RESEARCH ARTICLE

“ASSESSMENT OF THE EFFECTIVENESS OF STP ON KNOWLEDGE OF MOTHERS REGARDING WEANING AND RESPONSIVE FEEDING AMONG INFANTS IN SELECTED VILLAGES OF HIMACHAL PRADESH.”

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Abstract

Background: Weaning means introducing a wide range of foods gradually until the baby is eating the same food as the rest of the family. Until six months, the baby needs only breast milk or infant formula milk. Around six months of age, the baby needs initially semisolid foods and later on gradually solid foods are introduced in addition to breast or formula milk. Responsive feeding is a component of active feeding that provides complementary foods in an “active” manner. Active feeding is when the parent or caregiver engages in positive behaviour with the child, while encouraging and bearing in mind the interests of the child during mealtimes.

Aim: The aim of this study conducted was to increase the knowledge of mothers regarding weaning and responsive feeding for infants.

Methodology: A quantitative approach with pre-experimental, one group pretest post test design was used.

Sample And Sampling Technique: This study include 40 samples of mothers. Sample was selected using purposive sampling technique.

Setting: The research setting was selected community area of Solan, H.P. i.e. Noun, Dhar ki baid, Sihardimuosalmana, Sukhjihodi.

Tools: The Socio Demographic Performa and structured knowledge questionnaires was used to collect the data. After assessing the preexisting knowledge of the sample, (STP) on weaning and responsive feeding was administered to the selected mothers at community area Solan. At the end post test was conducted.

Result: In analysis both descriptive and inferential statistical methods were used. The pre-test mean score was 13.03. The post test mean score was 26.08. The difference in mean % was 32.63. The result of post test depicted that, (87.5%) mothers had very good knowledge, and (12.5%) had excellent knowledge and none of the mother had average and poor knowledge. The conclusion of the study revealed that there was significant improvement in the knowledge on the weaning and responsive feeding.
**Introduction:-**

Infancy is a period of rapid growth and development. An infant requires extra nourishment for new tissue development and growth.\(^1\)

The term weaning comes from the Anglo-Saxon word weanian “to become accustomed to something different”. It is a complex process involving nutritional, immunological, biochemical, and psychological adjustments. The very first introduction of food other than breast milk is by definition, “the true beginning of weaning”\(^2\).

Weaning means introducing a wide range of foods gradually until the baby is eating the same food as the rest of the family. Until six months, the baby needs only breast milk or infant formula milk. Around six months of age, the baby needs initially semisolid foods and later on gradually solid foods are introduced in addition to breast or formula milk\(^3\).

According to WHO 2012, the gradual replacement of breast milk by solid food as the main source of nutrition for infant is known as weaning. Complementary feeding means giving the child other nutritious foods in addition to breast milk. Breast feeding alone is sufficient food for first six months. Thereafter, concentrated energy giving complementary foods are essential in order to maintain an adequate range of growth for infant. (O.PGHAI, 2005)\(^4\)

At about six months, babies are ready to be move on to a mixed diet, the child begins to erupt, and the biting movements begin. The tendency to push solids out of the mouth also decreases. The infant achieves voluntary control of swallowing.\(^5\)

Responsive feeding defined by Black & Aboud (2011) is the ‘reciprocity between child and caregiver’ and is ‘a three- step process, the child signals requests through motor actions, facial expressions, or vocalizations, the caregiver recognizes the signals and responds promptly in a manner that is emotionally supportive, contingent on the signal, and developmentally appropriate and the child experiences a predictable response to cues’. Components of responsive feeding that are effective in increasing food intake include responding positively to the child with smiles, eye contact, and encouraging words; feeding the child slowly and patiently with good humour; waiting when the child stops eating and then offering more; and giving finger foods so the child can feed him/herself and staying with the child attentively through the mealtime. Food refusal and low appetite are common problems, and responsive feeding that recommends how to feed complementary foods is associated with improved food intake.\(^6\)

**Methods and Materials:-**

**Research Design**

This study aims to assess the effectiveness of structured teaching programme (STP) on knowledge regarding Weaning and responsive feeding among mothers. So, Quantitative approach was selected under that design was pre experimental alone group pre-testpost test design.
Population
Mothers (having 4 months to 8 months babies) residing community area of Solan.

Sample and sampling technique
In the present study 40 samples of community area of Solan was selected by purposive sampling technique.

Data Collection Tolls and Techniques
Based on the objectives and conceptual framework of the study, the tool developed was divided into the followings section:
1. Sample characteristics Performa
2. Structured knowledge questionnaire
It was self-structured knowledge questionnaire containing 40 questions. It was validated by experts from the field of nursing. Experts were requested to judge the items for their clarity, relevance, meaningfulness, and content.

**Ethical considerations**

Ethical permission was obtained before conducting the study. Research participants were enrolled in the study after online informed consent and they were assured about the confidentiality of their responses.

**Results:**

Description of demographic variables among community mothers N=40.

| Variables           | Options         | Percentage | Frequency |
|---------------------|-----------------|------------|-----------|
| **Age**             | 18-21 years     | 22.5%      | 9         |
|                     | 22-25 years     | 42.5%      | 17        |
|                     | 26-29 years     | 22.5%      | 9         |
|                     | 30 and above    | 12.5%      | 5         |
| **Education**       | 10<sup>th</sup> | 10.0%      | 4         |
|                     | 12<sup>th</sup> | 37.5%      | 15        |
|                     | Graduate        | 47.5%      | 19        |
|                     | Post-graduate   | 5.0%       | 2         |
|                     | No formal education | 0.0% | 0         |
| **Occupation**      | Home maker      | 42.5%      | 17        |
|                     | Private job     | 47.5%      | 19        |
|                     | Govt. job       | 10.0%      | 4         |
| **No. of children** | One             | 65.0%      | 26        |
|                     | Two             | 35.0%      | 14        |
| **Monthly income**  | 10,000-15,000   | 17.5%      | 7         |
|                     | 16,000-20,000   | 45.0%      | 18        |
|                     | 21,000-25,000   | 27.5%      | 11        |
|                     | More than 25,000| 10.0%      | 4         |
| **Source of information** | Mass media | 37.5% | 15 |
|                     | Health professional | 40.0% | 16 |
|                     | Neighbour       | 22.5%      | 9         |
|                     | Any other specify | 0.0% | 0         |

**Interpretation**

Table 1 reveals distribution of the subjects according to their age (in years), education, occupation, number of children, monthly income, and source of information. It shows that 22.5% mothers were age group of 18-21 years, 42.5% mothers were age group of 22-25 years, 22.5% mothers were age group of 26-29 years, and rest of mothers were age of 30 and above. 10.0% mothers were educated till 10<sup>th</sup>, 37.5% mothers had passed 12<sup>th</sup>, 47.5% mothers were graduate, 5.0% mothers were post graduate. 42.5% mothers were home-maker, 47.5% mothers had private job, and 10.0% had government job. Only 65.0% mothers had 1 child and the rest of mothers 35% had 2 children. 17.5% mothers had monthly income between Rs. 10,000 – 15,000, 45.0% mothers had monthly income between Rs. 16,000 – 20,000. 27.5% mothers had monthly income between Rs. 21,000 – 25,000, 10.0% mothers had monthly income more than 25,000. 37.5% mothers had mass media as the primary information source, while 40.09% mothers got information from health professionals and 22.5% mothers from neighbour.

**Assessment of pre-test and post-test knowledge score among girls**

**Table 2:** Frequency and percentage distribution of pretest and post test level of knowledge regarding weaning and responsive feeding among mothers.

| Score Level (N= 40) | PRE-TEST (F%) | POST-TEST (F%) |
|---------------------|---------------|---------------|
| Poor.(0-10)         | 3(7.5%)       | 0(0%)         |
| Average.(11-20)     | 37(92.5%)     | 0(0%)         |
| Very good.(21-30)   | 0(0%)         | 35(87.5%)     |
| Excellent(31-40)    | 0(0%)         | 5(12.5%)      |

Maximum Score=40 Minimum Score=0
**Interpretation**

Table 2 reveals that in pre-test 3 (7.5%) of the mothers had poor knowledge, while 37 (92.5%) of the mothers had average knowledge and none of the mothers had very good and excellent knowledge. In post-test 35 (87.5%) of the mothers had very good knowledge, 5 (12.5%) of the mothers had excellent knowledge regarding weaning and responsive feeding. None of the mothers had either poor or average knowledge. Hence it could be concluded that majority of the mothers had very good knowledge in post test score regarding weaning and responsive feeding.

![Frequency and distribution of pre test and post test knowledge score of mothers according to their level of knowledge score.](image)

**Figure 2:** Frequency and distribution of pre test and post test knowledge score of mothers according to their level of knowledge score.

**Table 3:** Mean, standard deviation and mean percentage of pre-test knowledge score of mothers regarding weaning and responsive feeding for infants. (N=40)

| Descriptive Statistics | Mean | S.D. | Maximum | Minimum | Range | Mean% |
|------------------------|------|------|---------|---------|-------|-------|
| Pre-test Knowledge     | 13.03| 1.819| 17      | 10      | 7     | 32.60 |

**Interpretation**

Table 3 shows the maximum score among subjects was 17 and minimum was in 10. Mean pre-test knowledge score was 13.03 and standard deviation was 1.819. Mean % was 32.60.

From the mean it can be inferred that knowledge of mothers regarding weaning and responsive feeding among infants was average.
Figure 3: Mean and standard deviation of pre test knowledge score of mothers regarding weaning and responsive feeding for infants.

Table 4: Comparison of pre-test and post-test Scores to test hypothesis.

| Mean%  | Pre-test Knowledge | Post-test Knowledge | Difference | Pre-test Knowledge Score % | Post-test Knowledge Score % | Diff % | t value |
|--------|--------------------|---------------------|------------|----------------------------|----------------------------|--------|--------|
| Average | 13.03              | 26.08               | 13.05      | 32.56                      | 65.19                      | 32.63  | 30.169 |

Interpretation

Table 4 shows the mean, mean percentage and difference between the pre-test and post-test knowledge score. In pre-test mean knowledge score is 13.03 which is 32.56% of total mean knowledge score. In post-test mean knowledge score is 26.08 which is 65.19% of total mean knowledge score percentage. The difference in mean % is 32.63%. Paired t test showed significant increase in the knowledge score (t=30.169).

It could be concluded that null hypothesis is rejected. Because there is a significant difference between the pre-test and post-test knowledge score. Hence it shows that the structure teaching program was effective and helped the mother to improve their knowledge regarding weaning and responsive feeding among infants.
Discussion:
This study concentrates on the feelings derived from the statistical analysis. Many researches have been conducted in the national and international level to improve the knowledge of mothers. The discussion has been presented in the context of the finding revealed by the other researches. The present study revealed that the difference in mean knowledge score percentage for pre-test and post-test was 32.63%. The post-test mean was 26.08 and the standard deviation was 2.235. In a similar study by Sunil Kulkarni et al. (2015) conducted a study effectiveness of planned teaching programme on knowledge on complementary feeding among the Mothers of Infants. They showed that subjects had 51.45% knowledge score in pre-test whereas in post-test it was 88.71%.

Conclusion:
The findings revealed that knowledge of mothers regarding weaning and responsive feeding was poor and average before the implementation of structured teaching programme but knowledge level increased to very good and excellent after the implementation of structured teaching programme.

Limitations
The mothers were selected from community area of District Solan (i.e. Noun, Dhar ki baid, Sihardimusalmana, Sukhihjodi) H.P, only.

Recommendation:-
On the basis of study findings, the following recommendations were made;
1. A replication of the present study can be done with large sample.
2. A comparative study can be conducted between rural and urban knowledge and Practice of infant feeding.
3. Practice can be assessed after giving self-instructional module.

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