THE ROLE OF NUTRITIONAL INFORMATION IN ADDRESSING UNDER-FIVE CHILD MALNUTRITION IN TANZANIA

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Abstract

The paper discusses the role of nutritional information for addressing under-five child malnutrition in Tanzania. The paper is based on a master's dissertation whose objective was to determine the sources of nutritional information used to provide nutritional information to mothers in Maternal and Child Health (MCH) clinics, to investigate variables that determine accessibility and use of nutritional information and the sources of information routinely consulted by mothers when seeking nutritional information. Questionnaires and interview guides were used to collect data from 150 mother-child pairs and 25 health workers randomly selected from selected MCH clinics around Morogoro Urban District. The study found that although the MCH health and nutrition education sessions are an important aspect in disseminating nutritional information to mothers, these sessions were seldom conducted and the attendance of mothers to these sessions was poor. Radio and oral communication from friends and colleagues were the most commonly used sources of information and education is the most important variable that determines use and access to nutritional information. The study concludes that access to reliable nutritional information is an important aspect in addressing child malnutrition and therefore efforts should be made to ensure that mothers have access to adequate and reliable nutritional information through establishment of information units within the MCH clinic and paying more attention to less educated women when providing information.

Introduction

Today, malnutrition is still one of the major community health problems in the world. It is associated with more than half of all deaths of children worldwide (Smith and Haddad, 2000). In developing countries, it is estimated that over 50% of about 12 million deaths each year of children under-five years of age are attributed to malnutrition while over 200 million children under the age of five are malnourished Carol (1998). In Tanzania over 29% of children under the age of five are said to be moderately or severely malnourished (UNICEF, 1996).

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In Tanzania like in many other developing countries there is a growing interest in providing quality health care services and there is significant improvement in the provision and accessibility of health services. But in most cases health care consumers including women who attend Maternal and Child Health (MCH) clinics are not better informed about how to manage their health (Popoola, 2000).

· Lack of accessibility to relevant nutritional information to mothers as well as MCH staff has been attributed to the increasing rate of malnutrition. Provision of nutritional information that is tailored to the needs of the consumers is one of the ways that can help to fight malnutrition. Information can help people take preventive measures against diseases which will result in the adoption of healthier lifestyles and consequently even lower utilization of services and costs to the provider (Kaiser Permanente, 1987).

The word malnutrition as it is used in this study refers to the condition that develops when the body does not get sufficient amount of the vitamins, minerals and other nutrients it needs to maintain healthy tissues and organ functions. Malnourished children will include all children who are either underweight, stunted or severely malnourished.

The role of nutritional information

Availability of relevant nutritional information to mothers can have a significant role to play in alleviating malnutrition. According to Friedrich (1997), nutritional education component, which aims at improving knowledge, attitude and practices (information) was more successful in alleviating malnutrition than activities that aimed at increasing food availability. Regular surveillance of growth, early management of childhood diseases and health education will reduce the level of malnutrition in a community (Adie et al, 1985). Chowdhury (2000) also observed that a major element in the fight against child malnutrition is the information available to the household, especially the mother. Therefore, there is a need to ensure that women and families in general have access to nutritional information and are in a position to use that information properly in order for them to be able to address this problem effectively at the household level.

Nutritional information as a strategy to address the problem of malnutrition. The role of relevant nutritional information as a strategy to addressing the problem of malnutrition in Tanzania has been underestimated and there is limited accessibility and use of information in addressing malnutrition (Masawe, 1994). It was also observed by Dal-Lago et al. (1988) that the awareness of malnutrition on the part of mothers and the Maternal and Child Health (MCH) clinics' staff and the general public is poor, mainly due to lack of information. This is probably one of the reasons why malnutrition is still a major problem facing underfive children in Tanzania today. Because of lack of nutritional information the nutritional needs of

children are not adequately known as a result children are malnourished due to inadequate feeding and care.

Women education is another strategy that has been widely used to combat the problem of malnutrition in developing countries (Smith and Haddad, 2000). But it was observed by Kavishe (1993) that increasing the education of women seems to improve the use of relevant information at the household level but only after time lags and therefore it can only be used as a long term solution to this problem. For instance in Tanzania for the past 15 years literacy rate has been decreasing from 90% in 1986 to 67.4% in 2001. In rural areas of Tanzania where about 80% of the population live, the percentage of women who are literate is only 54.5% of the total women population (Bhalalusesa, 2000 and URT, 2001). In this context, knowledge of the role of information is essential, it is assumed by this study that information will enable even those women with minimum level of education or none at all, to understand some of the basic nutritional practices that can enhance the nutritional status of their children, provided the relevant information is repacked in a format that they can understand. The use of information at all levels helps to formulate strategies that provide a preventive approach to the problem of malnutrition. For instance, access to real time information by policy makers can enhance the quality of their decision making power and in case of mothers, it can improve the quality of care to their children and can ultimately address the problem of malnutrition.

The research gap

From the literature that has been reviewed, the importance and the role that pertinent information can play in addressing malnutrition has not been adequately emphasized. This role has only been mentioned and there is no specific study that has been conducted to investigate this role. In most cases, the importance of information in addressing malnutrition has been perceived in terms of nutrition surveillance data that are obtained from growth monitoring and not the information available to individual mothers that will help them make better decisions regarding the nutritional status of their children. For instance information about the cause and treatment of malnutrition, importance of breast feeding and information about the timing, amount and type of food to be given to children during weaning. The literature shows that in many cases malnutrition occurs at weaning age due to ignorance, incorrect food beliefs and lack of accurate and timely information (WHO, 1994; Gwatkin, 1985 and Kings, 1992). Furthermore Mothers need relevant information about management of common child hood diseases such as diarrhoea. Gwatkin (1985) said that diarrhoea represent the leading cause of malnutrition among children in developing countries and is responsible for about 5 Million infant and child death annually. Therefore if mothers were provided with relevant, accurate and timely information about all these

aspects it would help them make better decisions concerning the nutritional status of their children and hence reduce the rate of malnutrition.

But it should be noted that nutritional information alone can not solve to the problem of malnutrition despite the significant role that it can play in addressing malnutrition. Zeitlin (1988) argued that nutritional information alone is unable to solve the problem of malnutrition especially among the very poor. A number of economic, social, cultural and environmental factors contribute to the problem of malnutrition. Therefore in dealing with this problem no single approach is likely to be effective. Other strategies such as increasing food production and distribution, immunization services, growth monitoring, increasing women education and fighting poverty have to go hand in hand with increasing access to nutritional information to mothers.

Methodology

The research was carried out in Morogoro urban district in Tanzania. This area is moderately affected by the problem of malnutrition. Data from Morogoro regional social economic profile indicate that the rate of malnutrition in 1996 was 24.4% and 1.1% for moderate and severe malnutrition respectively. Malnutrition is widespread in the whole of Morogoro urban district, but mainly among the disadvantaged sections of the population. A survey research method using questionnaires, in-depth interviews, observations, and anthropometric measurements to determine the nutritional status of the children were used as data collection methods. The study involved 150 women who attended MCH clinic services in Morogoro municipality and who had children less than five years of age; these were randomly selected using the ballot system from the five MCH clinics which were purposefully selected. 30 women were randomly selected form each clinic. The study also involved 20 MCH staff and 5 health community workers.

Research findings and discussion

Sources of Nutritional Information in MCH Clinics

The study identified the following as the major sources of information that are used to provide nutritional information to mothers who attend MCH clinics.

Health and Nutrition Education Sessions

Nutritional education has been defined by Andrien (1994) as that group of communication activities aimed at achieving a voluntary change in nutrition related behaviour. Nutrition education is among the various services that are provided by the MCH clinics. This service is normally offered in the morning for 15 minutes. One topic was being taught each month because mothers attend these clinics only once a month. But it was observed that in all the

clinics these sessions were seldom conducted. There was shortage of teaching materials and the attendance of mothers to these sessions (in some of the clinics) was not very good. These sessions, if properly used, have the potential of being very effective in enhancing the nutritional status of children through providing appropriate nutritional information to mothers. For example, results from an integrated rural nutritional project study conducted in Kawambwa, Zambia, shows that nutritional education programs can have a significant impact on the nutritional status of children under-five years of age if conducted at the right time. (Friedrich, 1997). A study conducted by the Canadian Paediatric Society revealed that health professionals play a very instrumental role in providing infant nutritional information. However, in this study it was noted that the information required and desired by mothers was not consistently provided in either a comprehensive or appropriate format (this was also noted elsewhere by Tanaka et al 1989). This suggests that health professionals need to make improvements in meeting their responsibility to provide information to mothers on the topic of infant nutrition.

Counseling sessions

Counseling sessions are normally conducted for mothers whose children are sick or are in a bad nutritional status. Some times this is seen as an alternative to nutrition education session, but it's not the case because those who receive counseling are those who are already affected, something that could have probably been prevented if the nutrition education sessions were properly conducted.

Posters/fliers

In every clinic that was visited by the researcher, there were a number of posters on the walls except in the outreach stations where normally services were provided in a ward or village offices or under a tree. About 85% of mothers said these posters were useful to them and they normally read them and got information from them. But in all the clinics there were very few posters, which had nutritional information. Posters can be a good source of information especially, if they give information that is useful to local people and make people think about nutrition problems. But in the case of nutrition, the message normally varies with local conditions and therefore locally produced posters are much more effective than the centrally prepared materials, which may cover topics not important to every local area. Most posters in MCH clinics were centrally prepared. Posters are expensive and difficult to produce and it is difficult to change the messages often (King and Burgess 1993). They also do not teach people much if they are just pinned to the wall and left there. People soon stop looking at them. A good way to use posters is to start group discussions using the message provided in the poster.

Since most mothers said they normally get some information from posters, these can be a very good source of information if they are effectively and deliberately used to provide information.

Variables that determine accessibility and use of nutritional information

These were identified to be level of education of the mother, income level of the mother/family, occupation and age of the mother. The study found the level of education of the mother to be the most important variable that determines accessibility and use of nutritional information and therefore it is the only variable that will be discussed.

Table 1: Distribution of respondents by their level of education and child nutritional status

	Child Nutritional status		
Mother's Educational Level	**Well nourished**	**Malnourished**	**Total**
No formal Education	17 (15.2%)	12 (31.6%)	29 (19.3%)
Primary Education	78 (69.7%)	25 (65.8%)	103 (68.7%)
Secondary Education	15 (13.4%)	1 (2.6%)	16 (10.7%)
Post Secondary Education	2 (1.7%)	0 (0%)	2 (1.3%)
TOTAL	112 (74.7%)	38 (25.3%)	150 (100%)

Table 1 depicts the distribution of respondents by their level of education and the nutritional status of their children. The highest percentage of the respondents were having primary level of education, followed by those without any form of formal education while those with post secondary level of education (College and University) constituted the lowest percentage. All the respondents in this study were women.

The relationship between the level of education of the mother and child nutritional status indicates that the highest percentage of malnourished children (Those who were either underweight or severely malnourished) came from mothers with secondary level of education followed by those with no any form of formal education. All children from mother with post secondary education were having a good nutritional status. These results

indicate that the level of education of the mother has an influence on the nutritional status of their children.

Table 2: Level of education of the mother versus source of information used

Channel	No formal Education	Primary Education	Secondary Education			Post Secondary Education		
	No	%	No	%	No	%	No	%
Only clinics	5	17.2	9	8.7	00	00	00	00
Radio	11	37.9	40	38.8	4	25	00	00
Newspapers	00	00	7	6.8	00	00	00	00
Television	00	00	6	5.8	00	00	00	00
Books & other Literature	00	00	11	10.7	4	25	2	100
Seminars	00	00	1	1.0	1	6.3	00	00
Friends	9	31.0	23	22.3	4	25	00	00
Experience from school	00	00	1	1.0	2	12.5	00	00
Experience	2	6.9	3	2.9	00	00	00	00
Doctors	2	6.9	2	1.9	1	6.3	00	00
Total	29	19.3	103	68.7	16	10.7	2	1.3

Table 2 shows that 11 (37.9%) of mothers without any form of formal education indicate that radio is their major source of information while 9 (31%) depend on their friends for their nutritional information needs, the same trend is also observed among mothers with secondary level of education where 40 (38.8%) use radio and 23 (22.3%) use friends as their source of information. Among mothers with post secondary level of education 100% of them said they normally use books and other forms of literature such as professional magazine and articles for their nutritional information needs, while 25% of mother with secondary level of education use books and other forms of literature when seeking nutritional information.

These results show that levels of education have significant effect on access to information. With low levels of education there is limited accessibility to formal sources of information such as books and other forms of literature, instead the informal sources of information which are based on oral communication such as friends and colleagues which are normally not reliable or accurate enough to guarantee a high level of validity. Low levels of education have been identified as one of the barriers in accessing information (Kiondo, 1998). Niemeijer and Hoorweg (1991) also observed that there is a positive relationship between formal education and nutrition cognition of mothers. With some years of secondary education, mothers

become more aware of the general principles of child nutrition and have a more positive nutrition preference. These results concur with those of Mwansasu (2001) who argued that Education plays a very important role in people's access to information.

Table 3: Rank order distribution of information sources routinely used by the respondents

Source of information	Percentage of users
1. Posters /fliers	85%
2. Radio	54.5 %
3. Colleagues, relatives and Friends	37.7 %
4. Newspapers	31.2 %
5. Television	16.9 %
6. Books	13.6%
7. School	6.5 %
8. Health officers	6.5 %
9. Experience	5.2 %

According to Table 3 Posters on the walls of MCH clinics, Radio and colleagues has been cited as the major sources of information that most women have access to.

Radio is normally a good source of information because it can be used by both literate and illiterate people and can reach many people at a time. Radio normally offers the best solutions to problems associated with literacy, language, distance and access (Mavoneka, 1991). This study concurs with the findings by Lettenmainer et al (1993) that the radio is the most popular source of information because of its instant accessibility to many people. Use of media like newspapers and radio is highly recommended as the most suitable way of accessing information because they are cheap.

The media example radio and newspapers are a fast and most effective way of transferring information. It is also relatively cheaper and can easily be shared among people. Hence the nutritional information providers should utilize the media to provide information to their target groups. But some mothers said that they did not have time to listen to the radio due to too many responsibilities at home. The information providers can overcome this problem by targeting these messages at hours/times when most mothers are at home and are relieved from their daily activities, then a good number of them could be reached.

Although media such as radio has been cited as the most useful source of information and has the potential of disseminating messages quickly, such programs are normally short and messages in the media can only tell people about a problem and how to solve it. They give people useful information but they do not usually persuade people to change what they do. People are more likely to change what they do if a nutritional worker whom they know and trust explains and discusses the message (FAO, 1994). A combination of media and the education sessions provided in clinics should therefore run concurrently for effective service.

Conclusion

The importance of relevant nutritional information in improving nutritional status of under-five children cannot be overemphasized. The health and nutritional education sessions implemented by MCH clinics still play an important role in dealing with this problem but malnutrition deserves much more attention by the MCH staff. This is because malnutrition is a condition that requires a preventive rather than curative approach, and nutrition education can offer a very good preventive strategy to the problem. Mothers need appropriate information to help them take good care of their children and make better food choices and hence prevent children from being malnourished.

Education has been identified as the most important variable that influences access to different sources of information. Education influences the knowledge of the mother about different nutritional aspects and facilitates use of information, which ultimately improves nutritional status. But it was observed that the majority of mothers had no any form of formal education or had only the minimum level of education. Hence the nutritional information providers should consider this aspect when delivering information.

Recommendations

Despite the fact that nutritional information alone cannot adequately improve nutritional status it has been observed that it can help in the adaptation of no cost or low cost nutritional approaches which can improve child nutritional status. Thus emphasis should be on repackaging information and

disseminating it in the most appropriate manner and on enhancing women education by making sure that less educated mothers get particular attention. This is because the potentials of improving children's nutritional status of this group of women are still high if they are given appropriate information that will help these women to use appropriately the scarce resources that are at their disposal. Special programs to disseminate information to this group of mothers should be devised to help them by establishing information units, particularly within the MCH clinics units.

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