THE VALUE OF FREQUENCY OF NUTRITIONAL COUNSELING SERVICES ON PATIENT'S ADHERENCE TO DIETARY THERAPIES

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Introduction

Dietary counseling related to the management of diabetes has been proved to improve patients' nutritional status, clinical status, effectiveness of treatment, quality of life, functioning and survival (Harris & Haughton, 2000). Management of diabetes has been debated and accepted as one of the known interventions. The frequency of counseling is, however, known to have a direct impact on the adherence to dietary therapies since this is the best way to manage diabetes. When counseling services are well understood and dispensed at the right time, the nutritionist will be in a position to work together with the client to assess current eating patterns and identify areas where change is needed. Just like regular check ups, regular counseling enhances adherence to dietary regimens which in turn enhances management of diabetes. However, regardless of all this information on how to go about effective dietary counseling for diabetics, there are correlated failures of the nutritional counselors to dispense their services in a way that produces results in the management of diabetes (Scarlet, 1998). For instance, this anomaly has been pointed by studies among the Dutch general practitioners and dietary counselors that mostly target wrong people at the wrong time in their dispensations of diabetic dietary counseling therapies (Cook et al., 2009). This may involve giving not up to date information, failure to research on the needs specific dietary therapy and failure to consider the importance of family members' presence during counseling as a way of providing support and positive reinforcement.

The most important relationship between the counselor and the client is the feeling and attitudes that both share towards one another, the manner in which those feelings are expressed and so forth (Gelso & Hayes, 1998). Since this study is concerned with the counseling services offered to diabetics, it is assumed that registered dietitians have met certain education and experience

standards and are well qualified to provide nutrition counseling, that is effective and result oriented in the management of diabetes. This includes the best frequency of nutritional counseling which ensures the best results in compliance are achieved.

However, there are evidences that there is insufficient continuity of diabetic nutritional counseling care in most health care facilities, and thus patients continue to suffer (Cook et al., 2009). Continued care at the initial stages is very vital in ensuring that nutritional counseling results are established and the dietary routine become part of the patient's lifestyle (Hammond, 2000). When this follow up is lacking, patients are not able to have a behavior change crucial when it is incorporated in their health behavior choices in everyday life (Scarlet, 1998). In case this health care information is not followed up and no behavior change is achieved, there is lack of personalization of the lifestyle (Mitchell, 1997). This, therefore, compromises the aim of Carl Rogers person centered theory of counseling, which prescribes that it is only the individual who can solve his or her problems as long as they understand and accept the guidance on the ways to better their dietary welfare (Harris, & Haughton, 2000).

Diabetic management and treatment of the disease

Dietary adjustments are an integral part of the management of diabetes. Diabetics often need personal guidance so as to enrich their knowledge, and thus aid suitable selection of foods and intake of balanced diet. The goal of dietary counseling for diabetes management is helpful in improving the diets in affluent countries with high rates of literacy, easily available information about food compositions and a wide range of food choices (Franz, 2004). The impact of such guidance requires some evaluation in a variety of settings because compliance to various dietary suggestions may differ according to type of recipients and the effects (American Dietetic Association and Dietitians of Canada, 2000). Therefore, effectiveness of the frequency of counseling services offered in hospitals should be evaluated so as to give informed recommendations to stakeholders. In this case, interventions such as employing more dieticians, intensifying awareness campaigns on the recommended diet for the diabetics will be a significant step.

Theoretical Framework

This study would not have been complete without applying related theories. Considering that many theories have been developed to explain human uptake of health services, this study adopted Irwin Rosenstock's health belief model. This is a combination of a heath behavior model and a psychological model. The Health Belief Model has been applied to a broad range of health behaviors and subject populations (Strecher & Rosenstock, 1997). In this study much attention was on the health-promoting part of the model which includes; treatment therapies like diet, Sick role behaviors, which refer to compliance with recommended dietary treatment for diabetics, usually following professional diagnosis of illness (Strecher & Rosenstock, 1997). It was then tied to the main objective of finding out whether the frequency of nutritional counseling has effect on the adherence to the dietary therapies among diabetic patients under study.

Methodology

In order to achieve the objective of the study, descriptive survey with ex-post facto design was used. In this type of research, changes in the independent variables have already taken place, and the researcher studies them in retrospect for their effects on an observed dependent variable (Ary, Jacob, and Razavieh, 1979). This design allowed the researcher to gather information, summarize, present and interpret it with an aim of descriptive research and finally lead to successful reporting and recommendations (Orodho, 2002).

The study location was the Nakuru Provincial General Hospital in Nakuru County and situated 160 km North West of Nairobi, Kenya. The hospital has 15 general wards with the bed occupancy of 120% (720) on average at any given point (Ministry of Medical Services, 2010). The hospital serves a population of about 3.6 million in South Rift Valley plus patients coming as far as Western, Nyanza, North Rift Valley and Central part of Kenya (Ministry of Medical Services, 2010). It serves as a referral health facility within Nakuru County and the surrounding districts like Molo, Njoro, and Koibatek (Kenya situational report WHO, 2008). The facility serves about 1000 diabetic patients and about 700 diabetic patients attend treatment in a month. There are about 10 dietary counselors who serve patients in the whole hospital.

The target population for this study consisted of all known diabetic patients and nutritionists in rift valley general hospital. The diabetic patients who visit Rift Valley Provincial hospital are

about 1000. There are 10 nutritional counselors/nutritionists, in the hospital, who were available for the study.

The data collected from these respondents was guided by the structured questions in the questionnaire and included their views concerning nutritional counseling for diabetic patients. Two samples were considered for the study. The first sample constituted of diabetic patients and the other one constituted the dieticians. The sample size was determined using a guide for determining the required size of a randomly chosen sample from a given finite population of N cases as constructed by Kathuri and Pals (1993). In this formula, the sample proportion P was within plus or minus 0.05 of the population proportion P with a 95% level of confidence. For this research study, a sample of 278 subjects was selected from the total population of 1010 according to the guide. The researcher collected the data in form of responses through questionnaires, which was administered to the subjects. Since a case of one hospital has been selected, selected patients were used and those who are known to be diabetic and receiving counseling services or were supposed to be receiving such services from the hospital were involved.

The researcher obtained permission from all relevant authorities before embanking on this research. These included the Rift Valley General Hospital and the ministry of health as well as Departmental Head in the relevant hospital. The researcher also obtained research permit from the National Council of Science and Technology (N.C.S.T) in the Ministry of Higher Education Science and Technology (MHEST) through the Kenya Methodist University Department of Counseling to take to the relevant offices. To maintain confidentiality, the questionnaires did not require respondents' names and was also discussed prior to the filling of the questionnaires with the respondents so that they did not hold essential information. The questionnaires were only issued to those participants who were willing to participate after the discussion with the researcher.

Results and Discussions

Frequency of nutritional counseling services and the adherence to the dietary therapies

This study sought to establish whether the frequency of nutritional counseling services has any effect on the adherence to the dietary therapies among diabetic patients and was analyzed using

frequencies and percentages. The research hypothesis for this study stated, "There is no statistically significant relationship between nutritional counseling services and the adherence to the dietary therapies among diabetic patients in Nakuru Provincial. In order to analyze this hypothesis, the researcher first enquired on whether the patients had ever been counseled on the diet that they were supposed to take and the results summarized in Table 14:

Table 1: Response on whether the patients have ever been counseled on the diet

	Frequency	**Percent**
Yes	260	94.7
No	15	5.3
Total	**275**	**100.0**

Table 14 shows that majority (94.7%) of the patients have ever received diet counseling from different sources. Only a small portion of the respondents (5.3%) indicated having never received diabetic diet counseling. This implies that the nutritional counseling services are generally available and the main question should therefore be the frequency, adherence and effectiveness of counseling on the rate of healing among diabetic patients.

Respondents were noted to receive nutritional counseling from a variety of sources as indicated in Figure 4.

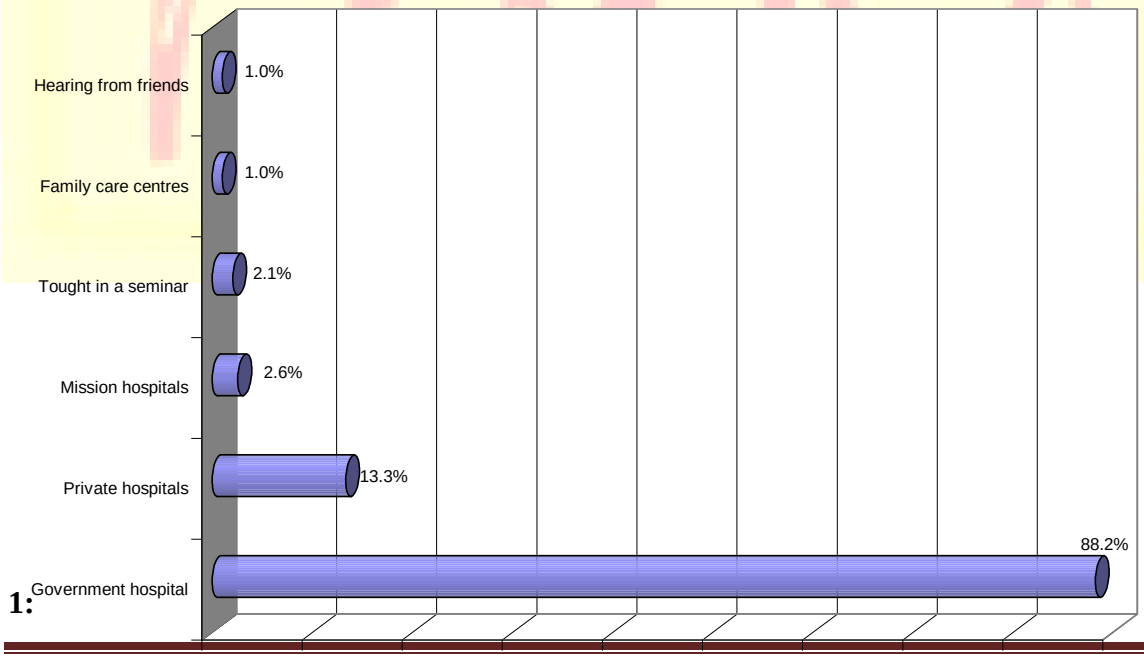

Figure 1: Where

the respondent received counseling on the diet

Figure 4 depict that majority (88.2%) of the patients received nutritional counseling from government hospitals. This was closely followed by private hospitals that constituted 13.3%. Other avenues for the nutritional counseling were mission hospitals (2.6%), seminars (2.1%), family care centres (1.0%) and friends (1.0%). The high popularity of government hospitals in nutritional counseling services can be attributed to the low levels of income by majority of the respondents who preferred to get the services from government hospitals at the lowest possible cost.

There was an interest of whether patients were able to adhere to therapy and treatment given to them during nutritional counseling. Figure 5 summarizes the results of the patients' responses on whether they were able to adhere to the recommended diet.

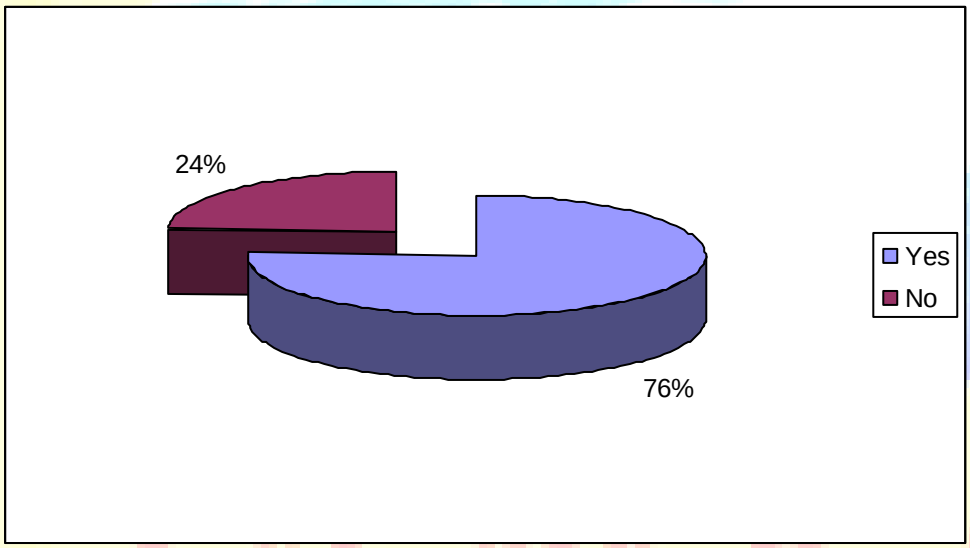

Figure 2: Whether the patients were able to adhere to the recommended diet

Figure 5 shows that majority (76%) of the patients were able to adhere to the recommended diet while 24% were not able to adhere due to a number of factors. The factors posing a challenge in the implementation/adherence of the recommended diet are cited in Table 15:

Table 2: Challenges encountered by patients in implementing/adhering to the recommended diet

Challenges	Frequency	Percent
Lack of money	166	36.9%
Long distance to the market	75	16.7%

The diets are not available in the market	59	13.1%
Seasonality	75	16.7%
Lack of support from the family	52	11.6%
Stigma	23	5.1%
Total	449	**100.0%**

Table 15 shows that 36.9% of the reasons cited as challenges to therapy adherence was lack of money. This has a direct and indirect effect on patient's ability to purchase medication and the recommended diet. Another challenge was long distance to the market (16.7%). Since most patients are rural dwellers and that some of the recommended diet (especially fruits) cannot be preserved for a long time with the prevailing technology, the problem of distance compels most patients to embrace some locally available alternatives to supplement their therapy. The fact that some required foods are not available in the market; at least throughout the year, was also cited by 13.1% of the respondents. This is closely connected with the problem of seasonality of some diets such as fruits and vegetables as cited by 16.7% of the respondents.

Some of the patients (11.6%) claimed to suffer from family related problems such as neglect, lack of support and conflicts. Table 16 summarizes the patients' responses on whether they involved their family in dietary counseling.

Whether the patient has ever involved their family in dietary counseling

The involvement of patients' families in the dietary counseling formed a primary part of this study. The following table summarizes the involvement of families in nutritional counseling. .

Table 3: Involvement of Patients families in nutritional counseling

Patient's families involvement	**Frequency**	**Percent**
Involved	230	83.5
Not involved	45	16.5
Total	**275**	**100.0**

Of the respondents interviewed, 83.5% of them claimed that they involve their families in dietary counseling while about 16.5% claimed that they have never involved their families. A number of reasons were cited for not involving the families in dietary counseling as summarized in Table 17.

Table 4: Reasons cited for not involving the family in dietary counseling.

Reasons	Frequency	Percent
My relatives are not interested	5	11.8%
My relatives are not supportive	25	55.9%
I don't like stressing them	11	23.5%
My relatives lack money that could assist me	4	8.8%
Total	**45**	**100.0%**

As shown in Table 17, majority of the patients do not involve their families in their dietary counseling because of their unsupportive nature of their relatives (55.9%), intention of not stressing their relatives (23.5%), situation where their relatives are not interested (11.8%) and when their relatives lack money that could assist the patient (8.8%). These factors need to be addressed in order to reduce family related stress factors than hamper the healing/treatment of the diabetic patients. Stigma was noted to affect a small proportion of respondents (5.1%) and thereby affecting their adherence to the recommended therapy.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary of findings

The following is a summary of the salient results of the findings of the study.

i) Majority of the respondents indicated that they had received nutritional counseling and that they are aware of the recommended diet suitable for their diabetic condition. However, despite the receipt of the diet counseling services, some patients still do not know the actual therapy they need to adhere to and consequently the progress made by majority of the patients towards healing continue to drag.

ii) Nutritional counseling services are generally available. Majority (94.7%) of the patients have ever received diet counseling from sources such as government hospitals, private hospitals and among other avenues. While majorities (76%) of the patients were able to adhere to the recommended diet, 24% were not able to adhere due lack of money, long distance to the market, lack of availability of some diets in the market mainly due to seasonality and family related problems such as neglect, lack of support and conflicts.

iii) While 83.5% of the respondents had involved their families in dietary counseling. , 16.5% of them claimed that they had never involved their families mainly due to unsupportive nature of their relatives, intention of not stressing their relatives, relatives who were not interested and relatives lack money that could assist the patient.

Conclusions

The following conclusions were reached based on the study objective

i) Nutritional counseling services are generally available to diabetic patients and consequently most patients had received diet counseling from different sources. However, low frequency of the services by nutritional counselors, negatively affects adherence and effectiveness of counseling which eventually impairs the rate of healing among diabetic patients.

Recommendations

Based on the findings of this study, the following recommendations were made:

i) The government must take an active role in promoting the nutritional counseling services offered in hospitals by employing more dieticians, intensifying awareness campaigns on the recommended diet for the diabetics.

ii) Necessary facilities such as well equipped hospitals and dieticians in all health facilities need to be established throughout the country. Long distances to the hospitals may contribute to lack of access to frequent nutritional counseling services among the diabetics

REFERENCES

American Dietetic Association and Dietitians of Canada. (2000). *Manual of Clinical Dietetics (*6th ed.). Chicago, Illinois: American Dietetic Association.

Cook, R.S., et al.(2009) The Meta-Analysis of Clinical Judgment Project: Effects of Experience in Judgment Accuracy. *The Counseling Psychologist*, 37, 350–399.

Franz MJ. (2004).Evidence-based medical nutrition therapy for diabetes. Nutr Clin Pract; 19(2):137-144.

Gelso, C.J., & Hayes, J.A. (1998). *The Psychotherapy Relationship: Theory, Research and Practice*. New York: John Wiley & Sons.

Glanz, K., Marcus Lewis, F. & Rimer, B.K. (1997). *Theory at a Glance: A Guide for Health Promotion Practice.* National Institute of Health.

Hammond, K. (2000). "Dietary and Clinical Assessment." In Krause's *Food Nutrition, and Diet Therapy*. Philadelphia: W.B. Saunders Company.

Harris, D., & Haughton, B. (2000). "Model for Multicultural Nutrition Counseling Competencies." *Journal of the American Dietetic Association,* 100, 1178-1185.

Mitchell, M. (1997). *Nutrition Across the Life Span.* Philadelphia: W. B. Saunders Company.

Orodho, J.A. (2002).*Access and participation in secondary schools in Kenya,* emerging issues and Policy; Bureau of Research Education.

Rosenstock, I. M. (1966). "Why People Use Health Services." *Milbank Memorial Fund Quarterly* 44:94–124.

Scarlet, S. (1998). "Dietary Counseling. ."In *Essentials of Human Nutrition.* by Jim Mann, Ph.D. and A. Stewart Truswell, Ph.D. Oxford: Oxford University Press.

Strecher, V. J., and Rosenstock, I. M. (1997). "The Health Belief Model." In *Health Behavior and Health Education: Theory, Research, and Practice,* eds. K. Glanz, F. M. Lewis, and B. K. Rimer. San Francisco: Jossey-Bass.