

Original Article

## KNOWLEDGE AND ATTITUDE OF SCHOOL TEACHERS REGARDING BREAST-FEEDING

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### ABSTRACT:

**Objective:** Breast milk meets all the nutritional needs of the baby safely and adequately. In developing countries like Pakistan where malnutrition is common and infant mortality rate is high, all possible measures should be taken to support and promote breast-feeding. In this regard school teachers can play an important role because not only they bring up their own children, but also they can effectively impart knowledge about breast-feeding in an appropriate way to their students. The objective of this study was to assess the knowledge and attitude of school teachers regarding breast-feeding.

**Design:** A pre-tested questionnaire in urdu with 27 open ended questions was administered to each respondent individually who completed it under supervision.

**Participants:** 375 female school teachers, 125 each from upper, middle and lower socio-economic areas of Karachi.

**Outcome:** Assessment of breast-feeding knowledge and attitude.

**Results:** The percentage of correct answers by teachers of upper class area for 27 questions was 33.23%, of middle class area 32.36% and lower class area 43.00%. The overall percentage of correct answers was 34.4% with no significant difference between the three groups. We documented that deficit in the knowledge was significant in all the three groups. When analyzed according to the five main topics of breast-feeding, we found no significant difference in knowledge between the three socio-economic groups although knowledge of one or the other group was significantly better regarding individual questions.

**Conclusion:** The overall knowledge of teachers about the subject of breast-feeding was markedly deficient with no statistically significant difference between the teachers of three socioeconomic areas.

**KEYWORDS:** Breast-feeding, knowledge, attitude, school teacher.

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## INTRODUCTION

The World Health Organization (WHO) and UNICEF have been emphasizing the importance of promoting breast-feeding as a way to improve the health and nutrition of infants and young children. Efforts to promote breast-feeding and to overcome problems that might discourage it, are a part of the overall nutrition, maternal and child health programmes of both organizations and are a key element of primary health care as a means of achieving health for all by the year 2000<sup>1</sup>.

Breast-feeding is ideal for the healthy growth

of an infant. It has a unique combination of nutritional and immunological benefits for the child and emotional benefits for both mother and child. Breast-feeding has been associated with lower rates of a variety of infant illnesses compared to bottle feeding<sup>2</sup> including wheezing, lower respiratory tract illnesses<sup>3,4</sup>, pneumonia<sup>5</sup>, upper respiratory tract illnesses<sup>6</sup>, otitis media<sup>7,8</sup>, gastroenteritis<sup>9,10,11</sup>, meningitis<sup>12</sup> and necrotizing enterocolitis<sup>1,13,14</sup>.

The benefits of breast-feeding for infant's health and survival are widely recognized by the scientific community. Exclusive breast-feeding should ideally be continued for up to six months of age and weaning should be started there after<sup>15,16,17</sup>.

Breast-feeding also plays a major role in birth spacing. A number of studies have demonstrated that longer the duration of breast-feeding, the longer is the interval between the last birth and the next pregnancy<sup>18,19</sup>. Breast-feeding is emotionally satisfying for the mother and helps in establishing healthy mother and child relationship<sup>20</sup>.

It is therefore, necessary to take all possible measures to support and promote breast-feeding. In this regard school teachers can play an important role. Not only they are involved in bringing up their own children but also, if given the task, they can impart knowledge about breast-feeding to their students in an appropriate way for the age and influence the community as opinion leaders provided they themselves possess correct knowledge and have the right attitude.

**Objective:** To assess the knowledge and attitude of school teachers about breast-feeding.

## SUBJECT AND METHODS

This study was carried out in forty-five schools located in upper, middle and lower socioeconomic areas of Karachi. Fifteen schools were selected from each area including government and private. This survey was conducted during months of March-May 1999. The questionnaire was given to 375 female school teachers with 125 teachers in each group i.e. upper socioeconomic area (upper), middle socioeco-

nomic area (middle) and lower socioeconomic area (lower). This pre-tested questionnaire in simple Urdu language (national language) comprised of 27 open ended questions, assessing their knowledge and attitude about breast-feeding. The questionnaire translated into English with medical terms is reproduced after table-V. They were asked to write their answers either in Urdu or English in the presence of the authors. Table-I gives the area wise breakdown of schools.

## METHOD OF ANALYSIS

The results were analyzed by the correct answers to individual questions as well as by grouping them under five main topics. The correct answers by teachers working in the three socioeconomic areas were statistically compared using Chi Square.

The breakdown of questions according to five main topics is as follows:

- |           |   |
|-----------|---|
| Topic-I   | Initiation, supplementation and alternatives of breast-feeding (Table-V) question 1-4 (4 questions) |
| Topic-II  | Colostrum<br>Questions 5-7 (3 questions)  |
| Topic-III | Breast-feeding practices<br>Question 8-16 (9 questions)   |
| Topic-IV  | Breast-feeding in twins and low birth weight babies<br>Questions 17-20 (4 questions)                |
| Topic-V   | Breast-feeding in special situations<br>Questions 21-27 (7 questions)                               |

## RESULTS

Table-II shows details of 375 school teachers according to their area of socioeconomic class, marital status and type of school whether private or government.

Table-III shows the percentage of correct answers and 95% confidence interval. Correct answers by teachers of upper class area in 27 questions was 33.23%, middle class area 32.36% and lower class area was 43.00%.

The overall percentage of correct answers by the teachers of upper, middle and lower class areas was 34.4%. 95% CI is given in table-III. There was no significant difference between the three groups.

Table-IV shows the comparison of only those questions for which the proportion of correct answers was significantly different in 3 groups. The proportion of correct answers to all other questions, which are not given in this table, were not significantly different in the 3 groups.

The overall proportion of correct answers relating to initiation, supplementation and alternatives of breast-feeding of the upper, middle and lower groups was 27.7%.

The overall percentage of correct answers of the three groups to questions relating to colostrums was 56.3%.

The overall percentage of correct answers to questions relating to various breast-feeding

practices was 43.3%.

The overall percentage of correct answers to the questions relating to breast-feeding in special situations was 26%.

The overall percentage of correct answers to the questions regarding breast-feeding in twin and low birth weight babies was 22.4% and there was no significant difference between the 3 groups.

Table-V shows mean percentage of correct responses according to different groups of topics. Comparison of the three socioeconomic classes (Table-VI) showed no significant difference between them when tested by chi-square of proportions.

Table - I: Area wise break down of schools (n = 375)

Upper Class	No. of school	Middle Class	No. of school	Lower class	No. of school
Defence	05	Nazimabad	05	Orangitown	05
PECHS	05	F.B. Area	05	New Karachi	05
Clifton	05	Gulshan-e-Iqbal	05	Liyari	05

Table - II: Break up of 375 school teachers to whom questionnaire was administered (n = 375)

Beseline Variable	SOCIOECONOMIC STATUS		
	Upper (%)	Middle (%)	Lower (%)
<b>SCHOOL</b>			
Government	63 (50.4)	61 (48.8)	49 (39.2)
Private	62 (49.6)	64 (51.2)	76 (60.8)
<b>MARITAL STATUS</b>			
Unmarried	33 (26.4)	51 (40.8)	50 (40.0)
Married	92 (71.7)	74 (59.2)	75 (60.0)
<b>TOTAL</b>	<b>125</b>	<b>125</b>	<b>125</b>

Table - III: Overall percentage of correct answers in three socioeconomic areas (n = 375)

Overall (n:375)		Upper (n:125)		Middle (n:125)		Lower (n:125)	
% Correct	95% CI	% Correct	95% CI	% Correct	95% CI	% Correct	95% CI
34%	29-71-39.32	33.23%	22.22-55.33	32.36%	16.24-49.39	43%	28.24-61.06

(Upper Vs: Middle, Upper Vs Lower and Lower Vs Middle P.value >0.07)

**Table - IV**  
**Comparison of correct answers with significant P. value given by the**  
**teachers of upper, middle and lower groups**  
**( n = 375 )**

Q.No Knowledge/Attitude (Correct answers)	Upper Correct n (%)	Middle Correct n (%)	Lower Correct n (%)	P. value		
				Upper Vs Middle	Upper Vs Lower	Middle Vs Lower
9 Nothing should be given except breast milk during first six months.	12 (9.6%)	25 (20%)	28 (22.4%)	<0.02	<0.005	N.S
10 Breast-feeding should be given on demand i.e. when the baby cries.	88 (70.4%)	67 (53.6%)	64 (51.2%)	<0.006	<0.001	N.S
12 Breast-feeding should be continued till 18-24 months.	35 (28.0%)	44 (35.2%)	51 (40.8%)	N.S	<0.03	N.S
13a Mothers requires extra diet during breast-feeding.	93 (74.4%)	111 (88.8%)	116 (92.8%)	<0.003	<0.01	N.S
13b Following extra diet should be given during lactation. - One rotti more in each meal - Two rotti more in each meal. - One glass of milk. - Double the normal diet.	49 (52.7%)	62 (49.6%)	71 (61.21%)	N.S	<0.01	N.S
19 Only breast milk should be given to the twins in first six months.	7 (5.6%)	1 (0.8%)	12 (9.6%)	N.S	N.S	<0.001
20 In case of Low Birth Weight baby the ideal method of giving the breast milk is to continue exclusive breast-feeding and expressed breast milk with cup and spoon.	28 (22.4%)	34 (27.2%)	46 (36.8%)	N.S	<0.01	N.S
21 Frequent breast-feeding should be done, if a baby cries excessively for milk.	19 (15.2%)	7 (5.6%)	22 (17.6%)*	<0.01	N.S	<0.003
26 Continue breast-feeding, if breast fed baby develops jaundice.	28 (22.4%)	39 (31.2%)	42 (33.6%)	N.S	<0.04	N.S
27 In case of cracked nipples mother should continue breast-feeding with expressed breast milk with cup and spoon.	8 (6.4%)	10 (8%)	24 (19.2)	N.S	<0.002	<0.009

Table - V: Average correct (%) knowledge in three socioeconomic groups regarding each of five main topics

(n = 375)

Topics	SOCIOECONOMIC STATUS				
	Upper Mean % + S.D	Middle Mean % + S.D	Lower Mean % + S.D	Over all Mean % + S.D	P. Value
i. Initiation supplementation & alternatives of breast-feeding	23.80 + 6.00	28.2 + 6.96	31.2 + 10.93	27.7 + 7.86	N.S
ii. Colostrum	54.81 + 31.64	57.41 + 33.15	56.68 + 31.58	56.3 + 32.4	N.S
iii. Breast-feeding practices	40.70 + 22.23	42.9 + 21.1	46.2 + 22.59	43.3 + 21.63	N.S
iv. Breast-feeding in twins and LBW babies	20.6 + 19.15	19.88 + 19.75	26.8 + 22.88	22.40 + 20.45	N.S
v. Breast-feeding in special situations	26.33 + 27.09	25.8 + 24.29	27.10 + 21.07	26.0 + 21.52	N.S

## DISCUSSION

The promotion of exclusive breast-feeding for first six months is a major child survival strategy<sup>21,22</sup>. Breast milk is readily available, fresh, free of contaminating organisms and nutritionally ideal food for first few months of life. However some mothers regard breast-feeding as traditional and backward and bottle-feeding as modern, and sophisticated way of feeding. The opinions in the community are greatly influenced by opinion leaders, of which school teachers are very important.

Because of the extensive nature of our questionnaire, we were able to assess several aspects of teachers' knowledge about breast-feeding in depth.

Our study shows that the overall knowledge of breast-feeding of school teachers working in different socioeconomic areas i.e. upper, middle and lower class was poor and not significantly different from each other.

Observations show that supplementary and complementary feed and prelacteal feed, either water, glucose/dextrose or formula or pacifier

may reduce the length of time for which a mother breast feeds her baby and may impair her ability to establish effective lactation<sup>23,24</sup>. In our study nearly two third of the respondents did not know the importance of giving only breast milk as a first feed after birth. Sarwar et al.<sup>25</sup> also found that only 18.5% of the babies were offered breast milk as first feed, the remaining 81.5% were given various other things.

Exclusive breast-feeding for the first six months of life<sup>26</sup> and thereafter breast-feeding with complementary nutritive foods well into the second year of life provide optimal nutrition<sup>27,28</sup>. In our study only 27.7% of the respondents opined that breast-feeding be started within one hour after birth. This compares with the study of Sarwar et al.<sup>25</sup> in which only 26% of mothers started breast-feeding on first day. This delay in starting breast-feeding may be a factor responsible for lactation failure of which most of the mothers complain. One of the reasons for delaying breast-feeding is considering colostrum harmful to the babies. In the study by Sarwar et al.<sup>25</sup> only 45% of the mothers gave colostrum to their babies. In our study the

**QUESTIONNAIRE (English Translation)**  
**Knowledge and Attitude of School**  
**Teachers regarding Breast Feeding**

**TOPIC-1: Initiation, supplementation**  
**and alternatives of breastfeeding:**

1. How long after birth should breastfeeding be started?
2. Should any alternatives of breast milk be given during first 6 months?
3. How long after birth should breastfeeding be continued without addition of other foods or drinks?
4. What are the effects of giving other type of milk (top feed) in addition to breast milk during first 6 months?

**TOPIC-II: Initial milk (Colostrums):**

5. Is the initial breast milk, which is secreted from first day after birth for first 2-3 days and is called colostrums, harmful, beneficial or useless for the baby?
6. (a) If colostrums is beneficial to the baby, then how does it help?  
(b) If colostrums is harmful to the baby, then how does it harm the baby?
7. Should colostrums be discarded?

**TOPIC-III: Breast Feeding Practices:**

8. What feed should be given immediately after birth?
9. What should be given in addition to breastfeeding during first 6 months?
10. Should the mother breastfeed by fixed timing or whenever the baby cries for it?
11. Should water be given during hot weather in first 6 months along with breast milk?
12. For how long should breastfeeding be continued?
13. (a) Does mother require extra diet during breastfeeding?  
(b) If yes, then how much extra diet is required during breastfeeding? Please tick the correct answer:-

- One extra roti (loaf) in each meal.
- Two extra rotis (loafs) in each meal.
- One glass of milk per day
- Double the normal diet.

14. Does breastfeeding reduce the chances of subsequent pregnancy?
15. What will be the effect of frequent breastfeeding on the mother?
16. Should mother stop breastfeeding whenever she is ill?

**TOPIC-IV: Breastfeeding in twins and low birth weight babies:**

17. Can mother feed only breast milk to twins?
18. If mother wishes to breastfeed the twins then how should she do it?
19. What should be given to twins in first 6 months in addition to breast milk?
20. What is the ideal method of giving the breast milk to a small size baby (Low birth weight) baby?

**Topic-V: Breastfeeding in special situations:**

21. What will you do if a breast fed baby cries excessively?
22. (a) Should breastfeeding be given or not if baby is delivered by cesarean section?  
(b) If breast feed is given then how long after cesarean section it should be started?
23. What should be done if a normal breast fed baby does not gain weight during first 6 months?
24. (a) Can a working mother give only breast milk to her baby?  
(b) If yes, then how working mother can manage to continue breast feeding if she is away for 8-10 hours a day?
25. What should be done if baby develops diarrhoea during first 6 months?
26. What should be done regarding feeding if breast fed baby develops jaundice?
27. In case of cracked nipples what should mother do in order to continue breast feeding?

teachers had better knowledge, as only 22.6% suggested that it should be discarded.

The American Academy of Pediatrics recommends breast milk as the only nutrition for infants during their first six months<sup>29</sup>. In our study only one third of respondent believed that exclusive breast-feeding should be for 4-6 months. Breast milk is an ideal food for the baby and it has no complete substitute. However in our study 91% of the teachers believed that formula or fresh milk are adequate substitute for the breast milk. Such belief may lead to early discontinuation of breast-feeding.

Breast-feeding can be continued for two years or longer<sup>30</sup>. In our study teachers from the lower class were better aware of the importance of continuing the breast-feeding till 18-24 months of age compared to the upper class ( $P < 0.03$ ).

Normal full term neonates should be fed on demand from birth with no fixed schedule during day and night. Feeding the baby on demand not only makes the breast-feeding successful but also prevents breast engorgement<sup>31</sup>. In this study teachers of upper class had better knowledge than other two classes (upper Vs middle and upper Vs lower  $P < 0.006$  and  $< 0.001$  respectively).

The knowledge of teachers about breast-feeding in special situations e.g. after caesarian section, was significantly deficient. Thus majority were not likely to even make the effort of breast-feeding after caesarian section, while others would favor delayed initiation which may result in inadequate lactation leading to supplementation and eventual failure of lactation.

Mothers of twins may have enough breast milk to feed both the babies. Difficulties arise because it is hard work to look after two babies at the same time. Such mothers can successfully breast feed their twins if provided proper knowledge, support and encouragement. Only 5.3% had the correct knowledge of feeding the twins. Thus in this situation, majority of them would readily bottle feed.

In Pakistan 25% of the babies are low birth weight<sup>32</sup> and it is a problem to feed them for first few days after birth. In our study only 28.8% respondents knew the ideal method of giving

the breast milk to low birth weight babies i.e. to give only expressed breast milk with cup and spoon, for just few days while continuing to put to breast and later start direct breast-feeding when the baby starts sucking.

Breast-feeding can be successfully done by working mothers by providing "crèches" at places of employment so that women can keep their babies and breast feed them during nursing breaks. If separation is necessary then the mother can keep on expressing her milk after each feed and save it in a cup and that milk should be given during her working hours. In our study 88.5% of teachers believed that working mother can not give breast milk to her baby. Mothers require extra diet during lactation. In our study teachers of lower socio economic class knew better about the extra diet as compared to the upper class ( $P < 0.01$ ). This may be because the mothers from the upper class had adequate diet in any case.

Breast-feeding has a contraceptive effect, as the prolactin secreted by the anterior pituitary in response to the baby's sucking has an anovulatory effect in addition to lactation amenorrhea<sup>33</sup>. Overall 61% teachers believed that breast-feeding reduces the chances of subsequent pregnancy.

Breast-feeding is an important child survival strategy and its promotion is an important intervention for the control of infant diarrhea. It protects the infant from diarrhea associated morbidity and mortality in the first few months of life<sup>34,35,36,37</sup>. In our study only 21% teachers knew this fact.

Jaundice is not a contraindication to breast-feeding. Only 21.3% of the teachers were in favor of continuing breast-feeding during jaundice and rest were against it suggesting glucose water in place of breast milk.

## CONCLUSION

The overall knowledge of teachers about the subject of breast-feeding was markedly deficient with no statistically significant difference between the teachers of upper, middle and lower socioeconomic areas.

**Recommendations:** It is recommended that the subject of breast-feeding should be included in the curriculum of schools and colleges for teachers in the national interest in an appropriate way. There is a need to conduct workshops and seminars to create right attitudes and to improve the knowledge about the importance of breast-feeding among teachers. It is necessary to promote the breast-feeding culture through posters, photographs and charts in the classrooms. Breast-feeding should also be promoted through interactive discussions about this subject on electronic media.

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