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Effectiveness of self-instructional module on knowledge of lactating mothers regarding weaning at selected village, Erayamangalam

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Abstract

The term weaning means “accustom to”. Weaning is a gradual process of introducing supplementary foods, starting around the age of 6 months. During this baby should be supplemented by suitable foods rich in protein and other nutrients which called as “supplementary” foods. These include usually cow’s milk, fruit juices, soft cooked rice, dhal, and vegetables. Weaning should proceed gradually and be based on the infant’s rate of growth and developmental skills. According to the WHO guidelines weaning should be started at 6 months of age along with breast feeding up to 2 years or more. India is the country of villages and about 70% of people live in villages and income level of village people is low. Studies in developing countries like India revealed that all these cases of malnutrition are to be found in household where there is no absolute shortage of food. The reason, why available food is not given to the child is that mother does not know how much food the child needs. Most of the mothers do not understand the importance of weaning foods and the pattern of weaning. A quantitative pre-experimental research design was conducted among 60 lactating mothers. Convenient sampling technique was used to select samples. Structured questionnaire was used to collect demographic data and to assess the knowledge regarding weaning. Mothers were explained about the purpose of the study and the importance of weaning. The data were collected and analyzed. The result clearly infers there is significant improvement in the post test level of knowledge regarding weaning among mothers at $p < 0.001$ level. This reveals there is a need for the educational programs among the lactating mother to improve knowledge on weaning and helps in proper growth and development of the child.

Keywords: Knowledge, self-instructional module, lactating mothers

Introduction

The term weaning means “accustom to”. Weaning is a gradual process of introducing supplementary foods, starting around the age of 6 months. During this baby should be supplemented by suitable foods rich in protein and other nutrients which called as “supplementary” foods. These include usually cow’s milk, fruit juices, soft cooked rice, dhal, and vegetables.² Weaning should proceed gradually and be based on the infant’s rate of growth and developmental skills. Weaning food should be carefully chosen to complement the nutritional need of an infant, promote appropriate nutrient intake, and maintain growth^[1]. Timely weaning is an important process in every child’s life which has an impact on future health, growth and development. Weaning also marks development of some degree of independence in child. Weaning food should be adequate in nutrition, appropriate in consistency and given in sufficient quantity and hygienic. According to the WHO guidelines weaning should be started at 6 months of age along with breast feeding up to 2 years or more^[2].

During weaning the young child’s diet changes from milk alone to regular family meals. Weaning allows the infant to meet the changing nutritional needs and become less dependent to milk. Weaning is important for a growing child to meet the additional requirements of nutrients such as protein, vitamins, and minerals like iron and calcium. When the baby’s sense of taste develops they will be more inclined towards new foods, taste and textures^[3].

The weaning period is the most crucial period of child development in which children are particularly exposed to the deleterious synergetic interaction of malnutrition and infection. Child may suffer from diarrhea, obesity, under weight, allergy, and refusal to take food, choking, regurgitation, vomiting, constipation and abdominal colic. These problems will hinder the growth and development of baby.

Many of these problems arise during the period of weaning due to inadequate knowledge of mother and also due to faulty feeding practices ^[4].

Each year 27 million children are born in India. About 10% of them do not survive up to 5 years of age. In absolute figures, India contributes to 25% of the over 9.0 million under five deaths occurring worldwide every year. About 50% of the deaths in India are attributed to malnutrition alone and 50% children stunted in their growth. Contributing causes of malnutrition includes infections, insufficient nutritional intake due to lack of knowledge regarding nutrition, and inadequate home care practices ^[5].

A survey conducted, in Raichur Karnataka reported that there are 2062 boys and 2469 girls who suffer from severe malnutrition due to lack of knowledge on nutrition. Many children suffer from multi-vitamin deficiency, 75% infant suffers from iron deficiency, 45% suffer from vitamin A and iron deficiency ^[6].

India is the country of villages and about 70% of people live in villages and income level of village people is low. Studies in developing countries like India revealed that all these cases of malnutrition are to be found in household where there is no absolute shortage of food. The reason, why available food is not given to the child is that mother does not know how much food the child needs. Most of the mothers do not understand the importance of weaning foods and the pattern of weaning ^[7].

The purpose of the study ^[1] To prepare self-instructional module on weaning ^[2]. To determine the effectiveness of self-instructional module in lactating mothers regarding

weaning, in terms of gain in knowledge as measured by post-test ^[3]. To find the association of pre-test knowledge scores with selected demographic variables.

Methods and Materials

A quantitative pre-experimental research design was conducted among 60 primigravida mothers at Erayamangalam. The samples who meet the inclusion criteria were selected by convenient sampling technique. The criteria for sample selection are lactating mothers having infants of 6-12 months age, who were willing to participate in the study and who can read and write Tamil or English. The exclusion criteria for the samples are Lactating mothers who were not available during the time of data collection and who were not willing to participate in the study. The data collection period was done with prior permission from the village officer. The investigator introduced and explained the purpose of study to the mothers and obtained the written consent. Structured questionnaire was used to collect demographic data and to assess the knowledge regarding weaning. Mothers were explained about the purpose of the study and the importance of weaning. The data were analyzed using descriptive and inferential statistics. The sample characteristics and level of knowledge were described using frequency and percentage. Chi square was used to associate the post-test level of knowledge with the selected demographic variables.

Results and Discussion

Section A: Sample characteristics

Table 1: Frequency and percentage distribution of demographic variables of mothers

Demographic Variables	No.	%
Age (in years)		
6 – 7	16	53
8 – 9	8	27
10 – 11	5	17
1y	1	3
Weight (in KG)		
4 -6	15	50
7 – 9	14	47
10 – 12	1	3
Age of mothers (in years)		
20 -25	11	36
26 -30	11	36
31 – 35	8	28
36 -40	0	0
Parity		
1	16	53
2	9	30
3	5	17
Above 3	0	0
Religion		
Hindu	11	3
Christian	12	40
Muslim	7	23
Others	0	0
Educational status		
Primary education	5	1
High school	9	30
PUC	11	36
Graduation	5	17
Post graduation	0	0
Occupation		
House wife	13	43

Agriculture	7	23
Self employee	2	7
Private employee	5	17
Govt employee	3	10
Income		
3000 – 6000	2	7
6000 – 9000	11	37
9000 – 12000	13	43
Above 15000	4	13
Type of family		
Nuclear	19	64
Joint	11	36
Extended	0	0
Previous information		
Yes	20	6
No	10	33
Source of information		
Mass media	9	30
Family members	1	3
Neighbours	19	64
Health personal	1	3
Problem during weaning		
Yes	7	23
No	23	77

According to age highest 53% were in the age group of 6-7 months, 27% were in the age group of 8-9 months, 17% were in the age group of 10-11 months, whereas 3% children were of 1 year. According to weight gain highest 50% infants were weighing between 4-6kg, 47% weighing between 7 -9 kg whereas 3% children were weighing between 10-12 kg. According to age of mother 36% of mothers were in the age group of 20-25 years, 36% were in the age group of 26-30, 28% were in the age group of 31-35 years and none of the mothers were between the age group of 36-40 years. According to parity 53% have one child, 30% have two children 1% have three children, and 0% have more than three. According to religion 40% of mothers were Muslims, 37% were Hindus and 23% were Christians. According to type of family 64% belong to nuclear family, 36% to joint family, 0% to extended family.

Section B: Assessment of level of knowledge among lactating mothers.

The level of knowledge among lactating mothers, the highest percentage (80%) of the sample had an average level of knowledge whose score ranged between 11-20, 14% of the sample had good knowledge whose score ranged between 21-30 and 6% of the sample had poor knowledge whose score ranged between 0-10. (Table 1)

Table 2: Frequency and percentage distribution of level of knowledge among lactating mothers. N = 60

Level of Knowledge	Inadequate (≤8)		Moderately Adequate (9 – 16)		Adequate (17 – 24)	
	No.	%	No.	%	No.	%
Pretest	2	6	24	80	4	14
Post Test	0	0	19	63	11	37

The study is supported by; a pre experimental study was conducted in two primary health centers of Udupi Taluk with a sample size of 50 mothers to assess the effectiveness of planned teaching program on knowledge about complementary feeding. The study showed that the mean post- test knowledge score was higher than mean pre-test

knowledge score. The t-test computed to determine the significant difference of mean pre-test knowledge score of mothers on complementary feeding and selected variables like age of the youngest child in months, type of family and educational status. This study also revealed that majority 80% expressed that planned teaching program was easy to understand. Hence the study found to be effective in meeting the objective [8].

Section C: Effectiveness of self-instructional module on knowledge regarding weaning among lactating mothers.

Table 3: Effectiveness of self-instructional module on knowledge regarding weaning among lactating mothers.

Level of Knowledge	Inadequate 1(≤8)		Moderately Adequate (9 – 16)		Adequate (17 – 24)		‘t’ value
	Mean	Sd	Mean	Sd	Mean	Sd	
Pretest	10	0	14.11	2.3031	21.5	0.5774	2.1611
Post Test	0	0	16.47	2.2452	22.73	1.7373	

The pretest and post mean score of knowledge among mother was 8.23 with standard deviation 2.37 and the post test mean score of knowledge was 20.68 with standard deviation 2.65. The calculated paired ‘t’ test value of t = 2.1611 was found to be statistically highly significant at p < 0.001 level. This clearly infers there is significant improvement in the post test level of knowledge regarding weaning among mothers.

In this study supported by an intervention study was conducted to monitor weight gain in infants using a home based complementary food recipe and a hand blender under University of Kelaniya, Sri Lanka. Infants attending four child health welfare clinics in the Medical Officer of Health area were recruited at the age of 4 months. The intervention group received a specially designed hand blender, recipe and advice to prepare a weaning food. The control group received weaning foods without any intervention. They were followed up monthly up to the age of 12 months. Results revealed that infants in the intervention group gained significantly more weight than the control group.

Study revealed that intervention was successful in improving knowledge of mothers there by promoting weight gain in infants ^[9].

Section D: Association of level of post-test knowledge with selected demographic variables.

Table 4: Association of level of post-test knowledge with selected demographic variables

S. No	Demographic variables	Chi square	Df	"P" value
1	Age	7.548	6	0.2731
2	Weight	0.726	4	0.9480
3	Age of mother	1.688	6	0.9460
4	Parity	1.364	3	0.7139
5	Religion	1.25	6	0.9743
6	Education	1.31	8	0.9954
7	Occupation	2.786	8	0.947
8	Family income	5.504	6	0.4809
9	Type of family	0.597	4	0.9633
10	Previous information	0.486	2	0.784
11	Source of information	5.91	6	0.4333
12	Problem during weaning	0.486	2	0.784

There was a significant association between the demographic variables such as education ($c^2=0.9954$), occupation ($c^2=0.947$), income ($c^2=0.4809$), type of family ($c^2=0.9633$) and previous information ($c^2=0.784$) about weaning and the pre-test knowledge scores at 0.05 level of significance. So null hypotheses is rejected for these variables. But the other demographic variables such as age of mother and baby, parity show no statistical association with level of knowledge regarding weaning.

Conclusion

This indicates that there is a need for the educational programs among lactating mothers. The improvement in knowledge will improve the growth and development of the child reducing morbidity among growing children.

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Authors contribution

All the authors actively participated in the work of the study. All authors read and approved the final manuscript.

Conflicts of interest:

The authors declare no conflicts of interest.

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