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EFFECT OF INTERVENTION PROGRAM ON KNOWLEDGE, ATTITUDE AND PRACTICES ABOUT BREAST FEEDING AND COMPLEMENTARY FEEDING AMONG MOTHERS

Neha Joshi, Tejashri Trivedi

Student, Sardar Patel University,
V.V. Nagar, Anand, Gujarat

Assistant Professor, CVM University,
V.V. Nagar, Anand, Gujarat

Abstract

Mother's milk supplies all the essential components require for optimum growth and development of child. It contains the perfect balance of rapidly digestible and accessible nutrients. Complementary feeding is oneof the important core indicators of infant and young child feeding practices (IYCF) which need to be initiated at accurate age. The research aims to check the level of KAP about breastfeeding (BF) and complementary feeding (CF) among mothers and effect of intervention programme on the KAP of mothers regarding BF and CF in Anand. The community based interventional study was conducted in which 150 mothers who have infants aged 6-24 months were enrolled. Information related to KAP regarding BF and CF was collected using structured and pretested questionnaire. The educational tool was developed which contain all the information regarding BF and CF practices given by IYCF guidelines. An intervention program was impartedfor one month. The change in KAP of the mothers was assessed after completion of intervention period. Obtained data was analysed by frequency, percentage, paired t-test ($p<0.05$). The result revealed that after one month of the intervention program the total mean score of knowledge and attitude were increased from 6.86±1.40 to 9.26 ±0.73 and 22.41±3.80 to 23.63±3.68, respectively. This showed 25.91% ($p<0.01$) and 5.44% ($p<0.01$) increased after intervention in knowledge and attitude, respectively. 97.3% children received the first milk and 72.8% children received breast milk immediately after birth.

Keywords: *knowledge, attitude, practice, intervention*

INTRODUCTION

Mother's milk supplies all the essential components require for optimum growth and development of child. It contains the perfect balance of rapidly digestible and accessible nutrients. Complementary feeding (CF) is oneof the important core indicators of IYCF practices that need to be initiated at right age. Deficient feeding and insufficient knowledge of mothers on optimal child feeding practice not only increases of infections and malnutrition but also considered as an important determinant of under 5 children mortality[1].

Optimal IYCF practices is a guideline which compromises starting ofBF within one hour after birth, exclusive BF for the first 6 months of life and initiation ofage-appropriate complementary feeding after 6 months of life and along with continuation of BF till 2 years and more [2]. BF strengthens emotional security and affection creating a strong bond between the mother and child [3]. It is cost-effective public health approaches that reduce infant morbidity and mortality from respiratory disease, diarrheal disease and other infections. Healthy BF is the foundation of life and is accepting at the best way of feeding infants. Later in life, BF brings continuingbenefits in terms of lower rates of obesity a reduced risk of chronic diseases and also offers health advantagesfor the breastfeeding mother [4]. It also provides the basic important components for excellent growth-development and contains the right amount of nutrients for growth that is easily digested and readily availableand it also enhances sensory and cognitive development [5].

Complementary feeding (CF) should be introduced to semisolid-solid food at beginning of 6 months along with continuation of breast feeding until 2 years of life [1]. Beginning of right CF at right age can stop chronic or non-infectious diseases such as diabetes, obesity and high blood pressure [2]. Timely initiation of complementary feeding is a major process in every child which has an effect on future correct well-being, proper growth and development of the infant [6]. Too early or late introduction of food may cause to nutritional insufficiency of macronutrients-micronutrients [7]. This short, prospective study was effect of intervention program on knowledge, attitude and practices about breast feeding and complementary feeding among the mothers.

METHODOLOGY

A. Study area: A community based interventional study was carried out between January to March 2023 in the selected area of Anand town in Gujarat.

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B. Sample size: 150 mothers of the infants aged 6-24 m were enrolled in the study.
C. Target population: All the mothers of infants aged 6-24m residing of Anand
D. Subject selection:
Total numbers of Anganwadi centers were listed from the selected area of Anand town. Mothers of infants aged 6-24 months attending these Anganwadi centers (n=6) were targeted for the study. All mothers were informed about the aim and objectives of the present study. A total number of 150 mothers were enrolled based on willingness to take part after taking written consent.
E. Inclusion and exclusion criteria*:*
Mothers of infants aged 6-24 months residing in the selected area and who willing to participate were included in the study and mothers of the infants less than 6 months, mothers with infants suffering from chronic illness and mothers who were not willing to participate were excluded from the study.
F. Intervention:
Booklet was developed based on IYCF guidelines as an intervention tool. All the purposively selected mothers (N=150) were interviewed and information regarding feeding practices (BF and CF) was collected using developed and pretested questionnaire to assess KAP of mothers. Mothers were intervened using developed booklet and after one month change in KAP regarding feeding practices were assessed through questionnaire.
The first section was socio-demographiccharacteristics of the mother and child; the second section was on knowledge of mother with 10 knowledge- related questions on BF and CF with optimal answers 'Yes' and 'No' where True was the correct answer and was recorded as 1; False was the incorrect answer and was recorded as 0. Minimum score was 0 and maximum score was 10. Correct answers were quantified and were assessed as 1-4 as poor knowledge of mother; 5-8 as fair knowledge of mother and 9-10 as good knowledge of mother.
The third section was on attitude of mother towards BF and CF with 5 attituderelated questions about BF and CF and answers were based on a five-point Likert scale of 1 to 5 with 1 as Strongly Disagree, 2 as Slightly Disagree, 3 as Neutral, 4 as Slightly Agree and 5 as Strongly Agree were usedto assess the attitude of mothers. The maximum score was assessed were 25 while the minimum score was 5 and quantification of the attitude was assessed as: 1-8 as poor attitude of mother; 9-18 as fair attitude of motherand 19-25 as good attitude of mother.
The fourth section was on practice related questions for mothers towards BF and CF. Theanswer was optimal 'different option' and 'Yes' and 'No' whereby correct answer and was recorded as 1 and incorrect answer was recorded as 0.
G. Data Analysis:
Data was compiled and coded in Microsoft excel and then data were classified and analyzed using statistical software (SPSS Version 20). Change in the KAP was assessed by applying paired t-test at a significance level of $p < 0.05$.

RESULT

A community based intervention study was conducted from January to March 2023 with one month intervention period in the area of Anand in Gujarat. A total number of 6 Anganwadi centers were selected for subject selection. 150 mothers of infants connected with these AWCs initially but at the end of the study 2% of the mothers had not continued and final data analysis was carried out fro 147 mothers.

Baseline information:
The sociodemographic data of the mothers shows that (142) 96.6% of the mothers belonged to Hindu religion. Majority of the mothers were belonged to nuclear families 59.8% and 40.1% of the mothers were belonged to joint families. 36.73% of the mothers had a monthly family income between Rs/ - less than 5,000to 10,000/- followed by 29.25% with a family income between Rs/ - 10,000 to 15,000/-. A total of 49.7% of the infants were maleand 50.3% were female. Majority of the child belonged to 13-18 months of age. About 49% of the study population was first born children followed by 42% who were second born children while about 9% were born either third or fourth in the birth order. Maternal characteristics indicated that about 41.50% and 53.8% of the mothers were aged between 26-30 years and 21-25 years, respectively. About 87.8% of the mothers were housewives. 43.6%of the mothers had completed their education up to primary school and 23.80% of the mothers had completedtheir education up to secondary school.

Effect of intervention on Knowledge score of mother
A set of ten questions were posed to the mothers before and after intervention for the assessment of knowledge regarding IYCF practices. 36.7% mothers had knowledge regarding timely initiation of CF before intervention which was improved to 94.6% after intervention period. Before intervention only, 45 (30.6%) of the mothers believed that BF should be continue up to 2 years but after intervention program 115 (78.2%)mothers believed that BF should be given up to two years. All the mothers responded correctly regarding a bottle-feeding method is not beneficial for both mother and child and clean utensils should be used to make food for child after the intervention program. Before intervention about 113 (76.9%) mothers responded regarding a child eats better when he/she is fed while watching TV or phone but after intervention it was reduced to 61.2%. (N=90) after

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intervention. Effect of intervention program on knowledge regarding feeding practices is presented in **Table 1**. The maximum change (100%) was observed in the question related to feeding practices during illness of child. About 61% change in the knowledge was observed in the questions related to BF practices such as exclusive breast feeding during first six months and it should be continued till two years along with CF and promotion of active feeding rather than use of mobiles and watching TV. After intervention program about 26 % change was reported in the knowledge of the mother regarding feeding practices. Guled et al (2016) reported that 58.5% of mothers had correct knowledge regarding initiation of CF which was improved to 93.6% after nutrition education program [8]. Similarly, studies conducted in China, Saudi Arabia and India reported that after intervention program mothers had shown improvement in knowledge regarding initiation of complementary feeding [9, 10, 11]. A study conducted in Somali Regional State has also reported that the mean score of knowledge was improved significantly from 5.837 ± 1.445 to 9.429 ± 0.757 among the mothers from intervention group after nutrition education intervention [8], which shows similar result as present study.

Table-1: Effect of intervention on the knowledge scores of mothers after intervention (n=147)

Variable	Intervention		Percent change	t-value
	Before	After		
Breast feeding should be started assoon as after birth	0.97±0.163	1.0±0.000	3	-2.021*
Mother's milk is sufficient for child upto 6 months	0.36±0.483	0.94±0.227	61	-14.148**
Child should not be breast feed whenhe/she is suffering from diarrhoea, fever, vomiting	0.42±0.495	1.00±0.000	100	-14.148**
After 4 months child should be givenhomemade food	0.72±0.450	0.93±0.240	29.16	-6.374**
Child should be breastfed till 2 yearsalong with complementary feeding	0.30±0.462	0.78±0.414	61.53	-11.521**
A bottle-feeding method is beneficialfor both mother and child	0.88±0.320	1.00±0.000	12	-4.369**
10 months child should be given allhomemade food and mashed food	0.98±0.116	1.00±0.000	2	-1.419^{ns}
Food kept for a long time should not begiven to the child	0.98±0.116	0.99±0.082	1.01	-1.000^{ns}
A child eats better when he/she is fedwhile watching TV or phone	0.23±0.423	0.61±0.488	62.29	-9.479**
Clean utensils should be used to makefood for child	0.99±o.824	1.00±0.000	1	-1.000^{ns}
Total score (out of 10)	**6.86±1.40**	**9.26±0.73**	**25.91**	**-22.316****
Values are mean ± SD, NS indicates no significant difference (p>0.05) *indicates significant difference (p<0.05), **indicates significant difference (p<0.01)				

Effect of intervention on Attitude score of mother

A set of five questions were evaluated on a five-point Likert rating scale, from strongly disagree to strongly agree, to assess the attitude of mothers regarding feeding practices, before and after the intervention program. Effect of intervention program on knowledge regarding feeding practices is presented in **Table 2**. Attitude of the mothers regarding the use of ready to eat foods are helpful in the development of the child has showed significant change (39.66%, p<0.01) after intervention. The total mean score was increased significantly by 5.44% (p<0.01) after the intervention period. The change in the attitude of mothers from intervention group regarding IYCF practices was also reported from 18.359 ± 3.725 to 23.098 ± 1.579 which showed significant improvement after nutrition education [8], which is higher than the present study. In the study conducted in the Bogor district of Indonesia has also reported change in the attitude of mother regarding IYCF practices after intervention and ultimately improvement in the nutritional status of their children also [12].

Table-2: Effect of intervention program on the attitude score of mothers after intervention (n=147)

Variable	Intervention		Percent change	t-value
	Before	After		
Breastfeed the child when the child issick	4.61±1.030	4.73±0.796	2.60	-3.286**
Ghee or oil should be added to child's food to make it full of energy	4.78±0.646	4.82±0.616	0.83	-2.147*
Ready to eat foods like wafers, biscuits, and chocolate available in the market help in the development in the child	2.42±1.270	1.46±1.008	39.66	11.007**
The child should be encouraged to share food with all family membersby serving food in a separate plate	4.62±0.980	4.71±0.906	1.94	-3.254**
Washing hands before and after preparing food for child is necessary	4.81±0.619	4.83±0.608	0.41	-1.744^{ns}
Total score (Out of 25)	**22.41±3.80**	**23.63±3.68**	**5.44**	**-11.221****

Values are mean ± SD,
*indicates significant difference (p<0.05), **indicates significant difference (p<0.01)

Effect of intervention program on the practice of mothers

Based on the current feeding practices of mothers it was reported that about 28% of the infants were on BF whereas rest of the infants (N=104, 72%) had started given CF. About 42% of the mothers gave reason that the infant was at the age to start CF and about 21% of the mothers were pregnant so discontinued giving breast milk. About 70% of the infants had given prelactial feed in the form of honey and ghee, cow milk and jaggery. Almost all the mothers have started giving CF but still 7% of the mothers had not started even though infants were completed six months.

Practice regarding eating with family members was 35.90% initially which was improved (90.80%) after intervention. Hand washing of child before eating and person who fed the child was 32.40% and 31.70%, respectively before intervention which was 93.70% and 83.30%, respectively, after the intervention period.

Mothers practice regarding exclusive breast feeding was reported 2.4% and 27.6% before intervention which was improved after nutrition education intervention to 81.3% and 30.8% in experimental and control group, respectively. Similarly the practice regarding continuation of breast feeding up to the age of two years was reported 67.3% and 71.1% before intervention in experimental and control group, respectively which was increased to 87..7% and 74.8% after intervention in the respective groups [8].

CONCLUSION

The present study concludes that the intervention program has significantly (p<0.01) improved the knowledge about mothers regarding initiation of BF and CF. In attitude score of the mothers are also increased regarding ghee or oil should be added to child's food for energy, the child should be encouraged to share food with all family members by serving food in a separate plate, and washing hands before and after preparing food for child is necessary. Thus, the intervention program was found to be useful to improve the knowledge and positive attitude about mothers related practices of complementary feeding.

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