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Evaluate the knowledge of mothers about Marasmic Kwashiorker among children of under-five admitted to the pediatric ward at tertiary care hospital Belagavi

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Abstract
Protein Energy undernutrition represents a significant public health issue affecting children under the age of five, with mothers primarily accountable for this situation. Consequently, this study was undertaken to evaluate the knowledge, attitudes, and practices of mothers with children under five, the results of the study indicate that the overall knowledge score among mothers reveals that 37% possessed average knowledge, 33% had below average knowledge, and 30% exhibited above average knowledge regarding malnutrition. There was a broad acknowledgment of the necessity to enhance mothers' knowledge levels.

Keywords: Marasmic-kwashiorkor, knowledge, assessment, mother, children under-five

Introduction

The most significant resource for a healthy future resides in today's children. The children of today will become the citizens and leaders of tomorrow. Investing in the care, maintenance, and health of the youth is a commitment to the future. A nation requires a well-nourished youth to ensure a healthy and productive workforce in the years to come. The nutritional well-being of children today is indicative of a healthy and effective generation in the future. The nutritional status is a vital element for optimal growth, and it should be balanced, neither lacking nor excessive. Enhanced nutrition and health improve children's capacity for learning. In the long run, this leads to a stronger workforce, thereby positively impacting economic development. Therefore, proper nutrition is essential for the well-being of individuals, families, and the nation [1].

The WHO characterizes malnutrition as "the cellular imbalance between the supply of nutrients and energy and the body's demand for them to ensure growth, maintenance, and specific functions". 1 While malnutrition can refer to both deficiencies and excesses in energy, protein, and other nutrients, this article focuses specifically on undernutrition, particularly protein energy malnutrition (PEM). Children suffering from primary PEM are predominantly located in developing nations, primarily due to insufficient food supply stemming from socioeconomic, political, and sometimes environmental factors, including natural disasters. Under nutrition is recognized as one of the four leading causes of mortality among young children globally, being attributed to 60.7% of deaths in children suffering from diarrheal diseases, 52.3% in those with pneumonia, 44.8% in measles cases, and 57.3% in children afflicted with malaria.2 Over half of all childhood fatalities are linked to undernutrition, with relative mortality risks estimated at 8.4 for severe malnutrition, 4.6 for moderate malnutrition, and 2.5 for mild malnutrition, based on analyses from 28 epidemiological studies conducted across 53 countries. 3-5 the majority of deaths over 80% occur among children with mild or moderate malnutrition weight for age 60% to 80%. This phenomenon can be attributed to the fact that, although the mortality risk is highest among those with severe malnutrition, these extreme cases represent only a small portion of the total number of malnourished children [2].

The early years of childhood (0-6 years) represent a crucial phase for a child's physical and socio-psychological growth. It is essential for all children to receive adequate care and attention. Those under the age of six are especially susceptible to malnutrition, infections, and accidents; thus, they require specialized care and health services. In developed nations, all children have easy access to basic and affordable healthcare that ensures they remain healthy and can achieve their full potential, in contrast to children in developing countries who lack such resources. The (WHO) through its (CHD), division is leading a renewed initiative aimed at enhancing the health outcomes for children

globally [3].

Over the past 30 years, various initiatives addressing child malnutrition have been implemented. Since 1998, these efforts have been integrated into the national health target program, which is directly managed by the health sector across all communities in the country. The primary aim of this initiative is to reduce malnutrition and enhance the growth and well-being of children. In the last decade, the health system, from the central level to local entities, has received active support from multiple ministries, sectors, agencies, and both domestic and international social organizations, along with community involvement. Together, they have navigated numerous challenges to achieve significant progress, fulfilling their assigned responsibilities and contributing to the enhancement of child nutritional status. The improvement of individual nutritional health is crucial for the overall development of society, which in turn fosters the advancement of each nation [4].

Objectives

- To assess the knowledge of mothers regarding malnutrition among children under five.
- To determine the relationship between the knowledge score and the selected socio-demographic variables.
- To prepare hand-outs for mothers on prevention of malnutrition in under-five children.

Review of Literature

A cross-sectional study was done in 1995. In Patna Medical College Hospital, the prevalent maternal beliefs in Aurangabad and Bihar were investigated. Regarding diet during common childhood illnesses in anganwadi areas. Whereas randomly selected with five mothers in each area who had at least one child younger than age five. 94% of the mothers were illiterate and of low socioeconomic status. The investigator found that instead of providing more nutrition during illness to meet children's increased nutritional demand, mothers restrict food, a practice with potentially disastrous consequences [5].

A cross-sectional investigation was conducted in 1995. This study investigated the prevalent maternal beliefs regarding diet during common childhood illnesses in anganwadi areas of Aurangabad and Bihar, specifically at PMC Hospital. The research involved randomly selecting five mothers from each area, all of whom had at least one child under the age of five. It was found that 94% of these mothers were illiterate and belonged to a low socioeconomic status. The investigator discovered that rather than increasing nutrition during illness to satisfy the heightened nutritional needs of children, mothers tended to restrict food intake, a practice that could have potentially disastrous consequences [6].

A case-control survey was conducted in India in 1994, focusing on the influence of maternal knowledge and practices on the nutritional status of infants. In this study, health workers interviewed 123 mothers of infants who were visiting the child health clinic at S.K. Institute of Medical Sciences in Srinagar. The researcher found that poor nutritional status was linked to socioeconomic factors such as the child's sex and the father's occupation. The female gender and the father's employment as a labourer were identified as significant risk factors for severe malnutrition. There was a notable difference between the two groups in terms of nutrition-related knowledge regarding mild mixed malnutrition, investigator concluded that mothers of well-nourished infants possessed a greater level of breastfeeding knowledge compared to those whose infants were moderately to severely malnourished [7].

A case-control study was conducted in 1994 in Dhaka, Bangladesh, India, focusing on maternal and socioeconomic factors and their association with the risk of severe malnutrition in children. This research took place at a prominent diarrhoea treatment centre located in a metropolitan area. The findings indicated that the cases comprised 125 severely malnourished children, all under 36 months of age, with weight-for-age measurements falling below 55% of the median values established by the United States of NCHS. The control group, consisting of 125 participants, was recruited simultaneously, ensuring a match for gender, type of disease (i.e., diarrhoea or dysentery), and age category, with their weight-for-age exceeding 60% of the median values [8].

A cross-sectional study was conducted to assess the prevalence and correlates of undernutrition in young children residing in urban slums of Mumbai, India. The aim of the study is to provide an analysis of prevalence and investigate correlates for various indicators of undernutrition, such as stunting, underweight, and anemia among children aged 10 to 18 months living in urban slums, a group that has been insufficiently studied and is considered vulnerable. The researcher discovered that the prevalence rates were 31.2% for stunting, 25.1% for underweight, 9.0% for wasting, and 76% for anemia among all children. The researcher concluded that the prevalence of undernutrition among children under five years old is notably high and varies significantly based on the assessment methods used, and there is a scarcity of studies focusing on the evaluation of over nutrition [9].

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Operational definitions

- **Knowledge:** Knowledge regarding malnutrition refers to the scores obtained by the respondent's verbal responses to the knowledge assessment questionnaire.
- **Assessment:** Assessment refers to the process used to identify the level of the mother's knowledge by questionnaire towards malnutrition and its prevention in under-five children.
- **Mother:** A woman who is having children in the age group 0-5 years.

- **Under five:** Children who are less than 5 years old.
- **Marsmic kwashiorkor:** Marasmic kwashiorkor represents the third type of protein-energy malnutrition, incorporating characteristics and symptoms from both marasmus and kwashiorkor.

Hypothesis

- **H_1:** There will be knowledge of mothers regarding malnutrition among under-five children.
- **H_2:** There will be a significant association between knowledge of mothers of under-five children and selected sociodemographic variables such as age, education, religion, income, type of family, number of children, food pattern etc.

Projected outcome

The results of this research study will help the investigator to assess the level of knowledge of mothers of under-five children at Tertiary Care Hospital Belagavi. The result of the study will help the health professionals to plan for further research related to the current problems.

Assumptions

- The mothers will have some knowledge regarding malnutrition.
- The mothers will cooperate with the investigator and willingly express their knowledge regarding malnutrition.
- The responses of mothers of under-five children to the items in the semi-structured interview schedule would reflect the true knowledge on malnutrition.

Delimitations

- Mothers who are having under-five children.
- Mothers who are residing in Dr. PKC Hospital & MRC Belagavi.
- Mothers who are willingly participating in the study.
- Mothers who are in the age group of 19-42 years.

Conceptual framework

The conceptual framework of the present study is adopted from Rosen stock's health belief model. This model stresses the importance of the learner's motivation in seeking preventive health behavior. The health belief model is useful for explaining the behaviors and actions taken by people to prevent illness and injury.

In the present study, as shown in Figure 1, there are certain modifiable and non-modifiable risk factors that cause malnutrition. There can be certain demographic variables, which will also contribute to the development of malnutrition in children under five.

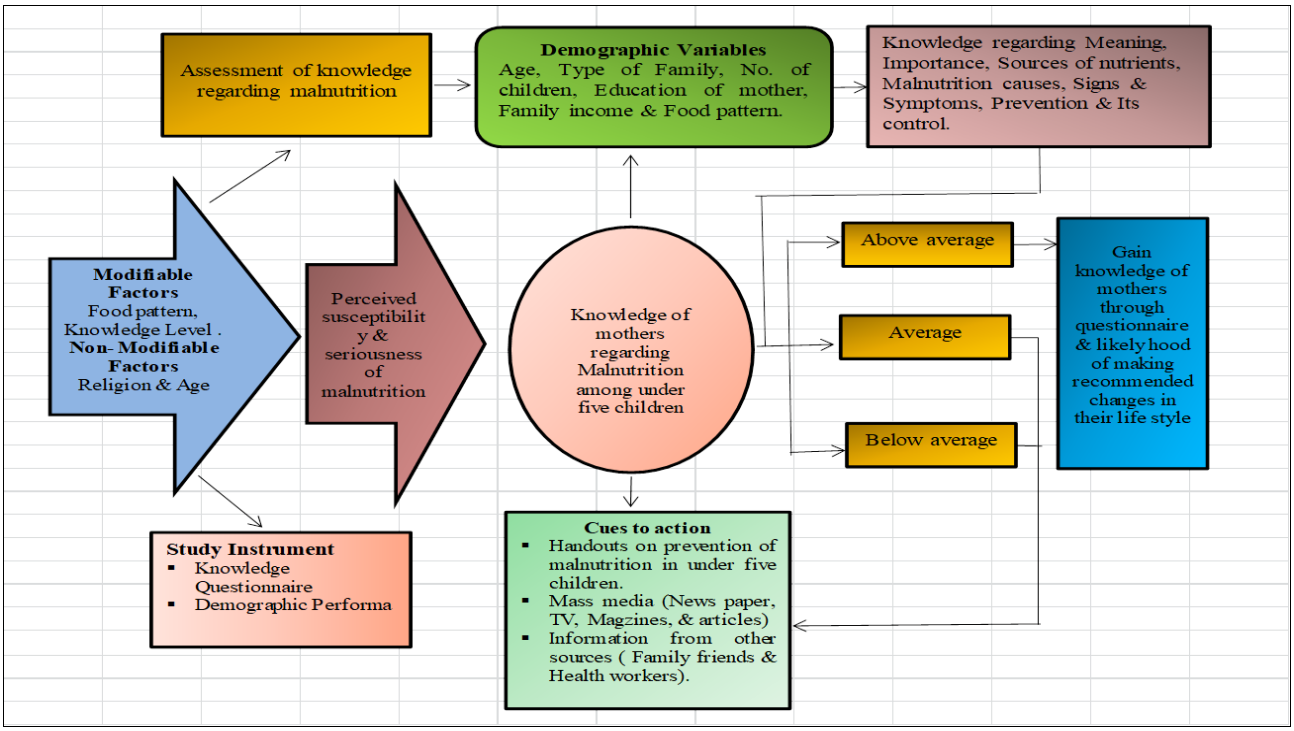


Fig 1: Rosen Stock's Health Belief Model.

Materials and Methods

Research methodology is the specific procedure or techniques used to identify, select, process, and analyze information about a topic. In a research paper, the methodology section allows the reader to critically evaluate a study's overall validity and reliability. The present study deals with the methodology used to acquire the needed information to conduct the research study. To assess the knowledge of mothers regarding malnutrition among children under five admitted to the pediatric ward at Dr. Prabhakar Core Charitable Hospital and Medical Research Centre, Belagavi.

- **Research approach:** The research approach adopted for this study was the descriptive research approach.
- **Research design:** In the present study the researcher adopted a descriptive research design.
- **Variables:** Variables are characteristics that may vary among the subjects being studied. It is the focus of the

study and reflects the empirical aspects of the concepts being studied; the investigator measures the variables.

- **Dependent variable:** In this study, the level of knowledge of mothers regarding malnutrition among under-five children was the dependent variable.
- **Extraneous variables**: It includes selected parents' demographic data, including age, religion, type of family, number of children, education, occupation, family income, and food pattern.
- **Setting:** The study was conducted in a pediatric ward.
- **Population:** Children under-five in a pediatric ward.
- **Target population:** The target population of this study is mothers of hospitalized children under-five.
- **Sample size:** For the purpose of assessing the level of knowledge among mothers of hospitalized children under five, 60 samples were considered from the pediatric ward.

- **Sample and sampling technique:** Purposive sampling was used to select the sample, then a total of 60 study subjects were selected as a sample from the pediatric ward.

Criteria for selection of sample

Inclusion Criteria

- Mothers who were having children under five years of age.
- Mothers who were residing in the pediatric ward.
- Mothers who were given consent for the study.

Exclusion Criteria

- Mothers who did not have children under five years of age.
- Mothers who were not available during the present study.
- Mothers who had not given consent for the study.

Data Collection Technique: A semi-structured interview schedule was selected as the appropriate method of data collection for the study. This method is applicable for both literates and illiterates, and a good deal of information could be obtained by directly interviewing the mothers.

Development of the tool: In the process of developing the tool, the investigator reviewed research and non-research literature and had discussions with experts in the fields of nutrition and community health nursing. The informal discussions were also held with the mothers. This helped in the selection of the content for the development of the tool. The tool was initially written in English and was then translated to Kannada.

Description of tool: The tool for data collection had two sections, i.e., Section I, Section II, had 3 areas, like Area I, Area II and Area III.

- **Section I:** It deals with sociodemographic variables like mothers age, religion, type of the family, number of children, education status of the mother, occupation of the mother, monthly income of the family and type of food pattern.
- **Section II:** Which had consisted of 50 questions? This section is categorized into 3 areas.

- **Area I:** Knowledge related to the meaning, importance, and sources of nutrients. It consists of 17 questions with a maximum score of 17. Each correct answer is given a score of one.
- **Area II:** Knowledge related to malnutrition, causes, signs, and symptoms. It consists of 15 questions with a maximum score of 15.
- **Area III:** Knowledge related to prevention and control of malnutrition. It consists of 18 questions with a maximum score of 18.

Validity: In order to maintain the content validity, the tool was given to 10 experts in the fields of pediatrics, community health nursing, nutrition, biostatistics, and medical-surgical nursing. The experts were consulted to review and verify the items for adequacy, clarity, and appropriateness of the tool, and comments and suggestions were invited.

Reliability

In order to establish the reliability, the tool was tested by administering is to six mothers of under-five children residing in Tertiary Care Hospital, Belagavi. The reliability coefficient of the tool was found using the Spearman-Brown prophecy formula. The reliability of the structured questionnaire was established as r=0.5841. Hence, the investigator can go ahead with the study. Even the Guttmann split-half method also suggests the same. (Part-1, α=0.5584 and part-II, α=0.5140). The structured questionnaire was found to be reliable for conducting the main study.

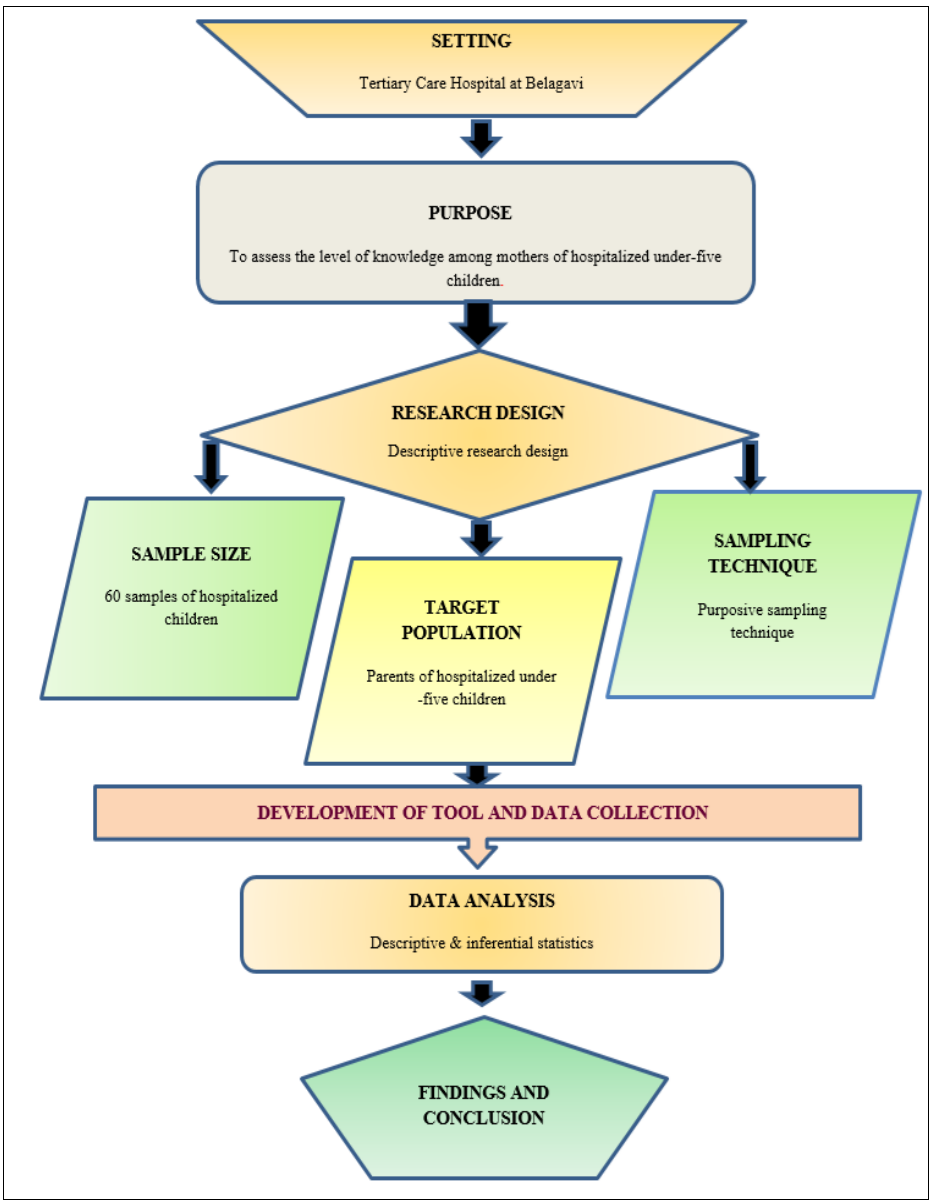
Data Collection Procedure

After obtaining the permission from the medical officer of Tertiary Care Hospital, from January 20th, 2020 to February 20th, 2020. Before interview the purpose of interview was explained to all mothers with self-introduction. A separate place was selected for the interview in the hospital and the privacy was maintained. Subjects were made comfortable and relaxed. An average time of 30 to 40 minutes was taken per each mother interview. Mothers are very cooperative.

Data analysis plan

The data obtained were analyzed in terms of the objectives of the study, using descriptive and inferential statistics. The plan for data analysis was developed under the excellent direction of experts in the fields of nursing and statistics. The data analysis plan was as follows. The data on sample characteristics would be described in the form of frequencies and percentages. The data would be represented in the form of graphical presentation, wherever applicable. The knowledge of the mothers was divided into 3 groups. Below average, average and above average.

Schematic representation of research plan



Results

Data analysis and interpretation of the data were based on the objectives of the study, i.e.

- To assess the knowledge of mothers regarding malnutrition among under-five children.
- To determine the relationship between the knowledge score and selected sociodemographic variables.
- To prepare hand-outs on prevention of malnutrition among under-five children for mothers.

Presentation of Data: The analyzed data were presented under the following headings.

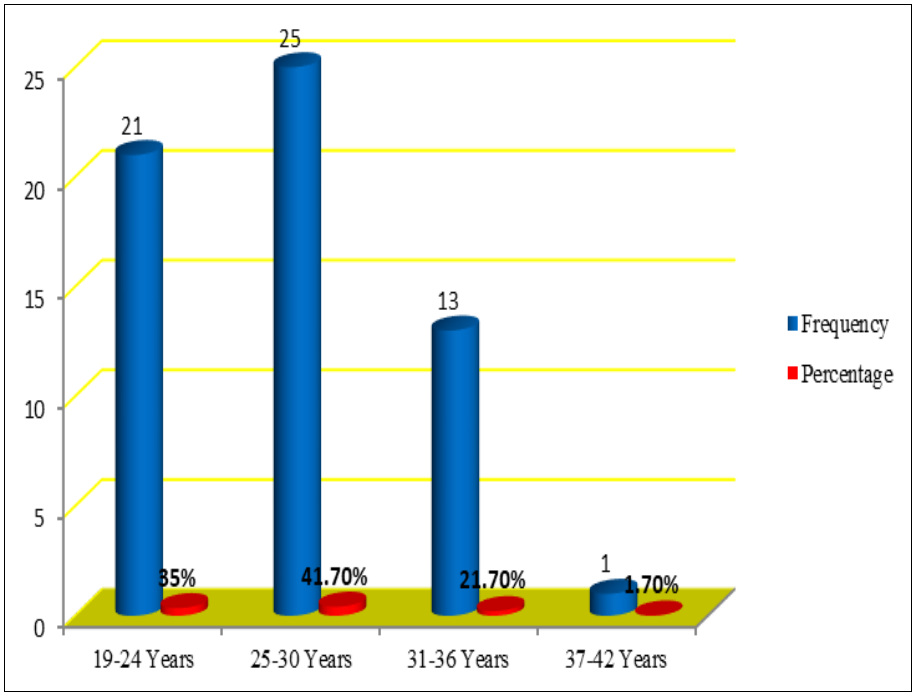
- **Section I:** Description of sociodemographic variables.
- **Section II:** Knowledge of mothers regarding malnutrition among under-five children.
- **Section III:** Area-wise knowledge of mothers regarding malnutrition among under-five children.
- **Section IV:** Association between the knowledge score of mothers regarding malnutrition among under-five children with selected sociodemographic variables.

Section I: Description of the sociodemographic variables. This section deals with the demographic data of the mothers' knowledge regarding malnutrition among under-five children in terms of frequency and percentage of age, religion, type of family, number of children, education, occupation, monthly income of the family, and food pattern.

Table I: Frequency and percentage distribution of mothers based on age, religion, type of family, number of children, and education. N=60

Variable	Frequency (F)	Percentage (%)
Age		
19-24 Years	21	35%
25-30 Years	25	41.70%
31-36 Years	13	21.70%
37-42 Years	1	1.70%
Religion		
Hindu	46	76.70%
Muslim	8	13.30%
Christian	5	8.30%
Any other	1	1.70%
Type of family		
Nuclear	42	70%
Joint	18	30%
Number of children		
One	17	28.30%
Two	32	53.30%
Three	7	11.70%
Four and above	4	6.70%
Education		
Above Inter	10	16.70%
S.S.L.C.	12	20%
Middle school	18	30%
Illiterate	20	33.30%

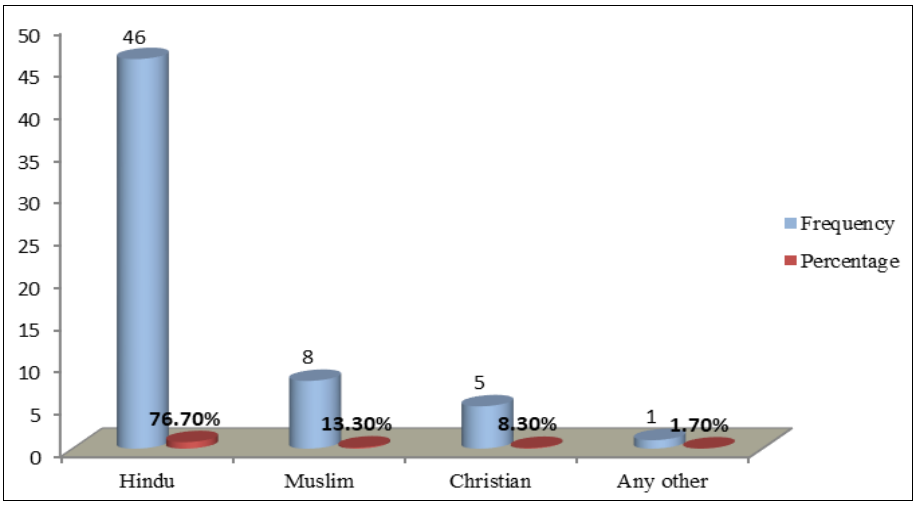
Data presented in the table reveals the distribution of the sample according to age, religion, type of family, number of children, and education.



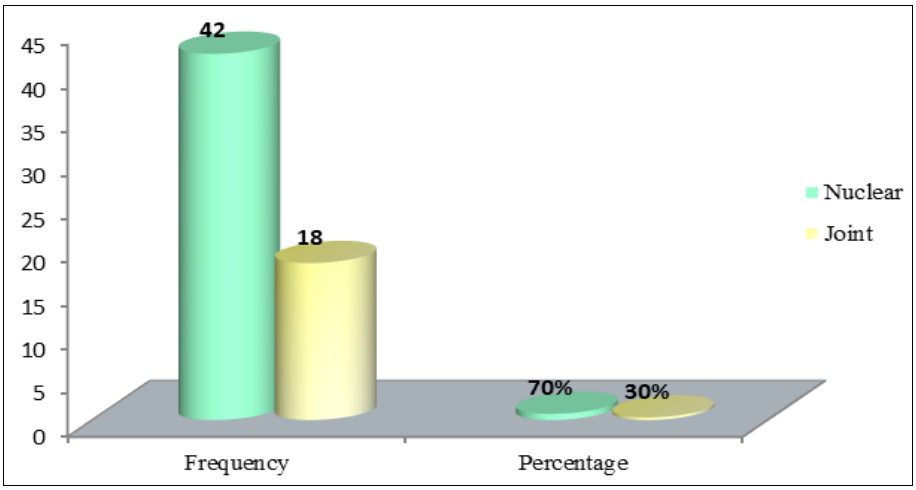
Graph 1: Distribution of respondents according to age.

Graph 1 shows that the majority of the findings were that 25 (41.70%) of mothers belonged to the age group of 25-30 years. 21 (35%) of mothers belonged to the age group of 19-24 years. 13 (21.70%) of mothers belonged to the age group of 31-36 years, and 1 (1.70%) of mothers belonged to the age group of 37-42 years.

Graph 2 shows that 46 (76.70%) of mothers belonged to the Hindu religion. 8 (13.30%) of the mothers belonged to the Muslim religion. 5 (8.30%) of the mothers belonged to the Christian religion, and 1 (1.70%) of the mothers belonged to any other.

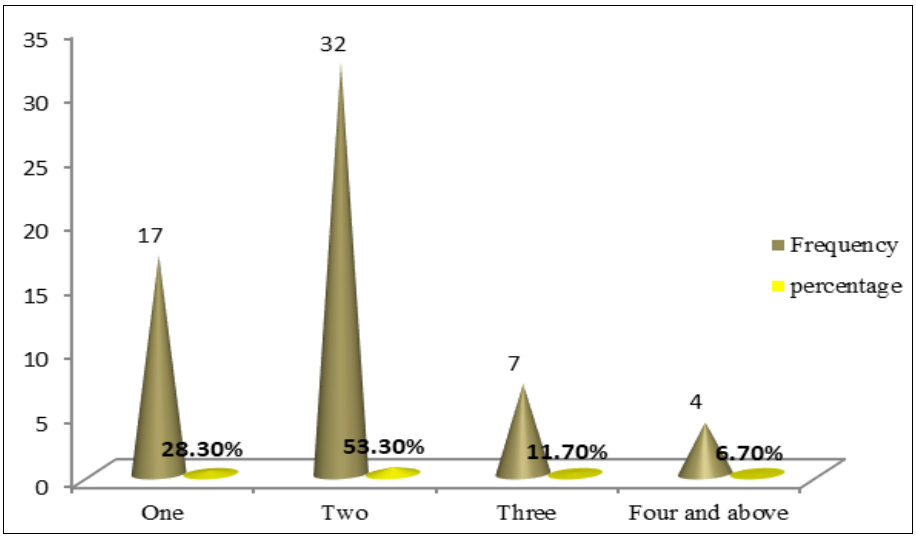


Graph 2: Distribution of respondents according to religion.



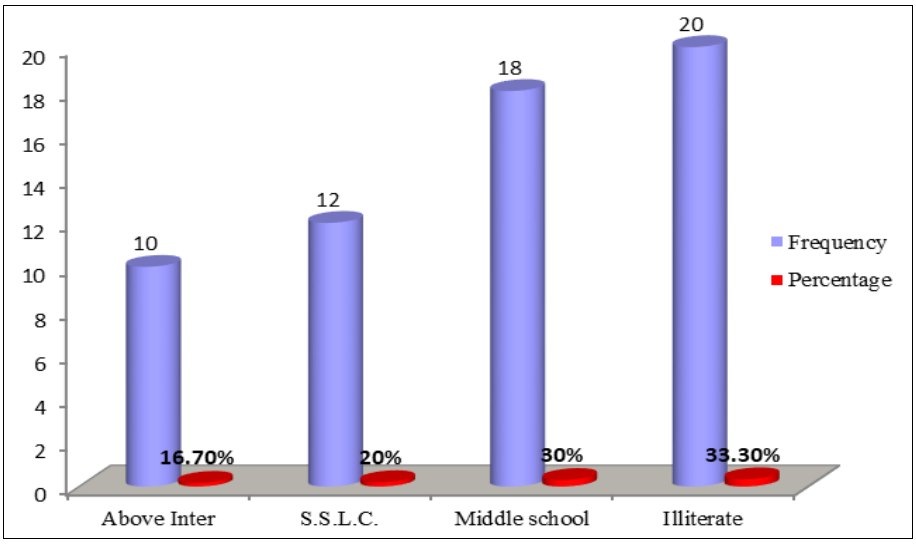
Graph 3: Distribution of respondents according to type of family.

Graph 3 shows that the majority of the findings were that 42 (70%) of mothers belonged to nuclear families and 18 (30%) of mothers belonged to joint families.



Graph 4: Distribution of respondents according to number of children.

Graph 4 shows that the majority of the findings were that 32 (53.30%) of mothers had two children, 17 (28.30%) of mothers had one child, 7 (11.70%) of mothers had three children, and 4 (6.70%) of mothers had four or more children.



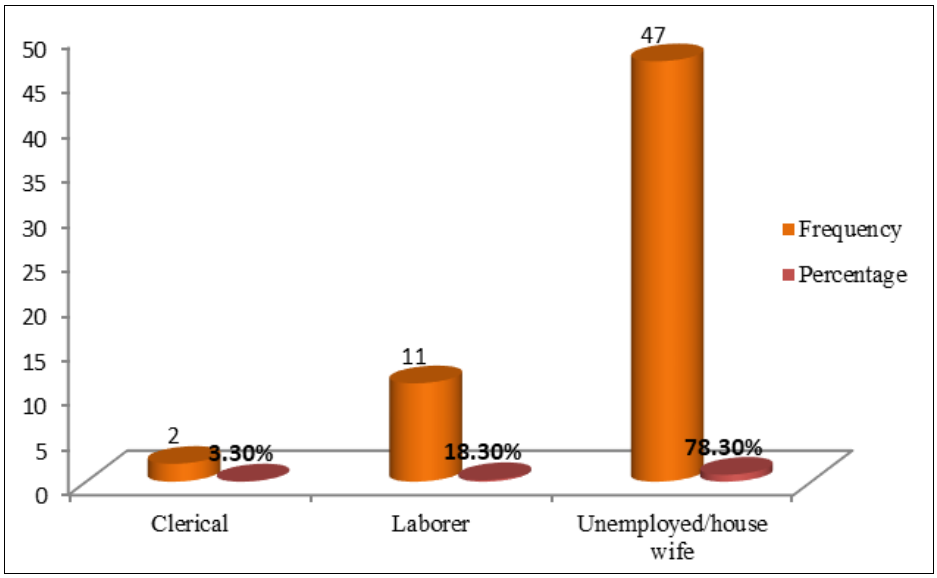
Graph 5: Distribution of respondents according to education.

Graph 5 shows that the majority of the findings were that 20 (33.30%) of mothers belonged to illiterate, 18 (30%) of mothers belonged to middle school, 12 (20%) of mothers belonged to S.S.L.C., and 10 (16.70%) of mothers belonged to above inter.

Table 2: Frequency and percentage distribution of mothers based on occupation, monthly income of the family, and food pattern. N=60

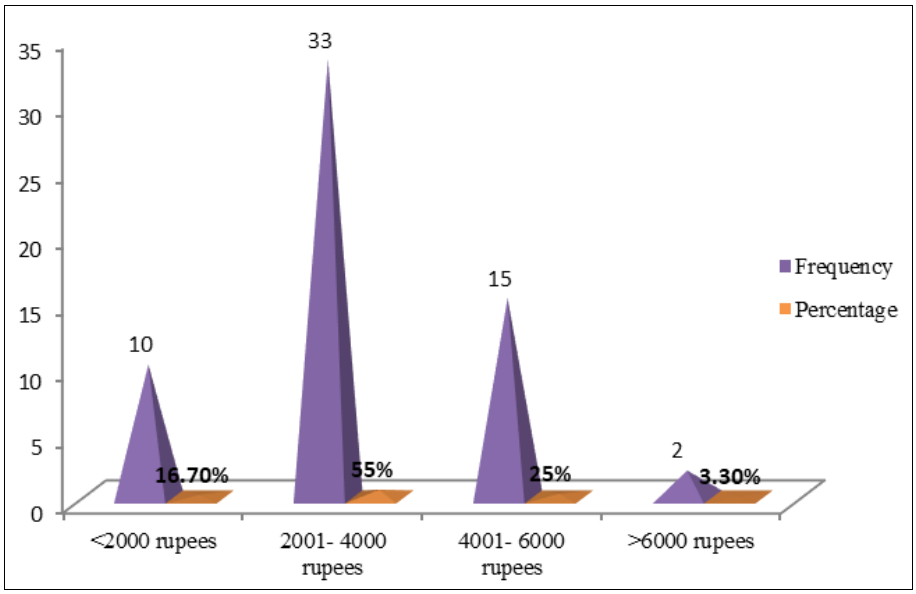
Variables	Frequency (f)	Percentage (%)
Occupation		
Clerical	2	3.3%
Laborer	11	18.3%
Unemployed/house wife	47	78.3%
Monthly Income		
< 2000 rupees	10	16.7%
2001-4000 rupees	33	55%
4001-6000 rupees	15	25%
> 6000 rupees	2	3.3%
Food Pattern		
Vegetarian	7	12.6%
Non-Vegetarian	52	86.7%
Mixed	1	1.7%

Data presented in table 2 shows the distribution of the sample according to occupation, monthly income of the family, and food pattern.



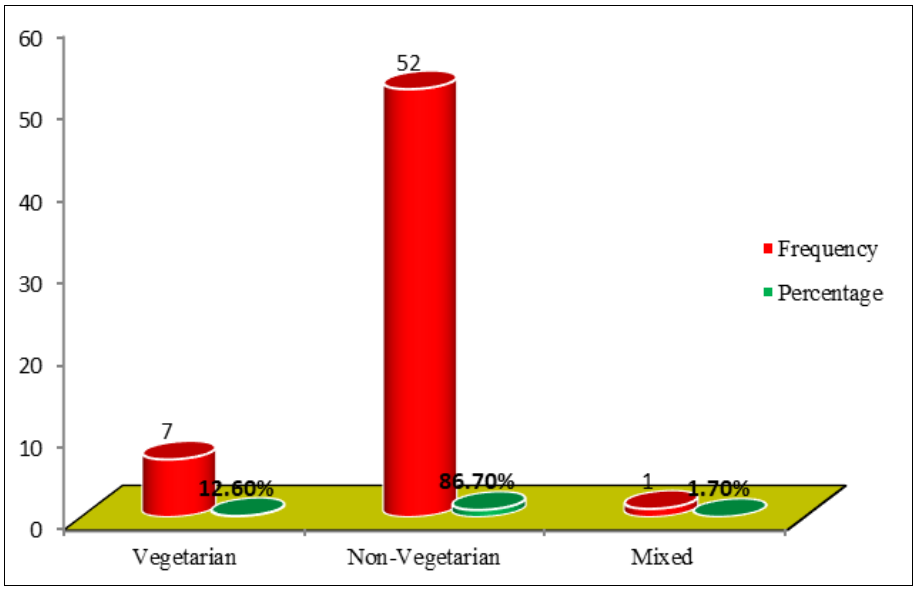
Graph 6: Distribution of respondents according to occupation.

Graph 6 shows that the majority of the findings were that 47 (78.30%) of mothers are unemployed or housewives, 11 (18.30%) of mothers are laborers, and 2 (3.30%) of mothers are clericals.



Graph 7: Distribution of respondents according to family income.

Graph 7 shows that the majority of the findings were that 33 (55%) of mothers had income between 2001 and 4000 rupees, 15 (25%) of mothers had income between 4001 and 6000 rupees, 10 (16.70%) of mothers had income of less than 2000 rupees, and 2 (3.30%) of mothers had income of more than 6000 rupees.



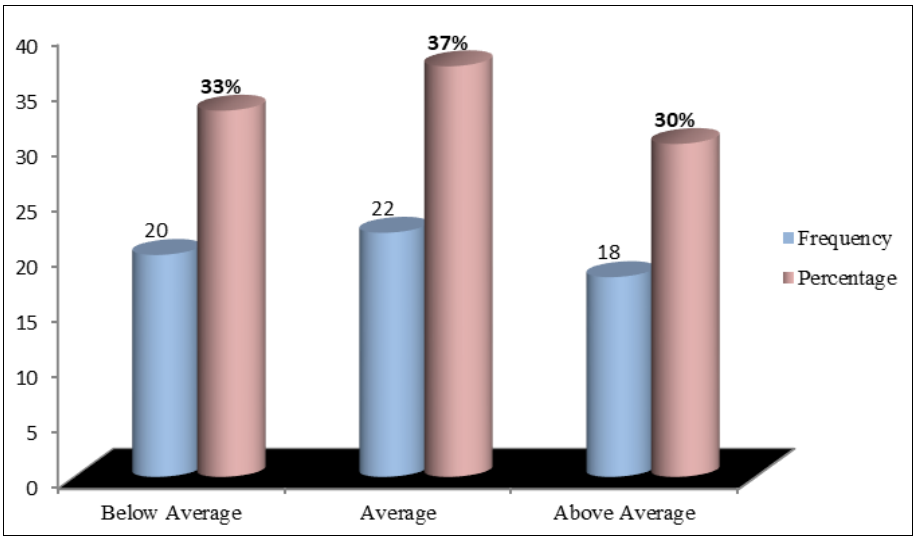
Graph 8: Distribution of respondents according to food pattern.

Graph 8 shows that the majority of the findings were that 52 (86.70%) of mothers belonged to a non-vegetarian food pattern, 7 (12.60%) of mothers belonged to a vegetarian food pattern, and 1 (1.70%) of mothers belonged to a mixed food pattern.

Section II: Knowledge of mothers of under-five children regarding malnutrition

Table 3: Frequency and percentage distribution of mothers based on their level of knowledge. N=60

Level of Knowledge	Frequency (F)	Percentage (%)
Below Average	20	33
Average	22	37
Above Average	18	30

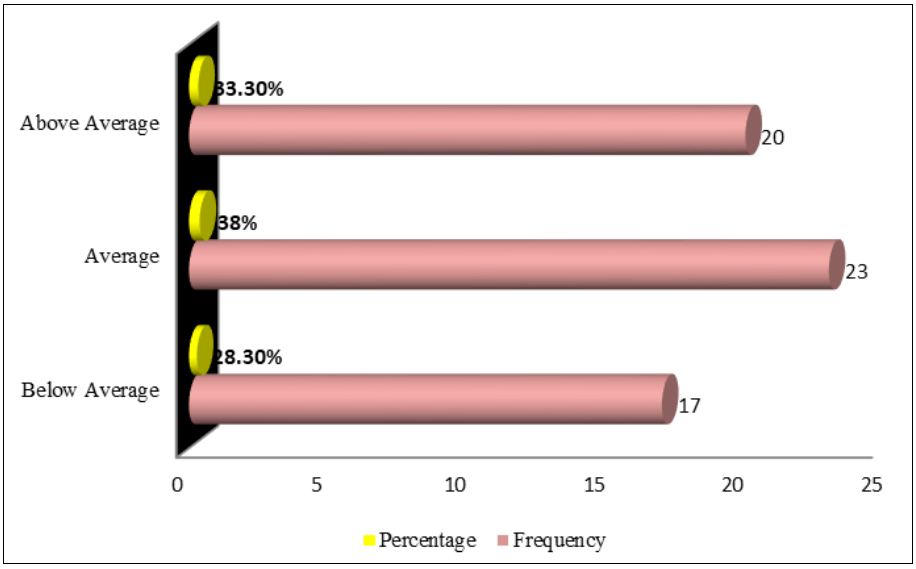


Graph 9: Distribution of respondents according to the level of knowledge.

Graph 9 shows that the majority of the findings were that 22 (37%) mothers had average knowledge regarding malnutrition among children under five, 20 (33%) of the mothers had below-average knowledge, and 18 (30%) had above-average knowledge.

Table 4: Percentage distribution of mothers' knowledge score in the area of meaning, importance, and sources of nutrients. N=60

Level of Knowledge	Frequency (f)	Percentage (%)
Below Average	23	38.3
Average	15	25
Above Average	22	36.6

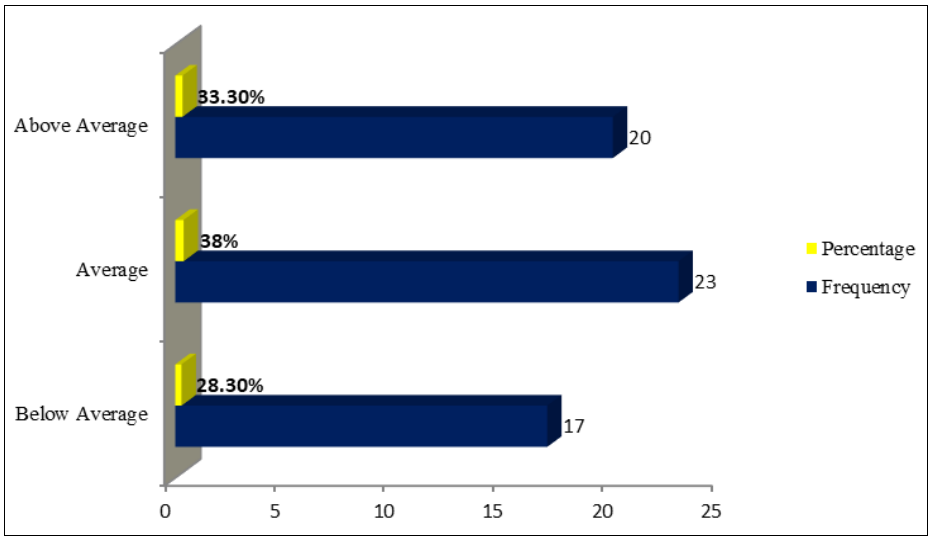


Graph 10: Distribution of mother's knowledge score in the area of meaning, importance, and sources of nutrients with percentage and frequency.

Graph 10 shows that the majority of the findings were that 23 (38.33%) of mothers had a below-average score, 22 (36.60%) of mothers had an above-average score, and 15 (25%) of mothers had an average score.

Table 5: Percentage distribution of mothers' knowledge score in the area of malnutrition causes, signs, and symptoms. N=60

Level of Knowledge	Frequency (f)	Percentage (%)
Below Average	17	28.3
Average	23	38.3
Above Average	20	33.3

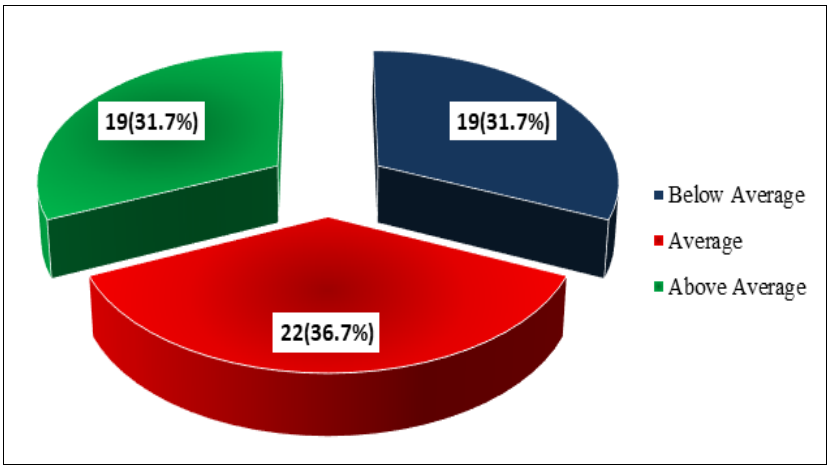


Graph 11: Percentage distribution of mothers' knowledge score in the area of malnutrition causes, signs, and symptoms with percentage and frequency

Graph 11 shows that the majority of the findings were that 23 (38%) of mothers had an average score, 20 (33.30%) of mothers had an above-average score, and 17 (28.30%) of mothers had a below-average score.

Table 6: Percentage distribution of mothers' knowledge score in the area of treatment, prevention, and control of malnutrition. N=60

Level of Knowledge	Frequency (f)	Percentage (%)
Below Average	19	31.7
Average	22	36.7
Above Average	19	31.7



Graph 12: Percentage distribution of mothers' knowledge score in the area of treatment, prevention, and control of malnutrition with frequency and percentage.

Graph 12 shows that the majority of the findings were that 22 (36.7%) of the mothers had an average knowledge of malnutrition among children under five, while 19 (31.7%) of the mothers had an above-average knowledge, and 19 (31.7%) of the mothers had a below-average knowledge score in the areas of meaning, importance, and source of nutrients.

Table 7 shows the association between knowledge score and demographic variables.

Association between knowledge score and age: The chi-square value of 8.055 between the knowledge score of the mothers regarding malnutrition among under-five children and the age of the mothers shows there is no significant association between them.

Association between knowledge score and demographic variables: The chi-square value of 11.687 between the knowledge score of the mothers regarding malnutrition among children under five and the religion of the mothers shows there is a moderately significant association between them.

Association between knowledge score and type of family: The chi-square value of 7.912 between the knowledge score of the mothers regarding malnutrition among children under five and the type of family of the mothers shows there is a moderately significant association between them.

Table 7: Association between the knowledge score and demographic variables, N=60

Demographic Variables	Level of knowledge			Mean	SD	Chi Square Value
Age (years)	**Below Average**	**Average**	**Above Average**			
19-24	10	6	5	48.34	23.27	$\chi 2$ Value=8.055
25-30	4	11	10	55.55	18.6	DF=6
31-36	5	3	5	51.23	26.78	P-Value=0.234
37-42	1	0	0	34.63	17.15	
Religion						
Hindu	12	17	17	54.43	20.56	$\chi 2$ Value=11.687
Muslim	6	2	0	30.26	13.09	DF=6
Christian	1	1	3	64.11	29.33	P-Value =0.069*
Any other	1	0	0	37.83	18.75	
Type of Family						$\chi 2$ Value=7.912
Nuclear	12	16	14	54.1	26.15	DF=4
Joint	8	4	6	50.45	21.28	P-Value=0.095*
Number of Children						
One	5	7	5	53.94	20.65	$\chi 2$ Value=5.551
Two	9	12	11	51.54	20.96	DF=8
Three	3	1	3	58.8	25.17	P-Value=0.475
Four and Above	3	0	1	31.66	28.02	
Education						
Above Inter	3	1	6	65.3	23.65	$\chi 2$ Value=29.033
S.S.L.C.	2	1	9	65.86	23.37	DF=8
Middle School	3	10	5	51.22	14.24	P-Value=0.175
Illiterate	12	8	0	36.48	10.72	
Occupation						
Clerical	0	0	2	90.9	6.92	$\chi 2$ Value=29.033
Laborer	6	3	2	38.77	22.5	DF=8
Unemployed/House wife	14	17	16	53.11	20.07	P-Value=0.175
Family Income						
Rs.<2000	6	2	2	36.99	18.83	$\chi 2$ Value=13.673
Rs.2001-4000	13	12	8	48.01	19.22	DF=6
Rs.4001-6000	1	6	8	65.23	20.56	P-Value=0.034
Rs.> 6000	0	0	2	85.81	5.49	
Food Pattern						
Vegetarian	0	3	3	69	14.14	$\chi 2$ Value=5.491
Non-Vegetarian	20	17	16	49.14	21.62	DF=4
Mixed	0	0	1	86.23	6.33	P-Value=0.241

Association between knowledge score and number of children: The chi-square value of 5.551 between the knowledge score of the mothers regarding malnutrition among under-five children and number of children shows there is no significant association between them.

Association between knowledge score and education: The chi-square value of 29.033 between the knowledge score of the mothers regarding malnutrition among under-five children and education of the mothers shows there is no significant relationship between them.

Association between knowledge score and occupation: The chi-square value of 6.662 between the knowledge score of the mothers regarding malnutrition among children under five and the occupation of the mothers shows there is no significant association between them.

Association between knowledge score and family income: The chi-square value of 13.673 between the knowledge score of the mothers regarding malnutrition among under-five children and the family income of the mothers shows there is no significant association between them.

Association between knowledge score and food pattern: The chi-square value of 5.491 between the knowledge score of the mothers regarding malnutrition among children under five and the food pattern of the mothers shows there is no significant association between them.

Discussion

The present study was undertaken to assess the knowledge of mothers regarding malnutrition among under-five children. The findings of the study were discussed under the following headings.

- **Section I:** Findings related to sociodemographic variables.
- **Section II:** Findings related to knowledge of mothers of children under five regarding malnutrition.
- **Section III:** Association between knowledge and the sociodemographic variables.

Section I: Findings related to sociodemographic variables

In the present study 60 mothers of children under five were selected for the study from Tertiary Care Hospital, Belagavi. Among the study groups, 33.3% of mothers were illiterate. & 66.7% were literate. Hence, the literacy level of the

mothers could have a profound influence on knowledge of malnutrition. Higher education betters the knowledge.
The similar study done at Dhaka, Bangladesh, by Islam MA, Rahman MM, *et al*. confirms the well-known association of lack of maternal education and breastfeeding related to severe malnutrition of their children.
The findings of the study by EI Nour and NM (1992), conducted on 50 mothers in the village of Shoubra Mant, revealed that mothers' level of education was found to be an important factor affecting knowledge and practice.

Section II: Findings related to knowledge of mothers of children under five regarding malnutrition
The findings of the present study revealed that, overall, regarding knowledge of malnutrition, 37% of the mothers had average knowledge, 33% of the mothers had below average knowledge, and 30% had above average knowledge of malnutrition.
The similar study clustered that the majority of findings revealed that overall knowledge regarding malnutrition. 38% of the mothers had average knowledge, 32% of the mothers had below average knowledge, and 30% had above average knowledge on malnutrition.

Section III: Association between knowledge score of mothers on malnutrition with selected sociodemographic variables
The present study shows a significant association between knowledge score and education of the mother (p-value 0.175). So there is no significant association between education and knowledge of mother. Family income and knowledge were also not significant (p-value 0.034). Hence, there is a close association between family income and knowledge score. There is a moderately significant association between knowledge and religion (p-value 0.069) and knowledge and type of family (p-value 0.095).
In the present study certain variables are not significantly associated with the knowledge, i.e., number of children (P=0.475), occupation (P-0.155) and food pattern (P-0.241).
In the similar study the above findings were supported by the following studies. Bhatt I.A., Shah G.N. A study conducted in an urban slum of the Srinagar district was assessed. A study revealed that a higher prevalence of malnutrition is associated with lower per capita income, higher birth order, and lower parental literacy. Hence, the lower the mother's literacy, the lower the knowledge of malnutrition, and the lower the per capita income, lower the knowledge of malnutrition.

Conclusion
The following conclusions were drawn on the basis of the present study is to assess the knowledge of mothers regarding malnutrition among under-five children admitted in the pediatric ward. Dr. Prabhakar Kore Charitable Hospital and Medical Research Centre, Belagavi. The study findings show that the majority of mothers' overall knowledge score was 37%; of the mothers, had average knowledge, 33% of the mothers had below average whereas 30% had above average knowledge on malnutrition. The need for improving the level of mother's knowledge was widely recognized.

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