

“A Study to Assess the of Knowledge on Essential Millets for Physical Growth Among Mother of School Going Children at Selected Area, Puducherry”.

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Abstract

Millets are nutrient-rich grains that play an important role in promoting physical growth and overall health in children. They are rich in vitamins, minerals, and dietary fiber, which help in improving immunity and preventing nutritional deficiencies. Several studies have highlighted the importance of millets in child nutrition and growth. The main objective of the study was to assess the knowledge on essential millets for physical growth among mothers of school-going children. A descriptive research design was adopted for the study. A total of 100 samples were selected using a convenience sampling technique. The mothers were assessed using demographic variables and a self-structured knowledge questionnaire. The study findings revealed that 45% of mothers had inadequate knowledge, 30% had moderate knowledge, and 25% had adequate knowledge. The study concludes that the majority of mothers had inadequate knowledge regarding essential millets, indicating the need for health education programs to improve awareness and promote child health.

Keywords: *Millets, Child Growth, Mothers' Knowledge, Descriptive Study, Convenience Sampling, Self-structured Questionnaire*

I. INTRODUCTION:

Essential millets about Mothers' poor knowledge especially regarding growth of the child and poverty may result in low growth for the entire growth period resulting in stunted stature. Among the low income mother studied, nutrition related anticipatory guidance was not consistently recalled. Pediatric health nurse is an effective agent to educate the community regarding various factors that influence the growth of toddlers. Since family is the first social environment for the infant and later for toddler, mother is an important primary health care provider and depending to the quality of this relation will evolve the adult. Poor knowledge of mothers regarding growth and development of a child may interfere with child's normal growth and development.

NEED FOR STUDY

Child malnutrition remains a major public health problem at national and global levels. Around 149 million children under five suffer from stunting and 45 million from wasting, with nearly 45% of child deaths linked to undernutrition. Most affected children live in Asia and Africa, where food insecurity and poor dietary diversity are common. In developing countries, more than 70% of energy intake depends on staple foods like rice, wheat, and maize, which lack essential micronutrients. Millets are traditional grains rich in protein, iron, calcium, zinc, and dietary fiber, making them highly beneficial for child growth and development. Studies have shown that millet-based diets significantly improve height, weight, and overall nutritional status compared to rice-based diets. Research conducted by ICRISAT and other organizations reported up to 50% higher growth in children consuming millet-based meals. In India and Tamil Nadu, millets such as ragi, bajra, and jowar are widely cultivated but underutilized in daily diets. In Puducherry, undernutrition among children remains a concern, highlighting the need for effective dietary interventions. Therefore, assessing mothers' knowledge regarding millets is essential, as they play a key role in child feeding practices. This study helps in identifying knowledge gaps and promotes the use of millets to improve child health and nutritional outcomes.

STATEMENT OF THE PROBLEM:

“A study to assess the knowledge on essential millets for physical growth among mother of school going children at selected rural area, Puducherry”.

OBJECTIVES:

1. To assess the level of knowledge on physical growth of school going children among mother in with their selected rural area.
2. To evaluate the level of knowledge regarding essential millets among mothers of school going children in a selected rural area.
3. To associate the level of knowledge on essential millets among mothers of school going children at with their selected demographic variables.

II. RESEARCH METHODOLOGY:

RESEARCH APPROACH:

Quantitative research approach was adopted forth is present study.

RESEARCH DESIGN:

Descriptive research design was adopted for this study.

SETTING OF THE STUDY

The study was conducted in Pondicherry.

POPULATION

The population of the study include the rural people who meet the inclusion Criteria.

SAMPLE

Rural people in Pondicherry.

SAMPLE SIZE

The sample size consist of 100samples.

SAMPLING TECHNIQUE

Purposive sampling technique was adopted for this study.

DESCRIPTION OF RESEARCH TOOL TECHNIQUE

SECTION A: DEMOGRAPHIC VARIABLES

Demographic variables such as age, religion, educational status, occupational status, monthly income, marital status, type of family.

SECTION B: QUESTIONNAIRES

Multiple choice questionnaires given to assess the knowledge on essential millet for physical growth among mothers of school going children rural population in Puducherry.

It consist of totally 30 questions .Each question carries one mark.

| SCORING | KNOWLEDGE LEVEL |
|---------|-----------------|
| 0 - 10 | Inadequate |
| 10-20 | Moderate |
| 20-30 | Adequate |

STUDY FINDINGS:

SECTION A: Description of the demographic variables of mother at selected rural area Puducherry

SECTION B: Assessment of the level of knowledge on essential millets for physical growth of school going children among mother

SECTION C: Association of the knowledge on essential millets for physical growth of school going children among mother with selected demographic variables

SECTION A: Description of the demographic variables of mother at selected rural area Puducherry

TABLE 1: Frequency and percentage wise distribution of demographic variables of mother at selected rural area Puducherry. N=100

| S.No | Demographic Variables | Number of Frequency | Percentage (%) |
|------|-----------------------|---------------------|----------------|
| 1 | Age in years | | |
| | a) 25- 30 years | 56 | 56 |
| | b) 35 – 40 years | 34 | 34 |
| | c) 40- 45 years | 10 | 10 |
| 2. | Religion | | |
| | a) Hindu | 51 | 51 |

| | | | |
|----|---------------------------|----|----|
| | b) Muslim | 21 | 21 |
| | c) Christian | 28 | 28 |
| | d) Others | | |
| 3. | Educational status | | |
| | a) Primary Education | 10 | 2 |
| | b) Secondary Education | 65 | 90 |
| | c) Diploma | 15 | 7 |
| | d) Graduate | 10 | 1 |

The above table presents a frequency and percentage-wise distribution of demographic variables of mothers. The age distribution shows that the majority of the mothers (56%) were between 25-30 years of age, followed by 34% who were aged between 35-40 years, and 10% were aged between 40-45 years. In terms of religion, 21% identified as Muslim, followed by 28% who were Christian, and 51% who were Hindu. No respondents identified with other religions. Regarding educational status, a large proportion 65% of the mothers had completed secondary education, while 15% had a diploma, 10% had received primary education, and only 10% were graduates.

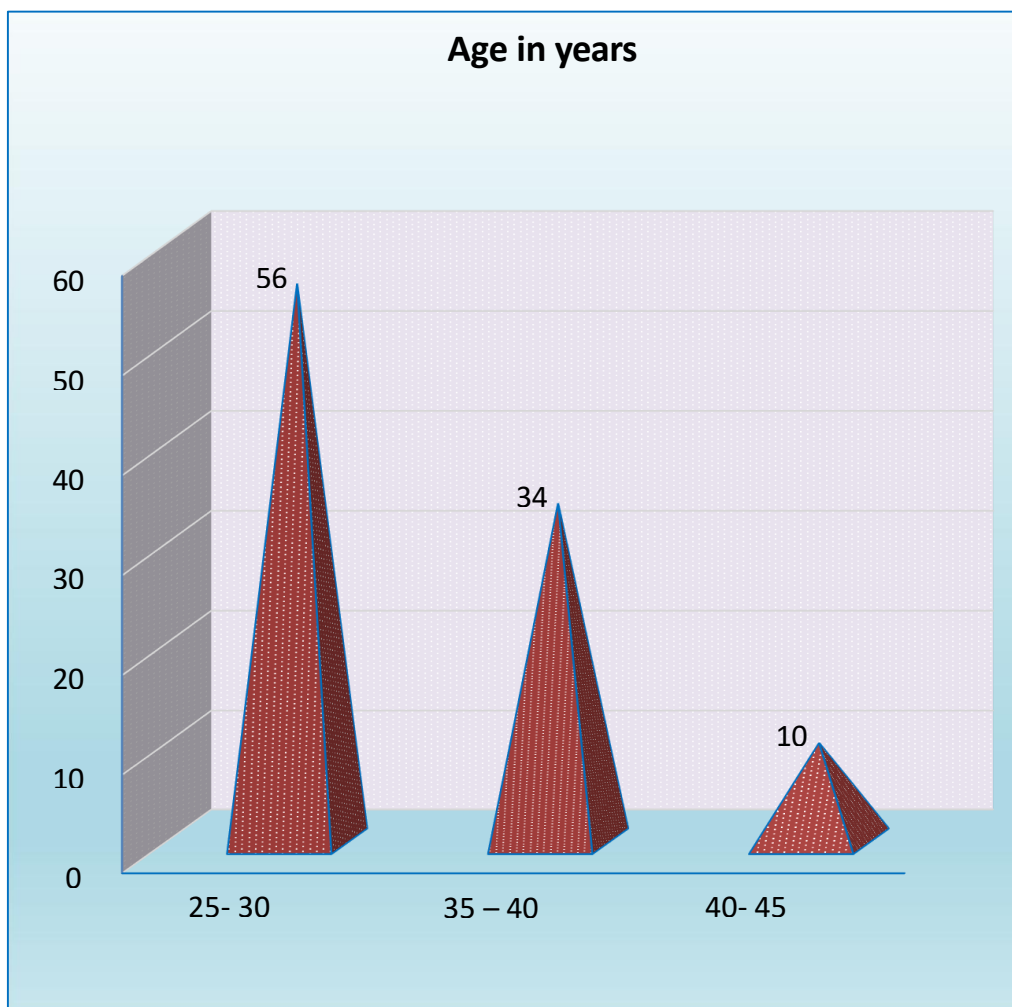


Figure 1: Pyramid diagram representing the percentage wise distribution of mothers according to age in Years

The age distribution shows that the majority of the mothers (56%) were between 25-30 years of age, followed by 34% who were aged between 35-40 years, and 10% were aged between 40-45 years.

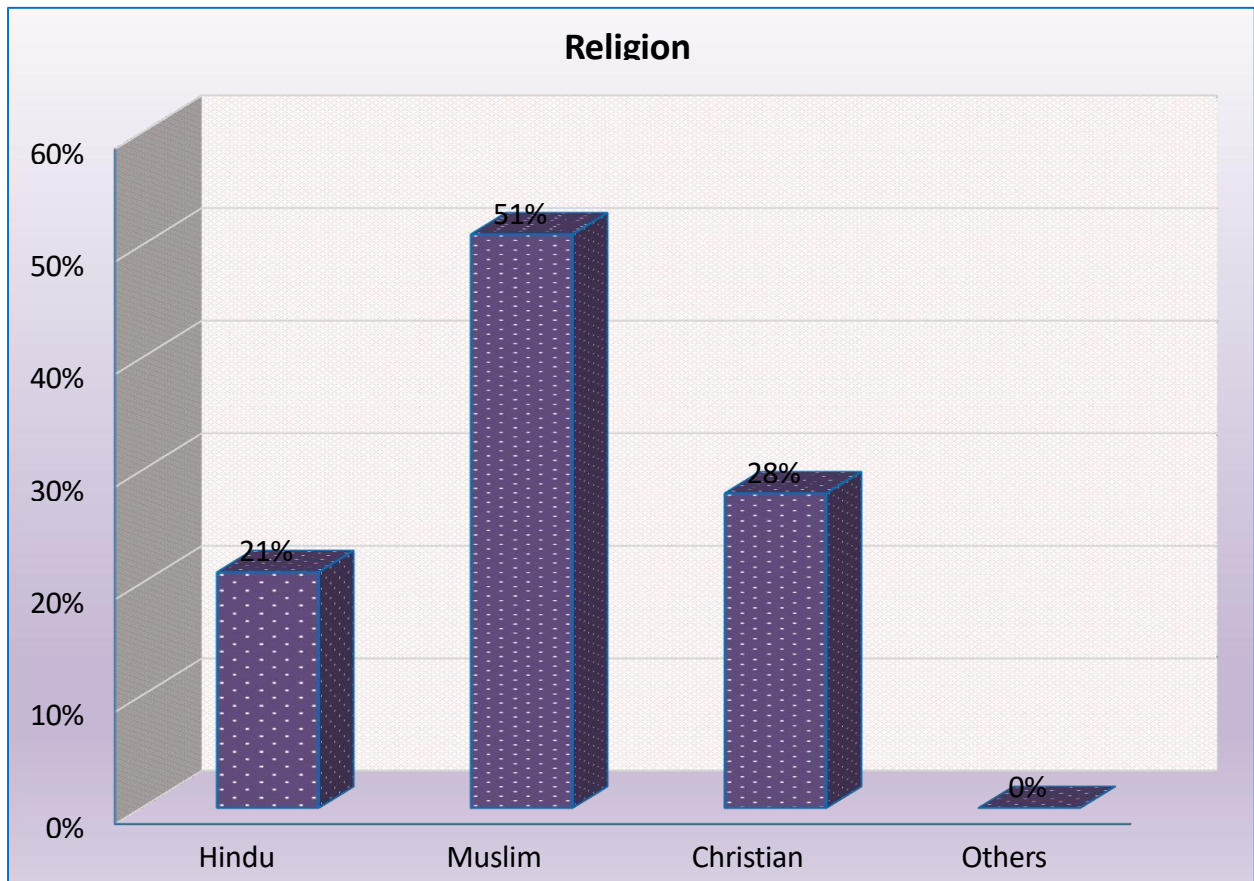


Figure 2: Bar diagram representing the percentage wise distribution of mothers according to religion

In terms of religion, 21% identified as Muslim, followed by 28% who were Christian, and 51% who were Hindu. No respondents identified with other religions.

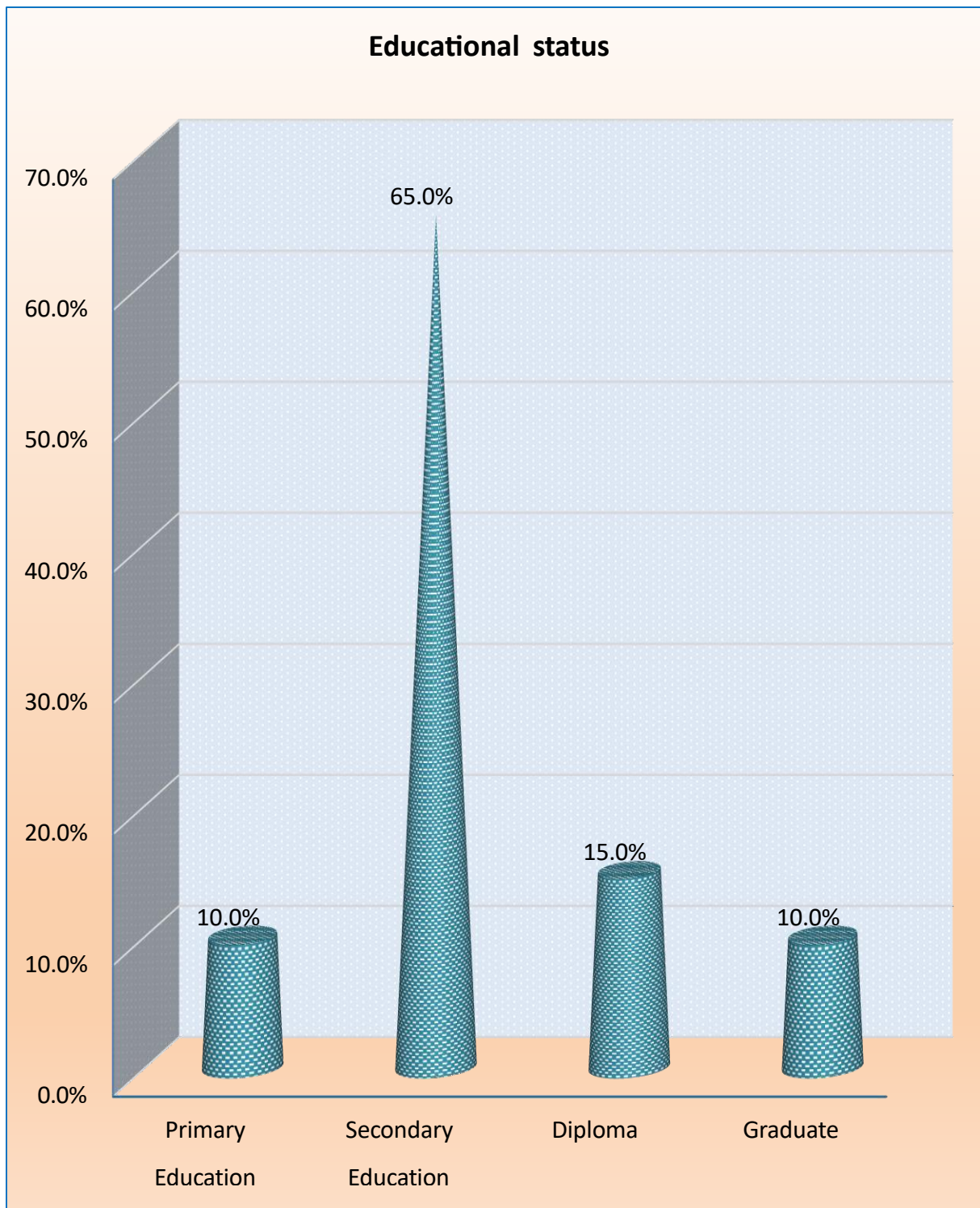


Figure 3: Cone diagram representing the percentage wise distribution of mothers according to educational status

Regarding educational status, a large proportion 65% of the mothers had completed secondary education, while 15% had a diploma, 10% had received primary education, and only 10% were graduates.

| S.No | Demographic Variables | Number of Frequency | Percentage (%) |
|------|-------------------------------------|---------------------|----------------|
| 1. | Marital status | | |
| | a) Married | 49 | 49 |
| | b) Widow | 20 | 20 |
| | c) Separated | 31 | 31 |
| 2. | Occupation | | |
| | a) Farmer | 53 | 53 |
| | b) Coolie | 42 | 42 |
| | c) Business | 4 | 4 |
| | d) Unemployed | 1 | 1 |
| 3. | Monthly income per month | | |
| | a) less than ₹ 10,000/ per month | 71 | 71 |
| | b) ₹20,000 /per month | 28 | 28 |
| | c) Above ₹20,000 per month | 1 | 1 |

In terms of marital status, 31% of the respondents were married and 31% were separated. Additionally, 20% of the mothers were widowed, and 18% were unmarried. The occupational status shows that a significant number (53%) of respondents were engaged in farming, followed by 42% working as coolies (laborers), 4% involved in business, and 1% were unemployed.

The data on monthly income revealed that 71% of the households had an income of less than ₹10,000 per month, while 28% had an income of ₹20,000 per month, and only 1% had an income exceeding ₹20,000 per month.

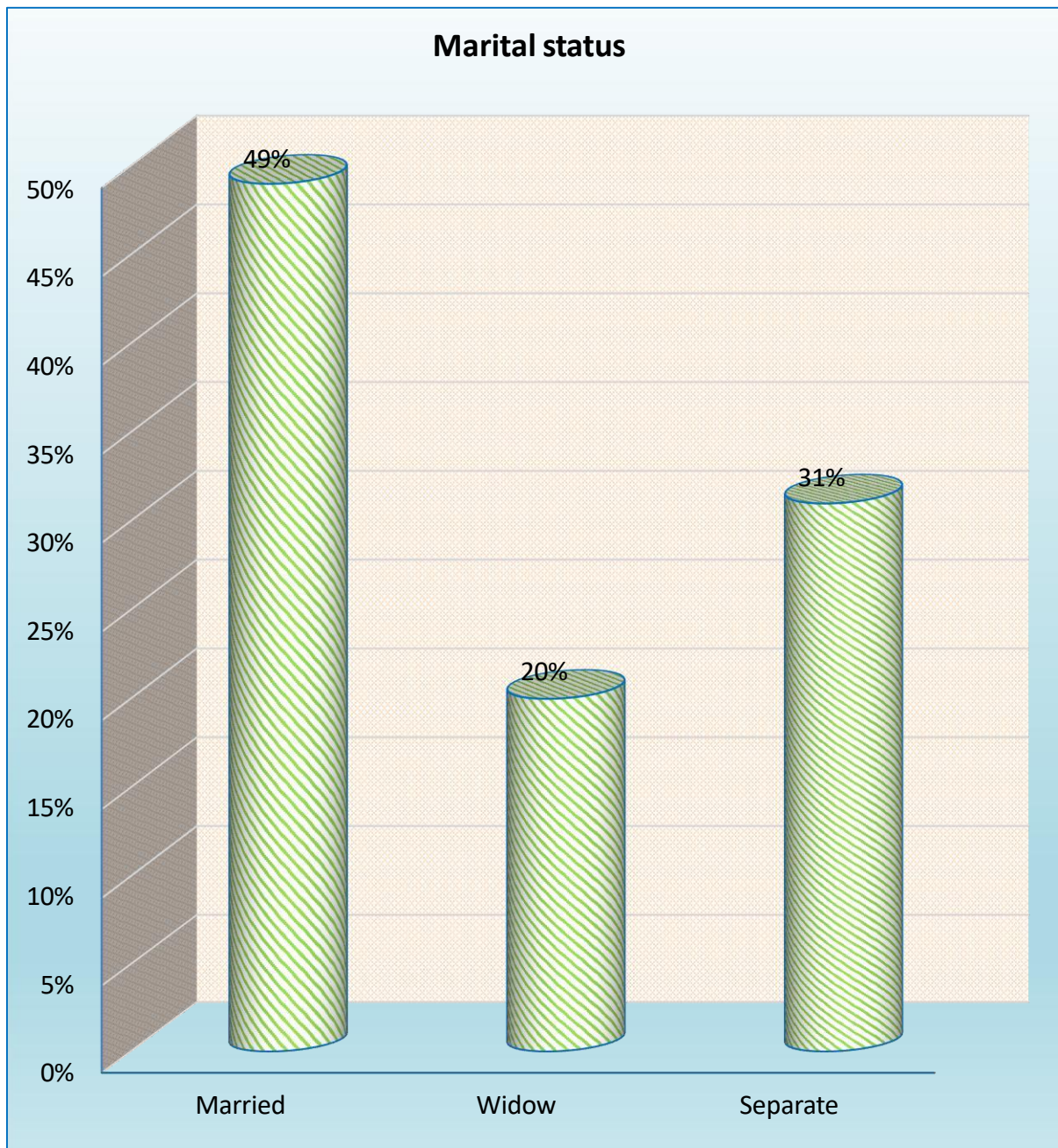


Figure 4: Cylinder diagram representing the percentage wise distribution of mothers according to marital status

In terms of marital status, 31% of the respondents were married and 31% were separated. Additionally, 20% of the mothers were widowed, and 18% were unmarried.

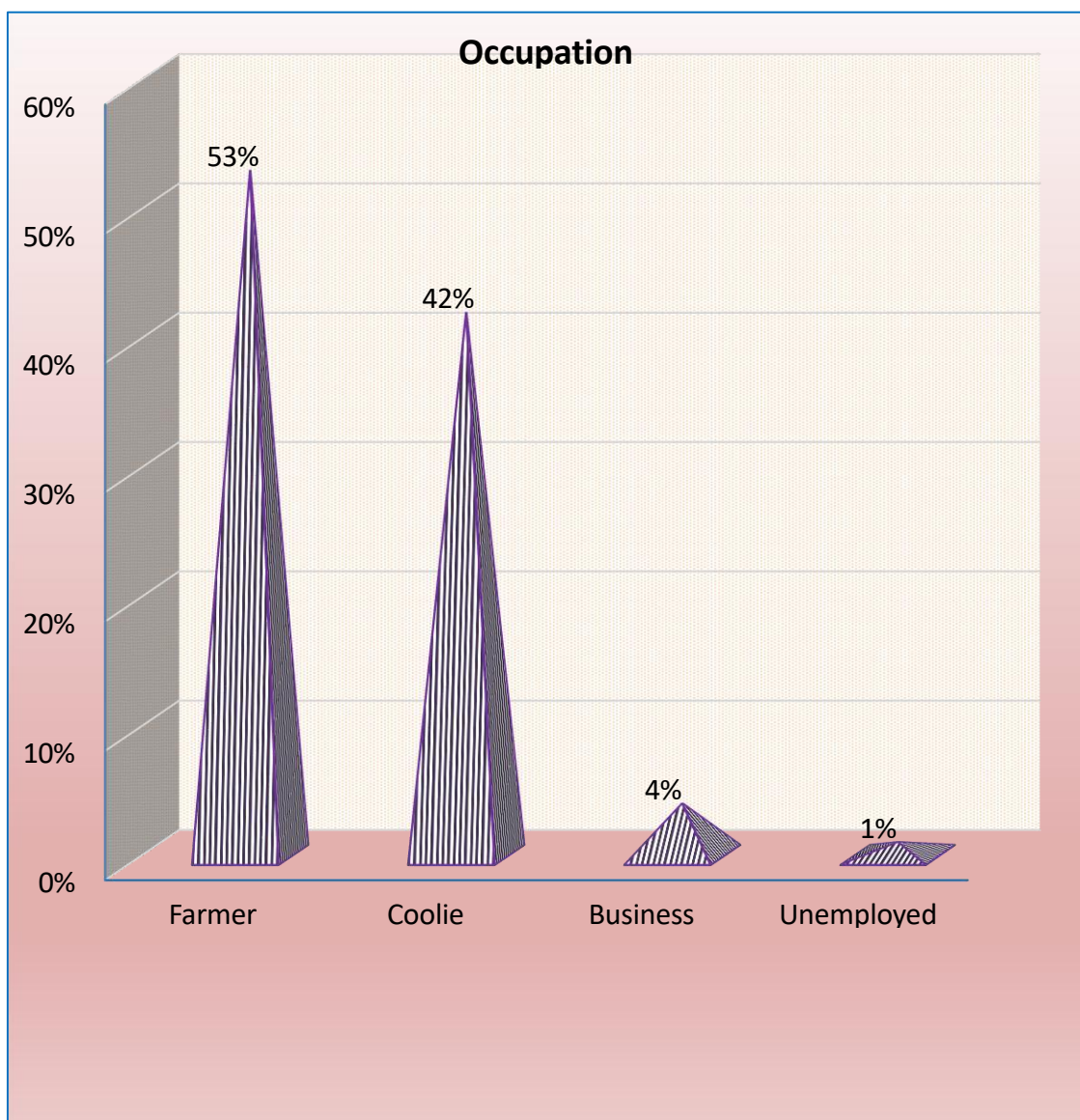


Figure 5: Pyramid diagram representing the percentage wise distribution of mothers according to occupation

The occupational status shows that a significant number (53%) of respondents were engaged in farming, followed by 42% working as coolies (laborers), 4% involved in business, and 1% were unemployed.

| S.No | Demographic Variables | Number of Frequency | Percentage (%) |
|------|-----------------------------------|---------------------|----------------|
| 1. | Type of family | | |
| | a) Nuclear | 81 | 81 |
| | b) Joint | 12 | 12 |
| | c) Extended family | 7 | 7 |
| 2. | Type of house | | |
| | a) Concrete | 31 | 31 |
| | b) Roof type | 46 | 46 |
| | c) Touched | 23 | 23 |
| 3. | No of people live in house | | |
| | a) Upto 3 | 92 | 92 |
| | b) 5 | 6 | 6 |

| | | | |
|----|--|----|----|
| | c) 7 | 2 | 2 |
| | d) Above 9 | 0 | 0 |
| 4. | Have you heard about small grains | | |
| | a) Yes | 93 | 93 |
| | b) No | 7 | 7 |

Most of the mothers (81%) were living in nuclear families, 12% in joint families, and 7% in extended families. Regarding housing type, 46% of the respondents lived in houses with a roof-type structure, 31% in concrete houses, and 23% in thatched houses.

The majority of households (92%) had up to three people living in the house, followed by 6% with four people, and 2% with five people. No households reported having more than six members. Finally, 93% of the respondents reported being aware of small grains, while 7% were not aware.

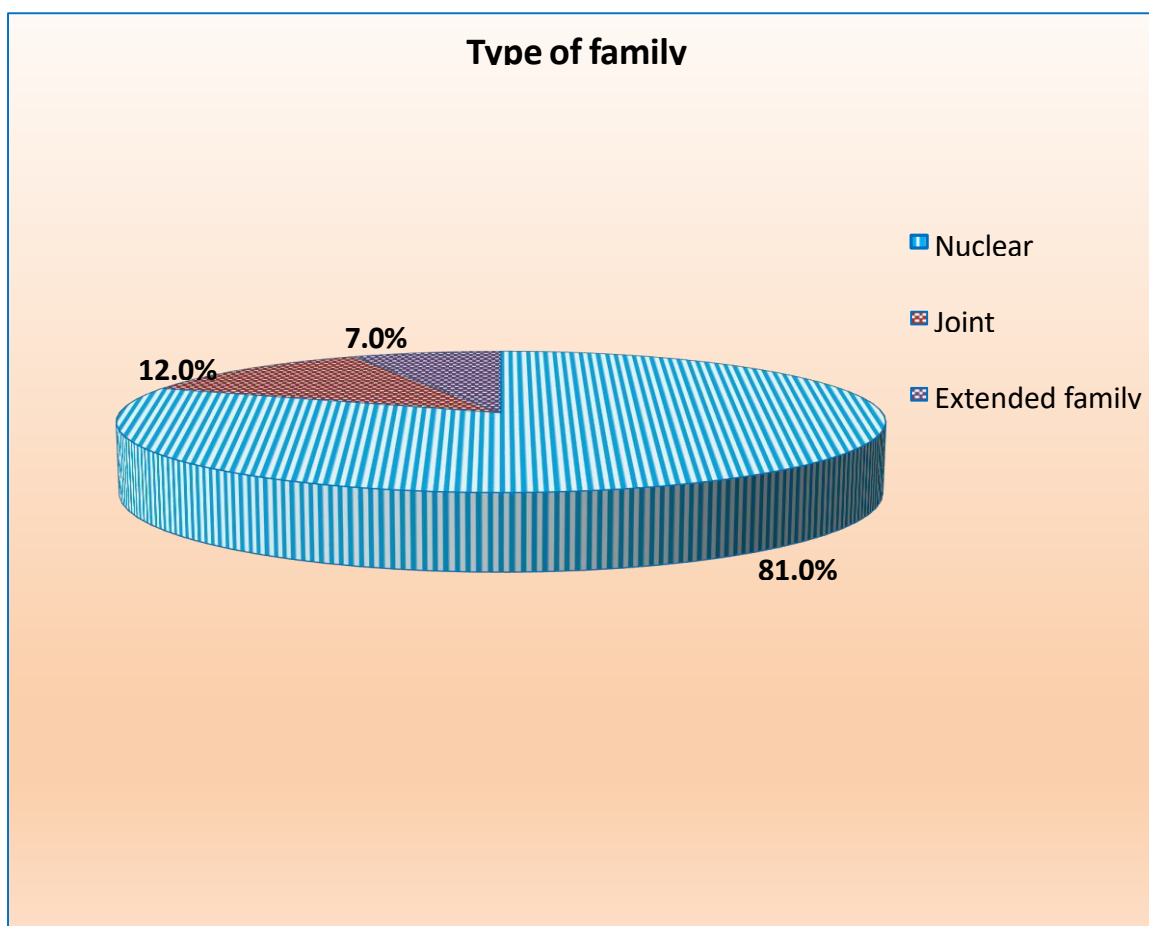


Figure 6 : Pie diagram representing the percentage wise distribution of mothers according to type of family

Most of the mothers (81%) were living in nuclear families, 12% in joint families, and 7% in extended families.

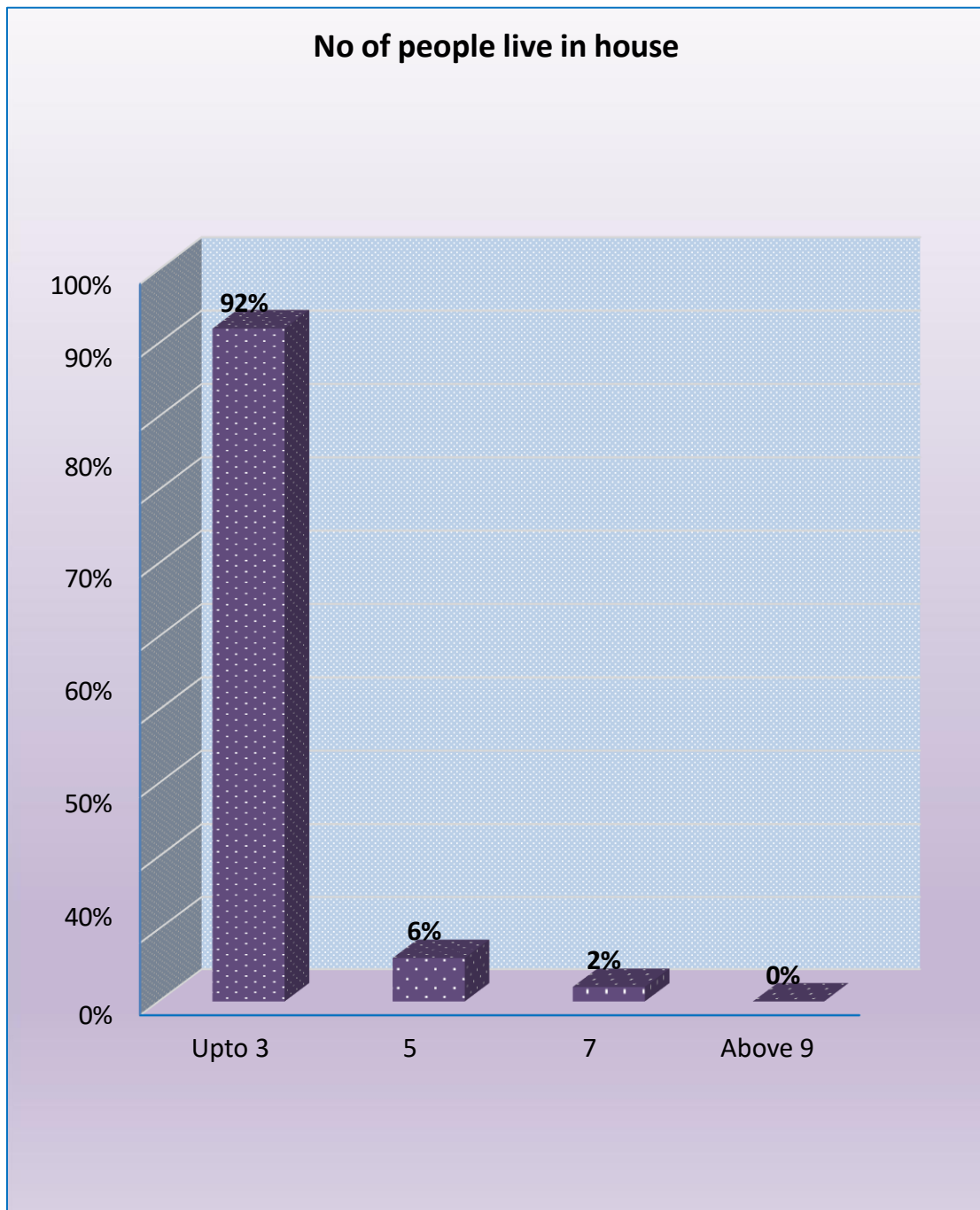


Figure 7: Bar diagram representing the percentage wise distribution of mothers according to No of people live in home

The majority of households (92%) had up to three people living in the house, followed by 6% with four people, and 2% with five people. No households reported having more than six members.

SECTION B: Assessment of the level of knowledge on essential millets for physical growth of school going children among mother

Table 2: Frequency and distribution of the level of knowledge on essential millets for physical growth of school going children among mother. N=100

| S.NO | Level of Knowledge | Frequency | Percentage |
|------|--------------------|-----------|------------|
| 1 | Inadequate | 45 | 45% |
| 2 | Moderate | 30 | 30% |

| | | | |
|---|----------|----|-----|
| 3 | Adequate | 25 | 25% |
|---|----------|----|-----|

The above table shows the distribution of the level of knowledge among mothers regarding essential millets for the physical growth of school going children. The data indicates that 45% of the mothers have inadequate knowledge, 30% have a moderate level of knowledge, and no mothers 25% possess adequate knowledge on this topic.

SECTION C: Association of the level of knowledge on essential millets for physical growth of school going children among mother with selected demographic variables

Table 3: Association of the level of knowledge on essential millets for physical growth of school going children among mother with selected demographic variables. N=100

| S.No | Demographic Variables | Level of Knowledge | | | | | | X ² Value |
|------|----------------------------------|--------------------|----|----------|----|----------|----|--|
| | | Inadequate | | Moderate | | Adequate | | |
| | | N | % | N | % | N | % | |
| 1 | Age in years | | | | | | | X ² = 7.267 Df=2 P=0.026* (S) |
| | a) 25- 30 years | 20 | 20 | 10 | 10 | 8 | 8 | |
| | b) 35 – 40 years | 12 | 12 | 14 | 14 | 12 | 12 | |
| | c) 40- 45 years | 13 | 13 | 6 | 6 | 5 | 5 | |
| 2. | Religion | | | | | | | X ² = 8.837 Df=2 P=0.012* (S) |
| | a) Hindu | 29 | 29 | 12 | 12 | 2 | 2 | |
| | b) Muslim | 11 | 11 | 10 | 10 | 20 | 20 | |
| | c) Christian | 5 | 5 | 8 | 8 | 3 | 3 | |
| | d) Others | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | Educational status | | | | | | | X ² = 6.777 Df=3 P= 0.079 (NS) |
| | a) Primary Education | 0 | 0 | 2 | 2 | 0 | 0 | |
| | Secondary Education | 21 | 21 | 11 | 11 | 14 | 14 | |
| | c) Diploma | 15 | 15 | 9 | 9 | 5 | 5 | |
| | d) Graduate | 19 | 19 | 10 | 10 | 6 | 6 | |
| 4 | Marital status | | | | | | | X ² = 1.472 Df=3 P= 0.689 (NS) |
| | a) Married | 25 | 25 | 14 | 14 | 15 | 15 | |
| | b) Widow | 15 | 15 | 11 | 11 | 7 | 7 | |
| | c) Separated | 5 | 5 | 5 | 5 | 3 | 3 | |
| 5 | Occupation | | | | | | | X ² = 4.927 Df=3 P= 0.177 (NS) |
| | a) Farmer | 18 | 18 | 12 | 12 | 5 | 5 | |
| | b) Coolie | 12 | 12 | 10 | 10 | 8 | 8 | |
| | c) Business | 10 | 10 | 5 | 5 | 12 | 12 | |
| | d) Unemployed | 5 | 5 | 3 | 3 | 0 | 0 | |
| 6 | Monthly income per month | | | | | | | X ² = 0.566 Df=2 P= 0.753 (NS) |
| | a) less than ₹ 10,000/ per month | 24 | 24 | 17 | 17 | 5 | 5 | |
| | b) ₹20,000 /per month | 11 | 11 | 10 | 10 | 12 | 12 | |
| | c) Above ₹20,000 per month | 10 | 10 | 3 | 3 | 8 | 8 | |
| 7 | Type of family | | | | | | | X ² = 4.997 Df=2 P= 0.082 (NS) |
| | a) Nuclear | 25 | 25 | 5 | 5 | 0 | 0 | |
| | b) Joint | 15 | 15 | 15 | 15 | 0 | 0 | |
| | c) Extended family | 5 | 5 | 10 | 10 | 0 | 0 | |

| | | | | | | | | |
|------------|--|----|----|----|----|----|----|---|
| 8 | Type of house | | | | | | | X ² = 0.4.358 Df=3 P= 0.225 (NS) |
| | a) Concrete | 18 | 18 | 12 | 12 | 12 | 12 | |
| | b) Roof type | 12 | 12 | 10 | 10 | 8 | 8 | |
| | c) Touched | 15 | 15 | 8 | 8 | 5 | 5 | |
| 9 | No of people live in house | | | | | | | X ² = 0.6.280 Df=2 P= 0.043* (S) |
| | a) Upto 3 | 25 | 25 | 22 | 22 | 12 | 12 | |
| | b) 5 | 15 | 15 | 8 | 8 | 12 | 12 | |
| | c) 7 | 5 | 5 | 5 | 5 | 1 | 1 | |
| | d) Above 9 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10. | Have you heard about small grains | | | | | | | X ² = 3.226 Df=2 P= 0.199 (NS) |
| | a) Yes | 40 | 40 | 20 | 20 | 20 | 20 | |
| | b) No | 5 | 5 | 10 | 10 | 5 | 5 | |

***p<0.05 - Significant; p<0.01 - Highly Significant**

The above table shows that there is a significant association of age, religion, number of people live in house with the level of knowledge on essential millets for physical growth of school going children among mother. There is no significance association of educational status, marital status, occupation, monthly income per month, type of family, type of house, No. of people live in house and have you heard about small grains with the level of knowledge on essential millets for physical growth of school going children among mother.

III. SUMMARY

This study was conducted to assess and the knowledge on essential millets for physical growth among mothers of school going children at selected rural area Puducherry. The study was descriptive research design. A total of 100 samples from rural population, who met the inclusion criteria was selected from Puducherry by using purposive sampling technique. The researcher first introduced herself to the village people and developed a rapport communication with them. After the selection of samples the data was collected with the prepared tools.

IV. CONCLUSION

The findings of this study underscore the importance of targeted public health interventions to improve knowledge on essential millets for physical growth among mothers of school going children. The rural population showed better outcomes in terms of knowledge related to essential millets for physical growth. Likely due to greater access to health information and resources. This disparity highlights the need for tailored strategies that account for the specific challenges faced by rural communities. The rural populations showed a generally positive attitude toward essential millets among mothers. But there is room for improvement in translating knowledge, especially in rural areas where infrastructure and health literacy may be limited.

NURSING IMPLICATION

The study has implications on nursing practice, nursing education, nursing research and nursing administration.

NURSING PRACTICE

- This study emphasis in improving the knowledge on essential millets for physical growth among mothers of school going children.
- Least knowledge regarding the knowledge on essential millets for physical growth of school going children among mothers.
- Questionnaires will help the client to increase the knowledge on essential millets.
- The nurses must have active participation in health programs to help and achieve the goals of health service.

NURSING EDUCATION

- Nurse educator should emphasize more on preparing the peoples for health information regarding essential millets for physical growth.
- The study has clearly proved that the questionnaires was helpful in identifying the level knowledge among rural population
- To practice this, nursing personnel needs to be equipped with adequate knowledge and practice regarding the questionnaires.

- The curriculum of nursing education should enable the student nurse to equip themselves within the knowledge on essential millets for physical growth.

NURSING ADMINISTRATION

- Nurse as an administrator should take limitation in formulating policies and protocols for health teaching.
- The nursing administration should motivate the subordinate for participating in various educational programs and improve their knowledge and skills.
- The administrator serves as a reserve’s person for young nursing students, parents and peoples for proving guidance and counseling regarding essential millets for physical growth.

NURSING RESEARCH

- There is a good scope for nurse to conduct research in this area, to find out the effectiveness of various teaching strategy to educate people.
- The research study can be made by further implication of the study.
- Can be used for evidence based nursing practice as a rising trend.

RECOMMENDATIONS

- The study can be implemented at various states of India.
- The same study can be created with large samples.
- The same study can be conducted in different settings
- The study can be conducted to assess the knowledge among mothers of school going children.
- The study can be done by using other research methods
- The study will be done as a longitudinal study.

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