

Original Research Article

Effectiveness of structure teaching programme on the level of knowledge regarding weaning among mothers infants in a rural community area in Nainital

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ABSTRACT

Background: Breast milk is the best and safest food for young babies. Babies must be given extra foods as well as breast milk at the right age in sufficient amounts to enable them to grow and stay healthy. Therefore, the present was "A quasi-experimental study to assess the effectiveness of structured teaching program on the level of knowledge regarding weaning, among mothers of infants, in a selected rural community area in Nainital. The objectives were, to assess the level of knowledge regarding weaning and the effectiveness of structured teaching programs among the mothers of infants.

Method: The sample size was 60. A descriptive survey research approach and Quasi-experimental design were adopted among 60 mothers selected through a convenient sampling technique.

Results: The result shows that the assessment level of knowledge of mothers revealed the mean of pre-test of knowledge of mothers of infants was 42.96 (SD-3.25) and the mean of post-test 56.45 (SD-2.48) and there was a statistically significant association found between the level of knowledge and demographic variables such as age, education, and source of information of mothers at $p < 0.01$ level. Hence, hypothesis H1 which stated that "there is a significant association with the selected demographic variable of mother of the infant is" proved.

Conclusions: The present study concludes that there is inadequate knowledge among mothers of infants on weaning practice. Hence, the individuals in the community could be given health education repeatedly. A regular health education program should be conducted by the health personnel related to weaning practices for future studies.

Keywords: Knowledge, Weaning, Mothers of infants, Structured teaching program

INTRODUCTION

Weaning is a process in which an infant's diet pattern is gradually changed from liquid food like breast milk to solid foods which are supplementary food to breast milk.¹ These can be added after 6 months of an infant's life because breast milk alone cannot provide the required amounts of nutrients and cannot sustain the growth of the infant after this age. Hence most important aspect of weaning is the introduction of solid food.² Delayed introduction of additional food in an exclusively breastfed

infant results in malnutrition. Improper introduction of foods is fraught with dangers of diarrhea due to infection from unhygienic preparation.³ Malnutrition is related to inadequate caloric intake due to low frequency of feeding and low-calorie density of additional foods. Weaning should provide a pleasant experience, not a conflict for mothers and infants. Praise, loving attention, and cuddling are vital to successful weaning.⁴

The younger children under 6 months, there is a risk factor of being underweight due to a lack of special

weaning food and method to prepare suitable foods. By 6 months, the child's teeth begin to erupt, and the biting movements begin. Thus at 6 months, child is ready to eat soft and starchy food, and called complementary feeding.⁵

A normal healthy baby requires 170 ml. of milk /kg of body weight During this period, an average mother secretes 450 to 600 ml of milk daily to meet the demands. So, for the first 6 months, breastfeeding alone is sufficient for the baby's requirements for normal growth and development beyond six months baby requires additional food to meet the body requirements Therefore it is necessary to introduce various other food items suitable for the age of the child are called supplementary food.⁶

Given the above, the present study was performed as "a quasi-experimental study to assess the effectiveness of structure teaching program on the level of knowledge regarding weaning among mothers infants in a rural community area in Nainital".

Objectives

Objectives of the study to assess the pre-test level of knowledge regarding weaning among the mothers of infants, to assess the effectiveness of structured teaching programmes regarding weaning among the mothers of infants and to find out the association between post-test level of knowledge with selected demographic variables.

Operational definitions

Knowledge

It refers to the understanding ability to answer on weaning mothers of infants.

Weaning

Weaning-Weaning implies additional or introduction of semisolid food along with the continuation of breastfeeding as long as possible complementary foods are started at 6 months of age.

Mothers of infants

Mothers having a child aged between 4 to 12 months.

Effectiveness

The ability of the nursing intervention to bring changes in the level of knowledge and practice on weaning.

METHODS

Research approach

A descriptive survey research approach was considered the best to assess the knowledge of mothers.

Research design

Investigator selected quasi-experimental design to assess knowledge among mothers of infants regarding weaning.

Research setting

Based on feasibility and availability of the samples, rural community area of Nainital, Uttarakhand was selected.

Study period

The study carried out from 10/10/ 2019 to 05/11/ 2021.

The population of the study

In the present study population includes mothers of infants aged (4-12 months).

Sample

In this study mothers of infants aged (4-12 months), who are weaning their babies were participants.

Sample size

In the present study the sample size consisted of 60 mothers having infants of 4-12 months.

Sampling technique

The sampling technique adopted for the present study was the non-probability convenient sampling technique.

Sampling criteria

Inclusion criteria

Residing in communities, Nainital, having 4-12-month infants, those who can speak Hindi, willing to participate in the study and available during data collection were included in the study.

Exclusion criteria

Unwilling to participate in the study and not available at the time of data collection were excluded from the study.

Variables

Independent variable

Structured teaching program regarding weaning for mothers of infants were independent variables.

Dependent variables

They can be a level of knowledge of the mother's regarding weaning practices.

Extraneous variables

Age, religion, marital status, education, occupation, income, type of family, number of children, and previous knowledge were extraneous variables.

Content validity

The validity of the tool was established by eight experts from pediatrics, community medicine, and the field of community health nursing. Initially, the tool developed consisted of 12 demographic variables, where experts accepted 10 items. There were 50 items on knowledge and the experts agreed 42 on items.

Reliability

The reliability of tools was established by testing the internal consistency. The internal consistency was assessed by using Kerl Pearson's correlation coefficient method. The coefficient correlation was found ($r=0.86$) which indicates the high degree of reliability of the tool.

Ethical consideration

Permission was obtained from the district medical officer Nainital. Consent was obtained from the samples and assured that confidentiality would be maintained on the information.

Pilot study

The function is to obtain information for improving the project or assessing its feasibility. The investigator took an average time of about 30-40 minutes for the test. From this pilot study, it has been found that the present study was feasible.

Development and description of the tool

Development and description of the tool included two sections-section I: Socio-demographic variables and section II: Self-structural questionnaire on weaning.

Socio-demographic variables

The items in the socio-demographic variable included the age of the mother, religion, marital status, type of family, number of children, educational status, occupation, family income, and source of information.

Self-structured questionnaire

In this section, the knowledge questionnaire on various aspects of Weaning such as general information on the type of foods, nutritional requirements of infant, available sources, daily menu plan for infant, care during weaning, and problems during weaning. It consists of 42 multiple-choice questions. Each correct answer was given a score

of land 2 and wrong answers a score of 0. A total possible score was 60.

RESULTS

Socio-demographic variables

The 86% of the mothers were Hindu, 50% were in the age group of 24-28 years, 46% of mothers had education up to high school and the o 32% were graduates. The majority 85% of the mothers were housewives, 55% had 1 child, 48% belonged to a nuclear family and 47% of mothers revealed that their source of information was mass media.

Knowledge regarding weaning among the mothers of infants

Table 2 shows the mean value of the level of knowledge in post-test (56.45) is more than pretest (42.96). The calculated Z value is significant at 0.05 level. This shows that the STP is effective and accepted.

Table 1: Knowledge regarding weaning among the mothers of infants with their frequency and percentage, (n=60).

Knowledge level	Pre-test		Post test	
	N	%	N	%
Adequate knowledge	17	28.34	45	75
Moderate knowledge	23	38.33	12	20
Inadequate knowledge	20	33.33	3	5

Table 2: Effectiveness of STP on the level of knowledge regarding weaning.

Z value	Pre-test			Post-test		
	Mean	%	SD	Mean	%	SD
8.8*	42.96	71.60	3.25	56.45	94.00	2.48

DISCUSSION

The human milk alone, even in reasonable quantities, cannot provide all the energy and protein required for maintaining an adequate velocity of growth for the infant, after the of six months. Based on this point the present study revealed the status of awareness among the mothers of infants in the selected rural areas of Nainital. Similar studies were performed by Suyal et al in which assess the knowledge, practice, and attitude of the mothers regarding weaning which is the major factor for nutritional deficiency in the infants. Most of the mothers (60%) showed adequate knowledge on the weaning concept and its starting time but were less informed regarding breastfeeding routine.⁷

Regarding weaning diet and position, our results are in accordance with Tiwari et al as most of the mothers have used Khichdi and meshed foods to the infants of 6-8 months with 2-3 meals per day along with breastfeeding.

Moreover, the average amount of each meal can be 2-3 tablespoons by using the lap as a referred position for weaning. Further, the solid foods should not be given to the infants until the baby is able to sit on a chair with back support. It can be concluded from the study that mother's knowledge is important on dietary practices in prevention of malnutrition, which in turn can help them to have a good attitude towards the dietary practices, so that, they can change their behavior and harmful practices.⁸

Regarding the STP our results are accordance with Hemlathy et al as the result of the study reveals that the structure teaching programme is found to be effective in terms of gaining both knowledge and practice. So, structure teaching programme is effective in improving the knowledge and practice of primi mothers of infant aged 6-12 regarding weaning.⁹ And our result was like Dhanani et al the effectiveness of planned teaching programme was assessed by using paired 't' test. The association between knowledge of demographic variables of primigravid mothers was analyzed by inferential statistics, (Chi-square test). It reveals that mean value of pre-test knowledge score was 10.883 and post-test knowledge score was 14.75. The mean difference was 3.867. The standard deviation for pre-test score was 3.412 and post-test score was 2.53. The obtained 't' value 7.03 which was statistically highly significant at the level of $p < 0.001$ (df=59 table value was 3.46). It is inferred that the planned teaching programme regarding knowledge on weaning was highly effective. This will promote the children growth and development.¹⁰

Limitation

The sample size is limited to 60, the result cannot be generalized because of individual differences and biases and the prescribed data collection period is only 6 weeks.

CONCLUSION

The main purpose of this study was to assess the knowledge regarding weaning practices by mothers of infants in the selected rural areas of Nainital, Uttarakhand. Based on the findings of the study, the following conclusions were made majority of the mothers of infants had inadequate knowledge concerning weaning practices. breastfeeding and weaning practices are mainly influenced by customs, beliefs, religion, cultural patterns, economic status, and educational system. Therefore, the researcher found inadequate knowledge in several areas that were tried to be overcome by structured teaching programs. This study helped the mothers to gain more knowledge in the weaning area.

Recommendations

A replication of the present study can be done with a large sample, a comparative study can be conducted between rural and urban mothers' knowledge and practice

of weaning and a study can be done with a qualitative research design.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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