

ASSESSMENT OF KNOWLEDGE OF MOTHERS REGARDING BASIC NUTRITIONAL REQUIREMENTS OF THEIR CHILD IN URBAN AND RURAL AREAS

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ABSTRACT

Background: Knowledge, attitude and practice of mothers regarding the basic health care needs of their child is pivotal for maintaining good health and creating a better future. Under five mortality is one of the gravest problems in our country and the major contributing factor is malnutrition.

Objective: Aim of our study was to assess knowledge of mothers regarding basic nutritional requirements of their child in both urban and rural areas and to determine the impact of counselling.

Methodology: Our study was an observational cross-sectional study with 300 participants of which 150 were from rural and 150 from urban locations and the study was carried out in Eraviperoor Gram panchayath and Thiruvalla Municipality from Pathanamthitta district. Compared to urban mothers, rural mothers had less knowledge regarding various nutritional aspects of their children.

Result: Compared to urban mothers rural mothers had less knowledge regarding various nutritional aspects of a child such as importance of breakfast in child's health overeating, lack of physical activity among children, improper sleep wake cycle, importance of balanced diet, exclusive breastfeeding, Complementary feeding etc.

Conclusion: But it was found with the selected group of respondents for the study that the intervention given in the form of counselling resulted in increasing the knowledge regarding the same among both groups. So proper counselling and a holistic level of support and guidance should be given to mothers, who is possible by strengthening and streamlining the existing programs designed for the same.

KEYWORDS: Nutrition, Balanced Diet, Complementary Feeding, Mother

Article History

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INTRODUCTION

“Children are the future of society and mothers are guardians of that future.” Under nutrition continues to be a major public health problem in most of the developing countries including India. Globally, under nutrition is an underlying or associated cause in at least half of all childhood deaths. A large proportion of the world's malnourished children live in India. Malnutrition is one of the leading causes of morbidity and mortality in children throughout the world. Severe acute malnutrition (SAM) among children below five years of age remains a major embarrassment, and impediment to optimal human capital development in India. Nutrition is an important part of a child's growth and development. Especially the first

two years of life are considered to be the window of opportunity where we can improve the wellbeing of the child. A child needs the right kind of nutrition to thrive and attain optimal development. The World Health Organization (WHO) describes nutrition as “the intake of food, considered in relation to the body’s dietary needs” and good nutrition is a key determinant of health. Malnutrition in young children can be prevented by feeding them enough nutritious and safe complementary foods. There are studies which suggest that caregiver’s knowledge, attitude and actions are crucial to the nutritional outcome of child.

Regardless of age, breakfast kick starts the body’s metabolism, helping burn calories throughout the day. The three main indicators used to define under nutrition, i.e., underweight, stunting, and wasting, represent different histories of nutritional insult to the child. Occurring primarily in the first 2-3 years of life, linear growth retardation (stunting) is frequently associated with repeated exposure to adverse economic conditions, poor sanitation, and the interactive effects of poor energy and nutrient intakes and infection. The prevalence of childhood obesity is on the rise around the world. Vitamin A deficiency is a major contributor to the mortality of children under five. Improving the vitamin A status of deficient children through supplementation enhances their resistance to disease and can reduce mortality from all causes by approximately 23 %. Micronutrient deficiencies (‘hidden hunger’) are highly prevalent and affect far beyond the known effects like anaemia, goitre, asymptomatic to devastating, often hard to recognize, mimic many diseases, have fewer signs but gamut of symptoms, and can involve multiple systems. The cascading effects of childhood malnutrition include diminished immune functioning; which leads to greater susceptibility to infection, especially gastrointestinal and respiratory infections; which leads in turn to increased child mortality. Recovery from malnutrition can occur with improvements in dietary practices such as conforming more closely to infant feeding guidelines, exclusive breastfeeding in the first 6 months of life, introduction of appropriate solid foods at 6 months, frequent feedings and continuation of breastfeeding for up to 2 years. Other recovery steps include the addition of micronutrients such as Vitamin A, iron, zinc, and iodine, continuation with more nutritious foods after infancy, and preventing diarrhoea and infections by avoiding contaminated food, and unhygienic, cold and wet surroundings. In this paper, we describe to study and compare knowledge of mothers regarding basic nutritional requirements of their child in both urban and rural areas and to determine the impact of counselling.

MATERIALS AND METHODS

A community based cross-sectional study was carried out in Eraviperoor Grama-panchayath and Thiruvalla Municipality from Pathanamthitta District on the topic of Assessment of knowledge of mothers regarding nutritional requirements of their children in urban and rural area and to determine the impact of counselling. The study duration was Six months from November 2019 to April 2020. The study sample size was 300 and it included mothers of 6 to 5 years old child and mothers who are not willing to participate were excluded from the study. The study was approved by Institutional Review Board of Nazareth College of Pharmacy. The study variables include educational level of mothers, knowledge regarding nutritional requirements of child from 6 months to 5 years, overweight or obese, right time to start complementary feeding, various aspects of nutrition, importance of balanced diet, importance of micronutrients in child’s growth and development.

Data collection was done using a pre-designed data collection form which has been validated. Participants will be asked to fill a prepared questionnaire to determine their knowledge regarding healthcare of their child. Those with communication problems and those who refused to participate were excluded. Questionnaires were filled through face-to-face interviews with patients. The questionnaire prepared in English will be translated into the local language. Later

counselling was given to mothers and their knowledge regarding nutritional requirements of their child is again collected and followed in the first month of data collection. Data analysis was done by entering data in Microsoft excel-2010 version and quantitative variables were analysed using chi-square

RESULTS

Our study was carried out in 300 mothers, 150 mothers each from urban and rural areas. Most of the mothers fall in the age group 26-30 years. The mean age of rural participants was 29.13(\pm 3.82) and that for urban ones was 29.87(\pm 3.65).

Figure 1 shows total population of 300 was divided into 5 groups based on their age, out of which the maximum respondents were from the age group 26-30 (51.3 % were from Rural area and 52 % were from Urban area).

Table 2 shows that the total population of 300 was divided into 5 groups based on their educational status. Here the percentage of graduate mothers were highest in number which was 48 % in Rural area and 86 % in urban area followed by mothers with secondary school education which was 31.3 % in Rural area and 6.66 % in urban area followed by mothers with primary school education which was 6.6 % in Rural area and 0.19 % in urban area followed by mothers with pre-college school education which was 12.6 % in Rural area and 6.66 % in urban area. The percentage of illiterate mothers in rural areas was 1.3 % and there were no such mothers in urban areas.

Figure 2 shows the total study population of 300 was divided into three groups (Unemployed /Housewife, Daily wage, Employed). Here percentage of Unemployed mothers/Housewife were 70.6 % in Rural area and 33.3 % in Urban area, the percentage of daily wage mothers were 3.3 % in Rural area and 6.66 % in Urban area and the percentage of employed mothers were 26 % in Rural area and 60 % in Urban area.

Figure 3 shows illustrated the distribution of awareness on the fact that skipping breakfast contributes to overweight among children. In the total study population of 300, the percentage of positive response was 33.3 % before counselling and was 93.3 % after counselling as well as the negative response was 66.65 before counselling, 0 % immediately after counselling and was 6.6 % one month after counselling in rural area whereas the percentage of positive response was 80 % before counselling and was 98.6 % after counselling as well as the negative response was 20 % before counselling, 0 % immediately after counselling was 1.3 % one month after counselling in urban area.

Table 3 shows that in the total study population of 300, the percentage of positive response was 53.3 % before counselling, 100 % immediately after counselling and was 83.3 % one month after counselling as well as the percentage of negative response was 46 % before counselling, 0 % immediately after counselling and 16.6 % one month after counselling in rural area whereas the percentage of positive response was 92.6 % before counselling, 100 % immediately after counselling and was 97.3 % one month after counselling as well as was 7.33 % before counselling, 0 % immediately after counselling and was 2.66 % one month after counselling in urban area.

Table 4 shows the distribution of awareness of mothers about the importance of giving vitamin A supplements to your child till 5 years of age. In the total study population of 300, the percentage of positive response was 77.3 % before counselling, 100 % immediately after counselling and was 96.6 % one month after counselling as well as the percentage of negative response was 22 % before counselling, 0 % immediately after counselling and 3 % one month after counselling in rural area whereas the percentage of positive response was 89.3 % before counselling, 100 % immediately after counselling and was 99.3 % one month after counselling as well as was 10 % before counselling, 0 % immediately after counselling and was 0.6 % one month after counselling in urban area.

Figure 4 illustrates the distribution of awareness of mothers on the fact that physical activity is a necessary component to good health. In the total study population of 300, the percentage of positive response was 46.6 % before counselling, 100 % immediately after counselling and was 81.3 % one month after counselling as well as the percentage of negative response was 53.3 % before counselling, 0 % after counselling and was 18.66 % one month after counselling in rural area whereas the percentage of positive response was 69.3 % before counselling, 100 % and was 94 % one month after counselling in urban area as well as the percentage of negative response was 30.6 % before counselling, 0 % immediately after counselling and was 6 % one month after counselling.

Figure 5 shows reveal the distribution of awareness of mothers on the fact that the majority of overweight is due to genetics. In the total study population of 300 about 56.6 % of the rural mothers and 76.6 % of urban mothers agrees with this statement whereas about 43.3 % of rural mothers and 23.3 % of urban mothers disagrees with this statement.

Table 5 shows distribution of awareness of mothers regarding the importance of micronutrients such as Vit A, Iron, and Iodine. In the total study population of 300 the percentage of positive response was 82 % before counselling and 97.3 % after counselling in rural areas whereas in urban areas the positive response was 94.6 % before counselling and 100 % after counselling

Figure 6 shows illustrated the distribution of awareness of mothers about complementary feeding. In the total study population of 300 the percentage of positive response was 94 % before counselling and 100 % after counselling in rural areas whereas in urban areas the positive response was 99.3 % before counselling and 100 % after counselling.

Table 1: Distribution of Subjects Enrolled in the Study

Sl. No	Subject	Locality	Pre-Test	Post-Test
1.	300	Rural	150	150
		Urban	150	150

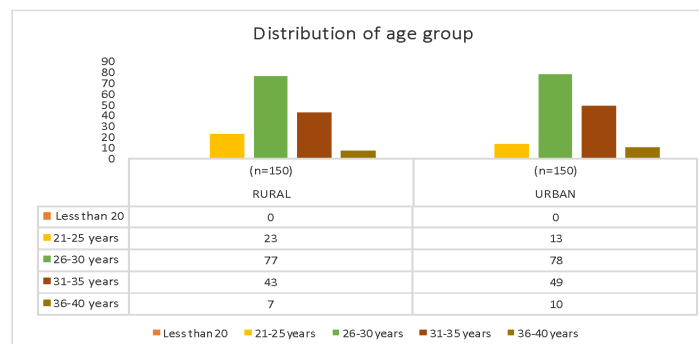


Figure 1: Distribution of Age Group.

Table 2: Distribution of Educational Status of Mother

Sl. No	Educational Status	Rural (N=150)	Urban (N=150)
1.	Illiterate	2	0
2.	Primary School	10	1
3.	Secondary School	47	10
4.	Pre-college	19	10
5.	Graduate	72	129

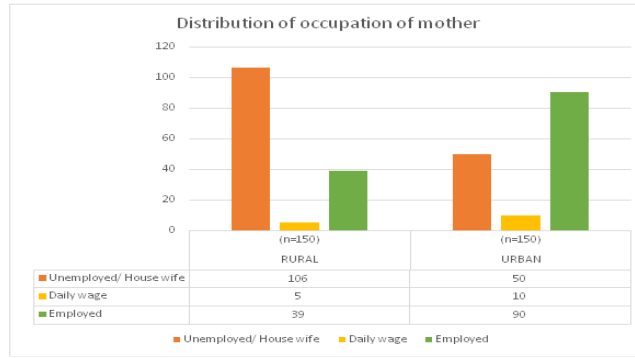


Figure 2: Distribution of Occupation of Mother.

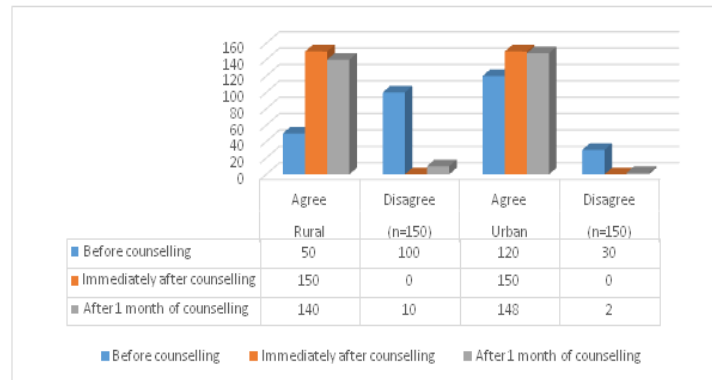


Figure 3: Distribution of Awareness on the Fact That Skipping Breakfast Contributes to Overweight among Children.

Table 3: Distribution of Awareness of Mothers on the Fact That Eating More Fruits and Vegetables Reduces Weight and A Balanced Diet Has All Food Groups

Sl. No	Locality	Response	Before Counselling	Immediately After Counselling	After 1 Month of Counselling
1	Rural (n=150)	Agree	80	150	125
		Disagree	70	0	25
2	Urban (n=150)	Agree	139	150	146
		Disagree	11	0	4

Table 4: Distribution of Awareness of Mothers About the Importance of Giving Vitamin A Supplements To Your Child Till 5 Years of Age

Sl. No	Locality	Response	Before Counselling	Immediately After Counselling	After 1 Month of Counselling
1	Rural (n=150)	Yes	116	150	145
		No	34	0	5
2	Urban (n=150)	Yes	134	150	149
		No	16	0	1

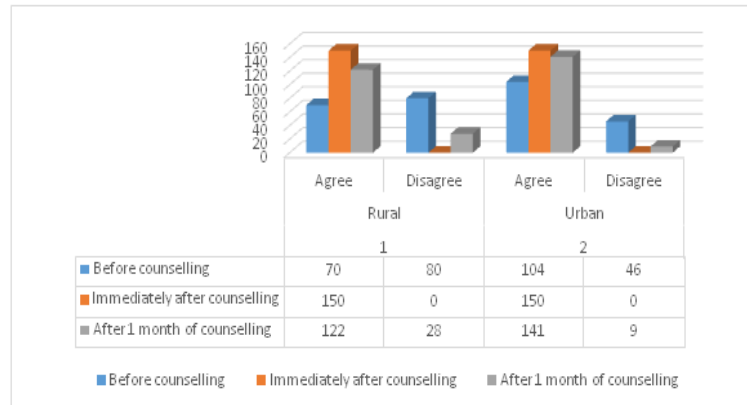


Figure 4: Distribution of Awareness of Mothers on the Fact That Physical Activity Is a Necessary Component to Good Health.

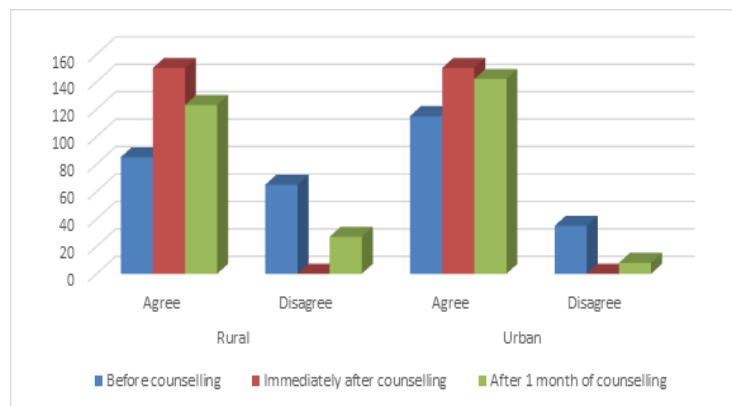


Figure 5: Distribution of Awareness of Mothers on the Fact That the Majority of Overweight is Due to Genetics.

Table 5: Distribution of Awareness of Mothers Regarding the Importance of Micronutrients Such As Vit A, Iron, Iodine

Sl. No	Locality	Response	Before Counselling	Immediately After Counselling	After 1 Month of Counselling
1	Rural (n=150)	Yes	123	150	146
		No	27	0	4
2	Urban (n=150)	Yes	142	150	150
		No	8	0	0

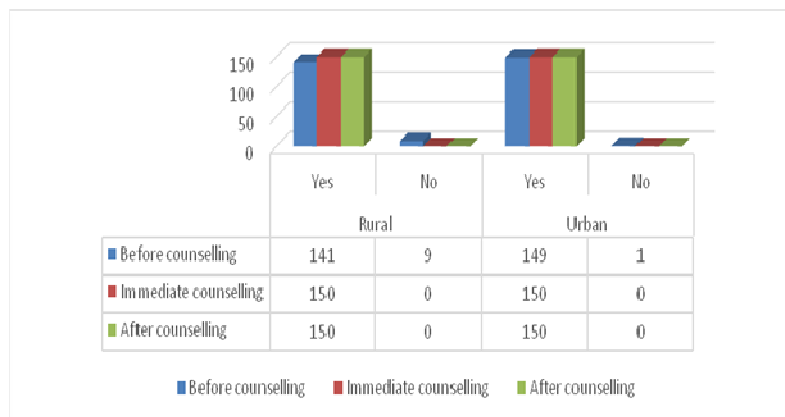


Figure 6: Distribution of Awareness of Mothers about Complementary Feeding.

DISCUSSIONS

Our study describes knowledge of mothers regarding basic nutritional requirements of their children in rural and urban areas. Knowledge and attitude of mothers towards the basic nutritional requirements of their children is essential for proper growth and development of children and thereby contributes positively for the economic growth as the future is in their hands.

As per previous studies prevalence of malnutrition was high in infants followed by toddlers and children. Thus, deficiency of major nutrients and micronutrients results in malnutrition in these age groups. Therefore assessment of mothers' knowledge about nutrition was important. In our study mothers' knowledge about micronutrients was good in both urban and rural settings. 82 % of rural mothers and 94 % of urban mothers knew the importance of micronutrients in weaning and they were well known about the addition of fruits, vegetables, nuts, grains etc. in complimentary feeding. Similarly a study conducted by Manohar B. et al. shows that the addition of fruits and vegetables for weaning provides large amount of micronutrients and it helps to overcome malnutrition and 89 % of mothers in their study knew that the addition of fruits and vegetables were beneficial to the child.

Maternal education has been suggested to be a powerful and significant determinant of child health status. Multipronged efforts have made significant inroad in uplifting child health in India. This is being reflected by improved parameters. Still there are areas which if attended to, can contribute to further improvement. It is pertinent to mention that community based public education; focussed more on mothers should be encouraged in order to improve health status

CONCLUSIONS

Mother's perception and attitude towards the basic healthcare needs of a child like immunization, feeding practices, hygiene and health seeking behaviour greatly influence the quality of life and future of the child. From our cross-sectional study we tried to assess the knowledge of mothers regarding nutritional requirement of their children in urban and rural areas. The presence of rural urban division was significant in our study. From this study we were able to find out that mothers in urban areas have better knowledge regarding nutritional requirements than rural areas. Also educated mothers from rural areas have better knowledge. We can't say that rural mothers are less educated, as the percentage of uneducated mothers was less.

Knowledge of mothers regarding the correct time of starting complementary feeding was found to be more satisfactory in urban populations than rural populations. The role of micronutrients in weaning is important and the majority of our urban respondents were well known about the importance of including micronutrients in complementary feeding and they prefer fruits, vegetables, nuts, grains etc in feeding as compared to the rural respondents. Proper counselling sessions regarding healthcare were given to every mother included at the beginning of study and proper follow up were done. With regards to counselling given, we were able to improve the knowledge of rural as well as urban mothers.

REFERENCES

1. Chetan S Patali; *A Descriptive Study to Assess the Knowledge of Mothers Regarding the Nutrition for Under Five Children in Selected Areas of Bagalkot with a View to Develop a Self Instructional Module*. *JOJ Nurse health care*, Vol.7, No.3(April 18 2018).
2. Meshram I. et al.; *Prevalence and Determinants of Undernutrition and its Trends among Pre-School Tribal Children of Maharashtra State India*. *Journal of Tropical Pediatrics*, Vol.58, No.2 (May 4, 2011).Page number: 125-131.
3. Manohar B, Reddy. S.N, Vyshnavi P., Sruthi P. S; *Assessment of Knowledge, Attitude and Practice of Mothers with Severe Acute Malnutrition Children Regarding Child Feeding*. *International Journal of Pharmaceutical and Clinical Research*, Vol.10, No.5 (May 25, 2018).Page number: 150-154.
4. Berihu A, Abera G.G., Berhe H., Kidanu K. ;*Mother's Knowledge on Nutritional Requirement of Infant and Young Child Feeding in Mekelle, Ethiopia, Cross Sectional Study*. *Global Journal of Medical Research Interdisciplinary*, Vol.13, No.6 (2013).Page number: 13-24.
5. Hussain et al.; *Nutrition Related Knowledge among Mother Having Primary School Going Children*. *European Academic Research*, Vol.2, No.6 (September 2016).Page number: 7565-7575.
6. Kamau T., Omwega A., Muita J.; *Child care practices and nutritional status of children aged 0-2 years in Thika, Kenya*. *East African Medical Journal*, Vol.79, No.10 (October 2002).Page number: 524-529.
7. Le Roux I. et al.; *Home visits by neighborhood Mentor Mothers provide timely recovery from childhood malnutrition in South Africa: results from a randomized controlled trial*. *Nutrition Journal*, (2010).
8. Singh H. et al.; *Sociodemographic correlates of nutritional status of under-five children*. *Muller Journal of Medical Sciences and Research*, Vol 7, No.1 (Jan - Jun 2016).Page number: 44-49.
9. Sharma S, Nagar. S ;*Impact of Educational Intervention on Knowledge of Mothers Regarding Child Care and Nutrition in Himachal Pradesh*, *J. Soc. Sci.*, Vol.12,No.2(2006).Page number: 139-142.