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## **A quasi-experimental study to assess the effectiveness of structured teaching program on knowledge regarding weaning among nursing mothers at selected Anganwadi Centers of rural areas of District Kangra H.P**

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### **Abstract**

**Background:** Weaning is when a baby moves from breast milk to other sources of nourishment. Weaning to a baby is a process that takes patience and understanding from both parent and your child. According to World Health Organization (WHO) and other health bodies recommend that babies are fed entirely on breast milk for their first six months of life and continue having their mother's milk alongside other foods – known as complementary foods – until at least the age of two. Today, more than 60% of mums in developed countries give their baby some formula or complementary food before the age of six months, even though WHO guidelines don't recommend this. Weaning is the process of stopping feeding baby with only breast milk. Ideally, the first step towards weaning baby is introducing complementary foods alongside your breast milk around the age of six months. The weaning process continues until breast milk is completely replaced by other foods and drinks

**Methodology:** A quantitative research approach and quasi experimental research design was adopted to conduct study. The non- probability purposive sampling techniques was used to select 100 nursing mothers of selected Anganwadi center of rural area of district Kangra Himachal Pradesh. A self-structured knowledge questionnaire was used to assess the level of knowledge of nursing mothers regarding weaning. Analysis of collected data was done according to the objectives of the study and data analyzed by using descriptive and inferential statistics.

**Result:** The study shows that, out of 100 nursing mothers, about 55% were in the age group of 30-39 years, 81% of nursing mothers were Hindu, 55% nursing mother multigravida, 68% nursing mother were graduated and above, 57% nursing mother were housewife, 46% nursing mothers were having monthly family income of 20,000-30,000, 75% nursing mother were belongs to Nuclear family, 52% of nursing mother were having previous knowledge regarding weaning, 21% having source of information from health workers. Overall mean value of pretest was low then the posttest i.e. 13.36 and t value obtained was found to be statistically significant (2.594) at p 0.005 level of significance, which show the effectiveness of structured teaching programme. Study finding revealed that out of all the selected sociodemographic variables, educational status and previous knowledge were associated with level of knowledge nursing mothers regarding weaning.

**Conclusion:** Structured teaching programme was an effective strategy in improving the knowledge of nursing mothers regarding weaning

**Keywords:** Structured teaching programme, weaning

### **Introduction**

Weaning is a process of introducing solid foods into the baby's diet in order to fulfil their growing nutritional needs. It is started at the age of six months of the child, from 4-6 months' baby May not get all the calories, iron & other nutrients from milk. Weaning is a gradual process starting around the age of six months, because mother's milk alone is not sufficient to sustained growth beyond six months. Weaning which is often referred to as "mixed feeding" proceeds in stages from liquids to solids and from one method of feeding to another, weaning is a gradual process, extending from the time when baby is solely breast fed, until he/she is feeding entirely on the adult diet <sup>[1]</sup>.

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Knowledge of foods and practices is an important aspect of preventive and social pediatrics. During the childhood the overall growth and development of the children totally depends upon mother or parents. If the mother is not aware about the nutritional status, nutritional needs of her child according to his requirements the child may leads to nutritional deficiency disorders [2].

### Materials and methods

The study was undertaken to assess the knowledge regarding weaning among nursing mothers of rural areas of District Kangra H.P. The aim of study is to assess the knowledge of nursing mothers regarding weaning and to improve their knowledge by giving them knowledge about weaning through structured teaching program. A quantitative approach was adopted for this study and quasi-experimental research design is used. The Non probability convenient sampling technique is used to select the sample of study and investigation is done in nursing mothers of

selected areas of District Kangra H.P., during the period of data collection.

### Data collection procedure

- The data has been collected in month of July/Aug 2021 in selected rural areas of District Kangra H.P.
- Written permission was taken from principal of Guru Dronacharya College of nursing Yol Cantt Dharamshala.
- Written permission was taken from Pradhan's of different rural areas of District Kangra H.P.
- Sample of 100 study subjects was taken in study.
- Non Probability convenient sampling technique was used. Study subjects were informed about the purpose of study.
- Interpersonal relationship was build up with study subjects before the data collection.
- The investigator collected the base line demographic data.
- Structured questionnaire was used for data collection.

### Result

**Table 1:** Frequency and percentage distribution of socio demographic variable of nursing weaning

N=100			
S. No	Scio-Demographic variables	F	%
1.	<b>Age (years)</b>		
	≤20	01	03%
	21-29	19	27%
	30-39	28	55%
2.	≥40	10	15%
	<b>Religion</b>		
	Hindu	81	81%
	Muslim	12	12%
3.	Sikh	07	07%
	Other	00	00%
	<b>Gravida</b>		
3.	Primi para	45	45%
	Multigravida	55	55%
4.	<b>Educational status</b>		
	Non-Formal education	01	01%
	Primary education	03	03%
	Secondary education	28	28%
5.	Graduation and above	68	68%
	<b>Occupational status</b>		
	Housewife	57	57%
	Private employee	15	15%
6.	Government employee	12	12%
	Self-employee	16	16%
	<b>Income of family per month (In Rupees)</b>		
	≤10,000	11	11%
6.	10,000-20,000	18	18%
	20,000-30,000	46	46%
	≥30,000	25	25%
7.	<b>Type of family</b>		
	Nuclear	75	75%
	Joint family	24	24%
8.	Extended family	01	01%
	<b>Previous knowledge regarding weaning</b>		
	Yes	52	52%
9.	No	48	48%
	<b>Source of knowledge</b>		
	Mass media	12	12%
	Books	5	5%
9.	Peer groups	6	6%
	Health worker	28	28%

The data presented on table 1, depicted about frequency and percentage distribution of nursing mothers according to their socio demographic variables. The inferences made are with respect to age, maximum of nursing mothers 55% were in 30-39 years, 27% were in 21-29 years, 15% were in <40 years, 3% were in >20 years. Regarding distribution of religion, 81% nursing mothers were Hindu, 12% were Muslim and 7% were Sikh. Gravida based distribution showed that majority of nursing mothers 55% were Multigravida and 45% were Primipara.

According to Educational status, maximum Nursing mothers 68% were graduated, 28% were having Secondary Education, 3% were having Middle Education and 1% were having Non-Formal Education

According to Occupational status of nursing mothers 57% were Housewife, 16% were Self employee, 15% were having Private Job and 12% were having Government job.

According to monthly family income (in rupees), 46% families of nursing mothers had income 20,000-30,000, 25% families had <30,000 income, 18% families had 10,000-20,000, 11% families had >10,000 monthly income.

According to type of family 75% of nursing mothers were belongs to nuclear family, 24% were belongs to Joint family and 1% of nursing mothers were belong to Extended family. According to previous knowledge 52% of nursing mothers were having knowledge about weaning 48% were not having previous knowledge about weaning.

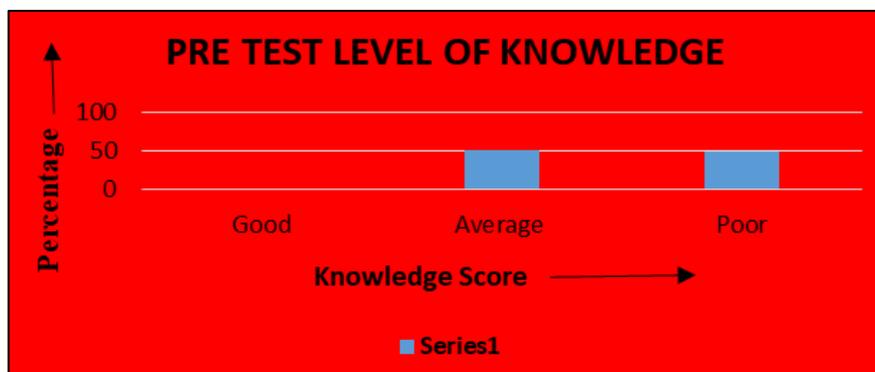
**Table 2:** Frequency and percentage distribution of pretest and posttest knowledge score of nursing mothers regarding weaning

N=100			
Level of knowledge	Pre Test Knowledge Score	F	%
Good	21-30	00	00
Average	11-20	51	51
Poor	00-10	49	49

Maximum score = 30

Minimum score =00

Data presented in the table 2 depict the frequency and percentage of pretest knowledge score of nursing mothers regarding weaning. Maximum 51% of nursing mothers were having average knowledge, 49% of nursing mothers were having poor knowledge regarding weaning none of them were having good knowledge regarding weaning.



**Fig 1:** Bar diagram showing percentage of pre-test level of knowledge of nursing mothers regarding weaning.

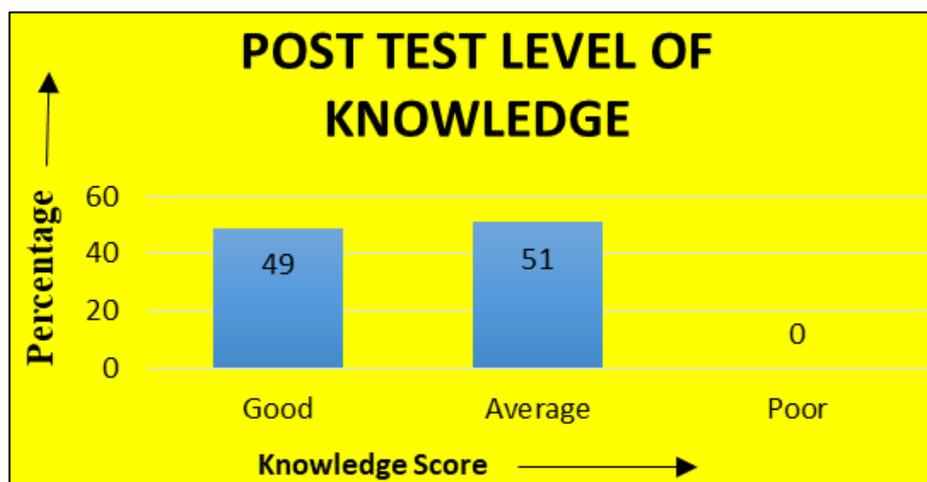
**Table 3:** Frequency and percentage distribution of post-test scores of nursing mothers regarding weaning

N=100			
Level of knowledge	Pre Test Knowledge Score	f	%
Good	21-30	49	49
Average	11-20	51	51
Poor	00-10	00	00

Maximum score = 30

Minimum score = 00

Data presented in the table 3 depicts the frequency and percentage of posttest knowledge score of nursing mothers regarding weaning. Maximum 51% of nursing mothers were having average knowledge, 49% of nursing mothers were having good knowledge regarding weaning and none of them were having poor knowledge regarding weaning.



**Fig 2:** Bar diagram showing percentage of post-test level of knowledge of nursing mothers regarding weaning.

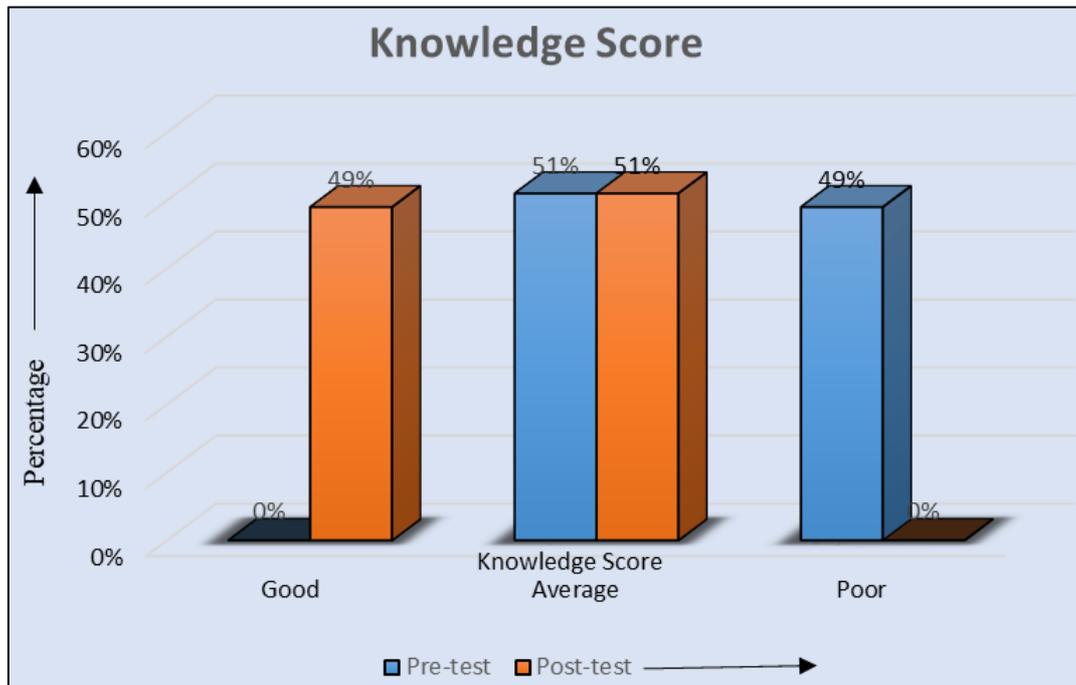
**Table 4:** Comparison of mean pretest and posttest knowledge scores of nursing mothers regarding weaning.

Level of knowledge	Mean	Median	Standard Deviation	DF	T	P value
Pretest	10.82	11	2.29	99	2.594*	1.99
Posttest	20.74	20	3.21			

The data depicted in table 4 shows the effectiveness of structured teaching program on knowledge regarding weaning in nursing mothers. The knowledge mean pre-test knowledge score was 10.82 and the mean post-test knowledge score was 20.74 and t value obtained (2.594)

was found to be statistically very highly significant at 0.05 level of significance.

Thus it is established that mean posttest knowledge score was greater than mean pre test knowledge score, which shows the effectiveness of structured teaching program, Hence research Hypothesis H<sub>1</sub> is accepted.



**Fig 3:** Bar diagram showing comparison between mean pretest and posttest knowledge score

**Table 5:** Chi-square showing association of pre-test knowledge scores with selected socio-demographic variable.

S. No	Scio-Demographic variables	Average	Poor	χ <sup>2</sup>	DF	P Value
1.	<b>Age (years)</b>	01	02	4.0429 <sup>NS</sup>	3	7.815
	≤20	19	08			
	21-29	28	27			
	30-39	10	05			
	≥40					
2.	<b>Religion</b>			7.74948 <sup>NS</sup>	3	7.815
	Hindu	42	39			
	Muslim	09	03			
	Sikh Other	07 00	00 00			
3.	<b>Gravida</b>			0.123 <sup>NS</sup>	1	3.841
	Primi para Multigravida	27 31	18 24			
4.	<b>Educational status</b>			8.90319*	3	7.815
	Non-Formal education	01	00			
	Primary education	00	03			
	Secondary education Graduation and above	21 36	07 32			
5.	<b>Occupational status</b>			6.754103 <sup>NS</sup>	3	7.815
	Housewife	27	30			
	Private employee	12	03			
	Government employee Self-employee	08 11	04 05			
6.	<b>Income of family per month (In Rupees)</b>			4.21857 <sup>NS</sup>	3	7.815
	≤10,000 10,000-20,000	06 09	05 09			

	20,000-30,000	24	22			
	≥30,000	19	06			
	<b>Type of family</b>					
7.	Nuclear	40	35	4.8987 <sup>NS</sup>	2	5.991
	Joint family	18	06			
	Extended family	00	01			
	<b>Previous knowledge regarding weaning</b>					
8.	Yes	35	16	4.824*	1	3.841
	No	23	26			
	<b>Source of information</b>					
	Mass media	07	05	1.183 <sup>NS</sup>	3	7.815
	Books	03	02			
	Peer group	04	02			
	Health worker	21	07			

Data given in Table 5 shows the computed chi-square of socio-demographic variables and the level of knowledge of nursing mothers.

The data revealed that there was significant association of level of knowledge with educational status and previous knowledge regarding weaning of nursing mothers and they were found statistically significant at 0.05 level of significance. Thus it is revealed that educational status and previous knowledge regarding weaning had some impact on level of knowledge of nursing mothers.

There was no significant association of level of knowledge with socio-demographic variable i.e. age, religion, Gravida, occupational status, monthly income of family and type of family.

### Discussion

The result of present study shows that structured teaching program is effective in improving the level of knowledge in nursing mothers that is from mean pre-test knowledge score (10.82) to mean post-test knowledge score (20.74). The t value obtained was 2.594 at  $\leq 0.05$  which was significant. Hence, it is inferred that the mean post-test was greater than mean pre-test score. These findings were consistent with the findings of similar study conducted by Ms. Soumya. V where t value was 17.87 this indicate there is significant difference between pretest and posttest knowledge score. The overall Mean score was higher in the post test 64.34 with SD 5.04 than pretest mean 48.13 with SD 6.33. These score indicate that structured teaching program has improved their level of knowledge about infant feeding practices. The overall t test value 17.87 is higher that critical table value indicate the enhancement in the mean score found to be significant at 5% level for all aspect under the study.

### Conclusion

From the result of the study it was concluded that implementation of structured teaching program showing effectiveness of the tool to enhance the knowledge of nursing mothers regarding weaning. Educational status and previous knowledge were significantly associated with pretest knowledge score ( $< 0.005$ ).

### Summary of the findings

Findings related to frequency and percentage distribution of socio demographic variables

- With respect to age, maximum of nursing mothers 55% were in 30-39 years, 27% were in 21-29 years, 15% were in <40 years, 3% were in >20 years.

- Regarding distribution of religion, 81% nursing mothers were Hindu, 12% were Muslim and 7% were Sikh.
- Gravida based distribution showed that majority of nursing mothers 55% were Multigravida and 45% were Primipara.
- According to Educational status, maximum Nursing mothers 68% were graduated, 28% were having Secondary Education, 3% were having Middle Education and 1% were having Non-Formal Education
- According to Occupational status of nursing mothers 57% were Housewife, 16% were Self employee, 15% were having Private Job and 12% were having Government job.
- According to monthly family income (in rupees), 46% families of nursing mothers had income 20,000-30,000, 25% families had <30,000 income, 18% families had 10,000-20,000, 11% families had >10,000 monthly income.
- According to type of family 75% of nursing mothers were belongs to nuclear family, 24% were belongs to Joint family and 1% of nursing mothers were belong to Extended family.
- According to previous knowledge 52% of nursing mothers were having knowledge about weaning 48% were not having previous knowledge about weaning.

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