Orginal Article

Knowledge Regarding Importance of Nutrition among Mothers of Under-Five Children in a Community of Pokhara

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Abstract

Introduction: Nutrition plays a great role in the proper growth and development of child. The nutritional well-being of a child is closely linked to the mother's understanding of healthy eating practices. The main objective of the study is to assess the nutritional knowledge of mother of under-five year children.

Methods: A cross-sectional study was conducted in 114 mothers using purposive sampling technique to choose sample and simple random sampling to choose ward. The data was collected in community setting by interview method from 26th June to 20th July 2023. After getting approval from ward office and Pokhara University Institutional review committee ,data was collected using a self-administered questionnaire. Data was entered into EpiData version 4.6 and subsequently exported to SPSS version 16 for analysis using both descriptive and inferential statistics.

Results: Out of 114 samples, the data showed that the more than half (51%) of the participants were of the mean age ≤ 26. More than (58%) of the mothers had satisfactory knowledge, only 24% had good knowledge whereas (18%) had poor knowledge. A significant association was found between levels of knowledge with religion (p=0.049), with ethnicity (p=0.002) and occupation of mother (p=0.045).

Conclusion: The study concluded that mother education was independently associated with the children nutritional status to ensure proper physical, mental and psychological growth of our future generation, it is essential to improve mother's education on child nutrition by providing health awareness to the mother, thereby preventing nutritional deficiency in under five children.

Keyword: Knowledge, Nutrition, Mothers of under five years' children

Introduction

According to National Demographic and Health Survey 2022 in Nepal, the nutritional status of children under age 5, according to the three anthropometric indices: 25% of children under age 5 are stunted, 8% are wasted, and 19% are underweight. One percent of children under 5 are overweight.[1] Undernutrition is responsible for approximately 45% of deaths among infants under the age of five. These are most common in low and middle-income nations. At the same time, rates of childhood overweight and obesity are rising in these nations. The global burden of malnutrition has serious and long-term effects in the developmental, socio-economic,

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and medical consequences for people in their society.[2] Mother's nutritional knowledge is directly related to the child growth and development.[3] So, the main objective of the study is to assess the nutritional knowledge of mother of under five years children to know the knowledge regarding nutrition among mothers.

Methods

A cross-sectional study design was carried out to assess the knowledge regarding importance of nutrition among mothers of under-five year children in community of Pokhara ward number 17 of Kaski district ,Gandaki province, Nepal in 3155 population. The sample size for this study was 114. The sample was chosen using a purposive sampling method. Mothers of under-five year children available and willing to take part in the study at the moment of data collection were included in the study. Data collection technique was face to face interviewed using structured questionnaire as a data collection tool, The questionnaire was divided into 2 parts: Part I: socio demographic and background information and Part II: questions related to assess the knowledge regarding importance of nutrition. This part includes the questions that assessed the knowledge regarding importance of nutrition among mothers of under five years children. Each correct answer was given a score 1, and wrong answer 0. By developing the instruments on the basis of literature review, opinion of subject expert's, research advisors and biostatistics teacher statistician's validity of the instrument was established. Instrument was given to experts and suggestion given by them was subsequently incorporated in the study. Reliability of the instrument for knowledge was calculated by using Karl Pearson's correlation coefficient test by adopting Split Half technique which was found to be 0.75. Pre-testing of the instrument was done in 10% of the total sample size i.e.11 in a community, ward no. 13, Miyapatan, Pokhara. After pre-test, according to the need of the study, required modification was done.

Data collection was done between 26th June to 20th July, 2023 after receiving approval from the Institutional Review Committee (IRC) of Pokhara University on 25th June 2023 (Ref no 161-079/80). The study's purpose was clearly informed to participants, and written informed consent was obtained from all the participants. Throughout the study, confidentiality and anonymity were maintained by using code numbers in place of participant names.

The researcher used Bloom's cut-off point to assess the level of knowledge to analyse the data. Poor knowledge: <60%, Satisfactory: 60-79%, Good knowledge: 80-100%. Collected data was processed, coded and substantially entered into spss version 16. Data was analyzed by using descriptive statistics and inferential statistical test to find the association between dependent and independent variable.

Results

Table 1 illustrates that the mean age of participants was 26.78 ± 5.48. More than half (51.8%) of the. participants were of mean aged 26≤ years. The minimum age of the respondent was 17 and maximum age was 45. Regarding religion, majority (81.6%) of the participants follow Hinduism. Almost half of the participants (50.0%) were from upper caste group. All the participants were from metropolitan city. Around 60.5 percent were from the nuclear family. Majority (94.7%) were literate and only 5.3percent mothers were found illiterate. Similarly, more than half (59.6%) of the participants were homemaker whereas only (40.4%) were employed. The minimum income was Rs.5000 and maximum income was Rs. 300000.Most of the participants (90.4%) had only one under five year children.

Table1: Socio-Demographic Variables of the Participants n=114

Variables	Frequency	Percentage
Age in years		
26>	55	48.2
26<		
Mean ± S.D=26.78 ± 5.48	59	51.8
Religion		
Hindu	93	81.6
Buddhist	11	9.6
Christian	7	6.1
Muslim	3	2.6
Ethnicity		
Brahmin/chhetri	57	50.0
Dalits	22	19.3
Janajati	30	26.3
Madhesi	2	1.8
Muslim	3	2.6
Residence		
Metropolitan city	114	100.0
		60.5
Type of family		
Nuclear	69	
Joint	42	36.8
Extended	3	2.6
Educational status of the mother		
No formal education	6	5.3
Primary education	16	14
High school	43	37.7
Bachelor	26	22.8
Master	23	20.2
Mother's occupation		
Homemaker	68	59.6
Employed	46	40.4
Family income(Rs/month)		
<5000	3	2.6
5000-20000	33	28.9
21000-35000	39	34.2
>35000	38	33.3
No of under five children		
1	103	90.4
2	11	9.6

Table 2: Background Information of Participants

n =114

Variables	Frequency	Percentage
Heard about nutrition		
Yes	114	100.0
Sources of information**		
Family/friends	33	29
School/college	20	17.5
Internet	25	21.9
Health personnel	36	31.6

**multiple response answer

Table 2 shows that almost all of the participants (100.0%) of the participants heard about nutrition. Around (29%) of the participants have heard nutrition from the internet.

Table 3: Knowledge Regarding Importance of Nutrition among Mothers of Under Five Children

n=114

Variables	Frequency	Percentage
Duration of exclusive breastfeeding 6months*	77	67.5
Initiation time of complementary feeding 6 months*	79	79
Heard about sarbottam pitho		
Yes	104	91.2
Know about preparation of sarbottam pitho		
Yes	78	78
Ratio of whole grain cereals and pulses		
2:1	42	36.8
Types of complementary food to children**		
Sarbottam pitho	68	59.6
Jaulo	83	72.8
Litho	77	67.5

Rice dal	93	81.6
Vegetables	77	67.5
Fruits	87	76.3
No. of major meal/day		
4 feeding*	32	28.1
Food should be prepared		
Wash hands before and after preparing foods	104	91.2
Cover food	99	86.8
Priority to fresh foods	100	87.7
Use clean cups and bowls	99	86.8
Cook food thoroughly	95	83.3
Remove skin, bone and fat from the meat and fi sh	83	72.8
No of fruits and vegetables servings/day		
3 servings of vegetables and 2 servings of fruits*	44	38.6

*correct answer **multiple response

Table 3 shows that most of the participants (67.5%) had fed breast milk for 6 months. Similarly, more than half (69.3%) of the participants had started complementary feeding at completion of 6 months of age. Majority (91.2%) of the participants heard about sarbottam pitho and more than half of the participants knew about preparation of sarbottam pitho.

Only (36.8%) of the participants answered correctly about the ratio of whole grain cereals and pulses. Majority of the participants (81.6%) of the mothers knew that rice dal is the additional food that need to feed child whereas more than half of the participants (59.6%) mother knew sarbottam pitho is the additional food that need to feed. Similarly, nearly half (51.8%) of the participants said 4 times feeding is needed for child. Majority (91.2%) of the participants preferred to wash hands before and after preparing food. Likewise, more than one third of the participants (38.6%) answered correctly children should give 3 servings of vegetables and 2 serving of fruits.

Table 4: Knowledge regarding Importance of Nutrition among mothers of under five children
n=114

Variables	Frequency	Percentage
Heard about child malnutrition		
Yes	110	96.5
No	4	3.5
Inadequate nutrition in children leads to		
Child suffer from child malnutrition*	104	91.2
If yes, child malnutrition is**		
Child having poor body nutritional requirement	68	59.6
Children who are always crying	60	52.6
Marasmus and kwashiorkor	92	80.7
Causes**		
Not regularly breastfed for 6 months	65	57
Repeated sickness	57	50
Inadequate balanced diet	78	68
Overeating of unhealthy food	61	53.5
Sign of malnutrition**		
Child fails to grow properly	99	86.8
Wasting of muscle	82	71.9
Failure to gain adequate weight	103	90.4
Symptoms of malnutrition**		
Unusual irritability	57	50
Lack of appetite	68	59.6
Pale, thick and dry skin	66	57.9
Sunken eye	60	52.6
Prevention of malnutrition**		
Adequate intake of balanced diet	102	89.5
Weight periodically	66	57.9
Exclusive breastfeeding for 6 months	74	64.9
Regular hospital check-up	62	54.4

*correct answer **multiple response

Table 4 depicts that almost all (96.5%) of the participants heard about child malnutrition. Similarly, almost all (91.2%) of the participants answered correctly that inadequate nutrition in children leads to malnutrition. Similarly almost all (96.5%) of the participants heard about child malnutrition. Majority (80.7%) of the participants said child malnutrition is related to marasmus and kwashiorkor. Likewise, more than half proportion (68.4%) said its cause is due to lack of balanced diet and majority (90.4%) of the respondent said failure to gain weight is the main symptoms of child malnutrition whereas more than half (59.6%) of the participants stated lack of appetite is its main symptoms and majority (89.5%) of the participants said child malnutrition can be prevented by intake of balanced diet.

Table 5: Knowledge Regarding Importance of Nutrition among mothers of under five children

n=114

Variables	Frequency	Percentage
Should feed vitamin A capsule		
Yes	101	88.6
Vitamin A capsule is necessary for**		
Boost immunity	87	76.3
Prevent night blindness	60	52.6
Essential for growth and development	78	68.4
Should feed deworming tablet		
Yes	95	83.3
Deworming tablet is necessary for**		
Deworming	80	70.2
Prevent anaemia and improve nutritional status	84	73.4
Enhances body's overall health	82	71.9

**Multiple response question

Table 5 depicts that majority (88.6%) of the participants had fed vitamin A capsule to their child whereas almost three fourth (76.3%) of the participants stated vitamin A is necessary to boost immunity. Likewise, majority (83.3%) of the participants had fed deworming tablet to their child and nearly three fourth (73.4%) of the participants stated that deworming tablet is necessary to prevent anaemia and to improve nutritional status.

Table 6: Level of Knowledge Regarding Importance of Nutrition among Mothers of Under Five Children

n =114

Level of knowledge	Frequency	Percentage
Good knowledge (≥80%)	28	24
Satisfactory knowledge (60 to<80%)	66	58
Poor knowledge (<60%)	20	18
Mean ± SD=45.95±8.02, Max=62, Min=28		

Table 6 shows that more than half (58%) of the participants had satisfactory knowledge, similarly (24%) of the participants had good knowledge whereas (18%) had poor knowledge regarding importance of nutrition.

Table 7: Association of Level of Knowledge on Importance of Nutrition and Selected Variables

n =114

Variables	Level of knowledge			Chi-square	df	p-value
	Good	Satisfactory	Poor			
Age in years Beside childbirth age Childbirth age	5(35.7) 23(23.0)	8(57.1) 58(58.0)	1(7.1) 19(19.0)	1.794	2	0.376
Religion Hindu Others	26(28.0) 2(9.5)	54(58.1) 12(57.1)	13(14.0) 7(33.3)	6.031	2	0.049*
Ethnicity Upper caste Others	22(38.6) 6(10.5)	27(47.4) 39(68.4)	8(14.0) 12(21.1)	12.125	2	0.002*
Type of family Nuclear Joint	15(21.7) 13(28.9)	40(58.0) 26(57.8)	14(20.3) 6(13.3)	1.318	2	0.512
Mother's occupation Homemaker Employed	21 7	33 6	14 33	6.185	2	0.045*

Educational status of mother Literate Illiterate	 27(25.00) 1(16.7)	 62(57.4) 4(66.7)	 19(17.6) 1(16.7)	 0.248	 2	 0.877
Family income <5000 5000-20,000 21000-35000 >35000	 1(33.3) 5(15.2) 10(25.6) 12(31.6)	 2(66.7) 18(54.5) 24(61.5) 21(55.3)	 0(0.00) 10(30.3) 5(12.8) 5(13.2)	 6.741	 6	 0.323

*: Significant (p<0.05)

Table 7 shows that only demographic variables religion, ethnicity, mother's occupation shows association with the knowledge level on importance of nutrition which means the demographic factors play a significant role in having knowledge related to importance of nutrition.

Discussion

The present study demonstrated that, more than half of the participants had average level of knowledge and only one fifth have good knowledge and less than one fifth have poor level of knowledge which corresponds with the study conducted at four slums of Khulna district of Bangladesh and India that represents similar pattern of level of knowledge on nutrition related issues.[4,5] Similar findings was also found in the study conducted in Ghana among 226 mothers.[6] But the study contradicts to the study conducted in Jammu Kasmir where around less than half have had a good knowledge in prevention of under-five malnutrition.[7] Not only this, the study was opposed by the study conducted in Indonesia where more than half (60%) of the participants had poor knowledge regarding nutrition.[8] It might be because of different in child care literacy level in different country.

The present study illustrated that majority (90.4%) of the participants stated failure to gain weight is the major sign of malnutrition on children which is similar to finding of the study done in India where three fourth of the participants stated less weight as a clinical sign of malnutrition.[9] Majority of the participants did not know about the risk factors of malnutrition which is also similar to our study findings.[10] This findings indicates the malnutrition in under five year children is one of the serious public health concern.

The findings of the present study show that majority of the participants wash hands before and after preparation of foods which is consistent with the study done in Punjab.[11] but in contrast with the another study done in Ethiopia found that the association of stunting , wasting and underweight irregular handwashing with soap and water in under five children.[12] This finding indicates that irregularities on using soap and water during handwashing increased risk factor for the malnutrition in children.

Regarding feeding practices, the current study revealed that more than half of the participants said duration of exclusive breastfeeding is 6 months. This finding is supported by the same study done in Pakistan.[13] Likewise more than half of the participants initiate complementary foods at 6 months which is similar to the same study done in Punjab where majority of the participants stated they initiate complementary feeding at 6 months.[14] This suggest that majority of the participants know the exclusive breastfeeding and complementary feeding but in Delema with the exact time (after completion of 6 month) to start complementary feeding, this might be because of religious and cultural practice of different community.

There was statistically significant association between level of knowledge of participants with religion (p=0.049), ethnicity (p=0.002) and mother's occupation (p=0.045). There was no statistically significant association between level of knowledge and independents variables such as age, type of family, educational status, family income and no. of under five children.

our findings was similar with the study done in Malaysia which revealed that there is a significant relationship between the knowledge of mothers regarding under five nutrition and mothers occupation at (p=0.001).

Likewise our findings contrast with the study done in Punjab which revealed that there is a significant relationship between the level of knowledge regarding nutrition and mother's age (p=0.36).[14,18]

Conclusion

The study concluded that mother education was independently associated with the children nutritional status and to all the source of nutritional food requirement carbohydrates, proteins, vitamins, including hygiene, sanitation, vitamin and mineral supplementation including immunization to ensure proper physical, mental and psychological growth of our future generation. It is essential to improve mother's education on child nutrition at community level by providing health awareness to the mother, thereby preventing nutritional deficiency in under five children.

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