Original Research Article

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Empowering the future mothers: a bottom up approach

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ABSTRACT

Background: In India, marriage at an early age is still common and unfortunately any institution does not provide any education either regarding safe maternal health and infant care. The first two years of child are very crucial for infant development and it is quite evident that the well-being and nutrition of the child and his or her future is totally dependent upon the knowledge of the mother that she has about child care. The aim of the study was to evaluate the awareness of breastfeeding amongst young female students from three different teaching institutions i.e. school, nursing and medical and to evaluate the influence of educational intervention on them.

Methods: Dehradun has total 6 blocks of which 1 block was selected randomly i.e. CBD Doiwala. For selection of school, one school was randomly selected from the list of schools under CBD Doiwala. Out of 75 schools going young females 71 participated in the study. 66 Students each of 3rd Year Nursing and 3rd Year MBBS students of HIMS participated in the study.

Results: In school girls scaling of awareness was maximally seen in average duration of breastfeed (35%) and adequacy of each breastfeed (27%). In nursing students scaling was maximum in awareness regarding breastfeeding a baby in HIV/TB infected mother (85%) and positioning of baby (52%), similarly, in medical students also, it was maximum in HIV/TB infected mother (81%) and positioning of baby during feeding (48%).

Conclusions: Educational intervention is an effective tool to improve awareness regarding breastfeeding practices.

Keywords: Breast feeding practices, Nutrition, Infant care, Maternal health, Infant development

INTRODUCTION

In India, marriage at an early age is still common and unfortunately any institution does not provide any education either regarding safe motherhood and child care. The first two years of child are very crucial and it is quite evident that the well-being of the child and his or her future is totally dependent upon the knowledge of the mother that she has about child care. The younger the mother the lesser is the knowledge regarding reproduction, safe motherhood and childcare. Whatever

little knowledge she has is, acquired either from friends, relatives books or various other misconceptions prevalent in the society. They are not able to have a proper dialogue with their parents because of inhibitions and social taboo and hence youth may enter into parenthood with suboptimal information about infant and child feeding. Such information will reproduce poor health across generations as the largest cohort of adolescents ever become parents. This necessitates specific points of entry for adolescent nutrition education interventions especially about breastfeeding. In addition, opinions on

infant feeding can be formed prior to pregnancy suggesting that promoting breastfeeding with individuals in a range of phases of human development could potentially be effective. Fin this regard, adolescent females offer a concentrated, easily approachable group who are receptive to change and any effort directed on this particular group is likely to generate benefits in far greater proportions than those applied on women with fixed attitudes. Further, schools are centers of teaching-learning, of shared experience and of growth where values for living is being acquired, which can be transmitted to families and communities.

Aims and objectives

With this background in mind, the study was carried mainly on young female students of intermediate school and in health-related fields to evaluate the awareness of breastfeeding amongst young female students from three different institutions i.e. school, nursing and medical and to evaluate the influence of educational lectures on them, so that they may serve as future role models and advocates of breastfeeding.

METHODS

It is a descriptive cross-sectional study conducted in public school of Doiwala, and medical college (HIMS) Dehradun for one year (2008-2009) among school, medical and nursing college girls. Approval was obtained from the Institutional Ethics Committee (IEC) of HIMS Dehradun. Prior permission was obtained from concerned authorities of the selected schools and colleges. Consent was taken from the students participating in the study. Dehradun has a total of 6 blocks out of which 1 block was selected randomly i.e. CHC Doiwala. For selection of school, one school was randomly selected from the list of schools under CHC Doiwala. There were a total of 75 young female students in 11-12th class of which 71 participated in the study. Students of 3rd year nursing and 3rd year MBBS students of HIMS i.e. 66 formed part of the study. The researchers explained the project to the teachers, who, in turn, coordinated in the research work. Participation was voluntary. It was demonstrated that answers would be completely anonymous and under no circumstances would identities be revealed. Students were briefed regarding the purpose of the study and informed consent was taken from all the female students. Students who were not willing to participate and who were absent on the day of visit; were not included in the study. The study tool was designed by a team of specialists from Department of Community Medicine and Department of Pediatrics. A validation study was carried out and the questionnaire was piloted in each study group (medical students: n=10 and nursing students: n=10 and non-medical students: n=10) in order to test the instrument's validity and reliability and to clarify terms and assess any potential difficulty in questionnaire administration. Based on the results of the pilot test, the questionnaire was revised on the basis of the observations made by the investigators as well as comments of the

surveyed participants, the final version of which contained 12 questions. Questions were mix of positive and negative ones to break the monotony. Participants had three options namely yes, no or don't know for some of the questions. A predesigned pretested semi-structured self-administered questionnaire having 12 questions was distributed among female students and completed forms were collected within twenty minutes. During this period, students were not allowed to consult each other. Questions were administered both in Hindi and English among the participants. The nature and objectives of the study was well explained to the participants in a language which they could clearly understand. While the questionnaires were being filled out, interviewers were there to answer all queries that arose. The intervention consisted of a lecture, lasting 30 minutes, delivered by the researchers themselves. Visual aids were used, in the form of slides displayed using an image projector. The lectures included practicality and reduced cost of breastfeeding as compared with artificial feeding; initiation and duration of exclusive and complementary breastfeeding and their significance to infant nutrition. The health, social and emotional benefits to the mother as well as health, cognitive, and social/emotional benefits to the child, were also discussed. Immediately following the presentation, we distributed the post-test survey. The pre and post surveys were identical to each other in order to determine intervention effectiveness in impacting participant's knowledge regarding breastfeeding. Statistical computations were facilitated with the use of IBM SPSS Statistics Version 22. An alpha level of 5% considered statistically significant for all comparisons. The Mc Nemar test was used for assessing the statistical significance between the two groups.

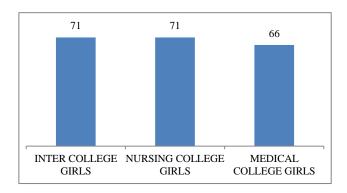


Figure 1: Demographic data of study subjects.

RESULTS

Scaling up of awareness in school going young females was maximally seen in average duration of each breastfeed (35%), adequacy of breastfeeding (27%), Exclusive breastfeeding (23%), HIV-TB mother should feed her baby or not (16%). In nursing female students, it was maximum in HIV-TB mother should feed her baby or not (85%), positioning of the baby during feeding (52%), exclusive breastfeeding (16%), average duration of each breastfeed (15%), whereas in medical students it was maximum in HIV-TB mother should feed her baby

or not (81%), average duration of each breastfeed (48%) harmful effects of bottle feeding, (48%) adequacy of

breastfeeding (41%), frequency of breastfeeding (35%).

Table 1: Pre and post-test evaluation of school going female students about early feeding practices (n=71).

Traits		Pre-test n (%)	Post-test n (%)	P value (Mc Nemar test)		
		Correct knowle	Correct knowledge			
Q.1	Benefits of breast feeding	71 (100)	71 (100)	< 0.001		
Q.2	Harmful effect of bottle feeding	60 (84.51)	68 (95.77)	>0.05		
Q.3	Initiation of breast feeding	71 (100)	71 (100)	< 0.001		
Q.4	Colostrum should be given	71 (100)	71 (100)	< 0.001		
Q.5	Pre-lacteal feeds should be given	62 (87.32)	71 (100)	< 0.05		
Q.6	Frequency of breast feeding	06 (8.45)	08 (11.27)	< 0.001		
Q.7	Exclusive breast feeding	55 (77.46)	71 (100)	>0.05		
Q.8	Positioning of baby during feeding	02 (2.82)	39 (54.93)	< 0.05		
Q.9	Average duration of each breastfeed	01 (0.14)	11 (15.49)	< 0.001		
Q.10	Adequacy of breast feeding	30 (42.25)	33 (46.48)	>0.05		
Q.11	HIV/TB mother can breast feed her baby	04 (5.63)	64 (90.14)	< 0.001		
Q.12	Lactating mother can become pregnant	17 (23.94)	26 (36.62)	< 0.001		

Table 2: Pre and post-test evaluation of nursing students about early feeding practices (n=71).

		Pre-test	Post-test	P value		
Traits		n (%)	n (%)	(Mc Nemar test)		
		Correct knowle	Correct knowledge			
Q.1	Benefits of breast feeding	64 (96.97)	66 (100)	< 0.001		
Q.2	Harmful effect of bottle feeding	33 (50.00)	65 (98.48)	< 0.001		
Q.3	Initiation of breast feeding	59 (89.39)	64 (96.97)	>0.05		
Q.4	Colostrum should be given	59 (89.39)	65 (98.48)	>0.05		
Q.5	Pre-lacteal feeds should be given	57 (86.36)	66 (100)	>0.05		
Q.6	Frequency of breast feeding	43 (65.15)	66 (100)	< 0.001		
Q.7	Exclusive breast feeding	48 (72.73)	66 (100)	< 0.001		
Q.8	Positioning of baby during feeding	52 (78.79)	37 (56.06)	< 0.001		
Q.9	Average duration of each breastfeed	24 (36.36)	56 (84.85)	< 0.001		
Q.10	Adequacy of breast feeding	30 (45.45)	57 (86.36)	>0.05		
Q.11	HIV/TB mother can breastfeed her baby	13 (19.70)	66 (100)	>0.05		
Q.12	Lactating mother can become pregnant	27 (40.91)	14 (21.21)	< 0.05		

Table 3: Pre and post-test evaluation of MBBS students about early feeding practices (n=66).

Traits		Pre-test n (%)	Post-test n (%)	P value (Mc Nemar test)	
		Correct knowledge			
Q.1	Benefits of breast feeding	64 (96.97)	66 (100)	< 0.001	
Q.2	Harmful effect of bottle feeding	33 (50.00)	65 (98.48)	< 0.05	
Q.3	Initiation of breast feeding	59 (89.39)	64 (96.97)	< 0.001	
Q.4	Colostrum should be given	59 (89.39)	65 (98.48)	< 0.001	
Q.5	Pre-lacteal feeds should be given	57 (86.36)	66 (100)	< 0.001	
Q.6	Frequency of breast feeding	43 (65.15)	66 (100)	< 0.001	
Q.7	Exclusive breast feeding	48 (72.73)	66 (100)	< 0.001	
Q.8	Positioning of baby during feeding	52 (78.79)	37 (56.06)	< 0.05	
Q.9	Average duration of each breastfeed	24 (36.36)	56 (84.85)	>0.05	
Q.10	Adequacy of breast feeding	30 (45.45)	57 (86.36)	< 0.05	
Q.11	HIV/TB mother can breastfeed her baby	13 (19.70)	66 (100)	>0.05	
Q.12	Lactating mother can become pregnant	27 (40.91)	14 (21.21)	< 0.001	

DISCUSSION

It was seen in our study, that most of the students had awareness regarding breastfeeding awareness of medical and nursing female students was more than school going young females reason being knowledge regarding benefits were more than likely imparted to these students in the classroom and clinical postings, though in some of the aspects nurses awareness superseded medical students reason being training of the nurses takes place mostly in the wards and most of their educational sessions are mostly directed towards the patients and they are more in touch with the patients than medical students. For students, i.e. medical and nursing who had prior breastfeeding awareness, the educational interventions reinforced or clarified information already known. Our findings were further supported by another study conducted among female medical students in Pakistan who found educational level strongly related to the perception regarding breastfeeding practices.⁷ In another study of adolescent mothers, it was found that they have less knowledge of basic information.8 Awareness of majority of the students in all three groups about the benefits of breastfeeding was very good. This is in line with other studies, whereas in another study, the overall knowledge about the health benefits of breast feeding was poor. 9-12

The areas of greatest knowledge identified in our study were awareness on benefits, initiation and importance of colostrum to the baby. However, the pre-test scores in this study showed that majority of students in all three groups were not aware about some topics like frequency of feeding, average duration of each breastfeed, HIV-TB mothers can breastfeed or not.

Only about 20% of the students in our study were aware of lactational amenorrhoea in all three groups whereas in other studies about half of students knew that breastfeeding reduces the rate of subsequent pregnancy. 9,10,13

In our study, most of the parameters showed drastic change. The video-based lecture emphasized many of the facts and cleared most of their doubts and the effectiveness of this information was apparent in their post-test response which showed posttest scaling up of awareness regarding breastfeeding. This is in accordance with another studies where the post-test scores revealed more positive attitudes and beliefs than the pre-test scores and the intervention was effective. 14-17

In our study, certain parameters did not show marked improvement especially in school going young females, though there may be scaling up of knowledge but the overall percentage was low even after the post-test i.e. lactational amenorrhoea, positioning of the baby during feeding, frequency of breastfeeding and adequacy of feeds (last two except in medical students where good response was seen post-test), average duration of each

breastfeed, harmful effects of bottle feeding and giving pre-lacteal feeds to the baby (especially in school going young females) etc.

This finding suggests that the video intervention was not sufficient especially for school children to believe certain facts regarding breastfeeding, reason being school going young females response is the same, as they have being watching things (as per their culture) around them at home. Hence, these points should be reinforced in their curriculum and a chapter should be included on the same aimed to remove their age old misconceptions so as to have a positive impact on future breastfeeding rates.

CONCLUSION

We concluded that educational intervention is an effective tool to improve the awareness regarding breastfeeding practices but the effect of interventions may vane off with time in the absence of reinforcement, hence periodic sessions should be held in medical colleges to remove the misconceptions and incorporate correct feeding practices regarding the same as they are the future health care providers and can be the immediate infant feeding counselors. In addition to it, adding the subject to the school curriculum would be an important measure for achieving this reinforcement. Such interventions prepare them to disseminate important information to their family members and the community as well.

Limitations

One major limitation was the small sample size. Also, the medical and nursing students were from one particular geographical location, and represented one specific university setting. A larger sample from more than one university may provide stronger evidence of the impact of the educational intervention on the knowledge. Although future studies should include larger samples of students in different geographical locations. The other limitation of our research was that a single educational session was provided and the follow-up period for measuring change in student knowledge, was only 1 hr. Because of time and cost limitations, additional follow-up was not conducted to determine long-term impact on future breastfeeding rate.

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Institutional Ethics Committee

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