

A Descriptive Study to Assess the Knowledge of Mothers Regarding Nutrition for Under Five Children in Selected Rural Area of Rohtas District with a View to Develop Information Booklet

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Abstract: In India it is observed from various nutrition surveys that the nutritional status of pregnant and lactating mothers and infants is not satisfactory, this is probably due to lack of basic knowledge regarding proper nutrition and wrong customs prevalent in the community besides non-availability and low intake of food. In order to bring about changes in the knowledge in the mothers regarding nutrition, an attempt was made to assess mothers' knowledge and hence to improve it based on their learning needs through an information booklet. Children are future of society and mothers are guardian of that future (WHO2005).

OBJECTIVES OF THE STUDY: To assess the knowledge of mother regarding the nutrition for under five children. To find out the association between the mother knowledge regarding nutrition for under five children with selected demographic variable. To develop in information booklet regarding the nutrition for under five children based on their learning need.

MATERIALS AND METHODS: The research approach used in the present study is quantitative research approach and the research design is descriptive research design is chosen for conducting the study, where there is no randomization and control group. In this design all the subjects were selected by convenience sampling technique and a pre-test conducted. The setting of the study was selected rural area of Rohtas District. The target population comprises of all mother of under five children. The accessible population in this study are all the mother of under five children in selected rural area of Rohtas district. Structured questionnaire was prepared containing a set of questions, were asked by the sample. The investigator collected the data from the 50 mothers. **RESULTS:** Nearly 4% of the mothers are of the age group 19-21years, 32% of the age group 22 - 24 years, 34% of the age group 25-27 years and 30% are above 28 years. About 100% of the mothers are married and no one are divorce or widow. Nearly 36% of the mothers having matriculation, 16% of the mothers having intermediate and 18% of the mothers are graduated and 30% of the mothers having no formal education. Approx. 12% of the mothers having less than Rs 10,000family income, 44% of the mothers having Rs 10,001-20,000 family income, 28% of the mothers having Rs 20,001-30,000 family income and 16% of the mothers having family income above Rs 30,001. About 70% of the mothers from nuclear family, 28% of the mothers from joint family and 2% of the mothers from extended family. Approx. 96% of the mothers are housewife, 4% of the mothers having private job and none of the mothers having govt. job or other job. About 54% of the mothers having 1 under five children, 34% of the mothers having 2 under five children, 6% of the mothers having 3 under five children and 6% of the mothers having more than 3 under five children .The main score of concept of knowledge of mother regarding of nutrition for under five children is raised from 8.74 and (SD = 2.388).

CONCLUSION: The obtained findings of the study led to the following conclusions: Majority of the mothers suffered from the deficit knowledge. Deficit of knowledge regarding nutrition for under five children existed in varying degree of mothers in all the learning need area.

Keywords: Assess the knowledge of mothers regarding the nutrition for under five children.

I. INTRODUCTION

“Children are future of society and mothers are guardian of that future”. (First and foremost, health, safety, and nutrition for the young child is written on behalf of young children everywhere.) Ultimately, it is the children who benefit from having parents who understand and know how to protect and promote their safety and well-being by knowing regarding nutrition. Nutrition is the provision, to cells and organisms, of the materials necessary (in the form of food) to support life. Many common health problems can be prevented or alleviated with a healthy diet. Nutrients are organic & inorganic complexes contained in food. There are six major classes of nutrients those are mainly carbohydrates, fats, minerals, protein, vitamins and water. These nutrient classes can be categorized as either macronutrients (needed in relatively large amounts) or micronutrients (needed in smaller quantities). The macronutrients include carbohydrates, fats, protein and water. The micronutrients are minerals and vitamins.

Mother is the one who take care of the child, it is very important that she should need to have knowledge regarding care of under-five and nutrition which they need, under-fives are “age in-between 0-5 years of child”. Healthy eating and physical activity are essential for growth and development in childhood. To help children develop healthy eating patterns from an early age, it is important that the food and eating patterns to which they are exposed-both at home and outside the home-are those which promote positive attitudes to good nutrition

Timeweight-for-age; stunting, a chronic restriction of growth in height indicated by a low height-for-age; wasting, an acute weight loss indicated by a low weight-for-height; and less visible micronutrient deficiencies. Under nutrition is caused by a poor dietary intake that may not provide sufficient nutrients, and/or by common infectious diseases, such as diarrhoea.

The micronutrients are minerals and vitamins. The macronutrients (excluding water) provide structural material (amino acids from which proteins are built, and lipids from which cell membranes and some signaling molecules are built), energy. Vitamins, minerals, fiber, and water do not provide energy, but are required for other reasons.

The fundamental role of care to child nutrition has been well-established since 1990 through UNICEF Model of Care. To provide care adequately, caregivers require education (both formal and informal), time, and support (e.g. control of resources). In the Ghanaian context, it remains unclear what the relationship is between the nutritional knowledge of non-literate mothers and nutritional status of their children. One would expect that mothers’ knowledge of child nutrition and childcare practices would have a significant effect on their children's nutritional status. However, there are conflicting study results on this.

Whereas some studies have reported that maternal nutritional knowledge is positively associated with the nutritional status of children (5-7), others have also shown that adequate knowledge *per se* is not always translated into appropriate actions (8-10). Understanding the factors that determine the translation of adequate child health and nutritional knowledge into appropriate action in impoverished environment might help design more effective interventions against malnutrition. It remains unclear whether giving mothers adequate knowledge on proper childcare practices has an independent impact on child growth. This study, therefore, investigated the relationship between mother's knowledge level in childcare practices and nutritional status of preschool children living in impoverished rural communities of India.

In India it is observed from various nutrition surveys that the nutritional status of pregnant and lactating mothers and infants is not satisfactory, this is probably due to lack of basic knowledge regarding proper nutrition and wrong customs prevalent in the community besides non-availability and low intake of food. In order to bring about changes in the knowledge in the mothers regarding nutrition, an attempt was made to assess mothers’ knowledge and hence to improve it based on their learning needs through an information booklet.

1.1 Objective of the Study

- To assess the knowledge of mother regarding the nutrition for under five children.
- To find out the association between the mother knowledge regarding nutrition for under five children with selected demographic variable.
- To develop an information booklet regarding the nutrition for under five children based on their learning need.

1.2 Hypothesis

There will be significant association between knowledge regarding nutrition of under five years children with selected demographic variable.

II. MATERIAL AND METHODS:

2.1 Study Design, Study Population and Setting

This Descriptive Research Design was performed on assess the knowledge of mother regarding the nutrition for under five children. this study was performed in December 2021 in the rural area of Jamuhar Rohtas .

2.2 Method of Sample Selection

The sample were selected using convenience sampling technique. The sample size of 50 has been taken in the study.

2.3 Statistical Methods

The method were used for analysis of data are P-Value (level of analysis), Chi- square test, CI (confidence interval) has so also has been use to control confounders. No subgroup of were categorised in the study. The sensitivity test used to evaluate the effectiveness of the tool is test-Retest methods.

2.4 Eligibility Criteria

The study subject includes knowledge of mothers regarding nutrition who meet our inclusion criteria and come for assess the knowledge of regarding nutrition in rural area in Jamuhar sasaram Rohtas .The age group mothers of under five year children 19-28 years and were selected through convenience sampling technique. The knowledge of regarding nutrition and management were included.

2.5 Description of the Tool

- **Part A:** Consisting of items related to demographic variable such as Age, Marital status, Educational status, family income, Occupation of mother Etc.
- **Part B:** Consisting structured questionnaire with 20 question related to knowledge of mother regarding nutrition for under five year children.
- **Scoring:** There will be 20 items; each items has 4 options with one correct answer. The score assigned for correct answer is 1, for answer 0

Overall Marks

The maximum marks are 20 and to interpret the knowledge the score is classified as:-

- 14-20 – good knowledge
- 7-13 – average knowledge
- 0-6 – poor knowledge

2.6 Variables

The study indicates that **age group** [19-25 years (32%), 22-24 years(34%), 25-27 years(30%)], **qualification** [(36%) matriculation, (16%) intermediate, (18%) graduate, of the mothers are graduate and 30%of the mothers having no formal education.] **occupation**[housewife(96%) , (4%) of mothers are having private job and none of the mothers having govt. job or other job], **types of family**[Nuclear family 70%, joint family 28 extended family 2%] **total no of under five children in the family** 54% of the mother having 1 under five children, 34% mother having 2 under five children, 6% of the mother having 3 under five children], **source of information** [previous information from internet(2%) , from books(4%) and have previous information from health professionals (94%)] are the demographic variables associated with the knowledge regarding nutrition for under five children.

2.7 Quantitative Variables

The quantitative variables in the study were managed through frequency and percentage . socio demographic variables (age , qualification , occupation, type of family , source of information) were included to find out association with the level of knowledge .

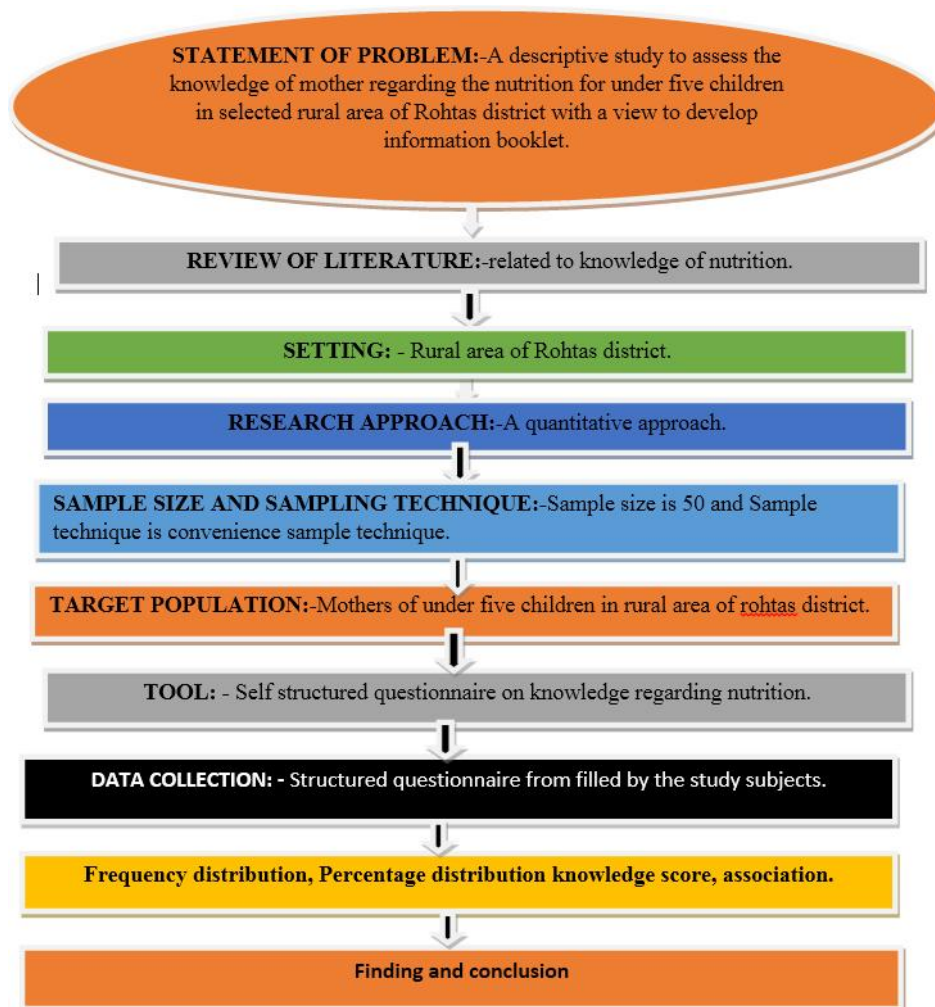
2.8 Ethical Approval

This study was approved by the Institutional Ethical Committee of Gopal Narayan Singh University, Jamuha Rohtas (Bihar) on 14th Feb 2022. Written permissions were taken from the village leader. Also participants gave their consents through their signature on the consent form before initiation of the session. All survey data were stored in accordance with national legislation and institutional policies. Confidentiality of patient information was maintained.

Result

The study was performed on 50 subjects who are mothers of under five children. Participants were assessed based on the structured questionnaire including items such as socio demographic variables, questionnaires related to knowledge of mother regarding the nutrition for under children. A schematic series of events has been followed for the derivation of result.

III. SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY



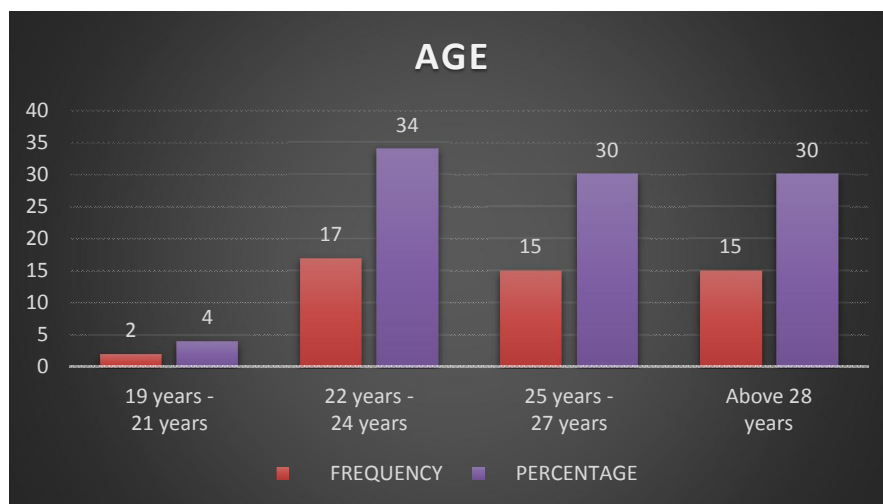
IV. SAMPLE CHARACTERISTICS

The category boundaries included in the variables were **age group** (19-21 years, 22-24 years, 25-27 year, Above 28 years), **qualification** [matriculation, intermediate, graduate, of the mothers are graduate and of the mothers having no formal education.], **occupation** [housewife, of mothers are having private job and none of the mothers having govt. job or other job], income of family, **marital status**, married, divorce, widow, **type of family** (Nuclear, Joint, Extended), **source of information** (Mass media, Internet, Books, Health professionals).

4.1 Age Group

AGE GROUP [19-25 years (32%), 22-24 years (34%), 25-27 years(30%)]

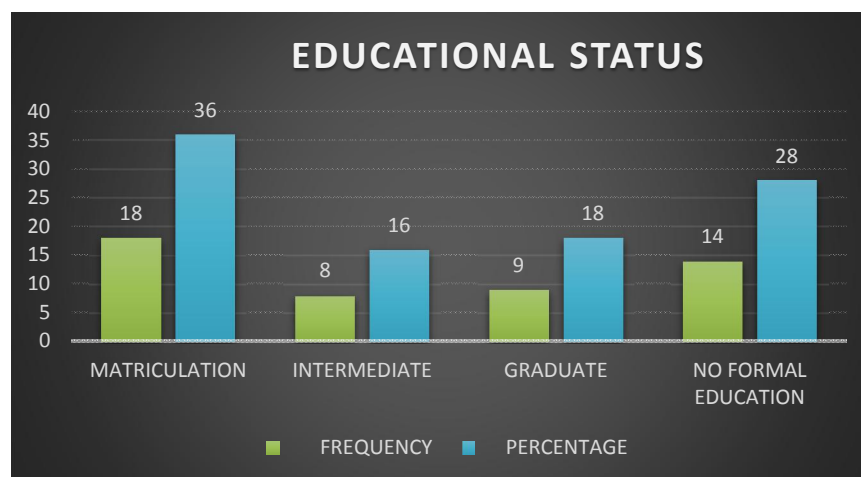
CHART 3.1



4.2 Educational Status

From the study it was found that about **qualification** [(36%) matriculation, (16%) intermediate, (18%) graduate, of the mothers are graduate and 30% of the mothers having no formal education.]

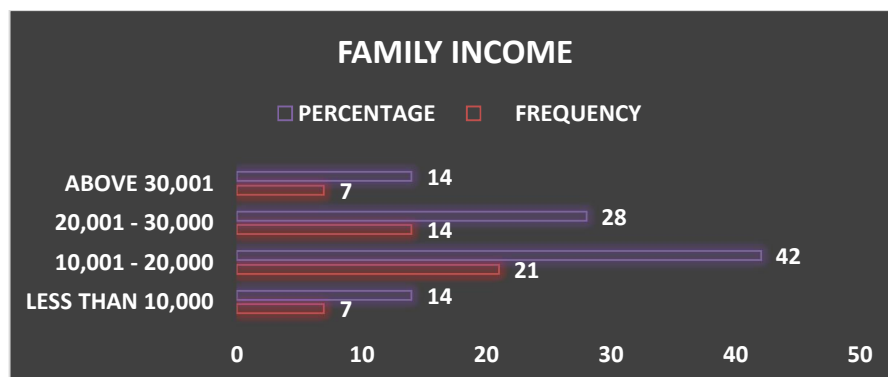
CHART 3.2



4.3 Family income

In the percentage distribution of the mothers according to their family income, about 12% of the mothers having less than Rs 10,000 family income, 44% of the mothers having Rs 10,001-20,000 family income, 28% of the mothers having Rs 20,001-30,000 family income and 16% of the mothers having family income above Rs 30,001.

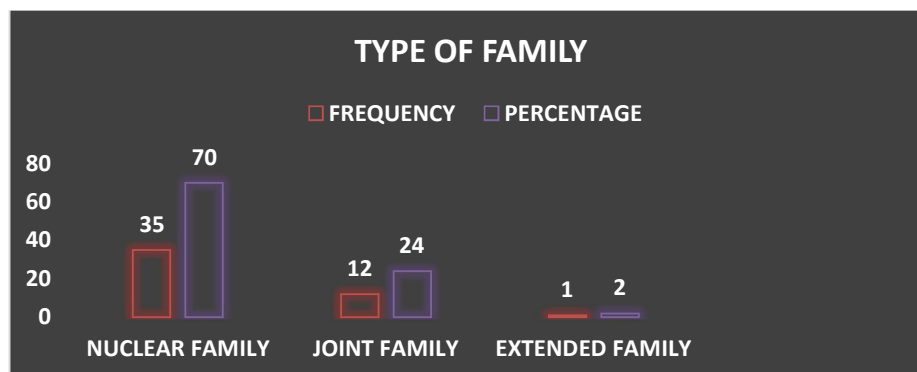
CHART 3.3



4.4 Types of Family

In the percentage distribution of the mothers according to their type of family, about 70% of the mothers from nuclear family, 28% of the mothers from joint family and 2% of the mothers from extended family.

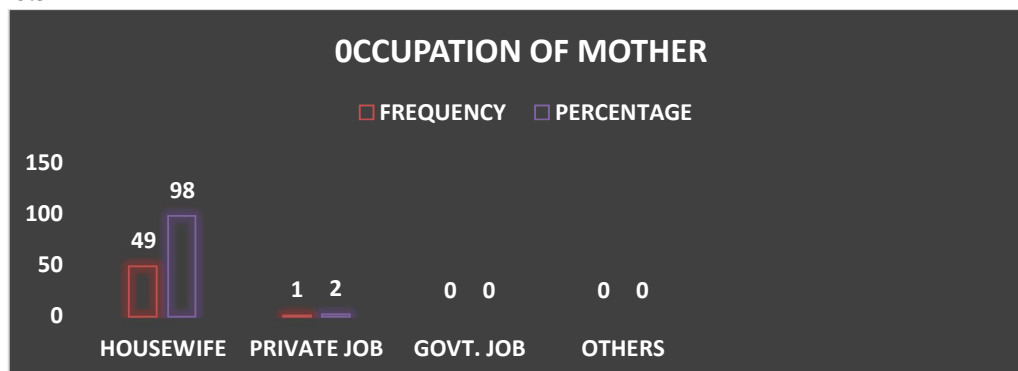
CHART 3.4



4.5 Occupation of Mother

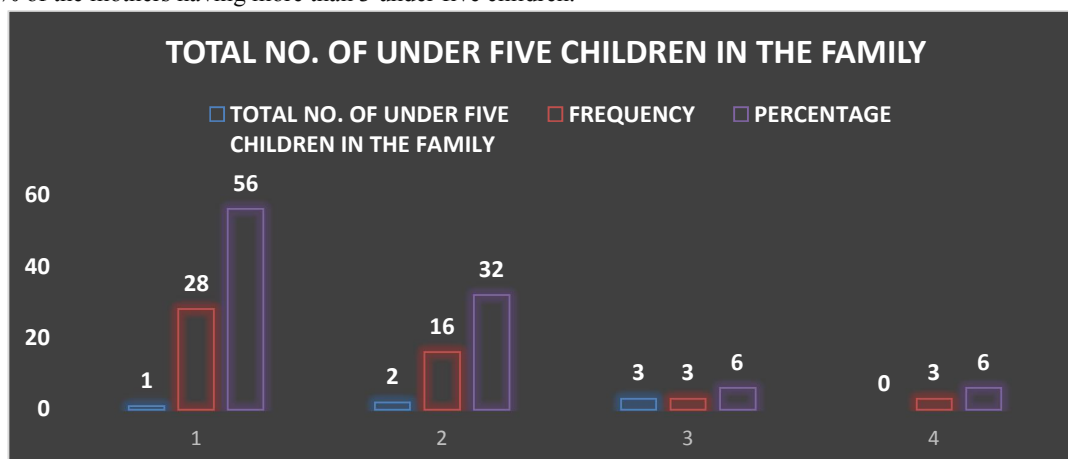
In the percentage distribution of the mothers according to their occupation, about 96% of the mothers are housewives, 4% of the mothers having private job and none of the mothers having govt. job or other job.

CHART 3.5



4.6 Total No. of Under Five Children in the Family

In the percentage distribution of the mothers according to their under -five children, about 54% of the mothers having 1 under five children, 34% of the mothers having 2 under five children, 6% of the mothers having 3 under five children and 6% of the mothers having more than 3 under five children.



SECTION - II

Chi Square analysis association between level of knowledge and selected demographic variables

Table 4.2 (N = 50)

Demographical data	Poor knowledge (0-6)		Average knowledge (7-13)		Good knowledge (14-20)		X ²	Df & P value	Inference
	No	%	No	%	No	%			
1. Age (in years)									
19 years-21 years	0	0%	2	100%	0	0%	4.94	0.55	NS
22 years-24 years	1	6.25%	14	87.50%	1	6.25%			
25 years-27 years	4	23.52%	13	76.47%	0	0%			
Above 28 years	4	26.66%	11	73.33%	0	0%			
2. Marital status									
Married	9	18%	40	80%	1	2%	4.18	0.01	S
Divorce	0	0%	0	0%	0	0%			
Widow	0	0%	0	0%	0	0%			
3. Educational status									
Matriculation	3	16.66%	14	77.77%	1	5.55%	4.45	0.61	NS
Intermediate	0	0%	8	100%	0	0%			
Graduate	2	22.22%	7	77.77%	0	0%			
No formal education	4	26.66%	11	73.33%	0	0%			

4. Family income									
Less than 10000	1	16.66%	5	83.33%	0	0%	8.30	0.21	NS
10001-20000	7	31.81%	15	68.18%	0	0%			
20001-30000	0	0%	13	92.85%	1	7.14%			
Above 30001	1	12.50%	7	87.50%	0	0%			
5. Type of Family									
Nuclear family	7	20%	27	77.14%	1	2.85%	0.93	0.91	NS
Joint family	2	14.28%	12	85.71%	0	0%			
Extended family	0	0%	1	100%	0	0%			
6. Occupation of mother									
Housewife	8	16.66%	39	81.25%	1	2.08%	1.46	0.48	NS
Private job	1	50%	1	50%	0	0%			
Govt. job	0	0%	0	0%	0	0%			
Other	0	0%	0	0%	0	0%			
7. Total no. of Under five children in the family									
1	4	14.81%	23	85.18%	0	0%	3.12	0.79	NS
2	3	17.64%	13	76.47%	1	5.88%			
3	1	33.33%	2	66.66%	0	0%			
above 3	1	33.33%	2	66.66%	0	0%			

Section III

Table 4.3: Calculation of mean and standard deviation among under five children mother.

Level of knowledge score	Mean	S d	P value	inference	Mean percentage
	8.74	2.3889	0.0569	NS	43.5%

* $p < 0.05$ is significant

V. DISCUSSION

The findings obtained from the study were discussed as follows.

5.1 Discussion of the Knowledge Scores

- The mean score of concepts of nutrition for under five children is 8.74 (SD=2.3889)
- The χ^2 of the number of age of mothers: - 4.94, χ^2 of the number of marital status: - 4.18, χ^2 of the number of educational status: - 4.45, χ^2 of the number of family income: - 8.3, χ^2 of the number of types of family: - 0.93, χ^2 of the number of occupations of mother: - 1.46, χ^2 of the number of total no. of under five children in the family: - 3.12

5.2 Discussion of the Sociodemographic Variables.

Nearly 4% of the mothers are of the age group 19-21 years, 32% of the age group 22 - 24 years, 34% of the age group 25-27 years and 30% are above 28 years. About 100% of the mothers are married and no one are divorce or widow. Nearly 36% of the mothers having matriculation, 16% of the mothers having intermediate and 18% of the mothers are graduated and 30% of the mothers having no formal education. Approx. 12% of the mothers having less than Rs 10,000 family income, 44% of the mothers having Rs 10,001-20,000 family income, 28% of the mothers having Rs 20,001-30,000 family income and 16% of the mothers having family income above Rs 30,001. About 70% of the mothers from nuclear family, 28% of the mothers from joint family and 2% of the mothers from extended family. Approx. 96% of the mothers are housewife, 4% of the mothers having private job and none of the mothers having govt. job or other job. About 54% of the mothers having 1 under five children, 34% of the mothers having 2 under five children, 6% of the mothers having 3 under five children and 6% of the mothers having more than 3 under five children.

5.3 Interpretation

The first objective of the study:-To assess the knowledge of mother regarding the nutrition for under five children.

The findings of the study revealed that the knowledge score was- mean 8.74, standard deviation 2.3889 and the mean score percentage was 43.5%. This Shows that the knowledge of mothers was inadequate.

The findings of the study are also supported by a study to assess the knowledge, attitude, and practice of mothers regarding nutrition of under-five children's in rural settings Sonica Sangria. Its results showed that out of total 30 samples, 2(6.6%) had excellent knowledge level, 20(66.66%) had good knowledge level, 7 (23.33%) had average knowledge level, 1 (3.33%) had poor knowledge level. The study concluded that there was very poor knowledge among mother regarding nutrition of under five children.

The findings are supported by a study was conducted to assess the knowledge and perception of mothers towards nutrition in selected areas of Karachi, Pakistan. The results revealed that majority (76%) of mother had inadequate knowledge, 23% had average knowledge and a very few had adequate knowledge regarding nutrition for under five children.

The second objective of the study: - To find out the association between the mother knowledge regarding nutrition for under-five children with selected demographic variable.

It was found that there was statistically significant association between knowledge scores of mothers with marital status, educational status, family income, types of family, occupation of mother and total number of under-five children in the family. There were no significant association between the age of mother regarding nutrition for under five children.

The third objective of the study: - To develop an information booklet regarding the nutrition for under five children based on their learning need.

A study was conducted to “assess the knowledge of mother regarding the nutrition for under five children in selected rural area of Rohtas district with a view to develop information booklet”. The objective of the study is to assess the knowledge of mother regarding the nutrition for under five children. Data collection is the gathering of information from the sampling units. The investigator collected the data from the 50 mothers’ in rural area. “A Questionnaire is a method of data collection in which the researcher obtains responses from the subject in a face to face encounter”. Hence, the researcher developed a structured questionnaire schedule to conduct the study. Descriptive research design was used for data collection to assess the knowledge of mother regarding the nutrition for under five children. The structured questionnaire schedule, which was used in assessment of respondents of the research study.

VI. IMPLICATIONS OF NURSING

The investigator has drawn the following implication from the study which are vital concern to the field of nursing service, nursing administration, nursing education and nursing research.

Nursing Service

It is the total health organization which aims to provide prevention of malnutrition and promotion of health.

Nursing Administration

Nurse administration should take interest in motivating the nursing personnel to improve their professional knowledge, skill by attending the information booklet.

Nursing Education

Verbalization teaching and information booklet can be used by the student to imparting knowledge on under-five nutrition to children in rural area while giving health education.

It is a professional education which is consciously and systematically planned and implemented through instruction and aims the harmonious development of the physical and intellectual and social for children.

Nursing Research

Nursing research should focus on improving level of knowledge regarding the nutrition for under- five children and to reduce the malnutrition.

Research study must be conducted to assess the mother’s knowledge regarding the nutrition for under-five children.

Recommendations

The following studies can be undertaken to strengthen the knowledge level of mothers regarding the nutrition.

1. The same study can be repeated in different region of the state or nation so as to compare the results.
2. The same study can repeat on a large sample so as to generalize the results.

Similar kind of study can be conducted among different population such as verbal communication health education and group discussion can be given to mothers, health care profession.

VII. CONCLUSION

The present study was aimed at assessing the level of knowledge regarding nutrition for under-five children. The relevant data was collected statistically based on objectives of the study.

Among 80% mothers had average knowledge level (40%), poor knowledge about 18% (9 mothers) and 2% (1 mother) were had good knowledge. Pertaining to relationship between the sociodemographic variable and level of knowledge, statically significant association was found between knowledge of mothers in this study. As per knowledge among 80% mothers had average knowledge level (40%), poor knowledge about 18% (9 mothers) and 2% (1 mother) were had good knowledge. This shows that these variables had influenced in this study.

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DECLARATION OF COMPETING INTEREST

None

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DATA AVAILABILITY:

Data is available in the form of hard copies.

SUPPLEMENTARY ITEM

Adobe Acrobat Document