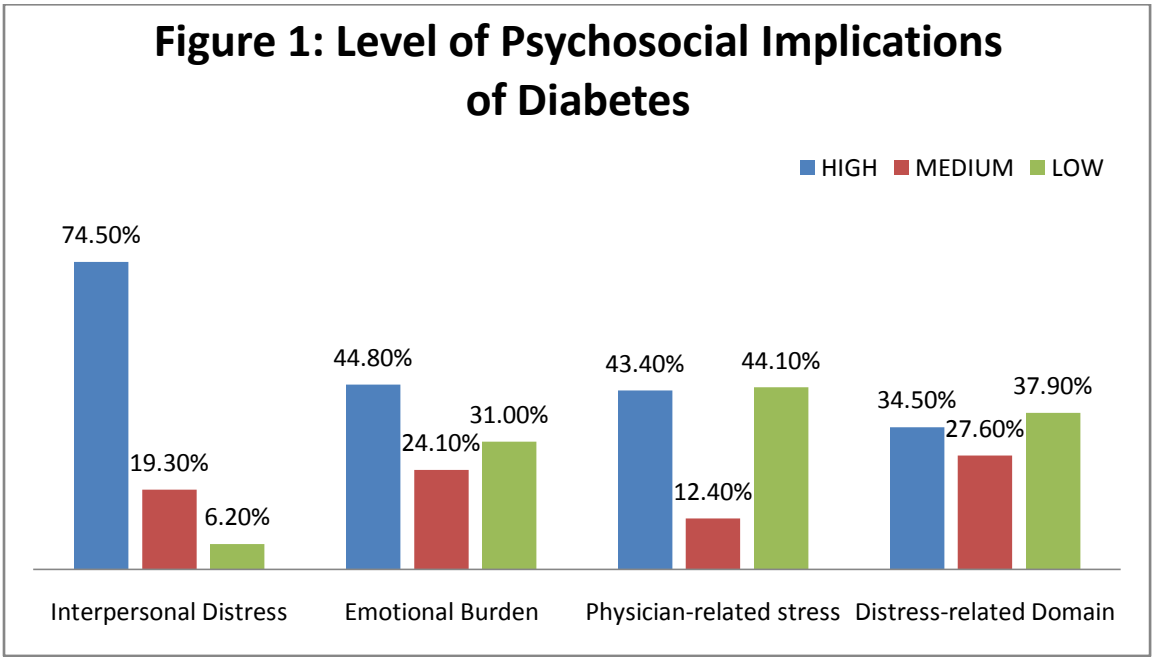
DISTRESS-RELATED DOMAIN	Responses	
	YES	NO
Feeling overwhelmed by the demands of living with diabetes	51 (35.2%)	94 (64.8%)
Feeling that I am not sticking closely enough to a good meal plan	99 (68.3%)	46 (31.7%)
Feeling that I will end up with serious long-term complications no matter what I do	51 (35.2%)	94 (64.8%)
Feeling that I am not testing my blood sugars frequently enough	50 (34.5%)	95 (65.5%)
Feeling the diabetes is taking up too much of my mental and physical energy every day	99 (68.3%)	46 (31.7%)

EMOTIONAL BURDEN SUBSCALE	Responses	
	YES	NO
Not feeling motivated to keep up my diabetes self-management	51 (37.2%)	94 (64.8%)
Not feeling confident in my day-to-day ability to manage diabetes	54 (37.2%)	91 (62.8%)
Feeling that I am often failing with my diabetes routine	96 (66.2%)	49 (33.8%)
Feeling angry, scared, and/or depressed when I think about living with diabetes	57 (39.3%)	88 (60.7%)
PHYSICIAN-RELATED SUBSCALE	Responses	

	YES	NO
Feeling that my doctor doesn't know enough about diabetes and diabetes care	49 (33.8%)	96 (66.2%)
Feeling that my doctor doesn't take my concerns seriously enough	50 (34.5%)	95 (65.5%)
Feeling that I don't have a doctor, who I can see regularly enough about my diabetes	58 (40.0%)	87 (60.0%)
Feeling that my doctor doesn't give me clear enough directions on how to manage my diabetes	96 (66.2%)	49 (33.8%)

DIABETES-RELATED INTERPERSONAL DISTRESS	Responses	
	YES	NO
Feeling that friends or family don't give me the emotional support that I would like	51 (35.2%)	94 (64.8%)
Feeling that friends or family don't appreciate how difficult living with diabetes can be	135 (93.1%)	10 (6.9%)
Feeling that friends or family are not supportive enough of self-care efforts (e.g., planning activities that conflict with my schedule, encouraging me to eat the "wrong" foods)	119 (82.1%)	26 (17.9%)
Feeling that diabetes controls my life	127 (87.6%)	18 (12.4%)

Results as shown in Figure 1 indicated that diabetes-related interpersonal distress was the most pressing psychosocial implication of diabetes among the patients, with a relative index (RI) of 2.68 (out of a maximum of 3.0) and p-value of 0.00. Following this, the emotional burden was another pressing psychosocial implication of diabetes with an RI of 2.14(p=0.01). Physician-related stress came third at 1.99(p=0.03), while distress-related domain came fourth at 1.97 (p=0.03). The test of the relationship between compliance to therapy and psychosocial implications of diabetes gave a chi-square value $\chi 2$ of 93.10 at p=0.001. The study examined the relationship between the level of psychosocial distress among patients with diabetes and compliance with therapy. It was shown that 36.6% of patients with high psychosocial implications, compared with 68.2% of patients with low psychosocial implications, were engaged in regular compliance to therapy. This indicated that more patients with low psychosocial implications, regularly complying with therapy.



Discussion:-

Psychosocial distress is prevalent among patients living with diabetes. This study confirms that there is a significant relationship between psychosocial distress among patients with diabetes and compliance with therapy. This is in line with other studies that reported T2DM and its related complications impose heavy health burdens on patients [11, 9, 17]We hypothesized a relationship between psychosocial distress among patients with diabetes and compliance with therapy. It was shown that more patients with low psychosocial implications regularly complying with therapy. Our findings reinforced pieces of evidence from previous studies that supported this hypothesis, .[18, 19]The mean age of the respondents in this study was 61.8, which was higher than 56.1 reported in a chinese study.[19] But lower than 67.9years reported in the France study[10]. Majority of our participants were males, thus strengthening previous gender-specific studies that documented higher occurrences of diabetes among males than females[10, 2]but in contrast with a previous study in Southeast Nigeria[20] that documented higher prevalence in females[21, 22]

The perceived distress-related domain among our respondents can be linked to the diabetic self-management regimen. A majority of our respondents expressed that they had a feeling that they were not sticking closely enough to a good meal plan and diabetes taking up too much of their mental and physical energy every day. Other studies had also linked self-management behaviors related to medication adherence and diet as significant correlates of distress in diabetes management.[19,23,24]Results of the emotional burden subscale revealed that more than half of our respondents indicated that they were feeling that they were often failing with their diabetes routine. Though, less than half expressed feelings of anger, anxiety, and/or depression when they thought about living with diabetes. This is in line with other studies [25, 18] On the physician-related distress subscale, the majority reportedly had the feeling that their doctors do not give clear enough directions on how to manage their diabetes. In the same vein, physician-related distress was also reported in a Chinese study[26, 27] and significantly reported a decreased of the trust in physician score[28]. It is noteworthy to report that almost all of the respondents expressed that they had the feeling that friends or family did not appreciate how difficult living with diabetes could be and agreed that friends or family were not supportive enough of self-care efforts (e.g., planning activities that conflict with patient scheduling, encouraging a patient to eat the "wrong" foods). The respondents inadvertently expressed that they had the feeling that diabetes controlled their life. This result also tallies with findings from a Chinese study [27]and a Norwegian study [18].

Summary and Conclusion:-

This study described the relationship between psychosocial distress and compliance with diabetes management. The reviewed literature confirms that diabetes presents a major public health problem to Individuals, families, and the healthcare system in Nigeria. The authors concluded by confirming the high prevalence of psychosocial distress among living with diabetes.

To the best of the researchers' knowledge, our study is one of the first to document psychosocial distress in people living with diabetes in Nigeria. It is noteworthy to document the implications of this study to nursing practice. There is a need to advocate for a comprehensive pre and post-test counseling for people living with diabetes. This will provide an avenue for individual and family education with opportunities to interact with nurses and become knowledgeable about the disease process. Findings from this study confirm the need for a multifactorial approach in the management of diabetes, thus the need for supportive diabetes tailored intervention will boost the patients' morale and relieve psychosocial distress. From the perspective of mental health nursing, people living with diabetes might benefit from resilience building and stress relief programs to alleviate the burden of psychosocial distress.

This study followed a rigorous data collection and analysis process; however, there are some limitations. The data collected were purely quantitative and we relied on the perceived responses of the patients to the questions on psychosocial distress which might not be a true reflection of their actual experiences. A future survey might add psychological assessment tools and further research studies might add value through qualitative methods of data collection to allow verbalization and triangulation of data. Furthermore, the use of convenience sampling method in the study might limit the generalizability of the findings as representing the general opinions of Nigerian patients living with diabetes. The researchers only surveyed patients from the southwestern geopolitical zone. Further research is needed to broaden the scope of understanding psychosocial distress and diabetes in Nigeria. It is believed that with information on diabetes management, and counseling would better prepare patients to cope with diabetes.

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