

A Descriptive Study to Assess the Knowledge Regarding Complementary Feeding in Children among the Mothers in Selected Rural Area of District Etawah, U.P.

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ABSTRACT

Complementary feeding is defined as the process of introducing solid or semi-solid foods and liquids alongside breast milk when breast milk alone is no longer sufficient to meet the infant's nutritional requirements, typically beginning around six months of age. Globally and nationally, appropriate complementary feeding is crucial for optimal physical growth, cognitive development, and the prevention of childhood malnutrition. Despite established international and national guidelines, significant gaps persist in maternal knowledge and practices in rural India, contributing markedly to high prevalences of stunting, wasting, and underweight. This descriptive study was undertaken to assess the knowledge regarding complementary feeding among mothers of children aged 6 to 24 months in the selected rural area of Nagla Subhan, Saifai, Etawah, Uttar Pradesh. A quantitative research approach and a descriptive research design were adopted for the study. A convenient sampling technique was employed to select 60 mothers meeting the inclusion criteria. Data collection was executed using a structured knowledge questionnaire divided into Section A (Demographic variables) and Section B (Knowledge-based questions regarding complementary feeding). The findings revealed that out of 60 mothers, 25 (41.66%) possessed good knowledge, 24 (40%) had average knowledge, and 11 (18.33%) had poor knowledge regarding complementary feeding. The overall mean knowledge score was 12.133 with a median of 13 and a standard deviation of 4.08 (range score: 16). Chi-square test analysis indicated no statistically significant association between knowledge levels and selected demographic variables such as maternal age, education, occupation, family income, religion, and family type ($p > 0.05$), with the exception of the number of children, where mothers with multiple children demonstrated significantly higher knowledge scores ($p < 0.05$). The study concludes that while rural mothers possess moderate to good baseline awareness, structured educational programs and regular community health nursing interventions are vital to bridge existing gaps in dietary diversity, food consistency, and hygiene practices.

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KEYWORDS: Complementary feeding, Maternal knowledge, Infant and young child feeding (IYCF), Rural area, Malnutrition, Descriptive study, Nursing education.

INTRODUCTION

"If we nurture the dreams of the children, the world's will be blessed. If we destroy them, the world will be doomed." - Wess Stafford. Complementary feeding is a critical phase in infant and young child nutrition,

representing the transition from exclusive breastfeeding to family foods. This transition typically commences at completed six months of age, when maternal iron stores from birth begin to deplete

and the infant's physiological demand for energy and micronutrients surpasses what breast milk alone can supply. According to World Health Organization (WHO) and UNICEF guidelines, complementary foods must be timely, adequate, safe, and properly fed. Timely introduction means that all infants should start receiving semisolid foods alongside breast milk at six months of age. Adequate means that the food provides sufficient energy, protein, and micronutrients to meet a growing child's nutritional needs. Safe implies that foods are prepared and stored under hygienic conditions, using clean hands and utensils, while avoiding feeding bottles to minimize gastrointestinal infection risks. Proper feeding involves practicing responsive feeding and offering a diverse variety of foods from different food groups.

Globally, improper infant and young child feeding (IYCF) practices contribute to approximately 45% of all child deaths under five years of age, frequently culminating in malnutrition-related morbidities such as stunting, wasting, underweight, and nutritional anemia. At the national level in India, the National Family Health Survey (NFHS-5) reports alarming statistics: approximately 35.5% of children under five are stunted, 19.3% are wasted, and 32.1% are underweight. In rural settings, such as the Etawah district of Uttar Pradesh, traditional cultural beliefs, familial pressure from elderly household members, and lack of formal maternal education frequently hinder optimal feeding practices. Early initiation of watery broths or delayed introduction of solid foods remains widespread. Therefore, conducting structured descriptive studies to evaluate maternal knowledge is imperative for designing targeted community nursing interventions and strengthening national initiatives such as the Integrated Child Development Services (ICDS) and Poshan Abhiyaan.

NEED FOR THE STUDY:-

At the International Level: Complementary feeding is a cornerstone of global child health improvement and the achievement of Sustainable Development Goals (SDGs) related to zero hunger and child survival. International epidemiological studies consistently demonstrate that nutritional deficiencies during the first 1,000 days of life lead to irreversible cognitive deficits, diminished immune competence, and reduced work productivity in adulthood.

At the National Level: India bears a disproportionate burden of childhood undernutrition. National Family Health Survey reports highlight persistent malnutrition across states. Assessing maternal knowledge supports national programs like Poshan Abhiyaan and the National Nutrition Mission by

identifying grassroots gaps in maternal awareness regarding dietary diversity and feeding frequency.

At the Rural Level: In rural India, poverty, food insecurity, and deeply ingrained cultural myths override scientific recommendations. Rural mothers often rely on diluted cereal water or delay solid food introduction. This study is urgently needed in rural areas like Nagla Subhan, Saifai, Etawah, to equip Anganwadi workers, ASHA workers, and community health nurses with empirical data to deliver targeted nutrition education.

STATEMENT OF THE PROBLEM AND OBJECTIVES:-

Problem Statement:

"A descriptive study to assess the knowledge regarding complementary feeding in children among the mothers in selected rural area of district, Etawah."

OBJECTIVES OF THE STUDY:

1. To assess the knowledge of mothers regarding complementary feeding for children aged 6 to 24 months in the selected rural area of district Etawah.
2. To find the association between the knowledge regarding complementary feeding in children and selected demographic variables.

RESEARCH METHODOLOGY:-

- Research Approach: A quantitative research approach was adopted to investigate the research problem systematically.
- Research Design: A descriptive research design was selected as the most appropriate strategy to observe, describe, and document aspects of a phenomenon without manipulation.
- Setting of the Study: The study was conducted in the rural community of Nagla Subhan, Saifai, Etawah, Uttar Pradesh.
- Target Population: Mothers of children aged 6 to 24 months residing in the selected rural area.
- Sample Size: 60 mothers fulfilling the inclusion criteria.
- Sampling Technique: Convenient sampling technique was used to select representative subjects.

Inclusion Criteria:

- Permanent residents of the selected rural area.
- Mothers having children in the age group of 6 to 24 months.
- Mothers willing to participate in the study.

Exclusion Criteria:

- Mothers unwilling to participate.

- Mothers failing to provide complete data.
- Mothers who are healthcare professionals.

DESCRIPTION OF THE TOOL

The data collection instrument comprised two distinct sections:

Section A: Structured questionnaire for assessing demographic variables (age, education, occupation, monthly family income, family type, religion, number of children, age of youngest child, birth order, source of information, and area of residence).

Section B: Self-structured knowledge questionnaire consisting of 20 multiple-choice items regarding complementary feeding definitions, timing, consistency, frequency, food groups, and hygiene.

VALIDITY AND RELIABILITY

Content validity was established by submitting the tool to experts in nursing faculty. Reliability was calculated using the Kuder-Richardson method,

yielding an 'r' value of 0.714, establishing high instrument reliability.

Ethical Considerations: Formal approval was obtained from the Institutional Ethics Committee of UPUMS, Saifai, Etawah, and the local Gram Pradhan of Nagla Subhan. Informed written consent was secured from all participants, ensuring absolute confidentiality and anonymity.

ANALYSIS AND INTERPRETATION OF DATA

Data analysis is the systematic organization and synthesis of collected data to answer research questions and test hypotheses. In this study, data gathered from 60 subjects in Nagla Subhan were analyzed using descriptive statistics (frequency, percentage, mean, median, standard deviation) and inferential statistics (Chi-square test). Frequency and percentage distribution of Sample according to demographic variables.

Demographical variable	Frequency	Percentage
1)Age of participants mother		
a) below 20 year	2	3.33%
b) 21-25 year	22	36.66%
c) 26 -to 30 year	28	46.66%
d) above 31 year	8	13.33%
2)Education status of mother		
a) uneducated	4	6.66%
b) primary school	12	20%
c)secondary school	19	31.66%
d)higher secondary school	12	20%
e) gradution	13	21.66%
3)Occupation		
a) housewife	54	90%
b) labour worker	1	1.66%
c)private job	3	5%
d)government job	2	3.33%
e)other		
4)family income per month		
a) below 5000	1	1.33%
b)5000-10000	1	1.33%
c)10000-15000	22	36.3%
d)above 15000	36	65%
5)family type		
a)nuclear	22	36.6%
b)joint	37	61.66%
c)extended	1	1.66%
5)Religion		
a)hindu	53	88.3%
b)muslim	7	11.66%
c)other		
6)Number of children		
a)one	18	30%
b)two	26	43.66%
c)more than two	16	26.66%

7)Area of residence		
a)urban		
b)rural	60	100%
8)Source of knowledge		
a)ASHA\ANM	14	23.33%
b) aaganwadi worker	7	11.66%
c) television\radio	12	20%
d) friends\relative	12	20%
e) Doctor \Nurse	7	11.66%
f) others	8	13%

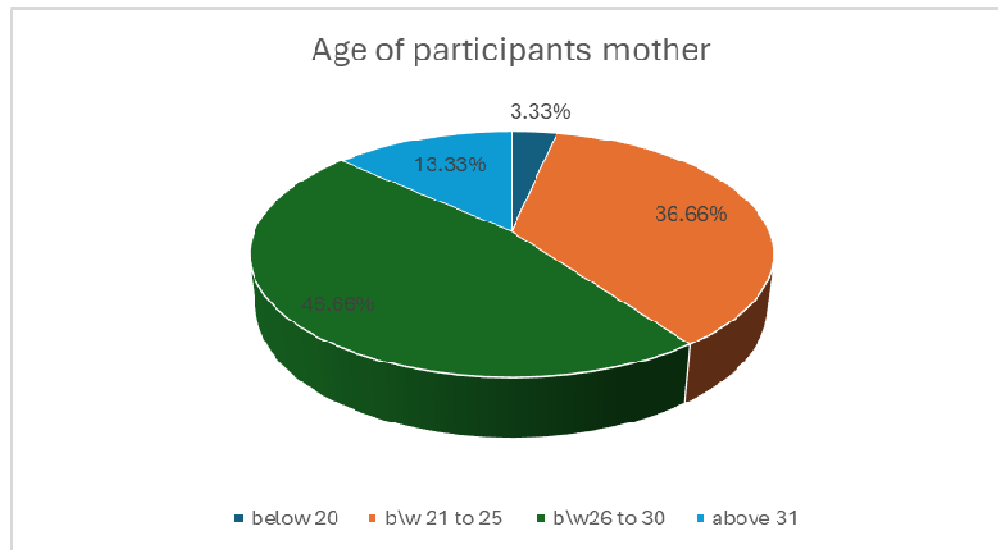


Figure 1: Pie Diagram showing percentage distribution of mother According to their Age

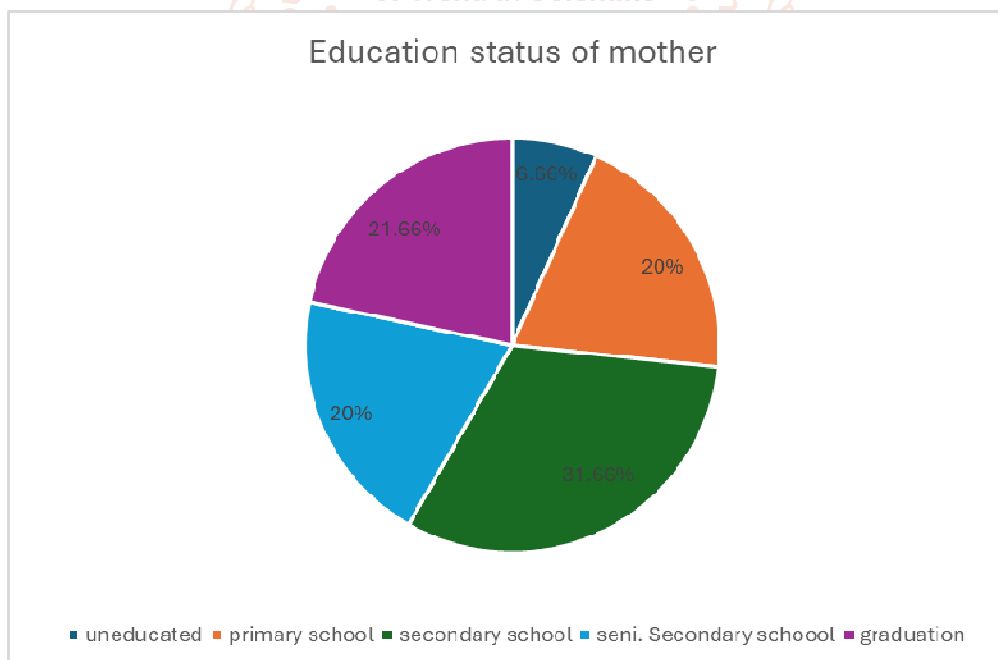


Figure 2: pie diagram showing percentage distribution of mother According to their education status.



Figure: 3 bar diagram showing percentage distribution of mother according to their occupation.

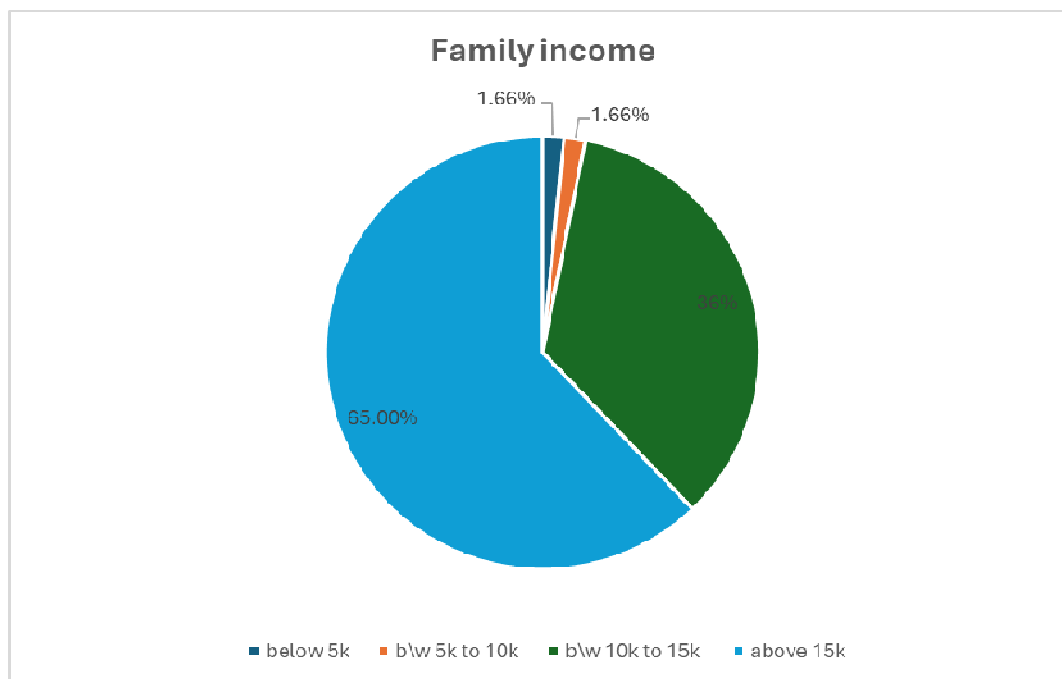


Figure 4: pie diagram showing percentage distribution of mother According to their of family income.

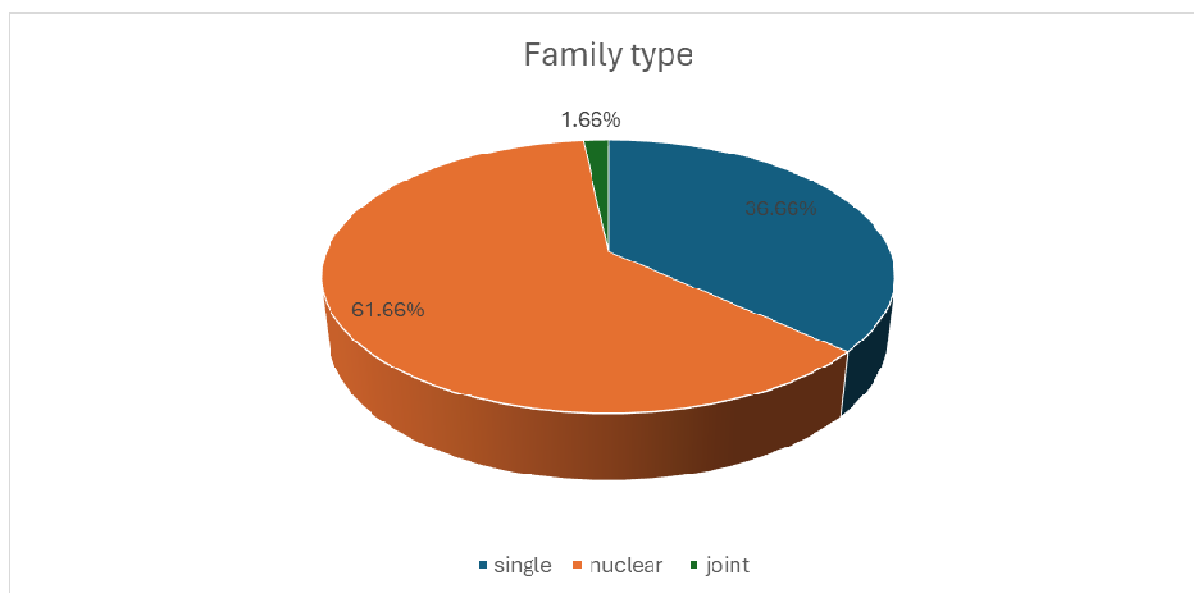


Figure 5: pie diagram showing percentage distribution of mother According to their family type.

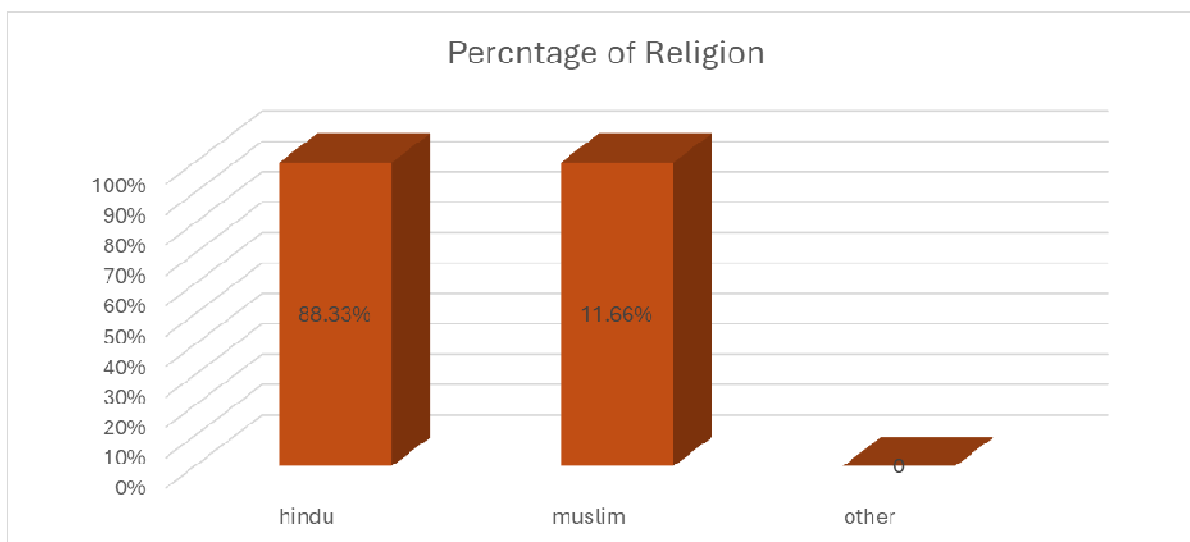


FIGURE6: bar diagram showing percentage distribution of mother according to their religion

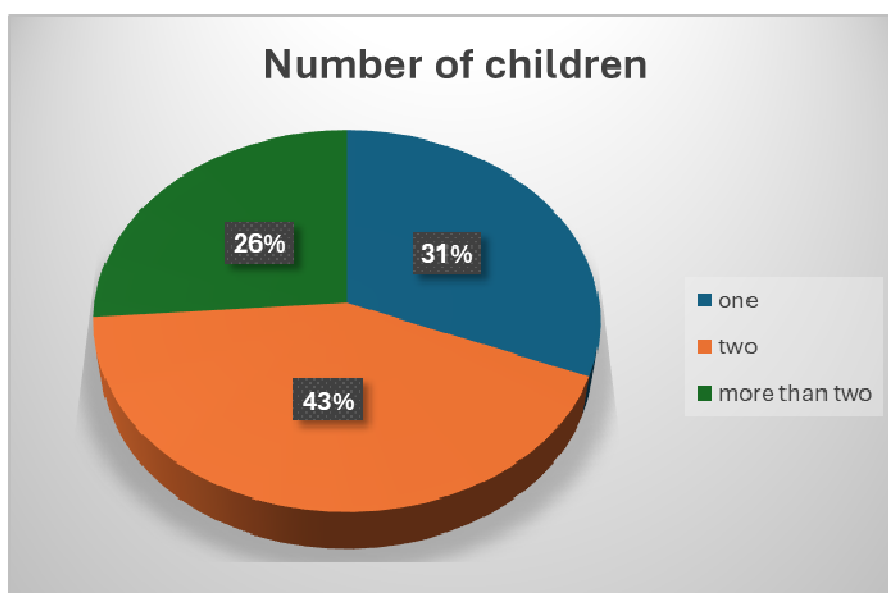


Figure 7: pie diagram showing percentage distribution of mother according to their number of children.

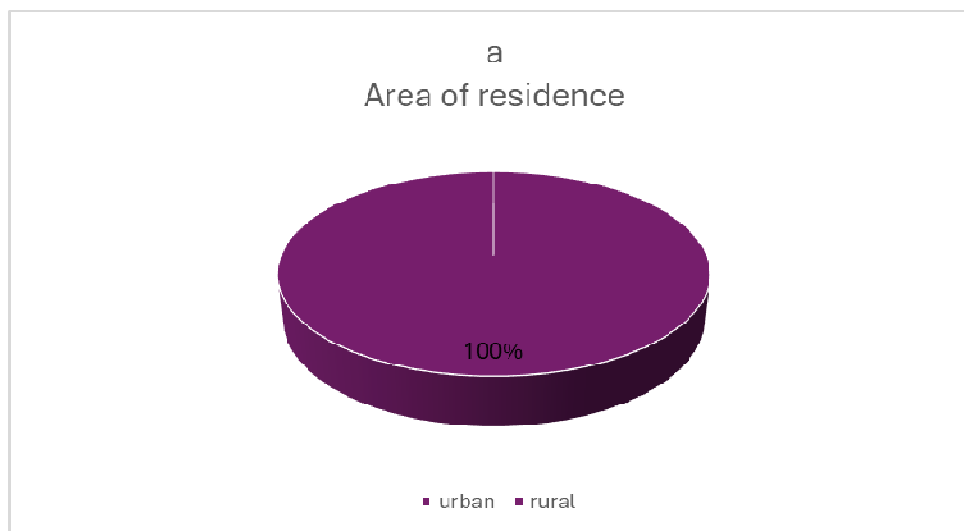


Figure 8: pie diagram showing percentage distribution of mother According to their area of residence.

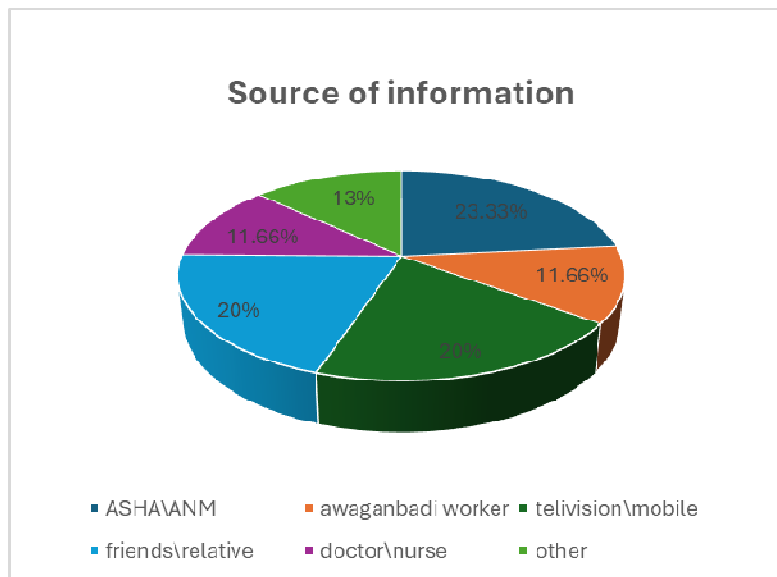


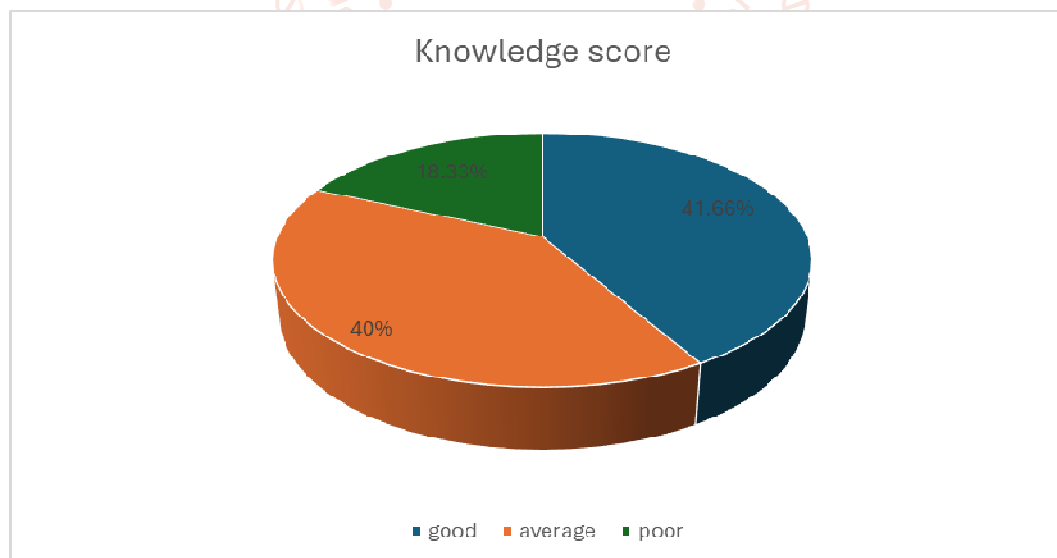
Figure 9: pie diagram showing percentage distribution of mother according to their source of information

Section II: Assessment of Knowledge Level Regarding Complementary Feeding

Table-2: Frequency And percentage of mother on knowledge level

Level of knowledge score	Frequency	Percentage
Poor (0-7)	11	18.33%
Average (8-13)	24	40%
Good (14-19)	25	41.66%
Total	60	100%

The table represent the Frequency and percentage distribution of mother knowledge level regarding complementary feeding with regard to the mothers majority 41.66% of them had good knowledge score ,40 %of them had average knowledge score and 18.33% mothers had poor knowledge regarding complementary feeding.



Section III: Association Between Knowledge Levels and Demographic Variables

Chi-square test analysis was performed to test the association between knowledge scores and selected demographic variables at the 0.05 level of significance. The results indicated no statistically significant association between knowledge levels and maternal age, education, occupation, family income, religion, family type, or source of information ($p > 0.05$). However, a statistically significant association was established with the number of children ($p < 0.05$), indicating that mothers with more children possessed higher experiential knowledge regarding complementary feeding.

DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

Discussion: The findings of the study reveal that the majority of participating mothers (41.66% good, 40% average) possess adequate baseline knowledge regarding complementary feeding. This reflects the positive penetration of rural health programs in Etawah. However, nearly 18.33% still exhibited poor knowledge, highlighting persistent vulnerabilities. The lack of significant association with demographic variables like education or income suggests that cultural norms and community health worker counseling play a more uniform role across households.

Conclusion: The study concludes that mothers in the selected rural community of Etawah possess average to good knowledge regarding complementary feeding. Continuous educational reinforcement by community health nurses is essential to prevent childhood malnutrition.

Nursing Implications:

- **Nursing Practice:** Nurses must actively assess maternal knowledge during postnatal visits and conduct health talks on dietary diversity and hygiene.
- **Nursing Education:** Nursing curricula should emphasize community nutrition counseling and practical grassroots health education.
- **Nursing Administration:** Administrators should organize community outreach workshops and empower nurse-led nutrition clinics.
- **Nursing Research:** Findings provide baseline data for large-scale multi-centric research on infant feeding practices.

Recommendations:

1. A similar study can be replicated with a larger sample size across multiple districts of Uttar Pradesh.
2. Experimental studies can be conducted to evaluate the effectiveness of planned teaching programs (PTP) on maternal feeding practices.

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