



Effectiveness of Training Programme on Infant and Young Child Feeding Practices for Accredited Social Health Activist (ASHAs) and ANMs Working in Health Department of Parel Municipal Corporation in Maharashtra, India

Shalini Ojha*, Kakoli Bandyopadhyay, Fazila Patankar and Usha Rathod

Terna Medical College, Navi Mumbai, India

*Corresponding e-mail: drshalinipandey18@gmail.com

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ABSTRACT

Context: The first 1000 days of life, from conception to 2 years of age, is a critical period that requires exclusive breastfeeding and nutrition-specific interventions. Accredited Social Health Activist (ASHA) and ANM are the key functionaries for the effective implementation of MCH care services at the grass root level in India. **Aims & Objectives:** 1) To assess the knowledge of the grass root level workers, 2) To study the effectiveness of the training program. **Methodology:** Interventional study was carried out on 105 grass root level workers. The training session was taken on various aspects of IYCF. The effectiveness of this training program was assessed by comparing Pretest and post-test scores. **Results:** Pretest questionnaire revealed knowledge on the adequacy of breastfeeding at 58.4%, on the duration of breastfeeding at 51.4%, and family planning at 41.9%. The difference in the pre-test and post-test scores of the participants was found to be statistically significant ($p < 0.05$). **Conclusions:** In-depth knowledge of IYCF was lower than expected in the study population..

Keywords: Accredited Social Health Activist (ASHA), Auxillary Nurse Midwifery (ANM), Mean Corpuscular Haemoglobin (MCH), Infant feeding, Exclusive breastfeeding

INTRODUCTION

Infant and Young Child Feeding (IYCF) practices directly affect the health, development and nutritional status of children less than two years of age and, ultimately, impact child survival. Improving IYCF practices in children 0-23 months of age is therefore critical to improved nutrition, health and development. The cognitive, health and economic benefits of breastfeeding are well established and recognized, yet only 44% of children under 6 months old worldwide are exclusively breastfed and only 49% of infants initiate breastfeeding within one hour of birth [1].

According to NFHS 5 in India Children breastfed within one hour of birth are only 41.8% and Children under the age of 6 months who are exclusively breastfed are 63.7%. Dismal rates of early breastfeeding, stagnant rates of exclusive breastfeeding rates, and poor rates of appropriate complementary feeding are a cause of concern and would require the focussed attention of the health care system [2,3].

The first 1000 days of life, from conception to 2 years of age, is a critical period that requires exclusive breastfeeding and nutrition-specific interventions. Mothers rely greatly on the advice given by Health Workers (HWs) on appropriate Infant and Young Children Feeding (IYCF) practices. Therefore, the knowledge levels of HWs play an important role in the effective promotion of recommended IYCF practices [4]. Accredited Social Health Activists Accredited Social Health Activists (ASHA) and Auxillary Nurse Midwifery (ANM) are the key functionaries for the effective implementation of maternal and child health care services at the grass root level in India. Hence, the present study was

conducted to assess the knowledge about Infant and Young Child Feeding (IYCF) among Accredited Social Health Activists (ASHA) and ANM. And to study the effectiveness of the training program on the knowledge of health workers regarding IYCF practices[5].

METHODS

An interventional study was conducted among grass root level health workers working in Urban Health Centres of Panvel Municipal Corporation. A total of 105 Accredited Social Health Activists (ASHA) and ANM were selected by convenience sampling method. The training program on the occasion of World breastfeeding week was conducted in the auditorium of the Municipal Corporation. A questionnaire was prepared from the WHO IYCF module. The questionnaire includes the following domains:

- Pre-lacteal feed
- Initiation of breastfeeding
- Colostrum feeding
- Duration of breastfeeding
- Special situation
- Latching
- Adequacy
- Family planning

Before the start of the training, a pretest was given to health workers to assess their existing knowledge. Training sessions were taken on various aspects of IYCF like exclusive breastfeeding, complementary feeding, latching, positioning expressed milk, and feeding during special situations like HIV, and COVID-19. Demonstration on breast model and dummy baby, audiovisual, and role play was conducted. The same questionnaire was given for the post-test. The effectiveness of this training program was assessed by comparing Pretest and post-test scores. The correct responses were given one mark, with a maximum of 21 marks. Analysis was done by SPSS version (20.0) by applying Wilcoxon signed rank test.

RESULTS

In the present study, 105 subjects participated out of which 61 (58.1%) were Accredited Social Health Activists (ASHA) and 44 (41.9%) were ANM (Figure 1 and Table 1).

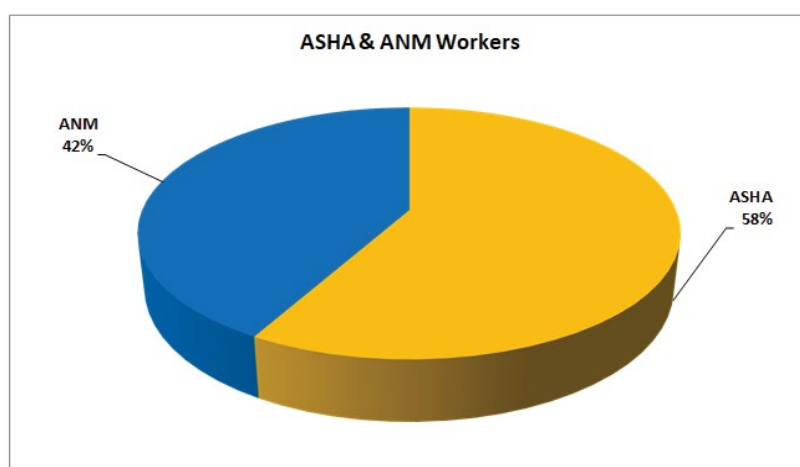


Figure 1 Accredited Social Health Activist (ASHA) and ANM

Table 1 Domain-wise Knowledge about IYCF Practice-Pre Test N=105

Domain	Accredited Social Health Activist (ASHA) Worker			ANM Worker			Total
	Max Score	F	%	Max Score	F	%	
Pre Lacteal Feeding							
Q1 Give the baby glucose/sugar/jaggery/plain water or honey before the first breastfeeding after delivery	61	55	90.2%	44	35	79.5%	90
Initiation of breastfeeding							
Q2 (Within half an hour after normal delivery)	61	53	86.9%	44	39	88.6%	92
Q3 mother cannot sit for 1-2 days after cesarean delivery, still breastfeeding should be done	61	55	90.2%	44	42	95.5%	97
Q4 (4 hours after cesarean)	61	39	63.9%	44	38	86.4%	77
Total (Q2-Q4)	183	147	80.3%	132	119	90.2%	266
Colostrum							
Q5	61	47	77%	44	25	56.8%	72
Other							
Q6 (the baby should place in the mother's cuddle)	61	52	85.2%	44	37	84.1%	89
Duration of breastfeeding							
Q7 (on demand)	61	12	19.7%	44	23	52.3%	35
Q8 As long as the baby takes breastfeeding each time)	61	30	49.2%	44	33	75%	63
Total (Q7-Q8)	122	52	42.6%	88	56	63.6%	108
Special situation							
Q9 (HIV)	61	37	60.7%	44	21	47.7%	58
Q21 (COVID-19)	61	59	96.7%	44	34	77.3%	93
Total (Q9 & Q21)	122	96	78.7%	88	55	62.5%	151
Latching							
Q10 Nipple and maximum black area (areola)	61	42	68.9%	44	28	63.6%	70
Adequacy of breastfeeding							
Q11 The mother should be considered to be short of milk. If the baby is crying	61	29	47.5%	44	29	65.9%	58
Q12 A baby who is exclusively on mother's milk defecates immediately time once in 7-8 days	61	24	39.3%	44	22	50%	46
Q13 Know if mother's milk is enough for the baby By urinary output and weight of the baby	61	44	72.1%	44	36	81.8%	80
Total (Q11-Q13)	183	97	53%	132	87	65.9%	184
Complementary feeding							
Q14 (Start at 6 months)	61	61	100%	44	44	100%	105
Q15 (Semisolid food)	61	55	90.2%	44	41	93.2%	96

Q16 Till 2 years breastfeeding continue	61	39	63.9%	44	22	50%	61
Total	183	155	84.7%	132	107	81.1%	262
Myths							
Q17 The baby needs to get used to the bottle for feeding water and milk.	61	50	82%	44	41	93.2%	91
Q18 Balkadu, Gripe water, etc things to be given to the baby	61	47	77%	44	32	72.7%	79
Q19 Breastfeeding mothers should avoid certain foods	61	32	52.5%	44	27	61.4%	59
Total (Q17-Q19)	183	129	70.5%	132	100	75.8%	229
Family planning							
Q20 One and a half months after delivery start using family planning tools	61	23	37.7%	44	21	47.7%	44

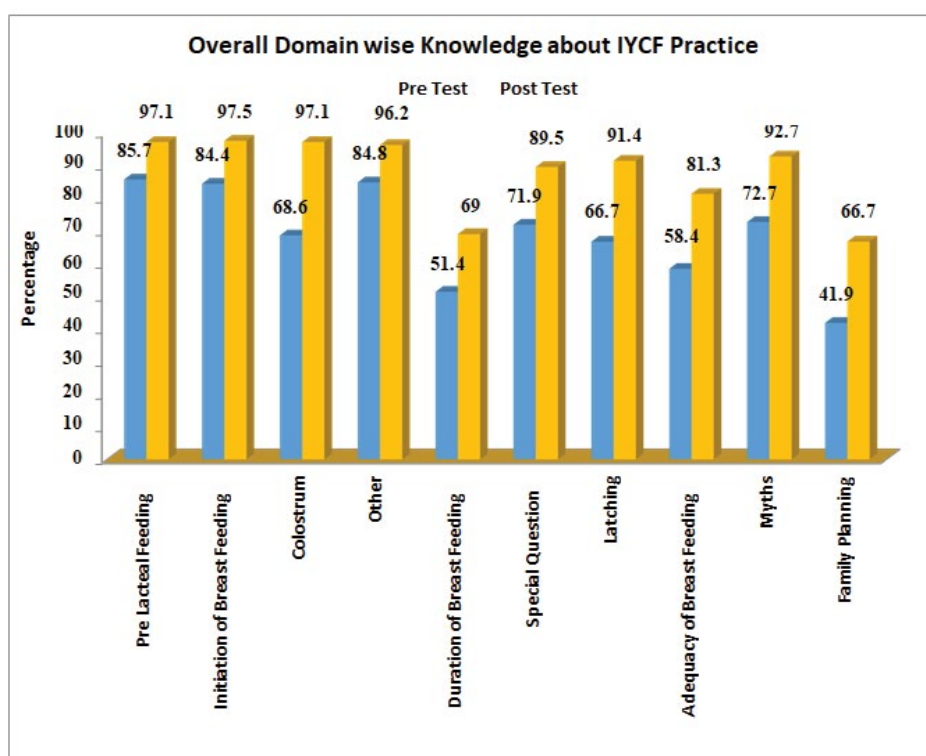


Figure 2 Overall domain-wise knowledge about IYCF practice

Figure 2 presents that overall domain-wise knowledge of study participants has been increased after training. The pretest questionnaire revealed knowledge of the adequacy of breastfeeding at 58.4%, the duration of breastfeeding at 51.4%, and family planning at 41.9%. In the post-test questionnaire score on the same domains were significantly improved to 69%, 89.3%, and 66.7% respectively.

Table 2 Domain-wise knowledge about IYCF practice N=105

Pre Lacteal feeding								
Q1	Pre	1	0.8571	0.3516	1	2.828	0.005	Yes
	Post	1	0.9714	0.1674	1			
Initiation of breastfeeding								

Q2-Q4	Pre	3	2.5333	0.7604	3	4.977	0	Yes
	Post	3	2.9238	0.3005	3			
Colostrum								
Q5	Pre	1	0.6857	0.4665	1	5.477	0	Yes
	Post	1	0.9714	0.1674	1			
Other								
Q6	Pre	1	0.8476	0.3611	1	3.464	0.001	Yes
	Post	1	0.9619	0.1923	1			
Duration of breastfeeding								
Q7-Q8	Pre	2	0.9333	0.7754	1	5.387	0	Yes
	Post	2	1.381	0.6561	1			
Special Question								
Q9 & Q21	Pre	2	1.4381	0.6343	2	5.621	0	Yes
	Post	2	1.7005	0.4089	2			
Latching								
Q10	Pre	1	0.6667	0.4737	1	5.099	0	Yes
	Post	1	0.9143	0.2813	1			
Adequacy of breastfeeding								
Q11-Q13	Pre	3	1.729	0.9408	2	6.461	0	Yes
	Post	3	2.4381	0.7712	3			
Myths								
Q17-Q19	Pre	3	2.181	0.8178	2	6.068	0	Yes
	Post	3	2.781	0.48	3			
Family planning								
Q20	Pre	1	0.419	0.4958	0	4.747	0	Yes
	Post	1	0.6667	0.4737	1			

Table 2 presents domain-wise Knowledge about IYCF Practice among grass root level workers in pre-test and post-test by applying Wilcoxon Signed rank Test. It is found Statistically Significant at a 5% level i.e. $P < 0.05$ in pre-lacteal feed and other domains whereas it is statistically highly Significant at a 0.1% level i.e. $P < 0.001$ in initiation breastfeeding, colostrum, duration breastfeeding, special situation, latching, adequacy of breastfeeding, myths and family planning. The results suggested that the training on infant and young child feeding practices significantly ($P = 0.001$) improved the knowledge of breastfeeding in the trainees in all domains.

DISCUSSION

National guideline on Infant and Young Child Feeding (IYCF) recommends that infants should exclusively breastfeed for six months of life and thereafter adequate and safe complementary food should be provided for up to two years of life [6,7]. Our study intended to assess the knowledge of the grass root level health workers in the community Accredited Social Health Activists (ASHA) and ANM) regarding the implementation of IYCF practices. We found that in our study 100% of workers think that exclusive breastfeeding should be done till 6 months and only 58.09% think that children should receive breastmilk even if the complementary feed is started up to 2 years and beyond. It was found that 80.2% of Accredited Social Health Activist (ASHA) and 90.2% of ANM thinks that breastfeeding should start immediately after, and 68.6% said colostrum should be given. Saxena V., et al. among Accredited Social Health Activists (ASHA) found that 98% have Knowledge about exclusive breastfeeding although the correct age of weaning was known to only 45% of Accredited Social Health Activists (ASHA) [8].

Singh et al study that 63% of AWWs thinks that child should receive breastmilk even if the complementary feed is started up to 2 years and beyond [9]. Whereas Sultan Rizwan Ahmad et al among Anganwadi workers found that 97.1% of AWWs had the correct knowledge that breastfeeding should be started immediately after birth, 100% said colostrum should be given and 94% said exclusive breast milk is the best food for up to 6 months of age, but only 70% believed that breastfeeding should be given on demand and another 30% believed it should be given every 2 hours. 75% of AWWs believed that a bottle is better than Katori and spoon for infant feeding [10]. Similar findings have been reported among other health care personnel [11-17].

Singh et al among Anganwadi workers found that 95.9% think that pre-lacteal feed should not be given to the baby [9]. In a study by T Amar, it is found that 6% of AWW believed that pre-lacteal feed should be given and 55% of AWW had knowledge that gripe water, ghutti, and honey were harmful to baby [18]. Whereas in this study 85.7% of grass root workers think that prelacteal feed should not be given to the baby. 77% Accredited Social Health Activist (ASHA) and 58.5% ANM thinks that for the first 3 days-5 days after delivery, though the mother is deficient in milk (colostrum), outside sourced milk (cow, buffalo, or powdered) should not be given to the baby. Only 66.7% of workers have proper knowledge regarding latching which was improved after the workshop to 91.4% [19,20].

Singh, et al. found that only a quarter of AWWs had correct knowledge regarding diet during lactation, Most of them believed that almonds and dry fruits increase breast milk secretion. Only 42% of AWWs had correct knowledge that bottle feeding should be avoided. In contrast, our study revealed that 72.7% of workers don't believe in myths like the baby needs to get used to the bottle for feeding water and milk, Breastfeeding mothers should avoid certain foods. Balkans/Gripe water/Tonic for teeth/Somva Chautrisi/Kumari Asav these things to be given to the baby as per tradition. Which was improved to 92.7% after the training program [21-23]. In this study, pretest knowledge on breastfeeding during illness (HIV and COVID-19) of grass root level workers was 55.2% for HIV and 88.6% for COVID-19 which was increased after the training program to 82.9% and 96.2% respectively. A similar finding in Kapil et al study among AWW 52% of AWW agreed that breastfeeding should be continued during fever and tuberculosis. Only 41.9% of health workers knew about using family planning methods after delivery at the right timing which was improved to 66.9% after training, so knowledge on breastfeeding during an illness like HIV and COVID-19 and knowledge on when to start using family planning methods after delivery this new edge we have found out in our study which was not revealed in much of studies [24].

Sushama S. Thakre, et al. among Accredited Social Health Activist (ASHA) workers reveals the comparative score of the participants before and after the training on breastfeeding knowledge, attitude, and practices. This difference was found to be statistically significant ($P=0.001$). There were no below-average scores in the post-test. The mean pretest score was 15.11 ± 1.89 , which had risen significantly ($P=0.001$) post-test to a mean of 17.30 ± 1.59 [19]. Our training also had a similar effect. There was a significant improvement in the score in post-test ($P=0.001$) in all domains.

There was a significant association between the cadre of health staff and knowledge of breastfeeding [20]. In our study, ANM has better knowledge than Accredited Social Health Activist (ASHA) in some domains like the initiation of breastfeeding, duration of breastfeeding, adequacy of breastfeeding, myths, and family planning whereas Accredited Social Health Activist (ASHA) has better knowledge on domains like prelacteal feeding, colostrum, feeding in a special situation, latching [25-27].

CONCLUSION

Such interventional studies are important to increase the knowledge amongst the grass root level workers. The present research paper draws very important conclusions that although the knowledge level of grass root level workers is high regarding prelacteal feeding, initiation breastfeeding, special situation feeding practices but their knowledge regarding complementary feeding practices, and family planning practices for postnatal mothers requires further improvement. It is also important to improve their knowledge and counseling skills about options available for working mothers for breast milk feeding by expression of milk and its proper storage. The Accredited Social Health Activist (ASHA) and ANM gained the knowledge and skills regarding breastfeeding and complementary feeding after the training and there is a need for regular training of health workers/personnel, for updating their knowledge. NFHS-5 data revealed the same.

DECLARATIONS**Conflict of Interest**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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