

## Original Research Article

# Knowledge on breast feeding and its techniques among health care workers in a tertiary health centre

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### ABSTRACT

**Background:** Breast milk is optimum for a neonate as it is a natural food and the best gift a mother can give to her baby. Breast feeding is an art and skill which need to be learnt and mastered by mothers. As health care workers are the first line of contact for lactating mothers, this study was planned to assess their knowledge on breast feeding.

**Methods:** Hospital based cross-sectional study was performed among health care workers at Yenepoya Medical College and Hospital of Mangalore. 100 health care workers consisting of 60 medical interns and 40 staff nurses were enrolled in the study. Health care workers were given a questionnaire that sought responses pertaining to the knowledge on breastfeeding and its techniques. The data were analyzed using Microsoft Access and Excel software.

**Results:** The present study showed 92% of medical interns and 95% of nursing staff had correct knowledge about initiation of breastfeeding. Knowledge on contents of colostrums and its advantage was more among medical interns (85%) as compared to nursing staffs (30%). Knowledge on prelacteal feeds was good among medical interns as compared to nurses. Both medical interns and nursing have poor knowledge on breastfeeding during maternal illness. Knowledge on correct feeding position and good breast attachment was good among nursing staffs.

**Conclusions:** Study showed there is some substantial knowledge gap on breastfeeding among health care workers. Enhancing their knowledge on breastfeeding and the problems associated with it will be useful for the nurturing mothers as well as themselves.

**Keywords:** Breastfeeding, Colostrums, Lactating mothers, Medical interns, Prelacteal feeds

### INTRODUCTION

Breast milk is optimum for a neonate as it is a natural food and the best gift a mother can give to her baby. It consists of all the essential nutrients that are required by the baby for its growth and sensory cognitive development.<sup>1</sup> According to WHO guidelines baby should be breastfed exclusively for 6 months and breastfeeding can be continued up to 2 years and beyond.<sup>2,3</sup>

According to NFHS survey only 54.9% of infants are exclusively breastfed. In Karnataka the percentage is 54.2%.<sup>4</sup>

In 2012, World Health Assembly declared that exclusive breastfeeding up to 6 months of age should be increased to 50% by 2025.<sup>5</sup> According to a recent survey done by Government of India (Sample registration survey) in 2017 infant mortality rate is 34% which is higher than the global average of 29%.<sup>6</sup> It is estimated that more than 8 lakh babies die which could have been avoided if the baby was exclusively breastfed for 6 months.<sup>7</sup>

Breastfeeding is the most effective way to reduce mortality and morbidity due to respiratory, diarrheal and other infectious diseases as it provides passive immunity. Breastfeeding not only helps the baby it also helps the mother in reducing several malignancies and helps in

shedding extra weight that the mother gained during pregnancy.<sup>8,9</sup> It also helps in establishing the bond between mother and baby.

WHO and UNICEF have come a long way in improving newborn health care by implementing various programs and Government of India has put its best efforts to implement it. Baby Friendly Hospital Initiative (BFHI) was launched in order to promote early initiation of breastfeeding and exclusive breastfeeding for 6 months, but despite this health status of newborn has not improved at the expected rate.<sup>10</sup> Breast feeding is an art and skill which need to be learnt and mastered by mothers not only to feed the infant but also to avoid breastfeeding complications. As health care workers are the first line of contact for lactating mothers, this study was planned to assess the knowledge about breast feeding and its techniques amongst health care workers.

Objectives of the study was to assess the knowledge of breastfeeding among health care workers and to assess the knowledge on techniques of breastfeeding among health care workers.

## METHODS

This study was focused on medical interns and nursing staffs as they are main people who are exposed to community in the future. It was a hospital based cross-sectional study, performed among medical interns and nurses of Yenepoya Medical College and Hospital of Mangalore. This study was approved by Institutional Ethical Committee, total sample size was 100, of them 60 were medical interns and 40 were nursing staffs.

### Inclusion criteria

- All existing medical interns and nurses working in Yenepoya Medical College

### Exclusion criteria

- Interns from other institutions.
- Health care workers other than nurses and medical interns.

All the participants were given participant information brochure and were asked to sign the consent form. They were given the structured modified questionnaire, which was validated by subject experts, consisting of multiple-choice questions on breastfeeding, knowledge on breastfeeding during illness and knowledge on techniques of breastfeeding. All the participants were informed that confidentiality would be maintained. The participants were briefed about the study without revealing the core factor of the study. The data thus obtained was tabulated and analyzed statistically.

## RESULTS

The study was conducted among 100 health care professionals, which included 60 medical interns and 40 nursing staffs to assess their knowledge regarding breast feeding and its techniques. It was a questionnaire study and the results are as follows.

The knowledge about initiation of breast feeding after normal delivery was same among medical interns and nursing staff which was 92% and 95% respectively, however in cases of Caesarian section the knowledge about initiation of breast feeding was much lower and accounts for 65% among the medical interns and 70% among the nursing staffs.

It was found the both the medical interns (95%) and the nursing staff (93%) had adequate knowledge about the duration of exclusive breast feeding. Knowledge of avoidance of pre-lacteals was very poor among nursing staffs (65%) but was considerably good among medical interns (88%).

**Table 1: Knowledge on breastfeeding.**

Questions	Correct answers			
	Medical interns		Nursing staff	
	Number (n=60)	%	Number (n=40)	%
Time of initiation of breast feeding in normal delivery	55	92%	38	95%
Time of initiation of breast feeding in LSCS delivery	39	65%	28	70%
Duration of exclusive breast feeding	57	95%	37	93%
Advice on prelacteal feeds	53	88%	26	65%
Frequency of feeding	39	65%	35	88%
Contents of colostrum and advantage	51	85%	12	30%
Till what age breast feeding has to be continued	48	80%	37	93%
Storage of expressed breast milk at room temperature	15	25%	16	40%
Effective way to increase breast milk	17	28%	30	75%
Adequacy of breast feeding	45	75%	35	88%

Only 65% of the of the medical interns had knowledge about the frequency of breast feeding, however 88% of the nursing staff knew about it. Very few nursing staffs (30%) were aware of the contents and advantage of giving colostrum but about 85% of the medical interns knew the composition and the importance of giving colostrum. 93% of the nursing staffs had answered correct about the age till which the breast feeding needs to be continued and only 80% of the medical interns answered it right. Both the medical interns and nursing staffs had poor knowledge about the storage of expressed breast milk at room temperature.

However, among them the nursing staffs had better knowledge and 40% of them gave the correct answer and only 25% of interns choose the correct answer. Surprisingly, only 25% of the medical interns knew the effective methods to increase the breast milk in mother. The nursing staffs (88%) had sufficient knowledge regarding adequacy of breast feeding compared to medical interns (Table 1).

Knowledge of continuation of breastfeeding in maternal illness like tuberculosis, hepatitis B, HIV and mothers on chemotherapy was poor among both medical (65%, 40%, 55%, 35%) and nursing staffs (63%, 50%, 45%, 20%). Both

medical interns and nursing staffs had adequate knowledge of breastfeeding during illness of the baby accounting for 95% and 93% respectively. On an average only 43% of the medical interns had knowledge of breast feeding in conditions like breast abscess, sore nipple, inverted nipple and cracked nipple, which was poor compared to the nursing staffs (83%) (Table 2).

Correct technique of baby’s chin touching the breast during breastfeeding and the areola to be visible above babies’ mouth than below is poor in case of interns accounting for 53% and 40% respectively. However, nursing staffs had adequate knowledge about it. Many of the medical interns and the nursing staffs knew that the mouth has to be wide open while feeding accounting for 75% and 85% respectively. It was found that very few knew that lower lip needs to be turned outward of baby while feeding among the medical interns (45%) and nursing staff (48%). Majority, 86% of the nursing staffs had better idea of the position of the baby while breast feeding as compared to the medical interns (59%).

The knowledge about the preferred positioning of the mother while feeding and effective sucking is much less among medical interns (50%, 52%) than the nursing staffs (80%, 85%).

**Table 2: Breastfeeding during illness.**

Questions	Medical interns		Nursing staff	
	Number (n=60)	%	Number (n=40)	%
Breast feeding during illness of baby	57	95%	37	93%
Breast feeding illness of mother like	Tuberculosis	39	25	63%
	Hepatitis b	27	20	50%
	HIV	33	18	45%
	Mother on chemotherapy	21	8	20%
	Minor illnesses like fever, cough, cold	53	38	95%
Breast feeding in local conditions like	Breast abscess	27	30	75%
	Sore nipple	27	33	83%
	Cracked nipple	28	35	88%
	Inverted nipple	21	34	85%

**Table 3: Techniques of breastfeeding.**

Questions	Medical interns		Nursing staff	
	Number (n=60)	%	Number (n=40)	%
Signs of good breast attachment	Chin touching breast	32	31	78%
	Mouth wide open	45	34	85%
	Lower lip turned outside	27	19	48%
	Areola more visible above baby’s mouth	24	30	75%
Baby position	Head and body straight	39	33	83%
	Keeping head slightly higher than body level	32	35	88%
Mother position	30	32	80%	
Signs of effective sucking	31	34	85%	
Various positions of breast feeding	21	26	65%	

Very few knew about the various positions of breast-feeding accounting for 35% among the medical interns and 65% among the nursing staffs (Table 3).

## DISCUSSION

The purpose of this study was to assess the knowledge of health care professionals on breastfeeding and its techniques.

Breast milk is the main source and ideal feed for newborn. In the study done by Satyavani et al, knowledge about initiation of breastfeeding was 82% in medical students and 61.5% among nursing students.<sup>11</sup> In the present study both medical interns (92%) and nursing staffs (95%) had a better knowledge. This could be because unlike students, medical interns and nursing staff teach mothers regarding breastfeeding so they were able to answer better. However, their knowledge about initiation of breastfeeding in case of C-section was very low.

In the present study knowledge of avoidance of prelacteal feed was very poor among the nursing staffs accounting for 65% which is similar to the study done by Khan et al, where 69.4% of nurses had knowledge about it.<sup>12</sup> However medical interns (88%) had a better knowledge about the avoidance of prelacteal feeds which is more as compared to the study done by Satyavani et al.<sup>11</sup>

Present study shows knowledge on duration of exclusive breastfeeding was almost equal among medical interns and nursing staff (95% and 93%) which is much higher than the study done by B.T utoo et al, where only 83.4% of total health care professions had knowledge about it.<sup>13</sup> This study reveals that 88% of the nursing staffs knew that feeding has to be given on demand which is higher than study done by Afreen khan where only 78.1% of the nurses knew about it.<sup>12</sup> Although the knowledge about feeds on demand was less among medical interns but this is consistent with the study done by Maryam Shehu et al.<sup>14</sup>

Present study shows that 85% of medical interns and 30% of nursing staffs were aware of nutritive benefits of colostrum. Study done by Sanjay Kumar Bhasin et al, showed that almost 92.7% of community health workers had knowledge about the nutritive benefits of colostrum.<sup>15</sup> Both medical interns (80%) and nursing staffs (93%) had a better idea about the continuation of breastfeeding till 2 years of age. This is consistent with the study done by Nigath Seema et al, where 77.4% of medical students had knowledge about it and Amreen et al, where 81.3% of nursing staff knew about continuation of breastfeeding till 2 years of age.<sup>12,16</sup>

In this study very few medical interns and nursing staff have correct knowledge of continuation of breastfeeding in maternal illness like TB, Hepatitis B, HIV and mother on chemotherapy. Almost similar results are reported in studies done among medical professionals in Karachi, Egypt, Nigeria and nursing students of Saudi Arabia.<sup>17-19</sup>

Local breast problems are the most common cause of lactation failure, and in this study medical interns had poor knowledge as compared to nursing staffs. Study done by Satyavani et al, also showed both nursing and medical students had poor knowledge about it.<sup>11</sup>

On average about 86% of the nursing staffs knew the correct feeding position and 71.5% were aware of the criteria's for good attachment. Similar results were seen in the study done by Khan et al, where 84.4% of nurses knew correct feeding position and 75% of nurses knew the criteria for good attachment respectively.<sup>12</sup> In this study, we also found that medical interns lack the knowledge of correct feeding positions and the criteria for good attachment.

## CONCLUSION

Present study showed that there is some substantial knowledge gap on breastfeeding among health care workers. Health workers at the secondary level of care are closer to the majority of the population and are also highly regarded by the people within the communities. Enhancing their knowledge on breastfeeding and the problems associated with it will help in improving the expressed breast-feeding rate and decreasing the infant mortality rate.

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