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**Dr. Arti Yadav**

Department of Home Science,  
Arya Kanya Mahavidhyala,  
Bundelkhand University, Jhansi,  
Uttar Pradesh, India

**Deepti Bhadoria**

Professor, Department of Home  
Science, Arya Kanya  
Mahavidhyala, Bundelkhand  
University, Jhansi, Uttar  
Pradesh, India

## Association between knowledge, attitude and practices of mothers regarding nutrition and nutritional status of their pre-school children

**Dr. Arti Yadav and Deepti Bhadoria**

### Abstract

Nutrition plays a vital role in growth and development of preschool children. Inadequate nutrition may lead to malnutrition, growth retardation; reduce work capacity and poor mental and social development. The Better knowledge, positive attitude and good practices of mothers regarding nutrition plays an important role in achieving the good health of children, as the mother is the main provider of the primary care of her child therefore mother's nutritional knowledge and attitude have great influence on their children's nutritional status. However, when much attention is not given by parents or mother towards their nutritional needs. Therefore, nutritional disorders occur frequently during this period.

**Keywords:** Nutrition, positive attitude, good health

### Introduction

There is very closely relationship between nutrition and the level of nutritional status. Nutrition is considered as one of the major factors affecting the human health as well as Nutritional status is closely related to the wellness, where food gives us energy and the nutrients to live with. There is no doubt that balanced diet or good food that what we eat is a major key to achieving and maintaining optimal body function, getting good nutritional status and preventing against future's physical illnesses. Thus we can say that health of a person indicates his nutritional status. In India, nutritional status of pre-school children varies from region to region and society to society due to difference in dietary habits, social, cultural attribute, irrational practices and economic status etc.

Assessment of nutritional status refers to the state of health an individual. Nutritional status is the condition of the body which is influenced by the diet or dietary habits. The main purpose of the nutritional assessment, to identify individuals or population groups who are malnourished and to develop health care programs that meet the community needs which are defined by the assessment. The nutritional status of a person can be measured by the popular methods known as ABCD methods.

- Anthropometric measurements
- Biochemical assessment
- Clinical examination
- Dietary assessment

### Research methodology

The design adopted for the study entitled "Knowledge, Attitude and Practices of Mothers Regarding Nutrition and its Impact on Nutritional Status of Pre-School Children" is 'Descriptive research design'. Descriptive research designs help provide answers to the questions of who, what, when, where, and how associated with a particular research problem a descriptive study cannot conclusively ascertain answers to why. Descriptive research design is used to obtain information concerning the current status of the phenomena and to describe "what exists" with respect to variables or conditions in a situation.

**Corresponding Author:**

**Dr. Arti Yadav**

Department of Home Science,  
Arya Kanya Mahavidhyala,  
Bundelkhand University, Jhansi,  
Uttar Pradesh, India

**Results and Discussion**

Results related to the association between knowledge, attitude and practices of mothers regarding nutrition and nutritional status of their pre-school children have been presented under the following table heads.

1. Association between knowledge of mothers regarding nutrition and nutritional status of their pre-school

- children.
- 2. Association between attitude of mothers regarding nutrition and nutritional status of their pre-school children.
- 3. Association between Practices of mothers regarding nutrition and nutritional status of their pre-school children.

**Table 1:** Association between knowledge of mothers regarding nutrition and nutritional status of their pre-school children, N=200

S. No.	Variables	Level of knowledge regarding nutrition			Total	DF	Chi square value	
		High	Medium	Low				
1	Height/length for age	Severe stunting(<-3)	3	5		44	4	131.57**
		Moderate stunting (≥-3 to <-2)	5	9	22	36		
		Normal (≥-2 to ≤+3)	82	38	0	120		
		Extreme tallness is not usually a nutrition issue. May indicate endocrine (>+3)	0	0	0	0		
		Total	90	52	58	200		
2.	Weight for age	Severe underweight (<-3)	8	9	36	53	4	66.97**
		Moderate underweight (≥-3 to <-2)	26	16	22	64		
		Normal (≥-2 to ≤+1)	44	27	00	71		
		Total	78	52	58	188*		
3.	Weight for length/ height	Severe wasting/ severe acute malnutrition (SAM) (<-3)	8	6	36	50	4	82.26**
		Moderate wasting/ Moderate Acute Malnutrition (MAM) (≥-3 to <-2)	16	19	22	57		
		Normal (≥-2 to ≤+1)	54	27	0	81		
		Total	78	52	58	188*		
4.	BMI for age	Severe wasting/ Severe Acute Malnutrition (SAM), (<-3)	8	6	36	50	6	99.90**
		Moderate wasting/ Moderate Acute Malnutrition (MAM) (≥-3 to <-2)	16	19	22	57		
		Normal (≥-2 to ≤+1)	54	27	0	81		
		Overweight/ Obesity (>+1 to >+3)	12	0	0	12		
		Total	90	52	58	200		
5.	Head circumferences for age	Very small head circumference (severe microcephaly) (<-3)	0	09	0	09	4	95.61**
		Small head circumference (microcephaly) (≥-3 to <-2)	05	05	36	46		
		Normal (≥-2 to ≤+2)	85	38	22	145		
		Total	90	52	58	200		
6.	Mid Upper Arm Circumferences (MUAC)	Severe Acute Malnutrition (SAM) <115mm	3	6	36	45	4	91.53**
		Moderate Acute Malnutrition (MAM) ≥115 mm to <125mm	21	19	22	62		
		Normal >125mm	54	27	00	81		
		Total	78	52	58	188*		

\*N=Total number of pre-school children [200] - number of pre-school children who were overweight/ obese [12] = 188

\*\*Significant at 0.1 level

Table 1 shows the association between knowledge of mothers regarding nutrition and nutritional status of their pre-school children. The result clearly indicates the significant association at 0.1 level between the knowledge of mother regarding nutrition and nutritional status of their pre-school children in reference to length/height-for-age (HFA), weight-for-length/height (WFH), weight- for-age (WFA), body mass index-for-age (BMI-for-age), head circumference-for- age and Mid Upper Arm Circumferences (MUAC). Thus, the result clearly shows that the nutritional knowledge highly affected the nutritional status of their pre- school children.

Sadiq *et al.*, (2020) [5] also reported that there was a high significant (p value = 0.001) relationship between overall knowledge of mothers and nutritional status according to BMI categories of their preschool children.

Gyawali *et al.*, (2013) [6] also reported that if mothers have sufficient nutrition knowledge, it is effective in improving nutritional status of their children.

Joseph (2010) [7] also reported that nutrition knowledge of mothers had significant relationship (p<0.05) with nutritional status of children and also found that women with low knowledge score recorded high rate (67.3% of malnourished children) while women having highest score recorded low rate (32.7% of malnourished children).

Table 2 shows the association between attitude of mothers regarding nutrition and nutritional status of their pre-school children. The result clearly indicates the significant association at 0.1 level between the attitude of mothers regarding nutrition and nutritional status of their pre-school children in reference to length/height-for-age (HFA), weight-for-length/height (WFH), weight- for-age (WFA), body mass index-for-age (BMI-for-age), head circumference-for- age and Mid Upper Arm Circumferences (MUAC). Thus, the result clearly shows that the attitude of mothers regarding nutrition highly affected the nutritional status of their pre-school children.

**Table 2:** Association between attitude of mothers regarding nutrition and nutritional status of their pre-school children, N=200

S. No.	Variables Anthropometric indicators and condition	Categories (z score)	Attitude regarding nutrition			Total	DF	Chi square value
			Favorable	Neutral	Unfavorable			
1	Height/ length for age	Severe stunting (<-3)	8	36	0	44	2	128.59**
		Moderate stunting (≥-3 to <-2)	5	31	0	36		
		Normal (≥-2 to ≤+3)	114	6	0	120		
		Total	127	73	00	200		
2.	Weight for age	Severe underweight (<-3)	13	40	0	53	2	79.40**
		Moderate underweight (≥-3 to <-2)	31	33	0	64		
		Normal (≥-2 to ≤+1)	71	0	0	71		
		Total	115	73	00	188*		
3.	Weight for length/height	Severe wasting/ severe acute malnutrition (SAM) (<-3)	8	42	0	50	2	100.18**
		Moderate wasting/Moderate Acute Malnutrition (MAM) (≥-3 to <-2)	26	31	0	57		
		Normal (≥-2 to ≤+1)	81	0	0	81		
		Total	115	73	00	188*		
4.	BMI for age	Severe wasting/ Severe Acute Malnutrition (SAM), (<-3)	8	42	0	50	3	110.00**
		Moderate wasting/ Moderate Acute Malnutrition (MAM) (≥-3 to <-2)	6	31	0	57		
		Normal (≥-2 to ≤+1)	81	0	0	81		
		Overweight/ Obesity (>+1 to >+3)	12	0	0	12		
		Total	127	73	00	200		
5.	Head circumferences for age	Very small head circumference (severe microcephaly) (<-3)	5	4	0	09	2	46.67**
		Small head circumference (microcephaly) (≥-3 to <-2)	10	36	0	46		
		Normal (≥-2 to ≤+2)	112	33	0	145		
		Total	127	73	00	200		
6.	Mid Upper Arm Circumferences (MUAC)	Severe Acute Malnutrition (SAM) <115mm	3	42	0	45	2	110.96**
		Moderate Acute Malnutrition (MAM) ≥115 mm to <125mm	31	31	0	62		
		Normal >125mm	81	0	0	81		
		Total	115	73	00	188*		

\*N= Total number of pre-school children [200] - number of pre-school children who were overweight/ obese [12] = 188

\*\* Significant at 0.1 level

**Table 3:** Association between practices of mothers regarding nutrition and nutritional status of their pre-school children, N=200

S. No.	Anthropometric indicators and condition	Variables Categories (z score)	Practice regarding nutrition			Total	DF	Chi square value
			Good	Average	Poor			
1	Height/length for age	Severe stunting (<-3)	3	5	36	44	4	145.93**
		Moderate stunting (≥-3 to <-2)	0	14	22	36		
		Normal (≥-2 to ≤+3)	86	34	0	120		
		Total	89	53	58	200		
2.	Weight for age	Severe underweight (<-3)	3	14	36	53	4	133.18**
		Moderate underweight (≥-3 to <-2)	10	32	22	64		
		Normal (≥-2 to ≤+1)	64	07	0	71		
		Total	77	53	58	188*		
3.	Weight for length/ height	Severe wasting/ severe acute malnutrition (SAM) (<-3)	3	11	36	50	4	176.00**
		Moderate wasting/ Moderate Acute Malnutrition (MAM) (≥-3 to <-2)	0	35	22	57		
		Normal (≥-2 to ≤+1)	74	7	0	81		
		Total	77	53	58	188*		

\*N= Total number of pre-school children [200] - number of pre-school children who were overweight/ obese [12] = 188

\*\* Significant at 0.1 level

Table 3 Shows the association between practices of mothers regarding nutrition and nutritional status of their pre-school children. The result clearly indicates the significant association at 0.1 level between the practice of mother regarding nutrition and nutritional status of their pre-school children in reference to length/height-for-age (HFA), weight-for-length/height (WFH), weight-for-age (WFA), and body mass index-for-age (BMI-for-age), head circumference-for-age and Mid Upper Arm Circumferences (MUAC). Thus, the

result clearly shows that the practice of mother regarding nutrition highly affected the nutritional status of their pre-school children.

On the other hand, El-Nmer *et al.*, (2014) [8] reported in their study that there was no significant correlation between nutritional practice of children and their BMI and height, whereas there was significant correlation between nutritional practice of children and their weight.

## Conclusion

The findings underscore the crucial link between maternal knowledge, attitudes, practices regarding nutrition, and the nutritional status of pre-school children. The study revealed significant associations between maternal knowledge and attitudes towards nutrition and various measures of child nutritional status, including length/height-for-age, weight-for-length/height, weight-for-age, body mass index-for-age, head circumference-for-age, and Mid Upper Arm Circumferences. These results emphasize the pivotal role of maternal education and attitudes in shaping the nutritional outcomes of children. However, it's important to note discrepancies in findings, such as those reported by El-Nmer *et al.*, indicating a need for further research to explore nuanced factors influencing child nutrition. Ultimately, addressing maternal knowledge, attitudes, and practices surrounding nutrition is paramount for improving child nutritional status and promoting overall health and well-being.

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