



## Effectiveness of STP on knowledge regarding weaning among primi-para mothers

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### ABSTRACT

**Background:** Weaning is the term which will be familiar for every mother. Proper knowledge and training is required to perform effective weaning. Many studies have conducted on Weaning in India and abroad reveal that most of the mothers, especially primipara mothers had not have adequate knowledge regarding effective weaning, weaning foods, feeding practices, as they are following traditional feeding practices. Effective weaning in the child requires proper knowledge and good technique skills in the mothers. The investigator found that a Structured Teaching Programme can improve the knowledge level of the primi para mothers regarding Weaning.

**Aims and objectives:** The study aimed at assessing the knowledge of primi- para mothers regarding weaning, to develop and administer the structured teaching programme, evaluate its effectiveness on knowledge of primi para mothers and to find an association between pre and posttest knowledge scores with their socio-demographic variables.

**Material and Methods:** A one group pre-test post-test pre-experimental approach was adopted. The study was conducted among 60 primi-para mothers conveniently selected from a community area in Bangalore. The content validity of the tool and teaching plan was established. The reliability of tool was established by testing the internal consistency by using Split Half method.

**Results:** The findings of the study with regard to the pre test knowledge assessment, revealed that the mean of the primi para mothers knowledge was 58. In post test, very significant increase in knowledge was found as the mean percentage of knowledge score was improved from 58% in pre test to 80.93% in the post test.

**Conclusion:** This study concluded that structure teaching program is an effective tool to improve the knowledge of Primi-Para mothers regarding weaning.

### KEYWORDS

Primi-para mothers, knowledge regarding weaning, Structured teaching programme.

### INTRODUCTION

Infancy is the period when foundation of health is laid. The changes in the infant between birth and the age of one year are dramatic. The health and nutritional status of the infant and its subsequent growth and development through childhood depends upon successful feeding practice right from birth. Human breast milk is the most desirable diet for the first 6 months. But on reaching 6 months, breast milk alone is not able to provide all necessary nutrients to the child. Hence a process called 'weaning' is practiced from the child's second half of infancy<sup>1</sup>.

Weaning was derived from an English word 'weanien' meaning 'accustom' literally means to be taken off or alienated from an accustomed pursuit. By weaning, we try to take off the baby from the accustomed feeding of breast milk and to introduce him to solid food along with breast milk. Weaning is the second most important step for independent existence. Thus weaning is defined as the systematic process of introduction of suitable food at the right time in addition to mother's milk in order to provide needed nutrients to the baby<sup>2</sup>.

The right age for weaning is around 4-6 months. The right type of food is a semi solid. The most important fact of weaning is to bridge the gap between liquid and solid diet. If weaning is not proper, children are likely to fall in to the pit of malnutrition. Weaning should be a solid process of gradual replacement of breastfeed by other suitable feeds. The bridge should be built on three strong planks namely continued breast feeding, vegetable protein and animal protein with safety net beneath namely supplementary feeding<sup>3</sup>.

Early weaning is often due to ignorance and leads to contamination and infection related to unhygienic preparation. Late weaning leads to malnutrition and growth faltering. Weaning foods should be cheap, easily available and acceptable to

the custom. Slowly other foods can be introduced. Semi solids and fruit juices can be started from 4-6 months of age, items that can be mashed with fingers can be started from 6 months of age. Vegetables, roots, tubers, fruits, fish, meat... Etc can be added. By one year of age the child must be taking all the items that are cooked at home<sup>4</sup>.

A sound knowledge and practical application of nutritional requirements must be the basis of choice of infant foods. The socioeconomic status and education of the mother have also been known to influence infant feeding practices. Socio cultural and economic aspects and prevalent feeding habits of the community also have to be taken in to account when the parents are advised regarding weaning procedures<sup>5</sup>.

### STATEMENT OF THE PROBLEM

"A study to assess the effectiveness of Structured Teaching Programme on knowledge regarding Weaning among primi-para mothers in a selected community area of Bangalore".

### OBJECTIVES OF THE STUDY

1. Assess the knowledge of Primi-para mothers regarding weaning.
2. Develop and administer the structured teaching programme.
3. Evaluate the effectiveness of structured teaching programme on knowledge of Primi-para mothers regarding weaning.
4. To find an association between pre test knowledge of primi para mothers with selected socio-demographic variables.

### HYPOTHESES

H1: There will be significant difference in pretest and posttest knowledge level of Primi-para mothers regarding weaning.

### MATERIALS AND METHODS

**Research Approach:** Evaluative research approach was used.

**Research Design:** A one group pre-test post-test Pre experimental research design was adopted

**Setting of the Study:** The study was conducted in a selected community are Bangalore.

**Target Population:** The target population for this study consisted of Primi-para mothers are residing in Nelamangala, A community area in Bangalore.

**Sample:** The sample for the present study comprises of 60 Primi-para mothers in Nelamangala, Bangalore Dist.

**Sampling technique:** Non-probability convenience sampling technique was used.

**Development of tool for data collection:** it consists of 2 parts:-

**Part 1:-** The first section of the tool consists of 7 items seeking information about age, religion, education, occupation, monthly income, Area of living, family type,.

**Part 2:-** Structured teaching programme was prepared based on reviewing the related literature, consulting with the subject experts and investigators personal experience. Number of items are 30 (questions) and is divided into 6 categories based on their importance.

- Definition and meaning of weaning
- Timing of commencement of weaning
- The qualities of ideal weaning food item
- Weaning food items provided according to the age of the child
- Technique of weaning/ feeding (Principles)
- Common problems in weaning & its Management

**Validity of instrument:** To ensure the content validity of the prepared tool, it was submitted to 10 experts in which 1Pediatritian, 1 statistician, and 8 are different experts of nursing field from India.

**Reliability:** Reliability of the tool was established using split half method and product moment correlation co-efficient was calculated. The reliability co-efficient of correlation of knowledge questionnaire was found to be 'r'=0.8679. Hence the tool was found to be reliable for the study.

**Data collection procedure:** The data collection was scheduled, and written permission was obtained from the Medical Officer, Nelamangala CHC. The investigator visited the Anganwadi nearby the CHC as per prior information and was introduced to mothers. The purpose of the study was explained to them and informed consent was obtained from the respondents. Primipara mothers of that area were assessed of their knowledge through structured questionnaire. 30 minutes time was given to the subjects to complete the questionnaire. Structured teaching programme was conducted on the same day. The duration of the session was 1 hour and group consists of 60 mothers in that area. Lecture cum discussion was the method adopted. Power point was used. The mothers were listening without any distraction during structured teaching programme. After the lecture cum discussion, the questions raised by the group were given appropriate explanation. On the 7<sup>th</sup> day post test was given using same questionnaire to evaluate the effectiveness of structured teaching programme. After expressing thanks to the respondents, the data collection procedure was terminated. The investigator found no dif-ficulties during data collection.

**Analysis of data:** Data analysis is the systematic organization of research data. The data obtained would be analyzed by both descriptive and inferential statistics, on the basis of ob-jectives of the study. The data is to be tabulated according to

various parameters like age, religion, education, occupation, income, area of residence, type of family age of the child, and exposure to previous information. The data are presented in terms of frequency, percentage, mean, mean percentage and standard deviation. Association between knowledge and de-mographic variable was assessed by Chi-square. The level of significance would be set at 0.5 level to test the significance of difference. The level was used as standard for testing the difference.

RESULTS

The finding discussed under the following headings based on objectives of the study.

**Section I:** - description of demographic data of the sample.

**Section II:** - Analysis of the existing knowledge of sample re-garding weaning by pre test.

**Section III:** - Evaluate effectiveness of the structure teaching programme

**Section IV:** - Association between pretest knowledge scores of Primi –Para mothers with their socio-demographic variables.

SECTION I: - DESCRIPTION OF DEMOGRAPHIC DATA OF THE SAMPLE

TABLE-I : FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLE ACCORDING TO AGE

AGE	FREQUENCY	PERCENTAGE
LESS THAN 20	10	16%
20-25	31	52%
25-30	17	28%
30-35	2	4%

**INFERENCE:** The majority of respondents 52%, and28% were between 20-30 years.

TABLE-II: FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLE ACCORDING TO RELIGION

RELIGION	FREQUENCY	PERCENTAGE
HINDU	40	67%
MUSLIM	14	23%
CHRISTIAN	6	10%

**INFERENCE:** Majority of them 67% were from Hindu Re-ligion and Muslims and Christians were too less about 23% and10% respectively.

TABLE-III : FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLE ACCORDING TO EDUCATIONAL STATUS

EDUCATIONAL STATUS	FREQUENCY	PERCENTAGE
PRIMARY	8	13%
HIGH SCHOOL	32	54%
COLLEGE	18	30
PROFESSIONAL	2	3%

**INFERENCE:** Considering the Educational status 54% of the respondents underwent high school education, 30% have col-lege education, 13% have only primary education. The Pro-fessionals were 3%.

TABLE-IV : FREQUENCY AND PERCENTAGE DISTRIBUTION OF SAMPLE ACCORDING TO MONTHLY INCOME

MONTHLY INCOME	FREQUENCY	PERCENTAGE
LESS THAN 1500	20	33%
1500-3000	22	37%
3000-4500	11	18%
MORE THAN 4000	7	12%

**INFERENCE:** While considering the income 33% people are

low income area about 1500 and less, 37% have an income of 1500-3000. Only 12% has income of 4500+.

TABLE-V : FREQUENCY AND PRECENTAGE DISTRIBUTION OF SAMPLE ACCORDING TO AREA OF LIVING

AREA OF LIVING	FREQUENCY	PERCENTAGE
URBAN	8	14%
RURAL	52	86%

INFERENCE: About 86% of the respondents were staying in Rural areas and 14% in urban area.

TABLE-VI : FREQUENCY AND PRECENTAGE DISTRIBUTION OF SAMPLE ACCORDING TO TYPE OF FAMILY

TYPE OF FAMILY	FREQUENCY	PERCENTAGE
URBAN	8	14%
RURAL	52	86%

INFERENCE: 60% of the respondents were from nuclear family and joint family were less about 40%

TABLE-VII : FREQUENCY AND PRECENTAGE DISTRIBUTION OF SAMPLE ACCORDING TO OCCUPATION

OCCUPATION	FREQUENCY	PERCENTAGE
EMPLOYED	10	17%
UNEMPLOYED	50	83%

INFERENCE: Among the mothers 83% were unemployed and 17% were employed.

SECTION II: - ANALYSIS OF THE EXISTING KNOWLEDGE SCORE OF SAMPLE BY PRE TEST ON WEANING.

TABLE VIII: CLASSIFICATION OF RESPONDENTS ON PRE TEST KNOWLEDGE LEVEL ON WEANING

No	Knowledge aspects	Statements	Max. Score	Respondents Knowledge		
				Mean	Mean%	SD
I	Definition & Meaning	1	1	0.55	55.0%	0.497
II	Timing & Commencement	4	4	2.41	60.0%	0.936
III	Qualities of weaning foods	3	3	1.87	62.3%	0.741
IV	Food items according to age	4	4	2.53	63.3%	0.957
V	Principles in weaning	12	12	6.67	55.6%	1.67
VI	Common problems and Mgt.	6	6	3.38	56.3%	0.75
	Combined	30	30	17.42	58.0%	2.124

Table VIII: reveals that the mean response on definition and meaning, timing and commencement, Qualities of weaning foods, food items according to age, principles of weaning, common problems in weaning and management found to be 0.55, 2.41, 1.87, 2.53, 6.67, and 3.37 respectively. The mean % of respondents knowledge on definition and meaning, timing and commencement, Qualities of weaning foods, food items according to age, principles of weaning, common problems in weaning and management were 55.0%, 60.0%, 62.3%, 63.3%, 55.6% ,and 56.2% respectively. The SD% are 0.497, 0.936, 0.741, 0.957, 1.67, and0.75 respectively. The pre test mean % knowledge score found to be high in food items according to age 63.3% followed by 55.6% in principles in weaning.

SECTION III: EVALUATE EFFECTIVENESS OF THE STRUCTURED TEACHING PROGRAMME

TABLE IX: OVERALL PRE TEST AND POST TEST MEAN KNOWLEDGE ON WEANING n = 60

Aspects	N	Respondents Knowledge			‘t’ value
		Mean	Mean%	SD	
Pre test	60	17.42	58.067	2.124	18.54*
Post test	60	24.28	84.93	1.933	
Enhancement	60	6.86	22.86		

\*significant at 5% level t (59, 0.05) =2.0

The analysis is done in order to find out whether there is any significant difference between the mean score of pre and post test. The “t” value is found to be 18.54. It is significant at 0.05 level of confidence. The enhancement value (6.86) shows that the mean post-test knowledge score of primi para mothers regarding weaning is significantly higher than their mean pre test knowledge score. So that the structured teaching programme is effective for improving the knowledge level of primi para mothers regarding weaning.

TESTING THE RESEARCH HYPOTHESIS H<sub>1</sub>

Hypothesis was tested by using paired “t” test. The value of “t” was calculated to analyse the difference in knowledge of the primi-para mothers with their pre-test and post-test scores after calculation “t” calculated 18.54 is more than “t” table 2.000 at the 0.05 level of significance. So it shows the very high significant and association between pretest and posttest knowledge score of. Hence research hypothesis H<sub>1</sub>is accepted

SECTION IV: ASSOCIATION BETWEEN PRETEST KNOWLEDGE SCORES OF PRIMI-PARA MOTHERS WITH SELECTED SOCIO-DEMOGRAPHIC VARIABLES.

Assess the level of pre test knowledge with selected demographic variables which shows association between demographic variable and pre test knowledge level on weaning.  $\chi^2$  value shows the selected demographic variables such as are significant at pre test level.

TABLE X: SHOWS THE ASSOCIATION BETWEEN KNOWLEDGE AND TYPE OF FAMILY

TYPE OF FAMILY	SAMPLE	RESPONDENTS KNOWLEDGE		X <sup>2</sup>
		MODERATE	ADEQUATE	
Nuclear	36	20	16	5.475*
Joint	24	6	18	

\*significant at 5% level  $\chi^2_T(1, 0.05) =3.84$

INFERENCE: There is a significant association between level of knowledge of primi para mothers and the selected demographic variable such as Joint family and Nuclear family.

TABLE XI: SHOWS THE ASSOCIATION BETWEEN KNOWLEDGE AND OCCUPATIONAL STATUS

OCCUPATION	SAMPLE	RESPONDENTS KNOWLEDGE		X <sup>2</sup>
		MODERATE	ADEQUATE	
Un employed	30	10	20	6.67*
Employed	30	2	28	

\*significant at 5% level  $\chi^2_T(1, 0.05) =3.84$

INFERENCE: There is a significant association between level of knowledge of primi para mothers and the demographic variables such as employed or un employed.

TABLE XII:- SHOWS THEASSOCIATION BETWEEN AREA OF LIVING AND PRE TEST KNOWLEDGE LEVEL ON WEANING.

LIVING AREA	SAMPLE	RESPONDENTS KNOWLEDGE		X <sup>2</sup>
		MODERATE	ADEQUATE	

Urban	25	11	14	6.58*
Rural	35	5	30	

\*significant at 5% level  $\chi^2_T(1, 0.05) = 3.84$

INFERENCE: There is a significant association between level of knowledge of primi para mothers and the area in which they are living whether it is in Rural or Urban .

TABLE XIII: SHOWS THE ASSOCIATION BETWEEN RELIGION AND PRE TEST KNOWLEDGE LEVEL ON WEANING.

RELIGION	SAMPLE	RESPONDENTS KNOWLEDGE		$\chi^2$
		MODERATE	ADEQUATE	
Hindu	40	5	35	21.11*
Muslim	14	9	5	
Christian	6	3	3	

\*significant at 5% level  $\chi^2_T(2, 0.05) = 5.991$

INFERENCE: There is a significant association between level of knowledge of primi para mothers and their Religion.

DISCUSSION

The present study was conducted to determine the effectiveness of structure teaching program on knowledge regarding among primi-para mothers in a selected community area Bangalore. The finding of the study revealed that a very high significant difference between mean pre and post test knowledge score of respondents indicating significant increase in knowledge after structure teaching program. Hence it is observed that structure teaching program is very effective tool in improving the knowledge of students.

CONCLUSION

The following conclusion drawn from the study findings:

On pre test knowledge level on weaning the findings shows 13.3% respondents knowledge level were inadequate 83% respondents knowledge level were moderate and only 3.3% respondents knowledge were adequate. In post test about 83.3% respondents level of knowledge were adequate, 16.67% respondents knowledge were moderate and none had inadequate knowledge. Study also shows that “t” calculated 18.54 is more than “t” table 2.000 at the 0.05 level of significance so it shows the very highly significant and association between pretest and posttest knowledge score of Primi-para mothers regarding weaning. Hence it proves that structured teaching program was very effective to improve the knowledge of Primi para mothers regarding weaning.

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LIMITATIONS OF THE STUDY

- Data collection period was limited to 4 weeks; hence the sample size was relatively small.
- Sample was selected only from Nelamangala village, hence generalization can only be made for the sample studied.
- The study did not use control group. The investigator had no control over the events that took place between pre-test and post-test.

RECOMMENDATIONS

Based on the findings of the present study recommendations offered for the future study are:

- A comparative study can be done with primi para mothers and Multi para mothers.
- A similar study can be done to assess the knowledge, attitude and practice of weaning among primi mothers.
- A similar study can be done among field staffs in the community.
- An Experimental study can be conducted using control group.

ETHICAL STANDARDS

This study was conducted after getting approval from the Institutional Ethics Committee and after obtaining written consents from all subjects.

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**Conflict of interest:** The authors had no relationship/condition/circumstances that present a potential conflict of interest.

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