

Evaluating the Impact of a Structured Teaching Program on Maternal Knowledge of Weaning Diets for Children Aged 6 Months to 2 Years

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Abstract: Beginning with supplementation, weaning continues until the child is totally off breast milk. Indian babies are entirely breastfed till six months, and their growth is usually good. Breast milk alone cannot support growth after six months. Breast milk cannot provide enough calories and nutrients for growing newborns as it diminishes. Fruit juice supplementation is necessary since breast milk lacks vitamin C. Since a child's liver stores iron for only 4-6 months, iron-rich foods should be offered after six months. Vitamin D is absent from breast milk. Starting additional meals around six months helps the youngster grow and stay healthy. This was a pre-experimental study (one group pre- and post-test). The sample included 100 moms from Mokhumpur, Dehradun. Study participants were selected via convenient sampling. Data was collected using a structured knowledge questionnaire. The pre-test showed that 15% (15) of mothers had inadequate weaning diet knowledge, 80% (80) had intermediate knowledge, and 5% (5) had adequate knowledge. After the intervention (a structured teaching program), 23% (23) had moderate knowledge, and 77% (77) had adequate understanding. Post-test knowledge scores (M = 21.86, SD = 2.98) were 7.09 points higher than pre-test scores (M = 14.77, SD = 3.59). The t-test value (t(99) = 26.660) and p-value (<0.001) indicate statistical significance (p-value < 0.05).

Keywords: Structured Teaching Programme; Knowledge and Weaning Diet; Infant and Young Child Feeding (IYCF); World Health Organization (WHO); Health Complications and Quantitative; Structured Teaching Program.

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1. Introduction

Adequate nutrition during infancy is essential for a healthy start in life. According to the WHO guidelines for infant and young child feeding (IYCF), a child should be breastfed for the first six months after birth and should be rapidly introduced to semisolid and solid foods after that during breastfeeding. Breast milk alone, even in reasonable quantities, cannot provide all the energy and protein a baby needs to grow adequately after six months of age. Adequate nutrition is essential to maintaining optimal baby health at six months as babies experience rapid growth and development in the first year of life. Where good

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nutrition is essential. Nutrition in the early years is a major determinant of healthy growth and development in childhood and healthy adulthood. From an average birth weight of 3 kg, the baby's weight increases by almost 5 kg at the end of 3 months. After six months, breast milk no longer provides all the nutrients your growing baby needs, especially the iron and calories that solid foods provide.

Therefore, weaning provides the child with a balanced diet for proper growth and development [1]. Poverty does not cause protein energy malnutrition in India, but it slows down the introduction of complementary energy nutrition, which can cause malnutrition in growing children. Mothers are unaware and don't know how much food a child needs, so weaning is an important source of supplementary feeding with breast milk for up to 2 years. Malnutrition in the first two years of life results from an improper weaning diet and will continue to do so in the future. This condition results in impairments in achieving the full potential for children's physical growth, brain development, and health status [2]. Weaning diet takes place from the start of supplementation until the child's birth is completely out of breast milk. In India, babies are fed only breast milk until they are six months old, and the growth rate during this period is satisfactory. Breast milk alone cannot provide sufficient amounts necessary to sustain growth after the first six months.

Decreased breast milk supply will not treat infants since growth requires calories and proteins. Fruit juice is a must-have vitamin C supplement because milk isn't very good either. A child's liver should only be able to store iron for around four to six months. This is why, beginning at six months of age, iron-rich foods should be introduced. Milk is also deficient in vitamin D. Restarting the additional power supply is necessary to ensure that your child continues to grow at the expected rate and is healthy and strong until approximately six months of age [3]. Mothers do not know this, according to the World Health Organization report. They are aware of what the baby needs to grow, but they might not have the skills to make weaning food. A typical cultural practise that is essential to a baby's development is weaning. Preventing a range of health issues requires good weaning technique. Roughly one-third of young children's fatalities occur as a direct or indirect result of malnutrition. There is a rising awareness of the importance of proper nutrition, particularly in the first few years of life, for a child's physical, psychological, and social development [4].

2. Statement of the Problem

A study to Evaluate the effectiveness of a Structured teaching program on knowledge regarding weaning diet among mothers of children aged (6 months to 2 years) in a selected community area of Mokhumpur, Dehradun, to develop an information booklet.

3. Review of Literature

A non-experimental study was carried out by Rani [5] to evaluate the knowledge and attitude of mothers regarding weaning. The locations of CHC, Kahnaur, Rohtak, and Haryana were the subjects of the current investigation. In order to carry out this investigation, the researcher relied on quantitative methods. This study employed a research design that did not involve experiments. This study used a non-likelihood convenience sampling strategy to interview 100 mothers of babies. The investigator has determined that the data provided by moms of newborns is sufficient. Babies' viewpoints and information about breastfeeding are highly correlated. Breastfeeding mothers can benefit from the information in the brochure.

One study that looked into primipara moms' knowledge on weaning was done by Leelavathi [6]. Jalaripeta village in the Visakhapatnam district of Andhra Pradesh was the site of the research. Both the methodology and the design of the study were quantitative. Using a non-probability convenient sampling strategy, 30 samples met the inclusion criteria for this investigation. Two parts make up the data gathering instrument: Part A consists of demographic information, while Part B is a structured questionnaire designed to test the weaning expertise of first-time mothers. Based on the data, it appears that 17.6% of moms have insufficient knowledge, 40.0% have intermediate knowledge, and 3.3% have adequate knowledge. Finding a strong correlation between "educational status, occupation, kind of family and no. Of children" and knowledge, the study deduces that a majority of primipara moms, specifically 56.6% (17 out of 20), lack sufficient understanding. Healthy weaning habits can be initiated through community health education initiatives that the nurse administrator plans to run.

A descriptive research was carried out by Thomas et al. [7] to evaluate primipara mothers' knowledge of weaning procedures. The research took place at Dehradun's Shri Mahant Indiresh Hospital in Patel Nagar. The primary moms' understanding of weaning procedures was the target of this research. The research study employs a descriptive study approach. One hundred moms made up the study's overall sample, which was chosen using a purposive sampling technique. Among a sample of prim iparous moms brought to the postnatal ward, 52% had insufficient understanding, 43% had intermediate knowledge, and 5% had adequate knowledge regarding weaning.

Researchers Deepa et al. [8] wanted to see how much moms knew and what they did when it came to weaning their children. Since the study's overarching goal was to evaluate mothers' familiarity with and approach to weaning, a descriptive survey design with a quantitative methodology was deemed suitable (6 months to 2 years of baby). All India Institute of Medical Science in Jodhpur served as the site of the present investigation, which included the outpatient department, ward, and intensive care unit. Seventy women with children ranging in age from six months to two years were included in this study using a convenient sampling strategy. The mean knowledge score for mothers as a whole is 18.11+3.37. Knowledge and practise scores were highly correlated (p = 0.9488). The majority of participants had mediocre understanding regarding weaning, according to the study's results.

A quasi-experimental study was carried out by Kandpal [9] in Lucknow, India, to determine the efficacy of a structured training programme in enhancing weaning skills among mothers of newborns in specific rural regions under sarojninagar. Sixty moms-to-be were chosen at random and studied using a quasi-experimental one-group pre- and post-test methodology. On the pretest, 75% of moms had no awareness at all about weaning, whereas 25% had a considerable amount of knowledge. On the follow-up test, 70% of moms had good knowledge and 30% had moderate knowledge on weaning their babies. The study population's mean knowledge score was 12.12+-3.17 before the intervention, and it increased to 23.72 +-3.33 following the organised training programme (p<0.001). Mothers' knowledge of weaning can be much improved by an organised teaching programme, according to the study. Infant mothers should be educated on how to support their children's healthy growth and development.

Vishwakarma [10] Preliminary research was carried out to assess the efficacy of a structured education programme on primipara moms' weaning knowledge. Naryawali, a village under Sagar, was the site of the research. In this work, the researchers used a quantitative technique and a pre-experimental design. Using a straightforward sampling technique, a sample size of 50 primi para mothers was determined. Using a post-test design, a non-randomization study group pre-test, and a quantitative research approach, the structured training program's impact on primi para moms' weaning knowledge was assessed. Method of convenient sampling used in the research group. To gather this information, we utilised a structured questionnaire. Descriptive and inferential statistics were used to examine the gathered data. In order to test the hypothesis, chi-square was employed. It evaluates the Primi Para moms' knowledge of weaning before and after the intervention. Primi Para moms' knowledge of weaning differed significantly between the pre- and post-tests, with a mean of 10.34, standard deviation of 7.96, and a computed (+) value. The mother's age, education, family type, occupation, religion, language, dietary habit, and source of health-related information were not significantly associated with the estimated chi-square values of 4.14, 1.58, 2.4, 0.78, 1.61, 0.11, 3.89, and 5.02, respectively.

Children in Gujarat's Devbhumi Dwarka District who were less than two years old were the subjects of a descriptive crosssectional study by Saha et al. [11]. The present investigation was carried out in the following four blocks of the Devbhumi Dwarka District in Gujarat: Khambhaliya, Bhanvad, Kalyanpur, and Dwarka. Although 1200 participants were intended for the study, only 1301 were actually enrolled. Malnutrition in the Devbhumi Dwarka District is a double-edged sword, as this study shows. Nevertheless, compared to earlier state and national surveys, the current study found a lower prevalence of wasting, underweight, and stunting. Undernourishment in children younger than two years old was linked to maternal variables such as the time between successive pregnancies and literacy levels.

4. Materials & Methods

A quantitative research approach was adopted as it is considered suitable for the investigation. The study's research design is pre-experimental (one group pre-test post-test design). This study aimed to evaluate the effectiveness of structure teaching program knowledge regarding weaning diet among mothers of child age (6 months - 2 years) at selected community area of Mokhumpur Dehradun to develop an information booklet. The present study was organized in the community area in Mokhumpur, Dehradun. The population under study was mothers of child age (6 months to 2 years). The present study comprised 100 samples. They were selected by convenient sampling technique. The tool used in this study was organized into two sections. Section A includes the Demographic profile. Section B includes the Self-structured knowledge questionnaire. A multiple-choice questionnaire was used to assess mothers' knowledge regarding weaning diet. These were 30 questions in total. Each question was prepared with one correct option. A Score of 1 was fixed for the correct answer and a 0 score for the wrong one. The retest method was applied to examine the tool's reliability, and the reliability value was r =0.74, which revealed that the tool was reliable. Data analysis based on study objectives and hypothesis states was prepared using descriptive and inferential statistics.

5. Results and Interpretation

Section-1: Description of The Socio- Demographical Variables of The Mothers

It deals with demographical data, which consists of 9 items to collect the sample characteristics, which comprises Age of mothers, Religion, Educational status, Occupation, Type of family, Order of the child, Sex of the child, Type of delivery, and Age of the child.

Age in year	F	%
a. 22-26 years	25	25%
b. 27-30 years	38	38%
c. 31-34 years	28	28%
d. Above 34 years	9	9%
Total	100	100%

Table 1: Distribution of Mothers by Age in Years (N=100)

Table 1 and Figure 1 show the age of the mothers. In the table, the ages of mothers between 22-26 years were 25% (25), 27-30 years were 38% (38), 31-34 years were 28%(28), and above 34 years were 9% (9), respectively.



Figure 1: Percentage distributions of mothers by age

Table 2: Distribution of Mothers By Religion (n=100)

Religion	F	%
a. Hindu	97	97%
b. Muslim	2	2%
c. Christian	1	1%
d. Others	00	00%
Total	100	100%

Figure 2 and Table 2 show the designation of mothers. In the group, Hindu mothers were 97 %(97), Muslim mothers were 2%(2), Christian mothers were 1%(1), and Others mothers 00%(00) respectively.



Figure 2: Distribution of mothers by religion

Ennbbhy Educational status	F	%
a. Illiterate	5	5%
b. Primary	13	13%
c. Senior Secondary	31	31%
d. Graduation	51	51%
Total	100	100%

 Table 3: Distribution of Mothers by Educational Status (n=100)

Figure 3 and Table 3 show the educational status of the mothers. In the group ,Illiterate were 5%(5), Primary were 13%(13), Senior secondary was 31%(31), and Graduation 51%(51) respectively.



Figure 3: Distribution of mothers by Educational Status

Table 4: Distribution	on of Mothers	by Occupation	(n=100)
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Occupation	F	%
a. Housewife	84	84%
b. Private employee	8	8%
c. Government employee	6	6%
d. Self-employee	2	2%
Total	100	100%

Figure 4 and Table 4 show the mothers' occupations. In the group, housewives were 84 % (84), Private employees were 8%(8), government employees were 6%(6), and self-employed 2%(2), respectively.



Figure 4: Distribution of mothers by occupation

Type of family	F	%
a. Nuclear family	33	33%
b. joint family	52	52%
b. Extended family	14	14%
c. Separated family	1	1%
Total	100	100%

Table 5: Distribution of Mothers By Type of Family (n=100)

Figure 5 and Table 5 show the years of experience of mothers. In the group, mothers of Nuclear families were 33 %(33), Joint families were 52% (52), Extended were 14% (14), and Separated was 1% (1), respectively.



Figure 5: Distribution of mothers by type of family

Table	6۰	Distribution	of Mothers	by Order	of The	Child $(N-100)$	
Lane	υ.	Distribution	of mouners	by Older	of the	Ciniu ($N=100$)	

Order of the child	F	%
a. One	50	50%
b. Two	45	45%
c. Three	5	5%
d. More than three	00	00%
Total	100	100%

Figure 6 and Table 6 show the order of the mothers' children. In the group, one were 50 %(50), two were 45 %(45) three were 5 %(5) respectively.



Figure 6: Distribution of mothers by order of the child

Sex of the child	F	%
a. Male	50	50%
b. Female	50	50%
Total	100	100%

Table 7: Distribution of Mothers by Sex of The Child (N=100)

Figure 7 and Table 7 show the sex of the mothers' child. In the group, males were 50 %(50), and females were 50 %(50), respectively.



Figure 7: Distribution of women by sex of the child

Table 8: Distribution of Mothers by Type of Delivery (n=100)

Type of delivery	F	%
a. Normal	52	52%
b. C-Section	47	47%
c. Forceps delivery	1	1%
a. Vacuum delivery	00	00%
Total	100	100%

Figure 8 and Table 8 Show the mothers' delivery type. In the group, normal were 52 %(52), C-Section 47 %(47), Forceps delivery 1 %(1) respectively.



Figure 8: Distribution of mothers by type of delivery

Age of the child	F	%
a. 6-10 Months	35	35%
b. 11-15 Months	34	34%
c. 16-20 Months	15	15%
d. 21-24 Months	16	16%
Total	100	100%

Table 9: Distribution of Mother by Age of The Child (N=100)

Figure 9 and Table 9 show the age of the mother's child. In the group, 6-10 Months were 35% (35), 11-15 Months were 34% (34), 16-20 Months were 15% (15) and 21-24 Months were 16% (16) respectively.



Figure 9: Distribution of mothers by age of the child

Part -1: This section shows the pre-test knowledge score regarding weaning diet among mothers.

Table 10: Pre-test Knowledge score of mothers regarding weaning diet

S. No.	Knowledge score	Mean	Mean%	S D
1	Pre-test	14.77	49.23	3.59

Table 10 reveals the distribution of mean, mean, and standard deviation of the knowledge score of mothers regarding weaning diet. The pre-test mean knowledge score was (14.77 ± 3.59) having a mean percentage of 49.23 respectively.

Part 2: This section shows mothers' post-test knowledge scores regarding weaning diet.

Table 11: Post-test knowledge score of mothers regarding weaning diet

S. No.	Knowledge score	Mean	Mean%	S D	
2	Post-test	21.86	72.86	2.98	

Table 11 reveals the distribution of mean, mean, and standard deviation of the knowledge score of mothers regarding weaning diet. The post-test mean knowledge score was (21.86±2.98) having a mean percentage of 72.86 respectively.

Knowledge level	Pre-test		Post-test			
	F %		F	%		
a. Inadequate	15	15%	0	0%		
b. Moderate	80	80%	23	23%		
c. Adequate	5	5%	77	77%		
Total	100	100%	100	100%		

 Table 12:
 Knowledge Level of Mothers in Pre-test & Post-Test (n=100)

Figure 10 and Table 12 show that the assessment of the level of knowledge regarding weaning diet that during the pre-test, 15% (15) of the mothers had inadequate knowledge, 80% (80) had moderate knowledge, and 5% (5) had adequate knowledge. After the intervention (Structured Teaching program), there was an improvement in the level of knowledge regarding weaning diet 23% (23) had moderate knowledge, and 77% (77) had adequate knowledge.



Figure 10: Bar graph showing Frequency distribution Knowledge level of mothers in pre-post test

Component	Group	Mean	Mean difference	Standard deviation	t- value	p-value
	Pre-test	14.77	7.09	3.593	26.660	001
Effectiveness of structured teaching program on weaning diet	Post-test	21.86		2.988		<.001

Table 13: Effectiveness of structured teaching program knowledge regarding weaning diet among mothers

Table 13 results reveal a statistically significant improvement in knowledge scores post-test (M, 21.86, SD= 2.98) compared to pre-test scores (14.77, SD=3.59) with a mean difference of 7.09, t (99) =26.660, the p-value of statistical "t" test for weaning diet is found to be p=<0.001 which is less than 0.05.

Hence, the research H1, the significant difference between pre-test and post-test knowledge regarding a weaning diet after administering a structured teaching program among mothers in the one group at p<0.05, Accepted (Table 14).

Fable	14:	Association	of pre-tes	t knowledge score	s of mothers	with selected	demographic	variables	(n=100)
			1	U			01		· /

Demograp	hic	Pre - Interver	Pre - Intervention Academic Score			(P	Chi-	Infernce
Variables		Inadequate	Moderate	Adequate		Value)	Square	
Age of	22-26 year	7	16	3	6	0.052	12.46	NS
Mother	27-30 year	6	31	1				
(In	31-34 year	0	27	1				
Years)	Above 34 year	2	6	0				
Religion	Hindu	12	80	5	4	0.001	17.52	S

	Muslim	2	0	0				
	Christian	1	0	0				
	Other	0	0	0				
Educatio	Illiterate	4	1	0	6	1.79	57.04	NS
nal Status	Primary	9	4	0	1			
	Senior Secondary	3	29	0				
	Graduation	0	45	5				
Occupati	Housewife	15	65	5	6	0.621	4.41	NS
on	Private employee	0	7	0				
	Government Employee	0	6	0				
	Self employee	0	2	0				
Type of	Nuclear family	9	24	1	6	0.04	12.94	S
Family	Joint family	5	43	3				
	Extended family	0	13	1				
	Separated family	1	0	0				
Order of	One	10	36	4	4	0.31	4.78	NS
The	Two	5	39	1				
Child	Three	0	5	0				
	More than three	0	0	0				
Sex of	Male	6	41	1	2	0.199	3.22	NS
The	Female	9	38	5				
Child								
Type of	Nuclear	14	35	4	4	0.02	11.53	S
Delivery	C-Section	2	43	1				
	Forceps delivery	0	1	0				
	Vacuum delivery	0	0	0				
Age of	6-10 months	8	27	1	6	0.86	2.570	NS
The	11-15 months	5	28	2]			
Child	16-20 months	2	11	1				
	21-24 months	1	13	1				

There was a statistically significant association between the age of religion, type of family, and type of delivery between knowledge levels of the mothers regarding weaning diet with their selected variables. The obtained p-values of these variables are less than 0.05. There was no statistically significant association between the age of mothers, educational status, occupation, order of the child, sex of the child, or age of the child between knowledge levels of mothers regarding the weaning diet with their selected variables. The obtained p-value of these variables is more than 0.05. Hence, the research hypothesis H2- There will be a significant association between levels of pre-test knowledge score with their selected demographic variables is partially accepted.

6. Discussion

The study results have been discussed in different sections, with the study objectives and hypotheses guiding the analysis. The significance criterion for testing the hypothesis was set at p<0.05. According to the findings, the socio-demographic variables of the mothers were assessed. In terms of age, the majority, 38% (38), were between 27-30 years of age, 28% (28) were between 31-34 years of age, 25% (25) were between 22-26 years of age, and 9% (9) were above 34 years. Regarding religion, 97% (97) of the mothers were Hindu, 2% (2) were Muslim, and 1% (1) were Christian. When looking at educational status, 51% (51) had graduated, 31% (31) had completed senior graduation, 13% (13) had primary education, and 5% (5) were illiterate.

In terms of occupation, 84% (84) of mothers were housewives, 8% (8) were private employees, 6% (6) were government employees, and 2% (2) were self-employed. Regarding the type of family, 52% (52) of mothers belonged to joint families, 33% (33) belonged to nuclear families, 14% (14) belonged to extended families, and 1% (1) belonged to separated families. The majority of mothers, 50% (50), had their first child, while 45% (45) had their second child, and 5% (5) had their third child.

For the child's sex, 50% (50) were male, and 50% (50) were female. Regarding the type of delivery, 52% (52) of the mothers had normal deliveries, 47% (47) had C-sections, 1% (1) had forceps delivery, and none had vacuum-assisted delivery. The majority of children, 35% (35), were between 6-10 months old, 34% (34) were 11-15 months old, 15% (15) were 16-20 months old, and 16% (16) were 21-24 months old.

The study further assessed the mothers' knowledge regarding weaning diets. During the pre-test, 15% (15) of the mothers had inadequate knowledge, 80% (80) had moderate knowledge, and 5% (5) had adequate knowledge. After the structured teaching program intervention, there was an improvement in knowledge: 23% (23) of mothers had moderate knowledge, and 77% (77) had adequate knowledge. The mean pre-test knowledge score of the mothers was 14.77 (49.23%), with a standard deviation of 3.59, indicating inadequate knowledge regarding weaning diets. The post-test knowledge score improved to a mean of 21.86 (72.86%), with a standard deviation 2.98, indicating adequate knowledge regarding weaning diets.

The study demonstrated the effectiveness of the structured teaching program, showing a statistically significant improvement in post-test knowledge scores (M = 21.86, SD = 2.98) compared to pre-test scores (M = 14.77, SD = 3.59), with a mean difference of 7.09. The t-test value was t(99) = 26.660, and the p-value was <0.001, indicating a significant improvement in knowledge. Regarding the association between pre-test knowledge scores and selected demographic variables, there was a statistically significant association between the mothers' religion, type of family, and type of delivery, as these variables had p-values less than 0.05. However, there was no significant association with age, educational status, occupation, order of the child, sex of the child, or age of the child, as the p-values for these variables were greater than 0.05. Consequently, the research hypothesis that there would be a significant association between pre-test knowledge scores and selected demographic variables was partially accepted.

Consistent with earlier research, these results... As an example, none of the moms had strong knowledge, 45% had average knowledge, and 55% had low knowledge on their pre-test. None of them had inadequate knowledge after taking the test; 70% had average knowledge; and 30% had high knowledge; the difference between the two groups was statistically significant (P = 0.0002) which indicated that participants' knowledge scores improved from 10.88 to 14.75 after the intervention, representing a mean difference of 3.87. With a p-value of less than 0.001 (DF = 59, table value = 3.46), the 7.03 t-value that was produced was considered statistically significant.

Furthermore, no statistically significant association exists between mothers' knowledge and other demographic variables such as age, religion, dietary patterns, occupation, family income, or socioeconomic status. However, there was a significant association between knowledge levels and the age of infants, the number of children, and the mother's education.

7. Conclusion

The study's main concept was to assess the effectiveness of a structured teaching program on knowledge regarding weaning diet among mothers of children aged (6 months to 2 years). The Independent variable was a structured health teaching program, and the dependent variable was knowledge regarding weaning diet. The study adopted a quantitative research approach with a pre-experimental design (one group pre-test pos-test design). The investigation was undertaken in the Community area of Mokhumpur, Dehradun. The calculated sample size in the current study was 100 samples were collected. The researcher used the non-probability convenient sampling technique to choose the samples for the population. Reliability is the ability of the data-gathering devices to obtain consistent results. All the tools were administered to 10 mothers. Karl Pearson's Correlation Coefficient established the reliability of the tool) method, it was found to be 0.74, which is reliable. The investigator also developed a lesson plan for a structured teaching program, and experts validated the script's content. Pre-testing was done on ten mothers. The main conclusion drawn from this study is that a structured teaching program effectively increased mothers' knowledge level of the weaning diet. The findings of the study revealed that there was a significant association between religion, type of family, and type of delivery, and there was no significant association between the age of mothers, educational status, occupation, order of the child, sex of the child, or age of the child. Most mothers of children had moderate knowledge, and some mothers had inadequate knowledge of weaning diets. Therefore, the researcher found inadequate knowledge in several mothers who tried to overcome the structured teaching program. The study helped the mothers to gain more knowledge about weaning diet.

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Data Availability Statement: The present study sample consists of mothers of children aged six months to -2years) in Mokhumpur, Dehradun.

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Ethics and Consent Statement: To secure credibility, the tools besides the research statement, objectives, and criteria checklist were submitted to 6 validators. Face Validity- the overall appearance of tools was appropriate regarding language, content, and organization. Language- in the context of language tools, it was appropriate and easily understood by experts. The content of the tools was adequate, accurate, and organized, as per the instructions of the validators.

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