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IS THERE ANY BENEFIT OF TRADITIONAL AFRICAN FAMILY SYSTEM AND VALUES IN DIETARY MANAGEMENT OF DIABETES IN A TERTIARY HEALTH INSTITUTION IN A SEMI URBAN SETTING, SOUTH WEST NIGERIA?

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A**BSTRACT**: *Globally, diabetes is becoming an important health problem and Africa has its own share of the increasing burden of the disease. Effective management of diabetes involves life style changes and dietary modification, compliance with the latter being a major challenge. This study was designed to know whether there could be any benefit of the traditional African family system and values in the dietary management of diabetes.A descriptive cross section study was carried out on consenting adult diabetic patients at the general outpatient department, Federal Medical Centre (FMC), Owo between December 2007 and March 2008. A total of two hundred and eighty (280) patients gave their consent to participate in the study. Data was collected with the aid of an interviewer administered, semi-structured questionnaire. Analysis was done by the use of SPSS version 12.All the 280 questionnaire were analyzed. The mean age of the respondents was 56.60 ± 11.45yrs with a male to female ratio of 1.3:1. Among the reasons given for non-compliance with dietary modification include financial constraint, belief more in drugs, conflict with social life, eating from fast food outlets, conflict within family and unwillingness to disclose diabetic status to spouse. There is a significant association between the extent of family support and dietary compliance with the best compliance among those that were supported by both nuclear and extended family members. Achievement of success in the management of diabetic mellitus goes beyond the patient alone. It demands personal motivation towards life style pattern and strong support from family. Some of the reasons given for non-compliance are probably reflections of a change in our family values. The finding that people who enjoyed the traditional African extended family support complied most in this study also raises the question whether our traditional family system and values could be hidden asset in the dietary management of diabetes. It is recommended that family should be involved in the management of diabetes and our traditional African family system and values with the possible health benefit also need to be sustained.*

KEY WORDS: Benefit, traditional African family, values, management of diabetes.

INTRODUCTION

According to the estimated global population of diabetic sufferers by the International Diabetes Federation (IDF) in 2001, 366 million adults, aged 20-79 years, of the world 7 billion are affected. This translates to 8.5% of the world population [1]. It is expected that by the year 2030, there will be 436 million sufferers globally[2, 3].

Globally, diabetes was the cause of death in 4.6 million people in 2011. This is higher than the global mortality for AIDS and Tuberculosis [4, 5] Nigeria has the highest number of people living with diabetes in Africa and it is estimated to be 3.1 million with a prevalence of 4.9%[6, 7]. The outcome of diabetes management is usually influenced by life style factors and dietary habit of the diabetic sufferer. Changes in life style and dietary modification are key to its successful management, especially for type 2 diabetes mellitus[8].

The family is the primary social context in which health promotion and disease prevention take place. Families, not health care providers are the primary care givers for patients with chronic illness. They are the ones who help with most of the physical demands of the illness[10]. The family relationship and dynamics are strongly associated with health and disease and family support affects the outcome of many chronic medical illnesses[9].

Marriage has been said to be the family relationship that has the strongest influence on physical health and the quality of marital relationships can influence the outcome of chronic medical illness. Women with breast cancer who do not confide in their spouses were found to have higher recurrence rates than those who have confiding relationship this exemplify the effect of spousal support on health [9].

Apart from the extended family system that characterized traditional Africa, the family institution goes beyond mere co-habitation. It has as its pivot, a sense of oneness and absolute trust which form the basis of African cultural values.

Family values has been defined as a traditional set of social standards defined by the family and a history of customs that provide the emotional and physical basis for raising a family. Individual values is said to be defined by activities in three areas which are work, play and love.

Love as one of the three areas involved among other things, one's beliefs about sharing responsibility, the common interests shared by the family, shared activities and how emotional available one is to other member of the family[10]. Having strong and well defined family values is said to be helpful in solidifying the foundation for a strong, tight knit family and when cultivated long enough this closeness provides a soft place to fall when life doesn't go according to plan.[11]

The ongoing socioeconomic changes on the African continent has been altering the structure of the family away from traditional patterns to new one with families abandoning key traditional practices in favour of modern ones. This process of social adaptation of family organizations has produced an uneasy amalgam that is yet to crystallize to a dominant pattern.[12]

At this transition period, it is desirable to ask whether the traditional African family system and values could be of any health benefit and the possible effect of the current level of changes on the management of chronic disease like diabetes mellitus. This study was undertaken to find some answers to these question with respect to dietary compliance among diabetic patients.

METHODOLOGY DESIGN

Descriptive cross sectional hospital based study among 280 adult diabetic patients at the Federal Medical Central Owo, Western Nigeria.

The Study Area

Owo is located in the Northern part of Ondo State about five kilometers from Akure the State capital. It is the headquarter of Owo Local Government Area of Ondo State in the Western part of Nigeria. It is the major town in the Local Government which has a population of 222,262 people going by 2006 census. It is a cultural town and has the largest palace in Africa which was declared a national monument by the Federal Government.

Owo is an agricultural Centre but other commercial activities like saw milling; block making industries and soya bean processing plant are also in the town. It also houses a polytechnic in addition to the Federal Medical Centre and branches of most of the first generation banks. The Federal Medical Centre Owo is a referral Centre not only for the people of Ondo State, it also attends to referral from neighboring States like Ekiti, Edo and Kogi States.

Sample Size

Sample size was calculated using the following formula – $n=p\ (1-p)\ (z/d)^2$ n= required sample size, p is the average of compliance prevalence from two previous studies which is 23.5, z= confidence level at 95% (standard value of 1.96), d= margin of error at 5% (standard value of 0.05).The sample size was thus: $n= (0.235)\ (1-0.235)\ (1.96/0.05)^2 = 276.25$

The calculated minimum sample size for this study should be 276, which was estimated to the nearest whole of 280 participants included in the study.

Questionnaire

This was a self-developed pretested questionnaire. It comprises of twenty four (24) items. The initial section of the questionnaire contained demographic information. There are questions designed to ascertain the level of compliance with dietary modification, reasons for not compliant, regularity of visit to dietician, the level of understanding of dietary counsel perceived family support and compliance with dietary counsel, all based on self-reporting. The blood pressure height and weight of each patient was recorded and the body mass index (B MI) calculated.

Definitions

For the purpose of this study, compliance with dietary regimen was rated good, fair and poor. Good compliance was recorded if patient complied with dietary counsel at least (4) days in a week, fair if he/she does so two to three (2-3) days, and poor if the individual does not comply at all or does so once a week or less frequently. In the analysis, good and fair was classified together as 'comply' while 'poor' was classified as 'not comply. This grading is similar to the one used by Mahfouz et al who graded compliance as 'no', less frequently and more frequently[13].

Family support was graded good, fair and poor in this work. The grading classifies family into nuclear and extended family. This classification has been used by Amelia et al[14]. Family support

was graded 'good' if the patient received the support he/she desired from members of his/her nuclear and extended family, 'fair' if he/she received support from only members of his nuclear family and 'poor' if no member of the individuals nuclear and extended family gave him/her support.

RESULTS

A total of 280 patients participated in the study. Mean age of the respondents was 56.60±11.45yrs while the male to female ratio was 1.3:1. 76.8% of the subjects were married while 78.6% had formal education.

Figure 1 shows that the compliance with dietary modification in this study was 29.6%.

Figure 2 shows that the major reason for non-compliance in this study was lack of money (38.6%). Some of the reasons that may be family related are unwillingness to disclose diabetic status to spouse (1.8%), those who's observance of dietary instruction cause conflict in their family (14.6%) and those who eat from food outlets (9.3%). Other reasons are belief more in drugs, those whom observance of dietary instruction is in conflict with their social life, lack of discipline, inability to read diet sheet and poor understanding of the need for dietary modification.

Table III shows that there is a significant association between respondents' occupation, level of income and compliance. Compliance among the privately employed was 53% and 41% among the self-employed while it was 21% and 15% among farmers and artisans respectively compliance was best among the group receiving the highest pay per month and worst among the lowest paid.

Table IV shows that compliance was best among those who were supported by both the nuclear and extended family members and hence perceived family support as good (59.3%). This was followed with a wide margin (16.1%) by those who perceived their family support as fair because they received support only from their nuclear family members. Only (3.1%) of those without family support complied.

Table I – Age and gender distribution of the subjects

Age group	**Male**	**Female**	**Total**
20-29	5(3.2)	1(0.8)	6(2.1)
30-39	7(4.5)	3(2.4)	10(3.6)
40-49	33(21.2)	27(21.8)	60(21.4)
50-59	44(28.2)	40(32.3)	84(30.0)
≥ 60	67(42.9)	53(42.7)	120(42.90)
Total	156(55.7)	124(44.3)	280(100.0)

Table II – Other socio-demographic characteristics of the subjects

Characteristics	**No (%)**
Educational Status	
No formal education	60(21.4)
Primary education	94(33.6)
Secondary education	72(25.7)
Tertiary education	54(19.3)
Occupation	
Self employed	34(12.1)
Civil servant	46(16.4)
Private employment	13(4.6)
Trading	65(23.2)
Farming	75(26.8)
Artisan	20(7.1)
Others	27(9.6)
Marital Status	
Single	8(2.9)
Married	215(76.8)
Separate	18(6.4)
Widow	39(13.9)
Ethnicity Status	
Yoruba	252(90.0)
Igbo	17(6.1)
Hausa	1(0.3)
Other tribe	10(3.6)
Income (in naira)	
≤5000	130(46.6)
5000-9000	79(28.3)
10,000-20,000	33(11.8)
≥20,000	37(13.3)

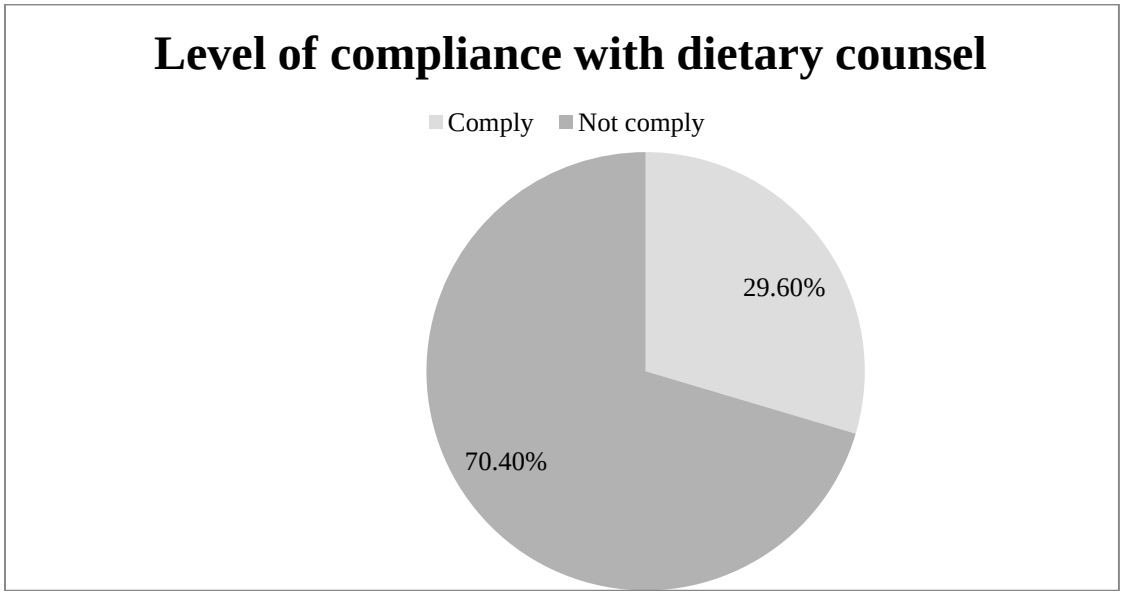

Figure 1 – Pie chart showing compliance among subjects

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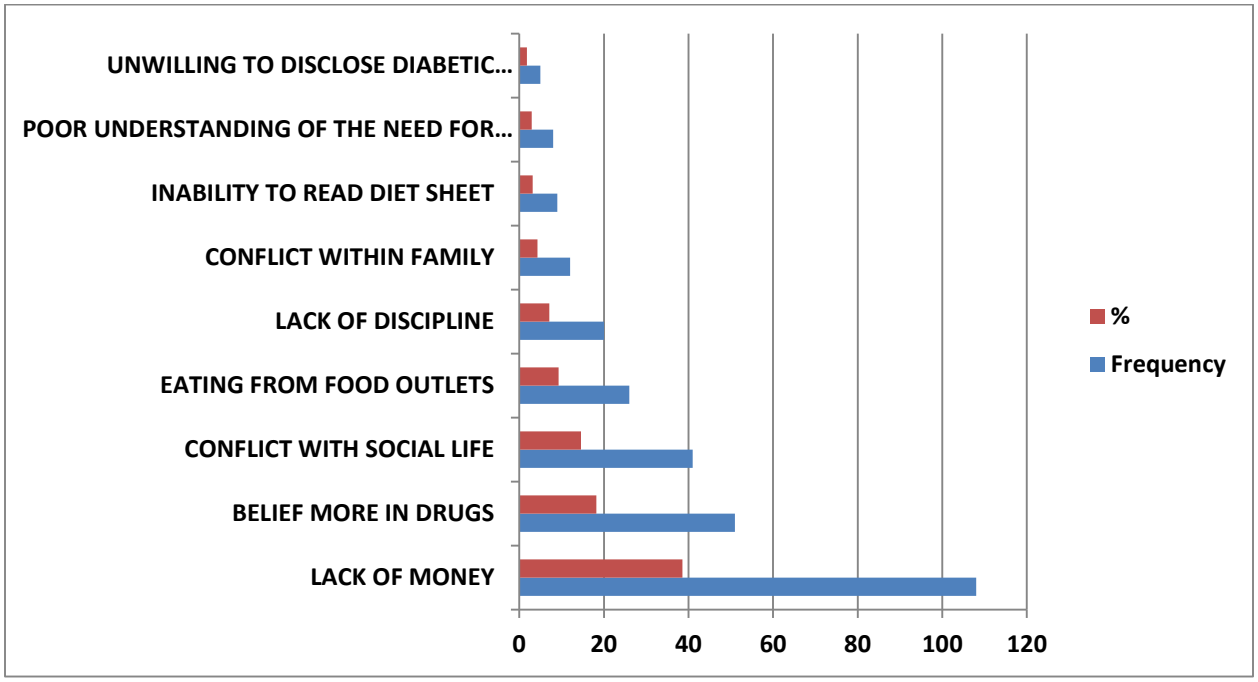

Figure 2 – Bar chart showing reasons for non-compliance with dietary counsel

Table III – Relationship between socio-demographic characteristics and compliance

p Age group	**Not comply N (%)**	**Comply N (%)**	
20-29	5(83.3)	1(16.7)	
30-39	6(60.0)	4(40.0)	X^2=3.80
40-49	47(78.3)	13(21.7)	P=0.434
50-59	55(65.5)	29(34.5)	
≥60	84(70.0)	36(30.0)	
Sex			X^2=0.349
Male	112(71.8)	44(28.2)	P=0.555
Female	85(68.5)	39(31.5)	
Marital status			
Single	7(87.5)	1(12.5)	X^2=2.308
Married	147(68.4)	68(31.6)	P=0.511
Separated	14(77.8)	4(22.2)	
Widow	29(74.4)	10(25.6)	
Ethnicity			
Yoruba	174(69.9)	75(30.1)	X^2=2.561
Igbo	11(64.7)	6(35.3)	P=0.464
Other tribes	10(90.9)	1(9.1)	
Educational status			
No formal education	49(81.7)	11(18.3)	X^2=4.74
Primary education	64(68.1)	30(31.9)	P=0.19
Secondary	48(66.7)	24(33.3)	
Tertiary education	36(66.7)	18(33.3)	

Table IV – Relationship between extent of family support and compliance

Extent of Family support	**Not comply**	**Comply**	**X^2**	**P-value**	**OR**	**95% CI**
Nuclear and Extended family	44(40.7)	64(59.3)				
Nuclear family only	73(83.9)	14(16.1)	72.75	0.001	3.91	1.33-11.44
No support	62(96.9)	2(3.1)				

DISCUSSION

The level of dietary compliance among subjects who participated in this study was 29.6%. The mean age was 56.60± 11.5 years with a male to female ratio of 1.3:1.

About seventy-six per cent (76.8%) of the subjects were married while the remaining 23.4% were either single, separated or widow. There was no significant association between demographic characteristics of the respondents and their level of compliance.

There is a significant association between the extent of family support and dietary compliance with those who were supported by both nuclear and extended family members complying best. Amelia et al in their work has demonstrated that extended family structures show healthier life style practices than 'alone' family structures while another study in Japan demonstrated that multigenerational family settings provide better social support[14, 15].

Financial constraint was the commonest reason for failing to comply in this study. This study has demonstrated a low earning power among the subjects with forty-six per cent (46.6%) of them earning below five thousand naira (#5,000.00) in a month which translates to less than one dollar per day. Strong family support is therefore needed to augment their earnings.

Other reasons for non-compliance includes the finding that some of them eat from food outlets instead of home. Studies have demonstrated associations between health and family social network and eating super at home regularly when used as a measure of social support to assess quality time spent with family has a positive influence on health related behaviour[14, 16]. Intimacy is one of the values cherished by a typical traditional African family. Also, some of the subjects did not comply because doing so causes conflict within their families. This may be because of lack of awareness and health consciousness. As expressed by Amelia et al in their study, the complex composition of large family structures will enhance awareness and more health information[15]. This could be readily achieved under extended family system.

Among the non-compliant are those who were not willing to disclose their diabetic status to their spouse. Communication has been said to be one of the most important family values[11]. Concealment of information negates the collective, kinship-oriented systems that characterize African traditional family system.

CONCLUSION

The traditional African family system is originally the extended, multigenerational type, the present changes will no doubt affect the life of the Africans. Sacrificing this family system at the alter of modernization has the potential of robbing us of the potential benefits.

The results from this research did not provide answer to some questions that arose from this study and further research is recommended. For instance, why were some of the respondents not willing to disclose their diabetic status to their spouses? Whatever might be the reason, this act of secrecy towards intimate family member does not appear to be in tandem with the relationships that usually

exist in traditional African family system that is characterized by trust, intimacy, collectiveness and the spirit of oneness. Perhaps, this may be a pointed to changing family values among our population. sAlso, the nature of the conflict generated by observance of dietary counsel was not ascertained in this study. Perhaps if this is done, there could be a way of taking care of this during the counseling session, further research is necessary in this regard.

The choice of Owo as the study center is because apart from being a highly traditional, town, it is a transition between modern urban Nigerian cities and rural settings. It is therefore expected that it will still retain the traditional African values, while also experiencing the gradual effect of modernization.

Finally, this study has demonstrated that afrocentric family values is a useful tool in the management of diabetes mellitus.

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