Knowledge, Attitude and Practice Towards Malnutrition among Mothers of Sunsari, Nepal

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DOI: 10.29322/IJSRP.10.01.2020.p9728
http://dx.doi.org/10.29322/IJSRP.10.01.2020.p9728

Abstract- Malnutrition, a global health problem, is a state of lacking proper nutrition. It contributes to childhood morbidity, mortality, impaired intellectual development, and increased risk of diseases in adulthood, with lack of knowledge and proper feeding practice being the leading cause. Therefore, the study aims to assess the knowledge, attitude and practice towards malnutrition among the mothers with under five children of Inaruwa, Sunsari, Nepal. A descriptive cross-sectional study was conducted among 389 mothers of under five children in Inaruwa. Systematic random sampling was used to reach the sample. Data was collected using structured questionnaire through face to face interview. Descriptive and bivariate analysis was done. About 38% of respondents were of age group 24-26 years. Mothers with adequate knowledge on malnutrition were 45.2%. Majority of the mothers (87.4%) had good attitude towards the malnutrition. Most of the mothers (78.7%) knew how to prepare the sarbottam pitho. Among the mothers, 76.6% of them started feeding complimentary food after 6 months' age of baby. The association between educational level and knowledge was found to be statistically significant. Although less than half of mothers had adequate knowledge on malnutrition, they had good attitude. It was also observed that the education of respondent has effect on the knowledge of malnutrition. Hence, it shifts the focus on the health education program related to malnutrition targeting the mothers having under five children.

Index Terms- Knowledge, Attitude, Malnutrition, Practice, Under five

I. INTRODUCTION

Malnutrition can be defined as a lack of proper nutrition. The nutritional status of a child, as with any individual, is assessed through dietary, anthropometric, biochemical and physical observation for signs of malnutrition. These methods of measurement are usually done in combination for more accurate results. When there is a deficiency in the amount and nutritional value of the food consumed, the growth pattern of a child becomes disrupted owing to nutrient deficiencies. [1]

The nutritional status of a child is usually described in terms of anthropometry, i.e. body measurement, such as weight, in relation to age or height, which is reflective of the degree of underweight or wasting of that child. Food is the prime necessity of life; life cannot be sustained without an adequate nourishment child needs adequate food for growth and development. According to the World Health Organization (WHO), breast milk has the complete nutritional requirements that a baby needs for healthy growth and development in the first six months of life. According to the United Nations Child Emergency Fund (UNICEF), children who are breastfed in the first six months of life have a six times greater chance of survival as opposed to non-breastfed children. Children are malnourished if their diet does not provide adequate nutrients for growth and maintenance or they are unable to fully utilize the food they eat due to illness/ under nutrition. [2]

Malnutrition is one of the major and basic health concerns especially in developing countries. Malnutrition is the major factor which is related to the economic, educational status of the people. Although malnutrition is prevalent in developing countries, it is rarely cited as being among the leading causes of death. This is due in part to the conventional way that cause of death data are reported and analyzed. In many countries, mortality statistics are compiled from records in which a single proximate cause of death has been reported. Childhood under nutrition is a major global health problem, contributing to childhood morbidity, mortality, impaired intellectual development, suboptimal adult work capacity, and increased risk of diseases in adulthood. [3]

Malnutrition can lead to childhood mortality due to diarrhea, pneumonia, severe infections, malaria and measles. According to the WHO (2013), more than 33% of childhood deaths worldwide resulted from malnutrition. Acute malnutrition in childhood is as much a medical problem as it is a social problem because it directly affects a broad range of issues: a country's mortality rates, educational prospects, productive employment and economic capacity. Malnutrition also happens to be one of the principal mechanisms behind the transmission of poverty and inequality from one generation to the next. [3][7]

According to the United Nations Children's Fund (UNICEF), the prevalence of stunting in children under five in Guatemala rivals

that of countries like Afghanistan, Bangladesh, Niger and India. At nearly 50%, this Central American country has a higher prevalence of stunting than the average prevalence in either Africa or Asia. [11] [12]

Acute malnutrition in childhood is as much a medical problem as it is a social problem because it directly affects a broad range of issues: a country's mortality rates, educational prospects, productive employment and economic capacity. Malnutrition also happens to be one of the principal mechanisms behind the transmission of poverty and inequality from one generation to the next. [4][8]

The global burden of disease for nutrition-related deaths is high, in part, because of food insecurity, sanitation conditions and a lack of knowledge and experience in implementing appropriate infant and young child feeding practices (IYCF). Malnutrition has three categories, acute, chronic and over-nutrition. According to The Lancet Maternal and Child Nutrition Series (MCNS), three times as many children suffer from chronic malnutrition as acute malnutrition in LMICs. Acute malnutrition (AM) is caused by a variety of factors like food insecurity, an unsanitary environment and inadequate dietary intake. The inappropriate height to weight relationship in AM can lead to death if untreated. Chronic malnutrition (CM) is generally a deficiency of energy, good quality protein and micronutrients (iron, vitamin A, zinc, etc.) that is exacerbated by recurrent infection and poor maternal nutrition before and throughout pregnancy. [5][10]

The nutritional status of children is important as it determines their health, physical growth and development, academic performance and progress in life. Under nutrition and poor health from preventable causes disproportionately affect the well-being of millions of people in the developing world. [6][9]

Malnutrition is the major nutritional problem in context of developing country like Nepal. Due to lack of knowledge and proper practice related to the nutritional requirement, the prevalence of malnutrition among under five children is high in our country. As there has not been any research conducted in Inaruwa, Sunsari, so this study will put a light on knowledge, attitude and practice of those mothers who have under five children, which might be helpful to launch the intervention. Also the association of socio demographic variables with knowledge and attitude will help to know whether or not socio demographic variables influence the knowledge and attitude.

Hence, the main objective of the study is to study knowledge, attitude and practice towards malnutrition among mothers of Sunsari, Nepal

II. METHOD OF STUDY

A descriptive cross sectional study design was used to conduct the study in Inaruwa Municipality of Sunsari, Nepal for 6 months from June- November, 2017.

Sampling Technique

A Simple random sampling technique was used to select the mothers whose children was below 5 years.

Sample Size

Sample size of 389 was determined by using the statistical formula [n= $(N/1+N) * e^2$]. The sample size was taken according to the CBS data i.e. total female population of Inaruwa, Sunsari where, N=14286, where acceptable error, e=0.05.

Data Collection Tools and Technique

Structured questionnaire was used to collect the quantitative data. Questionnaire was divided into questions for socio demographic variables, knowledge, attitude and practice. Pre testing was done in 10% of the sample i.e. 38 and the samples included in the pre testing was not used in the main study. Those who refused to give consent, those who have neonates, those who were not available at the time of the study, those mothers who have children aged more than 5 years, and only Those mothers who have under 5years children were included in the study.

Data Analysis

Data entry and analysis was carried out using Statistical Package for Social Sciences version 2.0. Chi square test was used to examine the associations between two variables and p value was significant at <0.05.

Ethical consideration:

Ethical consideration was obtained from the Institutional Review Board of Nobel College. Also, informed written consent was taken from the mothers before conducting the study. (Ref No: NIRC 012/2017)

III. RESULTS

TABLE 1: SOCIO-DEMOGRAPHIC VARIABLES

Variable/characteristic	Frequency	Percentage
Age of the respondent		
17-20years	34	8.7%
21-23years	78	20.1%
24-26years	148	38%
27-30years	94	24.2%
30+years	35	9%
Religion		
Hindu	360	92.5%
Muslim	29	7.5%
Ethnicity		
Brahmin	120	30.8%
Chettri	68	17.5%
Janajati	112	31.4%
Dalit	13	3.3%
Others	66	17%
Educational level		
Illiterate	31	8%
Primary	102	26.2%
Secondary	134	34.4%
Higher	122	31.4%
Occupation		
Service	147	37.8%
Agriculture	81	20.8%
Business	81	20.8%
Others	80	20.6%
Family type		
Nuclear	177	45.5%
Joint	212	54.5%

The above table shows, the maximum age of the respondent was 24-26, (38%) and mean age were 4.05. Similarly, minimum age of the respondent was 17-20, 8.7%. Maximum of the respondent, 92.5% were Hindu and 7.5% were Muslim. Majority, 31.4% were Janajati, and least were dalit 3.3%. Maximum of the respondent, 34.4% completed secondary level education and 8% were illiterate. The occupation of the majority of the respondent, 37.8% was service whereas agriculture and business was equal to 20.8% and minimum respondent 20.6% were foreign employers. 47% had 20-40 thousand monthly income and least had more than 1lakh monthly income i.e. 2.8%. 54.5% of the respondent were from nuclear family and 54.5% were from joint family.

From the analysis dome in Table 2, it was clear that 54.8% of the respondent had inadequate knowledge towards malnutrition and remaining 45.2% of the respondent had adequate knowledge towards malnutrition.

TABLE 2: KNOWLEDGE TOWARDS MALNUTRITION

Knowledge Score	Frequency(n=389)	Percentage
inadequate knowledge	213	54.8%
adequate knowledge	176	45.2%

This study finding also showed that 71.2% of the respondent knew about malnutrition and remaining 28.8% of the respondent were unaware about malnutrition. Majority of the respondent, 40.9% fed up to 5times a day for their children, and very least 5.9% of the respondent fed three times/day. 95.4% of the respondent preferred homemade foods for their children and 4.6% of the respondent preferred readymade foods for their children and 83.3% of the respondents knew about exclusive breastfeeding. 44% of the respondent fed their baby aged below 6month up to 10-12times per day where as 5.9% of the respondent breastfed less than 5times per day. Source of information for majority, 46% was health professionals, 14.1% from mass media and remaining from family members and other source. When respondents were asked about the age gap between two children, majority of them, 65.6% said 3-5 years followed by 26.7% said 5-7 years and very least 5.4% and 2.3% said 1-3 years and more than 7 years respectively. When respondents were asked about their age during first pregnancy 33.4% said 20-23 years, 45% said 17-20 years, 12.3% said more than 23 years and 9.3 % said below the age of 17 years.

TABLE 3: ATTITUDE TOWARDS MALNUTRITION

Likert Scale	Frequency(n=389)	Percentage
Good attitude	340	87.4%
Bad attitude	49	12.6%

Likert scale was used to determine attitude which showed that 87.4% of the respondent had good attitude while least 12.6% had bad attitude towards malnutrition.

The study also suggests, majority of the respondent, 60.9% strongly agreed with statement, “nutrition education for mother is essential to achieve balance diet eating practice for their children” while 0.5% of the respondent disagreed and 38.6% agreed. On the statement, “thick food cause constipation” 70.5% of the respondent agreed, while 0.3% strongly disagreed and 1.8% were neutral. Most 55.5% of the respondent disagreed on the statement, “feeding should be stopped during illness” while 4.4% were neutral, 4.6% strongly disagreed, 5.1% strongly agreed and 30.3% agreed. More than half i.e. 58.6% agreed on the statement, “malnutrition is caused by witchcraft and evil eyes” 1.5% were neutral and 3.1% strongly agreed. Majority 60.2% agreed on the statement, “Nutritious food are expensive” and the least 2.1% strongly disagreed. On the statement, “it is important to give baby some water, honey and other solid foods during the first six months after birth” 46% of the respondent agreed, least 1.8% were neutral and 38.6% disagreed. Majority of the respondent, 65% agreed on the statement “Poor breastfeeding practice makes the child prone to malnutrition” while 0.5% strongly disagreed and 1.3% were neutral. More than two-third of the respondent i.e. 73.8% strongly agreed on the statement, “Colostrum milk is very nutritious to the baby” while 1.3% disagreed and 2.6% were neutral. On the statement, “breast milk protects your child from illnesses up to 6 months” majority 60.9% agreed, 2.8% disagreed and least i.e. 1% were neutral.

TABLE 4: PRACTICE TOWARDS MALNUTRITION

Questions	Frequency	Percentage
Know the preparation of Sarbottam Pitho		
Yes	306	78.7%
No	83	21.3%
Types of milk preferred for the children		
powder milk	9	2.3%
fresh milk	373	95.9%
tetra pack milk	4	1%
others	3	0.8%
Way children were fed		
Consistency	270	69.4%
Variety	51	13.1%
quantity frequency	67	17.2%
other method	1	0.3%
Age baby was started to feed complimentary food		
earlier than 6month	70	18%
after 6month of age	298	76.6%
after 1year	21	5.4%
boil drinking water		
Always	115	29.6%
sometimes	88	22.6%
Never	183	47%
Others	3	0.8%
feed the child		
with bottle	5	1.3%
with spoon	200	51.4%
with hand	184	47.3%
Who takes cares of your child while you are working		
Family	327	84.1%
Friends/neighbor	30	7.7%
Helper	7	1.8%
Others	25	6.4%

The above table suggests the findings of practice towards malnutrition.

TABLE 5: KNOWLEDGE AND ATTITUDE

Knowledge	Attitude		Total	P-value
	Good	Bad attitude		

	attitude			
Adequate Knowledge	188 (55.3%)	152 (44.7%)	340	
Inadequate Knowledge	25 (51%)	24 (49%)	49	0.574
Total	213	176	389	

In the above table 5, it was found that among total respondents who had good attitude, 55.3% had adequate knowledge whereas 51% had inadequate knowledge. Among mothers who had bad attitude, 49% had inadequate knowledge while 44.7% had adequate knowledge. The association between knowledge and attitude was found to be statistically insignificant (P value= 0.574)

TABLE 6: EDUCATIONAL LEVEL AND KNOWLEDGE

Educational Level	Knowledge		Total	P-value
	Adequate Knowledge	Inadequate Knowledge		
Literate	173 (48.3%)	185 (51.7%)	358	
Illiterate	3 (9.7%)	28 (90.3%)	31	0.001
Total	176	213	389	

In the above table 6, it was found that among total respondents who had adequate knowledge, 48.3% are literate whereas 9.7% are illiterate. Among mothers who had inadequate knowledge, 51.7% are literate while 90.3% are illiterate. The association between educational level and knowledge was found to be statistically significant. (P value= 0.001)

TABLE 7: RELIGION AND ATTITUDE

Religion	Attitude		Total	P-value
	Positive attitude	Negative attitude		
Hindu	317 (88.1%)	43 (11.9%)	360	
Muslim	23 (79.3%)	6 (20.7%)	29	0.172
Total	340	49	389	

In the above table 7, it was found that among total respondent, who had positive attitude, 88.1% are hindu whereas 79.3% are muslim. Among mothers who had negative attitude, 11.9% are hindu whereas 20.7% are muslim. The association between educational level and knowledge was found to be statistically insignificant. (P value= 0.172)

IV. DISCUSSION

In the present study, around one-third i.e. 38% of the respondents were from age 24-26 years and least were of age 30 above which is a bit lower than the study conducted by Vinod in village of Belgaum district as 58% of the respondent were of age above 28years and least were of age below 18 years old. [2] Moreover, 92.5% were Hindu in this study and remaining 7.5% were Muslim which is almost reverse case to the study conducted by Vinod as 70% were Jain, 20%, Hindu, 8% Muslim and remaining were Christian. [2]

Here 34% of the respondents had educational status as secondary and least were illiterate which contradict the study conducted by Vinod, where 14% were Illiterate, 70% Primary, 12% Secondary and Degree and above 4% where illiterate. [2]

The economic status of the family was mostly between 20000-40000 and above 1 lakh were least 2.8% which significantly differ to the study conducted by Vinod where majority of family income were 3,000 and below were 54% and 12% have 12,000 and above were minimum. [2] Regarding illiteracy, 8% of the respondent were illiterate but the study which was conducted by Kanchan there 20.3% mothers were illiterate, it was clear that there is difference between the studies. [14]

In the present study, there was no significant association between knowledge and demographic variables which was similar to the study which was conducted by Saurav and Sandhita in Nilratan Sircar Hospital, Kolkata, India. [13] However, the present study suggests significant association between education level and knowledge of mothers towards malnutrition.

In the study of Kanchan, the age gap between two children were less than two years in 27.3% mothers and in the present study, the age gap between two children less than three years were 5.4%, where maximum respondent said that appropriate age gap between two children were 3-5years. [14]

Likewise, knowledge to increase breastfed if the infant was ill, was present in most of the respondents in this study, which inline the findings from the study conducted by Kanchan where, 9% of mothers had the correct knowledge to increase breast feeding if the infant was ill and 20% felt breast feeding should be decreased during illness of child. [14]

The mothers in our study got health information accordingly that, 46% from health professionals, 14.1% from mass media and remaining from family members and other source which were nearly gone similar to the study which was conducted by M. Kavitha that 53% of mothers got information from health professional and lowest percentage 6% of mothers got information from mass media. [15]

More than half i.e. 54.8% of the respondent in this study had inadequate knowledge towards malnutrition and remaining 45.2% of the respondent had adequate knowledge which was a bit higher the study conducted by M. Kavitha where 46.6% of mothers having average knowledge towards malnutrition and 36.6% of mothers having poor knowledge towards malnutrition, only 16.6% of mothers having good knowledge towards malnutrition. [15]

V. CONCLUSION

From the study we can conclude there were no such difference, both the majority were having inadequate and adequate knowledge towards malnutrition were nearly equal. Although

most of the respondent were having inadequate knowledge but majority had good attitude towards malnutrition by mothers. From the study it was found that majority of the respondent were good in practice of complementary food to their baby after the age of 6month. The association between knowledge and attitude towards malnutrition were statistically insignificant.

VI. REFERENCES

[1] D. OOSTHUIZEN, "Impact of a nutrition education programme on nutrition knowledge and," digiresearch, boipatong, 2016.

[2] V. V. Bagilkar and B. V. Savadatti, "a discriptive study on malnutrition," *researchgate*, pp. 72-80, 2015.

[3] Z. T. a. A. Shele, "Knowledge, attitude and practice towards malnutrition among health care workers in Hawassa City, Southern Ethiopia," *Global Academic Research Journals*, pp. 1(1):1-8, 2015 .

[4] W. w. UNICEF, "Monitoring the Situation of Children and Women," *joint child malnutrition*, may 2017.

[5] y. t. hammond, "Evaluating the Knowledge, Attitude and Practice of Rural Guatemalan Healthcare Providers Regarding," *emory*, pp. 1-15, 2014.

[6] g. p. dhungana, "NUTRITIONAL STATUS OF UNDER 5 CHILDREN AND ASSOCIATED FACTORS OF KUNCHHA VILLAGE DEVELOPMENT COMMITTEE," *Journal of Chitwan Medical College*, pp. 38-39, 2013.

[7] ghimire, jeeban, "Malnutrition: Still Challenging In Nepal," *Journal of Nutritional Health & Food Engineering*, p. volume 4 issue 5, 2016.

[8] C. B. o. S. a. U. Nepal, Nepal Multiple Indicator Cluster Survey, kathmandu, 2014.

[9] M. o. Health, "Nepal Demographic and Health Survey," *key indicator report*, 2016.

[10] m.-s. n. plan, "National Planning Commission," *For Accelerating the Reduction of Maternal and Child*, 2012.

[11] M. L. Ramagoma, "KNOWLEDGE REGARDING SEVERE ACUTE MALNUTRITION AND ITS," Pietermaritzburg, 2016.

[12] j. acharya, e. v. teijlingen, j. murphy and m. hind, "Study on Nutritional Problems in Preschool Aged Children of Kaski District of Nepal," *Malnutrition; Knowledge, attitudes and beliefs about nutritious food*, 04 march 2015.

[13] s. chatterjee and s. saha, "A Study On Knowledge And Practice Of Mothers Regarding Infant Feeding And Nutritional Status Of Under-Five Children Attending Immunisation Clinic Of A Medical College," *the internet journal of nutrtion and wellness*, p. 10, 2011.

[14] K. Mukherjee, "MALNUTRITION IN UNDER FIVE CHILDREN IN TURBHE STORES URBAN SLUMS IN NAVI MUMBAI," pp. 1128-1129, 2014.

[15] M.Kavitha, "Assess the Knowledge on Malnutrition among Mothers in Vinayaka Mission Hospital, Salem," *IOSR*, pp. 29-31, 2015.

ACKNOWLEDGMENT

We all the authors would like to express our sincere gratitude towards all the mothers included in the study and all the helping hands from Nobel College.

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