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Knowledge, attitude, and practice (KAP) survey on dietary practices in prevention of malnutrition among mothers of under-five children

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Original article

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Abstract

Introduction: Protein Energy Malnutrition is a leading nutritional problem in India. This causes mortality and morbidity among children and can impair physical and cognitive development of the children. The study aimed at assessing the Knowledge, Attitude, and Practice (KAP) regarding dietary practices in prevention of malnutrition among mothers of under - five children. **Materials and Methods**: A descriptive survey using interview method was carried out to collect data among 200 mothers of under-five children. Information regarding demographic data, knowledge, attitude, and practice on dietary practices in prevention of malnutrition was collected using a structured interview schedule. **Results**: Majority 112(56%) of mothers had moderately adequate knowledge and moderately adequate practice 116(58%) regarding dietary practices in prevention of malnutrition. Favourable attitude towards dietary practices in prevention of malnutrition was found among majority 112(56%) of the mothers. **Conclusion**: Adequate knowledge of mothers regarding dietary pattern of under-five children will enhance the attitude and practice to prevent malnutrition.

Keywords: Knowledge, Attitude, Practice, Dietary practices regarding malnutrition, Under-five children

Introduction

The health of the nation depends on its healthy citizens. Children are priceless resources and if the nation neglects their health, it would become a nation of unhealthy citizens. Nutrition of under-five children is of paramount importance because it can lead to long-lasting effect on the mental and physical health of the children. India faces the burden of diseases in which nutritional deficiencies are most common (Gopalan, 2013).

Protein Energy Malnutrition (PEM) is one of the prime nutritional and health problems in India (Blössner, Monika, de Onis, & Mercedes, 2005). The PEM leads to poor growth and high level of mortality among children between 12 to 24 months, which is a major cause of 30% of death among under-five children (Park, 2007).

Globally, the child deaths related to under nutrition in 2011 is 3.1 million annually or 45%. The prevalence of stunting is higher in South Asian region. Globally in 2011, 165 million children are affected by stunting and 52 million children by wasting (Black, et al., 2013). The UN estimates using WHO Child Growth Standards in 2011 revealed that 100 million or 16% of children under-five years of age were underweight. The prevalence of underweight in South Central Asia is 30%, whereas, in Western Africa it is 22% (Black, et al., 2013).

According to 2005-2006 National Family Health Survey (NFHS), 42.5% of under-five children were underweight, 48% were stunted, and 20 percent

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wasted (Bhat, et al., 2007). The Rapid Survey On Children (RSOC) conducted in India from 2013 to 2014 reported the prevalence of underweight among under-five children as less than 30%. Every third child in India is considered underweight (India's Rapid Survey on Children, 2013-14).

A community based survey conducted in Dehradun district showed that 57.3% of girls were in stunted category compared to 44.1% of boys and 34.2% girls were in wasted category compared 28.1 of boys (Kaur, Aggarwal, & Kakkar, 2014). A cross sectional study conducted among 0-36 months rural Indian children of Varanasi showed a 43.1% prevalence of stunting 43.1%, 35.2 %of underweight children 35.2% and 31.5% wasting cases (Anwar, Gupta, Prabha, & Srivastava, 2013). In Tamilnadu, the prevalence of under nutrition is 30% whereas in Kerala it is 23% where there is good implementation of health services (Bhutia, 2014).

Malnutrition is a major public health problem. Almost half of India's under-five children are malnourished and it remains a major health problem to achieve the India's target of achieving the Millennium Development Goal (MDG) (Bhutia, 2014). The key to overcome this problem is prevention. Education is important to create awareness among the public in modification of practice and behaviour. It is important to assess the present knowledge, attitude, and practice of the mothers in relation to dietary practices, which can in turn pave the way in educating the mothers and empowering them to modify the harmful practices related to malnutrition.

The present study aimed at assessing the knowledge, attitude, and practices related to dietary practices in prevention of malnutrition and identify the relationship between knowledge and attitude. To create awareness regarding malnutrition, a self-instructional module on dietary practices on prevention of malnutrition was prepared by the investigators and administered to the participants of the study.

Materials and Methods

A descriptive survey was conducted among 200 mothers who had children under the age of five years and attended a clinic in Dharapuram, Tamilnadu. The mothers were selected using purposive sampling technique. A valid, pretested, and reliable structured interview schedule was used to assess the knowledge, attitude, and practice of mothers with under-five children regarding dietary practices in prevention of malnutrition.

The background information was collected using a demographic proforma which included variables such as age, educational status, occupation, type of family, total number of under five children, income, religion, source of health information, and type of food consumption.

The knowledge regarding dietary practices in prevention of malnutrition was collected using a structured interview schedule (r= .9) which consisted of 30 multiple-choice questions. Each correct answer was given a score of one. The scoring was done arbitrarily and was classified as Inadequate knowledge (1 -10); Moderately Adequate knowledge (11- 20); Adequate knowledge (21- 30).

Attitude regarding dietary practices on prevention of malnutrition (α = .9) was assessed using a five point Likert scale which included 20 statements with 9 positive statements and 11 negative statements. The options include Strongly Agree=5, Agree=4, Uncertain=3, Disagree=2, Strongly Disagree=1. The negative items were scored reversely. Total score was 100. A score of 1-33 was considered having Unfavourable attitude, 33-66 was Moderately favourable attitude, and 67-100 was considered Favourable attitude.

Practice was assessed using a practice questionnaire (r = 0.8) which included 15 "Yes" or "No" questions. A score of '1' was given for 'yes' response and '0' for 'no' response. The scoring was arbitrarily classified as Inadequate practice (1 -5); Moderately adequate practice (6- 10); Adequate practice (11- 15).

The data was collected after obtaining administrative permission and ethical clearance from the authority concerned and written consent from the mothers of underfive children. The investigator collected data from five to six mothers of underfive children in a day. After collecting the data, a self-instructional module

on dietary practices in prevention of malnutrition was given to create awareness among the mothers. The data was analyzed by using statistical measurements and tabulated.

Results

The findings of the study are discussed under the following headings:

1. Description of sample characteristics:

The analysis of demographic variables of 200 mothers of under-five children is tabulated in Table 1. The data revealed that majority 75(37.5%) of the mothers belonged to the age group of 23-27 years. Majority 107(53.5%) of the mother were graduates, 112(56.0%) were housewives and 121(60.5%) lived in joint family. Majority 152(76.0%) of the mothers had only one child under the age of five years, 47 (23.5%) had two children and one (0.5%) had more than one child under-five years of age. The family's monthly income of 57(28.5%) were Rs.5001-8000 and majority 131(65.5%) belonged to Hindu religion. Majority 154(77.0%) of the mothers were non–vegetarian, 27(13.5 %) were vegetarian, and 19(9.5%) were eggatarian.

2. Description of Knowledge regarding dietary practices on prevention of malnutrition:

The findings related to knowledge level revealed that majority 112(56%) of the mothers had moderately adequate knowledge, 44(22%) of mothers had adequate knowledge and 44(22%) had inadequate knowledge regarding dietary practices in prevention of malnutrition. The mean and standard deviation of knowledge score was 15.28± 5.47. The area wise knowledge was analyzed and is described in Table 2.

3. Description of Attitude regarding dietary practices in prevention of malnutrition:

The findings related to attitude of 200 mothers revealed that majority 112(56%) of the mothers had Favourable

Table 1:
Distribution of Sample Characteristics in Frequency and Percentage N= 200

Demographic Variables	Frequency (f)	Percentage (%)
Age in years		
a. 18-22	23	11.5
b. 23-27	75	37.5
c. 28-32	73	36.5
d. 33-38	29	14.5
Education		
a. Illiterate	8	4.0
b. Primary school	22	11.0
c. High school	63	31.5
d. Graduate and above	107	53.5
Occupation		
a. House wife	112	56.0
b. Self employed	53	26.5
c. Government Employed	17	8.5
d. Coolie	18	9.0
Type of Family		
a. Nuclear	79	39.5
b. Joint	121	60.5
Monthly income in Rupees		
a. 5000 & below	48	24.0
b. 5001 – 8000	57	28.5
c. 8001- 10,000	54	27.0
d. 10,001 and above	41	20.5
Religion		
a. Hindu	131	65.5
b. Muslim	28	14.0
c. Christian	41	20.5
Source of health information		
a. News paper/ magazine	4	2.0
b. Radio/ television	84	42.0
c. Friends/ relatives	56	28.0
d. Health professional/ social worker	56	28.0

Table 2:
Area wise Analysis of Knowledge Regarding Dietary Practices in Prevention of Malnutrition among Mothers of Under - Five Children *N*= 200

Area wise Knowledge	Maximum Score	Mean ±SD	Mean percentage
Definition	2	1.13 ± .67	56.5
Causes	3	1.73 ± .91	57.66
Healthy dietary habits	5	2.41 ± 1.00	48.2
Nutrient deficiency diseases and nutrient rich diet	18	9.17 ± 3.87	50.94
Prevention	1	0.53 ± .5	53
Complications	1	0.31 ± .46	31

Attitude and 88(44%) of mothers had Moderately Favourable Attitude regarding dietary practices in prevention of malnutrition. The mean and standard deviation of attitude score was 68.2± 7.47.

4. Description of Practices related to prevention of malnutrition:

The findings related to practice of 200 mothers revealed that majority 116(58%) of mothers had moderately adequate practice, 82(41%) of mothers had adequate practice and two (1%) of mothers had inadequate practice regarding dietary practice in prevention of malnutrition.

5. Relationship between knowledge and attitude scores:

The relationship between knowledge and attitude on prevention of malnutrition was computed using Pearson's correlation coefficient. It revealed that there was a significant positive correlation ($r = .59$, $p < .05$) between knowledge and attitude regarding dietary practice in prevention of malnutrition, which indicates that as knowledge level increases attitude level also increases.

In addition, Chi-square test was computed to assess the association between the knowledge scores of mothers of under-five children and the selected variables. This showed a significant association between knowledge and selected variables like age (χ^2=13.026), education (χ^2=83.472), occupation (χ^2=67.53), monthly income (χ^2=40.52), religion (χ^2=12.716) and source of health information (χ^2=23.028), ($p < .05$). No association was found between knowledge and type of family (χ^2=3.687), number of under five children (χ^2=4.637), and type of food consumption (χ^2=5.7696), ($p > .05$). Hence, the pretest knowledge scores dependent on age, education, occupation, monthly income, religion, source of health information, and is independent of the type of family, number of under-five children, and type of food consumption.

Discussion

The findings of the present study revealed that majority 112(56%) of the mothers had moderately adequate knowledge and 44(22%) of mothers had adequate knowledge. These findings are consistent with the findings of the study conducted by Subash (2009) among 30 mothers of under-five children, which showed that 26.67% of mothers had poor knowledge, 53.33% had moderately knowledge, and 20% had good knowledge regarding protein energy malnutrition.

The present study was also supported by a study conducted by Berra (2013) in Ethiopia among 240 mothers. The study showed that a high proportion (92.4%) of the mothers had good knowledge regarding breastfeeding; its benefits and how long it should be continued and the source of health information were from the health centres (30.9%). A study conducted by Ouma (2006) in Aweil East and North counties, South Sudan, on knowledge regarding malnutrition showed that 29(58%) said it was a disease, and 31(62%) said that it was due to lack of food**.**

A cross sectional community study conducted to assess the knowledge of mothers of under-five children on nutritional problems and its prevention showed poor knowledge was found among 27(54%), average knowledge 19 (38%), and good knowledge 4 (8%) had. This study contradicts the present study findings. (Divya, Ansila, Maryes, Jeena, Reena, & Shahila, 2013)

The mothers of under-five children in the present study had moderately favourable attitude 88(44%), and favourable attitude among 12(56%). The study findings are consistent with the findings of Berra (2013) which showed that majority (72%) of mothers had positive attitude towards colostrum and 55.4% of the mothers practiced starting complementary food from six months of age.

The present study showed significant association of knowledge of mothers and age, education, occupation, monthly income, religion, and source of health information and did not show association with type of family, number of under-five children, and types of food consumption. A study conducted by Dhanasekaran (2015) in Tamilnadu showed a significant association between knowledge and education (p = .0151) which supported the present study findings. But, the significant association between knowledge score and type of family (p = .0091) was inconsistent with the present study findings.

Conclusion

Balanced nutrition is important for maintaining positive health of the child and prevents nutritional problems like malnutrition. Mothers, being the first caregivers of the under-five children, are in the best position to prevent the nutritional problems of their children and promote growth. Maternal knowledge, their attitude, and practices have an impact in changing the child's nutritional pattern. It is important that mothers have knowledge on dietary practices in prevention of malnutrition, which in-turn can help them to have good attitude towards the dietary practices, so that, they can change their behaviour and harmful practices. Educating and creating awareness among the mothers on good dietary practices will help reduce the rate of malnutrition and thereby, contributing to the Millennium Development Goals.

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