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A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE AND ATTITUDE OF PARENTS OF UNDER-FIVE CHILDREN REGARDING MALNUTRITION CONDUCTED IN SELECTED SCHOOLS OF BIHAR, NORTH INDIA

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ABSTRACT

Introduction: The world health organization (WHO) defines malnutrition as cellular imbalance between the supply of nutrient and energy and body demands for them to ensure growth, maintenance and specific function. India experiencing a malnutrition burden among its under - five population. As of 2015, the national prevalence of under-five stunting is 37.9%, which is greater than the developing country average of 25%. India's under-five wasting prevalence of 20.8% is also greater than the developing country average of 8.9%. **Objective:** Objectives of the study are- To assess the knowledge regarding malnutrition among the parents of under five children. To assess the attitude regarding malnutrition among the parents of under five children. To correlate the knowledge and attitude regarding malnutrition among the parents of under five children. To find out the association between knowledge and attitude regarding malnutrition with selected demographic variables of parents of under five children. **Methodology:** The non-experimental descriptive design was adopted convenient sampling technique was adopted to select 100 parents. The knowledge of parents of under five children regarding malnutrition was assessed by using online google form. Structured questionnaire tool is used for data collection. In data collection questions were asked, knowledge and attitude was assessed. The data obtained from the study subjects were analysed and interpreted in terms of objectives and assumptions of the study. **Result:** The findings of the study result shows majority 41% of parents were in age group of 20 – 25 years, 39% were in 26 – 30 years, 20% were in 31 – 35 years of age group. Majority 51% of samples were mothers, and 49% were fathers. Majority 69% of samples were married, 31% were single parents. Majority 92% of samples were Hindu, 2% of Muslim, 4% were Christian and 2% others were found. Majority 80% of samples were from urban area, 20% were from rural area. Majority 32% of samples have income less than 10,000, 25% had in between 10,000 – 15,000, 14% had in between 15000 – 20,000 and 29% had an income of more than 20,000. Majority 64% of samples were living in a joint family, 34% in nuclear family and 2% in extended family. Majority 36% of samples were private employee, 23% self-employed, 21% employed and 18% in government service were found. Majority 70% of samples have mixed type of food pattern, 16% vegetarian and 14% non-vegetarian were found. Majority of samples receives information from friends and family, 25% from mass media, 23% from health professionals and 11% with no information were found. 77% of the samples obtained shows there is good knowledge among parents of under-five children regarding malnutrition, 21% has average knowledge and 2 % has poor knowledge. 74% of the samples obtained has positive attitude and 26% has negative attitude towards malnutrition. **Conclusion:** Malnutrition in children is one of the most important social and health problem that is faced by the young children in the modern world, therefore, we conducted this study to assess the knowledge and attitude of parents of under-five children. Our finding strengthen the fact, that giving a balanced diet to a child will lead to a better growth and development, along with, adequate breastfeeding and nutrition in children.

KEYWORDS: malnutrition, underfive children, knowledge, attitude.

INTRODUCTION

Malnutrition is a broad term that refers to "all deviations from adequate and optimal nutritional status" resulting from specific nutrient deficiencies or diets based on inappropriate combinations or proportions of foods. There are two forms of malnutrition: over nutrition and undernutrition. Over nutrition is the hyper-consumption of calories and nutrients beyond levels necessary for growth, development, and metabolic functioning. Over nutrition can lead to obesity. Undernutrition, often used interchangeably with malnutrition, results primarily from inadequate intake of dietary energy but May also be caused by infections that limit absorption of key nutrients.[1]

The WHO defines malnutrition as "the cellular imbalance between the supply of nutrient and energy and body demands for them to ensure growth, maintenance and specific function".

More than 3.5 million children fewer than five die each year in Asia due to malnutrition. Malnutrition includes a wide array of effects including IUGR in low birth weight, underweight a reflection of low weight for age.

Stunting a chronic restriction of growth in height indicated by low height for age; wasting and acute weight loss indicated by low weight for height. Under nutrition is caused by poor dietary intake that may not provide sufficient nutrients, or by common infectious diseases as diarrhoea. These conditions are most significant in the first two year of life, high lighting the importance of nutrition in pregnancy and the window of opportunity for preventing under nutrition from conception through 24 months of age.[2]

Need of the Study
Children are the most vulnerable asset of any nation as the nation walks on the tiny feet of its children. In India about 2/3rd portion of the under five children of our country is malnourished. In India nearly 75% of the population reside in the village of the total rural population around 50% is still under the poverty line. Majority of children in India are not in a position to get adequate nourishment because of very low per capita income of their families. A significant proportion of these children live in economic and social environment which impedes the child's physical and mental development, this condition include poverty, poor environment, sanitation, diseases, infections, inappropriate child caring and feeding practices.[3]

Educated mothers may make earlier and effective use of health services. It is postulated that mother education would affect the children nutritional status which varies studies have shown and since illiteracy is the greatest barrier to any improvement in health condition. The malnutrition can be prevented at primary level by health promotion and good nutrient diet of pregnant mothers.[4]

A study was conducted by Yadav A. (2017) to assess the prevalence of malnutrition among under-five year children at selected Anganwadi centres of Jaipur district. Descriptive research design was adopted on 100 under-five year children of six Anganwadi centre. Total enumeration sampling technique was used to select 100 samples. 42% were found to be moderately malnourished whereas 9% children were severely malnourished. Overall mean prevalence of malnutrition was found to be 5%.[5]

A study was conducted by Renuka Manjunath (2014) to assess the prevalence of malnutrition among under-five children of Kadukuruba tribe and socio-demographic factors associated with it". Community bases cross-sectional study was done in kadukuruba tribes of Mysore district over a period of one year among 101 under-five children. Prevalence of underweight, stunting and wasting was 60.4%, 55.4% and 43%. Significantly higher prevalence of under-nutrition was noted among under five children in this community.[6]

TS Singh conducted a cross-sectional study during the period from June to October 2018 via an inline survey. The survey included questions to investigate the demographics of mothers, and other part of questions investigated the knowledge of mothers about malnutrition. This study included 800 mothers, the mean score knowledge was 16.2%, there were 61.25% who reported that they know about malnutrition and 62.5% reported that the main source of knowledge were doctors. These finding showed mean score 10.54 and the score range was 3-19, also their results showed that highest percent of mothers (65%) had average knowledge.[7]

Study of Knowledge, attitude, and practice of mothers regarding nutrition of under-five children: A cross sectional community – based study was conducted among 300 mothers who visited the Primary Health Centre (Miran Sahib) and had children under the age of five-years. A structured questionnaire based on KAP survey guidelines. The knowledge scores revealed that 135 (45%) mothers had good knowledge, 96 (32%) mothers had fair knowledge and 69 (23%) mothers had poor knowledge regarding under-five nutrition and prevention of malnutrition. The attitude scores among mothers had good 91 (30.3%), Fair 167 (55.6%) and poor 42 (14%).[8]

Objectives
1. To assess the knowledge regarding malnutrition among the parents of under five children.
2. To assess the attitude regarding malnutrition among the parents of under five children.
3. To correlate the knowledge and attitude regarding malnutrition among the parents of under five children.
4. To find out the association between knowledge and attitude regarding malnutrition with selected demographic variables of parents of under five children.

RESEARCH METHODOLOGY

Design of the research study
Non-Experimental Descriptive study.

Research setting
Selected School in Patna Bihar, Saraswati Vidhya Mandir Kankarbagh, Patna and Keshaw Saraswati Vidya Mandir, Bhagwat nagar, Patna.

Target population
In this study the population comprised of parents having children below 5 of age living in the selected community of Patna, Bihar.

Sampling technique and sample size
Non probability convenient sampling technique and the sample size is selected 100 parents of under-five children.

Validity of research tool
Validity identifies the degree of correlation between the test and the criterion of the study. In this study, to ensure the content and face validity, the questionnaire was reviewed and refined based on the aims, objectives and research question by five experts of the subject area and the suggestions and corrections given were implemented.

Procedure and time frame of data collection
The method of data collection used in the study through online google form, reaching the parents through email id and phone numbers of parents providing of school, time of data collection is about one week.

Ethical considerations
The study proposal was accepted by the ethical committee of the institution. Permission was obtained by the concerned authorities of the colleges before conducting the study. Consent letter was obtained from individual samples after explaining them the research process in their own language. Confidentiality regarding the samples information was maintained by using code numbers by the investigator.

Analysis plan
Analysis plan is the most important phase of research process which involves the computation of the certain measures along with searching for patterns of relationship that exists among data groups. In the present study suitable descriptive and inferential statistics is used to analyse the data.

Descriptive statistics is used to describes basic feature of the data and summarize the data to draw meaningful interpretation.

It is used to describe the main feature of collection of data in quantitative term. Percentage, mean of central tendency, means of dispersion are used to analyse the data in descriptive statistics.

Inferential statistics helps in drawing inferences from the data with the help of parametric and non-parametric test. It was used to find the association between knowledge and attitude of parents towards malnutrition with selected demographic variables and to find out the correlation between knowledge and attitude towards malnutrition.

RESULTS

The findings of the socio-demographic variables are given below-

Serial no.	Socio-demographic variable	Variables		Frequency (f)	Percentage (%)
1.	Age	a)	20 – 25 years	41	41%
		b)	26 – 30 years	39	39%
		c)	31 – 35 years	20	20%
		d)	More than 35 years	-	-
2.	Gender	a)	Male	49	49%
		b)	Female	51	51%
3.	Marital status	a)	Married	69	69%
		b)	Single parent	31	31%
4.	Religion	a)	Hindu	92	92%
		b)	Muslim	2	2%
		c)	Christian	4	4%
		d)	Others	2	2%
5.	Residential area	a)	Urban	80	80%
		b)	Rural	20	20%
		c)	Slum	-	-
6.	Education status	a)	No-formal education	-	-
		b)	Primary	5	5%
		c)	Middle school	8	8%
		d)	High school	87	87%
7.	Income	a)	Less than 10000	32	32%
		b)	10000 – 15000	25	25%
		c)	15000 – 20000	14	14%
		d)	More than 20000	29	29%

| 8.	Type of family	a)	Nuclear	34	34%
		b)	Joint	64	64%
		c)	Extended	2	2%
9.	Type of employment	a)	Government	18	18%
		b)	Private	36	36%
		c)	Self-employed	23	23%
		d)	Unemployed	21	21%
10.	Total number of under-five children	a)	1	55	55%
		b)	2	28	28%
		c)	3	12	12%
		d)	4 or more than 4	5	5%
11.	Food pattern	a)	Vegetarian	16	16%
		b)	Non-vegetarian	14	14%
		c)	Mixed	70	70%
12.	Source of information	a)	Health professionals	23	23%
		b)	Friends & Family	41	41%
		c)	Mass media	25	25%
		d)	No information	11	11%
13.	Previous experience and exposure with malnutrition	a)	Yes	20	20%
		b)	No	72	72%
		c)	Don't know	9	9%

(n = 100)

Table of socio-demographic data reveals that among of 100 parents, majority are females (51%), Majority of parents fall under the age of 20 – 25 years (41%), and belongs with Hindu religion (92%), most of the parents are from urban area (80%), majority of educated high school (87%), most of the family income less than 10000 (32%), 64% living in joint family, 36% of parents doing private job, 41% of parents source of information from friends and family, 72% parents have no any previous experience and exposure with malnutrition.
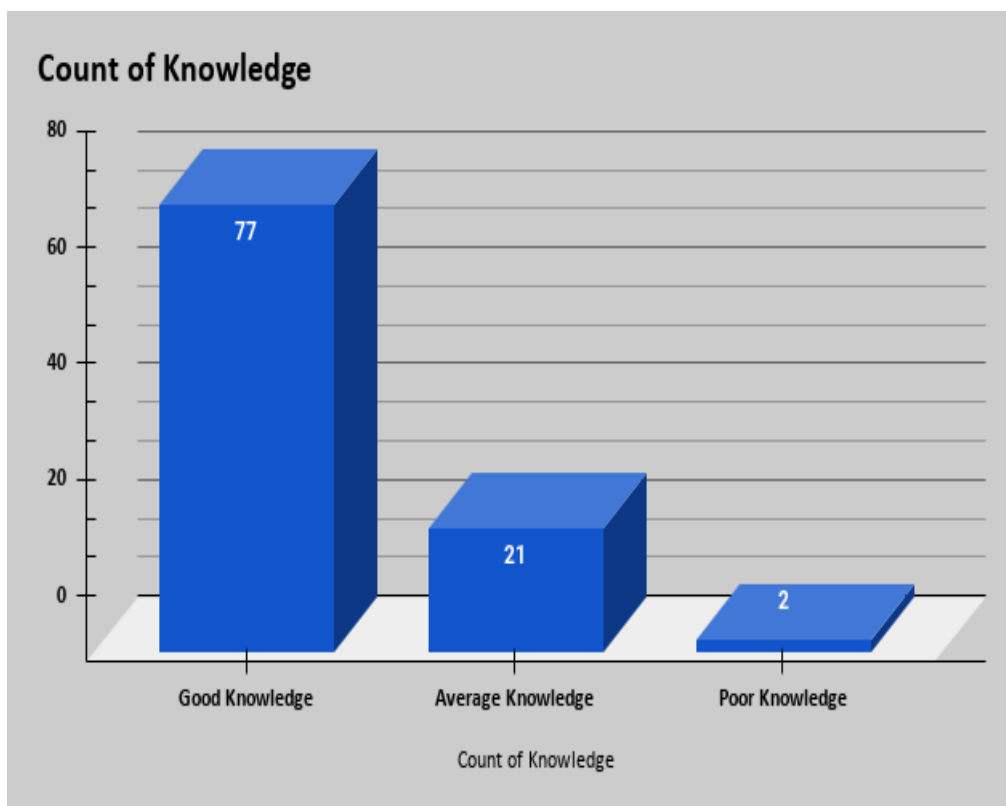
Bar diagram depicts knowledge frequency and percentage as 77% of parents have good knowledge, 21% of parents have average knowledge and 2% of the parents have poor knowledge.
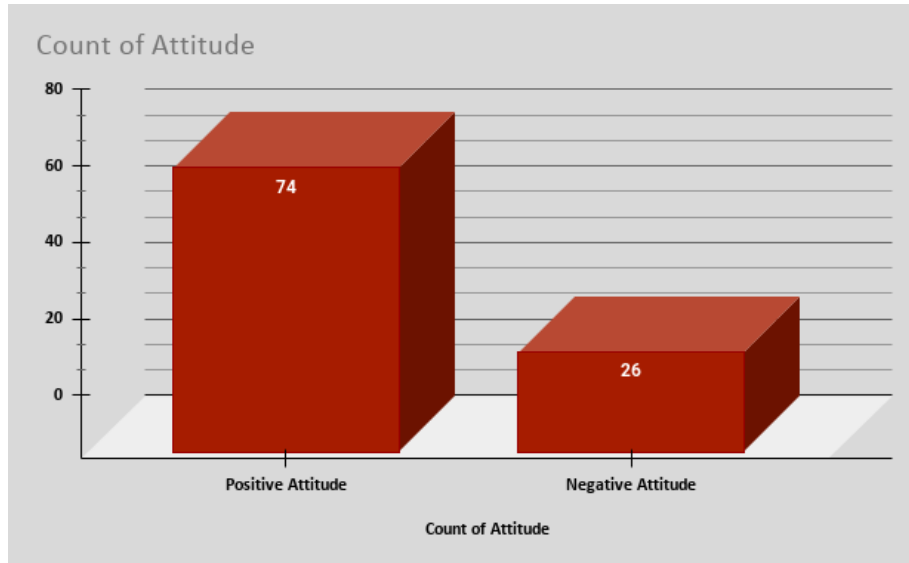
Bar diagram depicts Attitude frequency and percentage as 74% of parents have a positive attitude and 26% of parent's negative attitude regarding malnutrition.
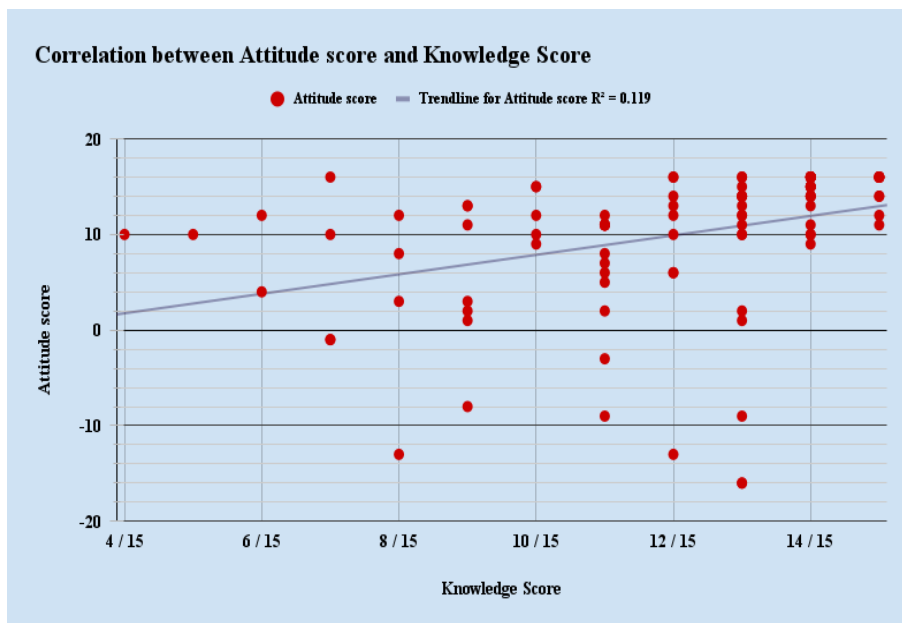
Correlation coefficient (r): 0.345 (Moderate / Weak positive correlation)

Trendline for Attitude score (R^2): 0.119

The Pearson correlation coefficient (r) can take a range of values from +1 to -1 ($-1 \leq r \geq 1$). A value is less than zero indicates negative correlation and greater than zero indicates positive correlation. If value is zero is indicate no correlation.

According to the guidelines it is interpreted as Pearson's Product Moment Correlation Coefficient the value of (r) lies in between 0.3 – 0.5 so correlation between variables is moderate / weak positive correlation.

Association of the level of knowledge with the socio-demographical variables (n = 100)

Sociodemographic variable	Category	Chi square χ^2	Tabular chi square value χ^2	df	Significance at 0.05 level
1. Age	a) 20 – 25 years b) 26 – 30 years c) 31 – 35 years d) More than 35 years	0.90	9.49	4	NS
2. Gender	a) Male b) Female	0.71	5.99	2	NS
3. Marital status	a) Married b) Single parents	0.44	5.99	2	NS
4. Religion	a) Hindu b) Muslim c) Christian d) Others	1.76	12.59	6	NS
5. Residential area	a) Urban b) Rural c) Slum	2.77	5.99	2	NS
6. Educational status	a) No formal education b) Primary c) Middle d) High School	11.10	9.49	4	S
7. Income	a) Less than 10000 b) 10000 – 15000 c) 15000 – 20000 d) More than 20000	5.24	12.59	6	NS
8. Type of family	a) Nuclear b) Joint c) Extended	14.92	9.49	4	S
9. Type of employment	a) Government b) Private c) Self employed d) Unemployed	3.60	12.59	6	NS
10. Total number of under-five children in the family	a) 1 b) 2 c) 3 d) 4 or more than 4	3.23	12.59	6	NS
11. Food Pattern	a) Vegetarian b) Non-vegetarian c) Mixed	3.25	9.49	4	NS
12. Source of information	a) Health professionals b) Friends and family c) Mass media d) No information	17.01	12.59	6	S
13. Do you have any previous experience and exposure with malnutrition	a) Yes b) No c) Don't know	13.16	9.49	4	S

$P<0.05$

NS = Not significant

S = Significant

The table shows the association between knowledge regarding malnutrition and educational status of parents of under-five children is significant at 0.05 level significance. The parents who have higher educational status have good knowledge about the malnutrition than others.

The association between knowledge regarding malnutrition and type of family of parents of under-five children is significant at 0.05 level significance. The parents living in nuclear family they have more knowledge than the parents living in joint and extended family.

The association between knowledge regarding malnutrition and source of information of parents of under-five children at the 0.05 level significance. The parents who are informed by the health professionals have good knowledge than parents who are informed by other sources.

The association between knowledge regarding malnutrition and previous experience and exposure of parents of under-five children with malnutrition at the 0.05 level significance. The parents who have a previous exposure and experience have more knowledge about malnutrition than others.

Chi Square Values Computed the Attitude and Socio-Demographic Data (n=100)

Socio-demographic variable	Variables	Chi-square χ^2	Tabular chi square value χ^2	df	Significance at 0.05 level
1. Age	a) 20 – 25 years b) 26 – 30 years c) 31 – 35 years d) >35 years	0.61	5.99	2	NS
2. Gender	a) Male b) Female	1.56	3.84	1	NS
3. Marital status	a) Married b) Single parent	1.03	3.84	1	NS
4. Religion	a) Hindu b) Muslim c) Christian d) Others	2.55	7.82	3	NS
5. Residential area	a) Urban b) Rural c) Slum	0.21	3.84	1	NS
6. Education status	a) No-formal education b) Primary c) Middle school d) High school	0.11	5.99	2	NS
7. Income	a) Less than 10000 b) 10000 – 15000 c) 15000 – 20000 d) >20000	5.02	7.82	3	NS
8. Type of family	a) Nuclear b) Joint c) Extended	0.72	5.99	2	NS
9. Type of employment	a) Government b) Private c) Self-employed d) Unemployed	1.35	7.82	3	NS
10. Total number of under-five children	a) 1 b) 2 c) 3 d) 4 or more than 4	2.50	7.82	3	NS
11. Food pattern	a) Vegetarian b) Non-vegetarian c) Mixed	0.20	5.99	2	NS
12. Source of information	a) Health professionals b) Friends & Family c) Mass media d) No information	10.58	7.82	3	S
13. Previous experience and exposure with malnutrition	a) Yes b) No c) Don't know	2.20	5.99	2	NS

P<0.05
NS = Not significant
S = Significant

The data presented in table no. 3 shows that

The table above depicts that there is association between attitude and educational status of parents of under-five children is significant at 0.05 level of significance. The parents who have higher knowledge have positive attitude regarding malnutrition than others.

The association between attitude and source of information of parents of under-five children is significant at 0.05 level of significance. The parents who are informed by the health professionals have positive attitude than parents who are informed by other sources.

Summary
The result shows that majority of parents have significant Good Knowledge (77%) on malnutrition of under-five children. Majority of 41% parents belongs to 20 – 25 years of age, 39% from 26 – 30 years and 20% from 31 – 35 years. Major finding of our research study including 32% parents have less than 10,000 per month income, 25% have been 10,000 – 15,000 per month income, 14% parents have income between 15,000 – 20,000 per month, 29% of the parents have income more than 20,000 per month. Findings reveals that 34% parents belongs to nuclear family, 64% belongs to joint family and 2% belongs to expended family. Major finding of our research include 36% parents are working in private sector, 23% are self-employed, 21% are unemployed and 18% are work in government sector. Also study showed that 70% of parents having mixed food pattern, 16% are vegetarian and 14% are non-vegetarian.

CONCLUSION

Malnutrition in children is one of the most important social and health problem that is faced by the young children in the modern world, therefore, we conducted this study to assess the knowledge and attitude of parents of under-five children.

Our finding strengthen the fact, that giving a balanced diet to a child will lead to a better growth and development, along with, adequate breastfeeding and nutrition in children. The study result that only 69% of sample considered malnutrition is a serious problem and 77% of them have a good knowledge about malnutrition, almost 64% of the sample favoured for checking height and weight pays a vital role in child's growth and development. The result obtained from the study clearly indicated that 74% samples were having positive attitude toward malnutrition and 60% agreed that hospitalization is needed to treat severe malnutrition.

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