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A STUDY OF ASSESSING THE KNOWLEDGE AND PRACTICE REGARDING EFFECTIVENESS OF BREASTFEEDING TRAINING PROGRAMME AMONG PRIMI PARA MOTHERS.

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Abstract

Background: ***Aim:*** To Evaluate Primi para mothers' awareness and behavior on the efficacy of the breastfeeding education program. ***Methodology:*** To assess the efficacy of a breastfeeding teaching program for primipara mothers, this study used an experimental educational intervention design.The study was carried out at the pediatric department at the Gayatri Vidya Parishad Institute of Health Care and Medical Technology (GVPIHCMT), located in Marikavalasa, Visakhapatnam. The study population consisted of primipara mothers who delivered at GVPIHCMT and met the inclusion criteria. ***Results:*** In the present study, A large proportion of mothers (64%) were homemakers, followed by 30% labourers, and 6% in private jobs, with none employed in government jobs. 84% of families had a monthly income between ₹10,001–₹15,000, while 10% earned₹15,001–₹20,000, and 6% earned less than ₹10,000. The majority of participants (92%) resided in rural areas, with only 8% from urban settings. Health team members provided information to 54% of moms, peer groups to 28%, and the media to 18%. In the pre-test, 88% of mothers had poor knowledge, 10% average, and only 2% good; post-test scores improved to 72% good, 24% average, and 4% poor. In the post-test, the mean knowledge score rose from 11.9 in the pre-test to 24.84, with a statistically significant t-value of 18.51 (p=0.05). Occupation showed a statistically significant association with pre-test knowledge levels (p=0.001), with homemakers having the highest poor ratings. Pre-test knowledge and place of residence were substantially correlated (p=0.002), with rural moms exhibiting lower levels of bad knowledge than urban mothers.Pre-test knowledge and other demographic factors, such as age, religion, education, family type, income, or information source, did not significantly correlate. ***Conclusion:*** The study concluded that the Video Assisted Teaching Program effectively improved knowledge among primi para mothers.

Keywords: Primi para mothers', Breast feeding, Education programme, Video assisted teaching Programme.

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INTRODUCTION

Breastfeeding has been held in high esteem as the infant nutrition gold standard for a very long time. It is an exclusive process that creates a close relationship between mother and baby as it offers the infant the maximum nutritional and immunological advantages. The World Health Organization (WHO) encourages exclusive breastfeeding throughout the first six months of life in order to give babies the best possible growth, development, and health. [1]. Not with standing its extensively documented benefits, breastfeeding habits across the world generally fall short of these guidelines owing to diverse cultural, social, and knowledge factors.

Breast milk is specially designed to address the unique needs of a newborn, with the perfect mix of nutrients, such as fats, proteins, and carbohydrates. In addition, it has bioactive molecules like antibodies, enzymes, and hormones that enhance the infant's immunity and overall growth. The initial milk, colostrum, is particularly significant as it contains a high concentration of immunoglobulins, such as IgA, that impart passive immunity and guard the child against infections such as diarrhoea and pneumonia [2]. Infants who are not breastfed are considerably more likely to suffer from infectious

diseases and die from them, particularly in settings with few resources [3]. Studies put the estimates of how many children's lives optimal breastfeeding habits could save at over 800,000 under the age of five each year [4].

Breastfeeding is also beneficial to mothers. It aids in postpartum recovery through the process of uterine involution and minimization of postpartum hemorrhage. Additionally, exclusive breastfeeding is a natural contraceptive by the lactational amenorrhea method, which can aid in birth spacing, especially among developing nations [5]. The long-term benefits to mothers include decreased risks of developing breast and ovarian cancers, type 2 diabetes, and postpartum depression [6]. Nevertheless, exclusive breastfeeding is still not the best practice in the world, despite its obvious benefits. Only 44% of newborns globally are exclusively breastfed for the first six months of their lives, which is much less than the 70% global nutrition target established for 2030, according to a UNICEF report from 2021 [7]. Training programs tailored for primipara mothers have been shown to improve breastfeeding knowledge and practices significantly. Video-assisted teaching, peer counseling, and mother-to-mother support groups are some of the effective strategies employed to educate mothers about breastfeeding [9]. Significant increases in breastfeeding initiation and duration rates have been shown when prenatal education emphasizes exclusive breastfeeding, the advantages of colostrum, and appropriate nursing practices [10].

The present study aims to evaluate the effectiveness of a breastfeeding training program among primipara mothers delivered in a tertiary care hospital setting. The research focuses on assessing the pre-test and post-test levels of knowledge and practices related to breastfeeding, thereby determining the impact of the educational intervention. The results of this study should improve mother and child health outcomes by offering important insights into the planning and execution of successful breastfeeding education initiatives.

AIM & OBJECTIVES

AIM:

Evaluating Primi para mothers' awareness and behavior on the efficacy of the breastfeeding education program.

OBJECTIVES:

1. To evaluate primipara women knowledge and practice of breastfeeding before and after the test.
2. To assess the impact of a breastfeeding education program on primipara women level of breastfeeding practice and knowledge.
3. To ascertain how primipara women' post-test knowledge and practice of breastfeeding relate to each other.

METHODOLOGY

Study Design: To assess the efficacy of a breastfeeding teaching program for primipara mothers, this study used an experimental educational intervention design.

Study Setting: The study was carried out at the pediatric department at the Gayatri Vidya Parishad Institute of Health Care and Medical Technology (GVPIHCMT), located in Marikavalasa, Visakhapatnam.

Study Population: The study population consisted of primipara mothers who delivered at GVPIHCMT and met the inclusion criteria.

Inclusion Criteria

1. Primipara mothers are above the age of 18 years.
2. Mothers who underwent normal vaginal delivery, lower segment cesarean section (LSCS), or outlet forceps delivery.

Exclusion Criteria

1. Mothers unwilling to participate.
2. Multipara mothers.
3. Mothers who delivered twins.
4. Mothers with communicable diseases or systemic illnesses.
5. Mothers whose babies were born under 34 weeks' gestation, with low birth weight, or with congenital defects.

Study Tools

In order to gather data and conduct an intervention for the study "Assessing the Knowledge and Practice Regarding Effectiveness of Breastfeeding Training Programme Among Primipara Mothers," the following instruments were employed:

1. Structured Questionnaire

The knowledge and breastfeeding behaviors of primipara moms were evaluated using a systematic and validated questionnaire. This survey was broken up into sections that addressed:

- Advantages of breastfeeding: Questions covered the health benefits of breastfeeding for both the mother and the infant.
- Effective breastfeeding techniques: This section evaluated the participant's understanding of correct positioning, latching, and the importance of colostrum.
- Breast milk expression: Questions focused on the knowledge about expressing breast milk, storage guidelines, and frequency.
- Practical aspects of breastfeeding: Items addressed initiation timing, feeding duration, and signs of adequate milk intake by the infant.
- Common breastfeeding problems: Questions explored mothers' understanding of conditions like cracked nipples, breast engorgement, and the management of such issues.

A Likert scale with the options "Strongly Disagree (1)" to "Strongly Agree (5)" was used to score the replies in order to quantitatively assess the respondents' knowledge and habits.

2. Breastfeeding Checklist

A checklist was designed to systematically observe and document mothers' practical application of breastfeeding techniques. During the training sessions, this tool was utilized to evaluate areas like:

- Infant's latch and positioning.
- Proper handling of breast engorgement.
- Frequency and adequacy of breastfeeding.

3. Pre-Test and Post-Test Design

- Prior to the intervention, a pre-test was given to evaluate the participants' baseline knowledge and behaviors.
- A post-test using the same questionnaire and checklist was conducted after the intervention (on the third day) to evaluate improvements in knowledge and practical application.

4. Educational Intervention Tools

- Video-Assisted Teaching Program: A 30-45 minute video session demonstrated breastfeeding techniques, explained the benefits of breastfeeding, and emphasized the importance of colostrum and exclusive breastfeeding.
- Mother-to-Mother Demonstrations: These interactive sessions, lasting 15-20 minutes, involved peer counseling and practical demonstrations by experienced mothers or healthcare providers. This approach made it possible to learn visually and practically.

Data Collection

A standardized, validated questionnaire and checklist were used to collect data for this study in order to evaluate primipara moms' breastfeeding practices and knowledge. To guarantee complete comprehension, the participants were initially informed about the study in their mother tongue, and their informed consent was acquired.

Data Analysis

For preliminary planning and arrangement, the gathered data was methodically entered into Microsoft Excel (2007 edition). For a more thorough statistical analysis, the data were subsequently exported to the most recent version of the Statistical Package for the Social Sciences (SPSS).

The knowledge and practice scores from the pre-test and post-test were compared using paired sample t-tests in order to assess the efficacy of the breastfeeding training program. A p-value of less than 0.05 was considered to be statistically significant. Additionally, correlation analysis was done to find out how post-test knowledge and practice scores related to each other.

The purpose of the analysis was to determine how much the training program affected primipara moms' breastfeeding practices and knowledge. To make the results easier to understand, all findings were methodically evaluated and displayed in tables and figures.

RESULTS

Table 1: Age category

Maternal Age	Frequency	Percentage
20–23 Years	10	10%
24–27 Years	76	76%
28–31 Years	10	10%
>31 Years	4	4%
Total	100	100%

In our study, the distribution of maternal age was predominantly within the 24–27 years category, accounting for 76% of the participants. Smaller proportions of mothers were in the 20–23 years and 28–31 years groups, each comprising 10%, while only 4% were aged over 31 years. With a mean of 25.8 years and a standard deviation (SD) of 2.31 years, the majority of maternal ages were found to be concentrated around this average, with comparatively little variation throughout the sample.

Table 2: Religion

Religion	Frequency	Percentage
Hindu	80	80%
Muslim	12	12%
Christian	8	8%
Other	0	0%
Total	100	100%

In our study, the majority of participants were Hindu, comprising 80% of the total sample. Muslims represented 12%, while Christians made up 8%. Participants in the "Other" religious category were not listed.

Table 3: Mother's Education

Mother's Education	Frequency	Percentage
Non-Formal	18	18%
Formal	44	44%
Secondary	34	34%
Higher Education	4	4%
Total	100	100%

The educational background of mothers showed that 44% had received formal education, followed by 34% with secondary education. 18% of mothers had non-formal education, while only 4% had pursued higher education.

Table 4: Type of Family

Type of Family	Frequency	Percentage
Nuclear	44	44%
Joint	56	56%
Total	100	100%

The majority of participants belonged to joint families (56%), while 44% lived in nuclear families.

Table 5: Occupation

Occupation	Frequency	Percentage
Home Maker	64	64%
Labour	30	30%
Private Job	6	6%
Government Job	0	0%
Total	100	100%

A large proportion of mothers were home makers (64%), followed by 30% engaged in labour work. Only 6% of participants were engaged in the private sector, and none of them held government positions.

Table 6: Family Income

Family Income	Frequency	Percentage
>10,000/Month	6	6%
10,001–15,000/Month	84	84%
15,001–20,000/Month	10	10%
Total	100	100%

Most families (84%) reported a monthly income between ₹10,001 and ₹15,000. 10% had a family income between ₹15,001 and ₹20,000, while only 6% had an income of less than₹10,000 per month.

Table 7: Place of Residence

Place of Residence	Frequency	Percentage
Urban	8	8%
Rural	92	92%
Total	100	100%

A significant majority (92%) of the participants resided in rural areas, whereas only 8% were from urban areas.

Table 8: Source of Information

Source of Information	Frequency	Percentage
Health Team Member	54	54%
Peer Group	28	28%
Mass Media	18	18%
Total	100	100%

Of mothers surveyed, 54% said that members of their health team were their main source of knowledge, followed by peer groups (28%), and the media (18%).'

Table 9: Assessment of pre-test and post-test knowledge score of Primi para mothers

Knowledge Score	Pre-test	Post-test
Good	2 (2%)	72 (72%)
Average	10 (10%)	24 (24%)
Poor	88 (88%)	4 (4%)
Total	100 (100%)	100 (100%)

In the pre-test assessment, the majority of mothers (88%) had poor knowledge scores, with only 10% scoring average and a minimal 2% achieving a good score. After the post- test, there was a marked improvement: 72% of mothers attained good knowledge scores, 24% were average, and only 4% remained in the poor category. This indicates a substantial gain in knowledge following the intervention.

Table 10: Comparison of the pre-test and post-test knowledge score of Primi para- Mothers.

	Pre-test Score	Post-test Score	Difference
Mean	11.9	24.84	10.96
Standard Deviation (SD)	2.98	2.71	
Standard Error Mean	0.41	0.37	

Test Results:

- Sample Size (N): 50
- Degrees of Freedom (df): 49
- Calculated t-value: 18.51
- Critical t-value (t 0.05): 1.74
- p-value: 0.05

The statistical analysis of the Pre-test and Post-test knowledge scores shows a significant improvement. The Pre-test mean score was 11.9, while the Post-test mean score increased to 24.84, reflecting a change of 10.96. The standard deviation decreased from 2.98 in the Pre-test to 2.71 in the Post-test, suggesting that the Post-test scores were slightly more consistent. The standard error of the mean also decreased from 0.41 to 0.37, indicating reduced variability. The t-test results show a calculated t-value of 18.51, which is much higher than the critical t-value of 1.74, with a p-value of 0.05. This indicates that the difference in scores between the Pre-test and Post-test is statistically significant, confirming that the Video Assisted Teaching Program effectively improved the participants' knowledge.

Table 11: Relationship between Pre-test Knowledge Level and Demographic Factors

Demographic Variable	Categories	Good (2)	Average (10)	Poor (88)	χ^2	P value
Age	20–23 Years	0	2	8	10.56	0.241
	24–27 Years	2	2	72		
	28–31 Years	0	4	6		
	>31 Years	0	2	2		
Religion	Hindu	2	8	70	4.55	0.152
	Muslim	0	0	12		
	Christian	0	2	6		
	Other	0	0	0		
Education	Non-Formal	0	0	18	10.45	0.268
	Formal	0	4	40		
	Secondary	2	6	26		
	Higher Education	0	0	4		
Type of Family	Nuclear	0	6	38	0.43	0.481
	Joint	2	4	50		
Occupation	Home Maker	2	4	58	18.75	0.001
	Labour	0	2	28		
	Private Job	0	4	2		
	Government Job	0	0	0		
Monthly Income	>10,000/Month	0	0	6	5.659	0.234
	10,001–15,000/Month	2	8	74		
	15,001–20,000/Month	0	2	8		
Place of Residence	Urban	0	2	6	11.38	0.002
	Rural	2	8	82		
Source of Information	Health Team Member	2	4	48	1.82	0.345
	Peer Group	0	4	24		
	Mass Media	0	2	16		

Age: The distribution of participants by age group reveals that the largest proportion of participants who rated "Poor" were from the 24–27 years category, with 72 participants in this group. The age group of 20–23 years had 8 participants rated "Poor," while the 28– 31 and >31 age groups had fewer participants rated "Poor." Since the p-value is higher than 0.05, the Chi-square test ($\chi^2 = 10.56$, $p = 0.241$) reveals no statistically significant relationship between age and the categories.

Religion: The largest group of participants identifying as Hindu rated "Poor" (70 participants), followed by Muslims (12) and Christians (6). The distribution across the "Good" and "Average" categories was much lower. However, as the p-value is higher than 0.05, the Chi-square result ($\chi^2 = 4.55$, $p = 0.152$) indicates that there is no significant correlation between religion and the categories of "Good," "Average," and "Poor." **Education**: In terms of education, a higher proportion of individuals with non-formal education (18) and formal education (40) rated "Poor," while secondary education had 26 participants in the "Poor" category. A small number of participants with secondary education (2) rated "Good." Since the p-value is more than 0.05, the chi-square value ($\chi^2 = 10.45$, $p = 0.268$) shows no significant correlation between education level and the three categories.

Type of Family: According to the table, those from joint families were somewhat more likely than those from nuclear households to rank as "Good" (2). However, the vast majority in both family types rated "Poor" (38 from nuclear families and 50 from joint families). Since the p-value is higher than 0.05, the Chi-square test ($\chi^2 = 0.43$, $p = 0.481$) indicates that there is no significant correlation between family type and ratings.

Occupation: A significant finding emerged in the occupation category. Most of the participants identified as homemakers, with 58 rating "Poor" and 2 rating "Good." Laborers and private job holders also had a high number of "Poor" ratings. Because the p-value is smaller than 0.05, the chi-square value ($\chi^2 = 18.75$, $p = 0.001$) shows a statistically significant link between employment and the categories.

Monthly Income: Regarding income levels, the majority of participants in all income brackets (10,001–15,000/month) rated "Poor," with relatively few in other income groups rating "Good." Since the p-value is higher than 0.05, the chi-square result (χ^2 = 5.659, p= 0.234) indicates that there is no significant correlation between monthly income and the categories.

Place of Residence: Most of participants from rural areas (82) rated "Poor," compared to just 6 from urban areas. Fewer participants from rural areas rated "Good" or "Average," with 2 in the "Good" category. Because the p-value is less than 0.05, the Chi-square test (χ^2 = 11.38, p = 0.002) indicates a statistically significant relationship between place of residence and the categories, emphasizing a considerable difference between rural and urban dwellers.

Source of Information: Participants mainly relied on health team members and peer groups for information, with health team members showing a higher number of "Poor" ratings (48). Since the p-value is higher than 0.05, the chi-square value (χ^2 = 1.82, p =0.345) suggests that there is no significant correlation between the categories and the information source.

DISCUSSION

AGE CATEGORY

A comparative analysis of maternal age distributions across multiple studies reveals both convergence and divergence in trends among primipara mothers, offering broader insight into regional and demographic patterns. The vast majority of women in this study (76%) were between the ages of 24 and 27. The percentages of moms in the 20–23 (10%), 28– 31 (10%), and >31 (4%) age groups were lower. The mean age was 25.8 years (SD = 2.31), indicating a relatively narrow age spread centered on the mid-twenties—suggesting a fairly homogeneous, young adult population.

However, findings from Bhaktiswarupa et al. [38] contrast sharply with this pattern. Their study reported that 93% of participants were between 19–24 years, suggesting a distinctly younger demographic. In comparison, only 10% of mothers in the current study were within a similar 20–23 years range. This discrepancy could reflect regional or cultural differences in the typical age of first-time motherhood, possibly influenced by social norms or access to education and reproductive healthcare.

On the other hand, 74% of mothers in the study by Pandya Tejas J et al. [41] were in the 24-27 age range, which strongly supported the notion that this age range is typical for first childbirth in a variety of settings. The small proportion of mothers aged ≥30 years in both studies (2% in their study, 4% in the current study) further supports the consistency of this age distribution across regions.

However, Lakshmi K et al. [43] reported a somewhat younger age distribution, with just 10% of participants above the age of 28 and 55% of participants in the 18–22 and 35% in the 23–27 age groups. This suggests a tendency toward earlier childbearing in their study setting, which may reflect localized socio-cultural or educational dynamics distinct from those in the present research.

Similarly, Sandhya Jagadale et al. [44] reported a broader distribution, with 40% of mothers aged 21–23 years and 31.4% in the 24–26 years range. This suggests more representation from the early twenties compared to the current study, though the 24–26 years group still overlaps with the dominant age category found here. Their findings reinforce the commonality of young adult motherhood while highlighting slightly more weight toward younger ages.

The study by Rajak et al. [45] also supports the trend of younger motherhood, with 78% of participants being ≤25 years old. While this overlaps with the current study's findings, Rajak et al. did not specify narrower subgroups within this age band. Importantly, their research observed that women over 25 years were more knowledgeable and practiced better breastfeeding techniques—suggesting that maternal age could influence maternal competencies, a point worth exploring in future analyses of our own data.

Hasan M et al. [47], cited in Rajak et al.'s study, reported that 54.5% of mothers were under 24 years, again indicating a younger maternal age profile compared to the current findings. This underscores the variability across populations, likely driven by factors such as education, socioeconomic status, or health service availability.
In conclusion, the concentration of primipara mothers in the 24-27 age range in this study is consistent with findings from a number of studies, including those by Rajak et al. [45] and Pandya Tejas J et al. [41].

RELIGION

Eighty percent of the participants in our study were Hindu, twelve percent were Muslim, and eight percent were Christian. Given that Hinduism is the most widespread religion in India, these percentages are consistent with the typical religious

demography of South Asia. Given how sociocultural settings may influence maternal health outcomes, the absence of representation from other faith groups points to a religiously homogeneous sample.

While there was no representation of Christians, Patel R et al. [40] discovered a similar religious split, with 81.9% of participants identifying as Hindu and 18.1% as Muslim. Although there were more Muslims and no Christians in their survey than in ours, these discrepancies might be due to regional demographics. Notably, Patel R et al. [40] did not discover any significant correlation between breastfeeding knowledge and religion, which is consistent with our own findings.

MOTHER'S EDUCATION

According to the mothers' educational backgrounds, 44% of them had formal education, 34% had secondary education, 4% had further education, and 18% had non-formal education. Given that most of the participants had formal or secondary schooling, this indicates that a sizable fraction of them had some degree of education. Although the distribution of education varies throughout studies, these results are generally consistent with similar studies.

33.3% of moms in the Bhaktiswarupa et al. study [38] had finished secondary school (matriculation), and the same proportion had graduated (further education). In comparison, just 4% of women in our sample had a higher education, suggesting that Bhaktiswarupa et al. [38] had a far greater percentage of moms with graduate degrees. This discrepancy implies that although moms with formal education are depicted in both studies, Bhaktiswarupa et al. [38] reported a higher percentage of mothers with higher education than our study, which found that the majority of mothers had formal or secondary education.

The relationship between breastfeeding knowledge and mother education was also investigated by Patel R et al. [40], who discovered a strong association. Although precise numbers were not given, the overall conclusion is consistent with the findings of our study and indicates that mother education is essential for learning about health issues. According to Patel R et al. [40], the substantial percentage of moms in our study who had formal or secondary education suggests that they probably have a solid basis for comprehending and using breastfeeding approaches.

Comparing our study to others shows that primipara moms' educational backgrounds differ and are comparable. The majority of mothers have formal or secondary education, according to numerous research, highlighting the influence of education on maternal health knowledge. Compared to studies like Bhaktiswarupa et al. [38] and Sandhya Jagadale et al. [44], where more women had completed higher education, our study had a greater percentage of moms with formal education, but a smaller percentage of mothers with higher education. These discrepancies can be the result of socioeconomic issues affecting educational attainment or inequalities in geographical access to education.

In conclusion, our study revealed that the majority of mothers had formal or secondary education, despite the fact that maternal education has a significant role in shaping health knowledge and practices. This is consistent with other studies' findings, which highlight the value of education in raising maternal health awareness, especially in relation to topics like breastfeeding. However, the disparities in the percentage of mothers with higher education found in different research could be explained by geographical variations in educational attainment.

TYPE OF FAMILY

According to the results of our study on family type, 56% of the primipara moms belonged to joint families, whereas 44% were from nuclear households. This suggests a fairly balanced division between mothers from these two family structures. When compared to other studies, our research reveals a higher proportion of mothers in joint families, as many studies report a greater presence of nuclear families.

In the research by Patel R et al. [40], a striking 75% of mothers lived in joint families, with only 23.6% in nuclear families. This contrasts sharply with our study, which found that 44% of households were nuclear. Mothers' post-test knowledge and practices did not significantly correlate with family structure, according to Patel et al. [40]. This result is consistent with our findings, which showed that there was no significant influence of family type on maternal knowledge or behavior on breastfeeding or health behaviors, even if there were differences in the distribution of family structures.

Similarly, the study by Pandya Tejas J et al. [41] showed 46% of mothers in nuclear families and 54% in joint families, which is nearly identical to our findings. Family structure may not be a significant factor in affecting mothers' pre-existing knowledge about health or child-rearing, as their study found no significant effect of family type on pre-test knowledge scores. Lakshmi K et al. [43] found a different pattern, with 30% of mothers in nuclear families and a significantly larger 70% in joint or extended families.

In conclusion, our research shows that women are almost equally likely to be from nuclear families (44%) and joint families (56%), although other studies frequently show that joint families are the most common family structure, with percentages above 70%. Our study did not find a significant correlation between mother knowledge or actions and family type, despite the fact that family type is a prominent sociodemographic determinant in many studies. This result is consistent with research by Patel R et al. [40] and Sandhya Jagadale et al. [44], which likewise found no significant relationship between maternal outcomes and family structure. Studies like Lakshmi K et al. [43] did discover a strong correlation between maternal knowledge and family type, indicating that family structure may have an impact on health behaviors under particular circumstances.

OCCUPATION

In our study, a large percentage of primipara mothers, 64%, were homemakers, while 30% were engaged in labor, and 6% worked in private jobs. Interestingly, none of the mothers were employed in government positions. While the distribution across various employment categories varies across studies, these findings are consistent with other studies that reveal a sizable number of moms engaged in homemaking.

For example, in the study by Bhaktiswarupa et al. [38], 87% of the mothers were homemakers, which is comparable to our study's 64%, though slightly higher. With a significant percentage of moms working outside the home, especially in labor and private sector occupations, this difference suggests that the sample of our study had a more diverse occupational structure.

Similarly, Patel R et al. [40] found that 81.9% of mothers were housewives, with a small portion working in private jobs (4.2%), and no mothers holding government positions. This is quite comparable to our study, which found that 64% of mothers stay at home and 6% work in the private sector. Additionally, Patel et al. [40] found no significant association between occupation and breastfeeding-related knowledge or practices, indicating that profession did not appear to have an impact on maternal breastfeeding behavior in either research.

In conclusion, while our study's findings on homemakers (64%) are similar to those reported in Bhaktiswarupa et al. [38] and Patel R et al. [40], the occupational diversity in our study—such as 30% laborers and 6% private sector employees—adds more complexity to the overall trends. The fact that occupation and maternal knowledge or behaviors did not significantly correlate in all research, including ours, raises the possibility that other sociodemographic characteristics may influence maternal practices more than occupation alone. However, research such as Rajak et al. [45] notes that occupation may be more important in some situations, especially when it comes to affecting breastfeeding patterns and knowledge.

FAMILY INCOME

In our study, the majority of primipara mothers, 84%, belonged to families with a monthly income ranging from ₹10,001 to ₹15,000, followed by 10% in the ₹15,001 to₹20,000 category, and a smaller group, 6%, earning less than ₹10,000 per month. These findings suggest a concentration of mothers in the middle-income group within our study population, offering a useful comparison to other research in the field.

When compared with the study by Patel R et al. [40], the distribution patterns show some differences. In Patel's study, 70.8% of mothers had a family income of ₹5,000–₹10,000, which falls slightly below the predominant income bracket of our study. Only 19.4% of mothers in Patel's study had a family income of ₹10,000 and above, much lower than our study's 94% (sum of both the ₹10,001–₹15,000 and ₹15,001–₹20,000 groups). This suggests that middle-class families are more prevalent in our sample. Similar to our study, Patel et al. found no correlation between post-test breastfeeding method knowledge or practice levels and family income.

In the study by Pandya Tejas J et al. [41], the income distribution closely matches our findings. They reported that 86% of mothers earned between ₹10,001 to ₹15,000, 10% earned between ₹15,001 to ₹20,000, and 4% earned above ₹10,000 — proportions nearly identical to those in our study. This consistency strengthens the idea that a large majority of primipara mothers in comparable settings belong to middle-income families. Similar to our results, Pandya Tejas J et al. [41] did not discover a statistically significant correlation between pre-test knowledge and monthly income.

Lakshmi K et al. [43] reported a more varied income distribution: 36% of mothers earned less than ₹10,000, 30% between ₹10,001 and ₹15,000, 22% between ₹15,001 and ₹20,000, and 12% earned more than ₹20,001. In contrast to our analysis, which found that only 6% of people made less than ₹10,000, this is somewhat different. This implies that a significantly higher percentage of households were in the ₹10,001–₹15,000 range, which may indicate that the participants in our study have a slightly better socioeconomic profile. Despite these differences, Lakshmi K et al. [43] similarly reported no significant association between income and mothers' knowledge or attitude scores.

In summary, our study's income distribution closely parallels that of Pandya Tejas J et al. [41], both highlighting a predominance of families earning between ₹10,001–₹15,000 per month. Compared to Patel R et al. [40], Lakshmi K et al. [43], and Rajak et al. [45], our study population tends to be slightly better off financially, with fewer participants in lower-income brackets. Family wealth does not appear to have a substantial impact on breastfeeding-related information, attitudes, or practices among mothers, according to a number of research, including ours. This suggests that other factors may be more important in determining these health behaviors.

PLACE OF RESIDENCE

In our study, a clear majority of 92% of the primipara mothers belonged to rural areas, while only 8% were from urban areas. This strong rural predominance highlights the demographic makeup of our sample population and aligns it closely with certain studies while differing significantly from others.

For example, a fairly similar distribution was found in the study of Rajak et al. [45], where 93% of mothers were from rural areas and 7% were from metropolitan areas.. This near-identical proportion indicates that both studies focused on predominantly rural populations and may share similar socio-cultural contexts.

Similar numbers were also reported by Pandya Tejas J et al. [41], who found that 94% of primipara moms lived in rural regions and 6% in urban ones. In contrast to our study, they discovered a statistically significant correlation between the pre-test knowledge score and the site of residency (Table 4), indicating that, in their environment, residence may have an impact on maternal knowledge.

In contrast, Patel R et al. [40] presented a different distribution — 65.3% rural, 33.3% urban, and 1.4% tribal. While rural mothers still formed the majority in their study, the urban representation was notably higher compared to our 8%. Interestingly though, Patel R et al. [40] observed no significant association between residence and post-test knowledge or practice levels in breastfeeding techniques (Table 5 and Table 6), similar to the non-significant findings reported in other studies.

Lakshmi K et al. [43]'s study had a 60% rural and 40% urban split, with a much higher urban proportion than our study. Despite this variation, they too found no significant association between place of residence and knowledge or attitude scores related to breastfeeding (Table 5 and Table 6).

Consistently across most studies, no significant association between place of residence and knowledge, attitude, or practice was reported — aligning with our findings if similar conclusions were drawn in our analysis. Only a few exceptions, like Pandya Tejas J et al. [41] and the Structured Teaching Programme study, reported significant associations, pointing to the possibility that specific local contexts or educational interventions may affect these outcomes.

SOURCE OF INFORMATION

In our study, the majority of primipara mothers (54%) received information on breastfeeding from health team members, followed by 28% from peer groups, and 18% from mass media. This trend of health workers being the primary source is strongly supported by findings from several other studies.

For instance, Patel R et al. [40] found that 73.6% of mothers obtained breastfeeding information from health personnel, which is even higher than our 54%, while 16.7% got it from mass media, and 9.7% from family/relatives/others. Both studies show that health workers are the most reliable and frequent source, despite Patel R et al.[40]observing a greater dependence on them.

Similarly, 56% of primi moms in the study by Pandya Tejas J et al. [41] got their knowledge from members of their health team, 26% from peer groups, and 18% from the media. These numbers show a consistent pattern across research and are strikingly similar to our findings (54%, 28%, and 18%, respectively).

Our study reflects a clear, health-professional-led information pattern, closely aligning with Patel R et al. [40], Pandya Tejas J et al. [41], and Rajak et al. [45]. It contrasts with Sandhya Jagadale et al. [44] and Bhaktiswarupa et al. [38], where mass media and family members played a bigger role, respectively.

While the proportions differ, the collective evidence emphasizes that health team members remain the primary and most reliable source of breastfeeding information for primipara mothers in many settings, reinforcing the crucial role of healthcare providers in promoting breastfeeding practices.

ASSESSMENT OF PRE-TEST AND POST-TEST KNOWLEDGE SCORE

Only 10% of primipara moms in the current study had an average score, and only 2% received an excellent score on the pre-test knowledge evaluation, which showed that the vast majority of them (88%) had inadequate information. Following the educational intervention, there was a marked improvement: 72% attained good knowledge, 24% were average, and only 4% remained in the poor category. With a mean difference of 10.96, the mean knowledge score increased from 11.9 (SD=2.98) to 24.84 (SD=2.71). This significant increase in knowledge is consistent with other research findings.

For instance, Pandya Tejas J et al. [41] reported similarly low pre-test knowledge, with 95% scoring poor, which improved to 74% having good knowledge post-intervention. The knowledge gain seen in the current study was closely matched by their mean scores, which rose from 12.3 to 23.26. Patel R et al. [40] found 41.67% with inadequate, 54.17% with moderate, and only 4.16% with adequate knowledge at baseline, improving post-test to 87.5% achieving adequate knowledge — another result strongly consistent with our findings. In Patel's study, the mean increased from 1.6250 to 2.8750 (on a different scoring scale), but still reflected a significant improvement.

Similarly, in Rawat K et al. (as cited by Ekta Patel), the pre-test mean was 12.8, rising to 25.8 post-test in the experimental group — almost identical to the improvement seen in this study. B. Amarendra et al. [48] (2019) also recorded a rise from 12.8 to 25.8, and in one report, to 27 in the experimental group after intervention.

Overall, this comparison shows that although baseline knowledge levels differ greatly between studies, a consistent pattern of notable improvement following focused interventions is seen, reaffirming the value of structured health education in raising primipara mothers' breastfeeding knowledge.

CONCLUSION

The study demonstrated that Primi para mothers initially possessed limited knowledge regarding the assessed topic, with the majority scoring poorly in the pre-test. Nonetheless, the large increase in post-test scores after the Video Assisted Teaching Program indicated a notable improvement in knowledge. The effectiveness of the intervention was demonstrated by statistical analysis, which verified that this improvement was significant. Furthermore, it was discovered that while other demographic characteristics did not significantly correlate with pre-test knowledge levels, occupation and area of residence did. The results indicate that, especially for rural and homemaker communities, focused, structured educational initiatives such as video-assisted instruction can be extremely effective in improving mother knowledge.

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REFERENCES

1. World Health Organization. Infant and young child feeding. Geneva: WHO; 2021.Available from: https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding.
2. Goldman AS. The immune system of human milk: antimicrobial, anti-inflammatory, and immunomodulating properties. Pediatr Infect Dis J. 1993;12(8):664–71.
3. Black RE, Allen LH, Bhutta ZA, Caulfield LE, de Onis M, Ezzati M, et al. Maternal and child undernutrition: global and regional exposures and health consequences. Lancet. 2008;371(9608):243–60.
4. Victora CG, Bahl R, Barros AJD, França GVA, Horton S, Krasevec J, et al.Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. Lancet. 2016;387(10017):475–90.
5. Kennedy KI, Visness CM. Contraceptive efficacy of lactational amenorrhoea. Lancet.1992;339(8787):227–30.
6. Chowdhury R, Sinha B, Sankar MJ, Taneja S, Bhandari N, Rollins N, et al.Breastfeeding and maternal health outcomes: a systematic review and meta-analysis. Acta Paediatr. 2015;104(467):96–113.
7. UNICEF. Breastfeeding: A mother's gift, for every child. New York: UNICEF; 2021.Available from: https://www.unicef.org/breastfeeding.
8. Renfrew MJ, McCormick FM, Wade A, Quinn B, Dowswell T. Support for healthy breastfeeding mothers with healthy term babies. Cochrane Database Syst Rev. 2012;(5):CD001141.
9. Kronborg H, Vaeth M, Olsen J, Harder I. Early breastfeeding problems: a mixed method study on mothers' experiences. Sex ReprodHealthc. 2017;14:166–74.
10. Bhaktiswarupa S, Das N, Sahoo P, Parhi R, Bhunia D. A study to assess the knowledge and practice of the primi Mothers related to Breast-Feeding in Post Natal ward in selected tertiary care Hospital. Scholars Journal of Applied Medical Sciences [Internet]. 2020Jan25;08(01):40–2.
11. Pandya Tejas J, Patel Kanan H, Patel Khushboo A et al. Knowledge of Primi Para Mothers Regarding Breast feeding. Int J Pediatr Nurs. 2019;5(3): 129-134.

12. K L. A Cross sectional study to assess the knowledge and attitude of primipara mothers regarding breast feeding, MES medical college hospital at Perinthalmanna. Asian Journal of Nursing Education and Research [Internet]. 2021 Dec 8;561–4. Available from: https://doi.org/10.52711/2349-2996.2021.00131.
13. Sandhya Jagadale, Jyoti A. Salunkhe, Kavita S. Kapurkar, Sangeeta Patil, NaseemaV. Kanase. "To Assess Knowledge, Attitude and Knowledge of Practice Regarding Breast Feeding among Primi Para Mothers". Journal of Evolution of Medical and Dental Sciences 2015; Vol. 4, Issue 30, April 13; Page: 5121-5127, DOI: 10.14260/jemds/2015/748.
14. Hasan M, Hassan MN, Khan MSI, Tareq MA, Afroj MS: Prevalence, knowledge, attitudes and factors associated with exclusive breastfeeding among mothers in Dhaka, Bangladesh: a cross-sectional study. Pop Med. 2021, 3:23.
15. Rajak P, Krishna Mandal A, Kumar Jana J, et al. (April 04, 2023) Knowledge of Breastfeeding Practices Among Mothers Attending a Tertiary Care Setting in East India. Cureus 15(4): e37146. DOI 10.7759/cureus.37146.
16. Patel R. To assess the knowledge and practice regarding breast- feeding technique among primipara mother's in selected hospital, vadodara. International Journal of Biology Pharmacy and Allied Sciences [Internet]. 2023 Jun 14;12(6 (SPECIAL ISSUE)). Available from: https://doi.org/10.31032/ijbpas/2023/12.6.1078.
17. Batthina Amarendra1, Indira vemuri2, Joseph Mary Meena3. (2019). A Study to Assess the Knowledge of Primigravida Mothers Regarding Exclusive Breastfeeding in Selected Hospital at Guntur District, Andhra Pradesh. International Journal of Nursing Education, 11(4), 31–34. Available from: https://doi.org/10.37506/ijone.v11i4.3941.