Original Article

Knowledge regarding Breastfeeding Practices among Medical Students of Ziauddin University Karachi

Qudsia Anjum[1], Tabinda Ashfaq[2], Hemna Siddiqui[2]

Department of Community Health Sciences[1], Department of Family Medicine[2], Zaiuddin University, Karachi.

Abstract

Objective: To assess knowledge among medical students of a private medical college regarding breast-feeding practices.

Methods: A cross sectional survey of medical students from first year to final year at a private medical college was conducted on a pretested self-administered questionnaire. Students were divided into preclinical and clinical years for analysis.

Results: A total of 344 students participated with 159 (47.6%) from the preclinical group and 185 (53.7%) from the clinical group. The mean age of respondents was 22 ± 1.5 years. Overall 69% students knew that breastfeeding should be initiated immediately after birth, 42% said that exclusive breastfeeding should be continued for 4-6 months and 33% said that weaning should be started between 4-6 months. Regarding giving colostrum to the newborn, 14% students felt that it should be discarded and 12% from both groups thought that colostrum was harmful. Over two-third (76%) from clinical group and 61% from preclinical group were of the opinion that breastfeeding should be started immediately after birth ($p=0.009$). Correct age to start weaning was identified by 71% of the clinical group, whereas, the preclinical group stated it to be 7-9 months of age ($p<0.001$).

Conclusion: The knowledge of students regarding breastfeeding was more in the clinical group as compared to the preclinical group, whereas, overall knowledge of the students regarding breastfeeding was low. Medical students being the future physicians will be the first line in dealing with mothers and breastfeeding related problems. The medical curriculum should lay emphasis on counseling regarding maternal and child nutrition (JPMA 57:480:2007).

Introduction

The global goal for optimal maternal child health and nutrition is that all women should exclusively breastfeed their infant for the initial six months of life.[1] Breastfeeding is considered as the most economical and easily accessible complete nutrition for every new born child. Although exclusive breastfeeding is the best way to feed infants but it is not commonly practiced.[1] The World Health Organization has stated that only 16% of mothers in Pakistan exclusively breastfeed for a period of three months, as compared to other developing countries where the ratio is higher like Bangladesh (46%), India (37%), and Sri Lanka (84%).[2]

The child health indicators are alarming in our country and enable us to understand the importance of investing into nutrition of mother and children. Multiple child health programmes have been implemented to improve child health and some indicators have shown progress. The infant mortality rate has been brought down to 79/1000 livebirths, however, malnutrition in children under five has been static for many years.[3] With this situation of malnutrition and infant mortality rate in Pakistan, all possible measures should be taken to support and promote breast-feeding.

Health care professionals can play a vital role in promoting breast-feeding among infants. Studies from other Muslim countries have shown that although health professionals had a positive attitude towards breastfeeding but their knowledge was inadequate.[4] Local studies among college female students and school teachers also revealed incomplete knowledge and misconceptions regarding

breast-feeding.[5-6]

This study was conducted to assess knowledge among medical students of a private medical college regarding breast-feeding practices.

Methodology

A cross sectional survey of medical students from first year to final year at a private medical college was conducted using a pretested self-administered questionnaire. Students were divided into preclinical and clinical years for analysis.

The questionnaire included questions related to knowledge of medical students about breastfeeding practices. There were 22 questions altogether related to initiation, duration and supplementation of breastfeeding; breastfeeding practices; while other questions assessed knowledge about breastfeeding practices in special situations. The students were given the questionnaire in the classroom and all the students were informed about the study.

The data entry and analysis was done in SPSS version 12.0, chi-square test and test of proportion was used to compare knowledge between preclinical and clinical students. P-value <0.05 were considered significant.

Results

A total of 344 students participated in the study with 159 (47.6%) from the preclinical group and 185 (53.7%) from the clinical group. The mean age of the respondents was 22 $\pm$ 1.5 years.

Overall 69% students knew that breastfeeding should be initiated immediately after birth, 42% said that exclusive breastfeeding should be continued for 4-6 months and 33% said that weaning should be started between 4-6 months. Regarding giving colostrum to the newborn, 14% students felt that it should be discarded and 12% from both groups thought that colostrum was harmful.

Table 1 shows the variables related to initiation, duration and supplementation of breastfeeding. Over three-fourths (76%) from the clinical group and only 61% from preclinical group were of the opinion that breastfeeding should be started immediately after birth (p<0.009). On asking about the duration of exclusive breastfeeding, most of the students from the clinical group (56%) said that it should be given exclusively for 4 to 6 months. On the other hand, a large number from the preclinical group (51%) had a misconception that it should be continued for 8 to 12 months exclusively (p<0.001). Less than half (48%) from preclinical group were aware that bottle feeding is harmful for health of the newborns (p<0.001). On inquiring about prelacteal feeds, 70% of the students from clinical group

Table 1. Initiation, duration and supplementation of breastfeeding.

	Preclinical		Clinical		p-value
	n=159	(%)	n=185	(%)	
Time of onset of breastfeeding					
Immediately after birth	97	(61)	141	(76)	0.009
6 hrs after birth	51	(32)	37	(20)	
12 hrs after birth	11	(7)	7	(4)	
Duration of exclusive breastfeeding					
4-6 months	40	(25)	103	(56)	0.001
6-8 months	38	()	32	(17)	
8-12 months	81	(51)	50	(27)	
Adverse effect of bottle feeding					
Yes	76	(48)	139	(75)	<0.001
No / Don't Know	83	(52)	46	(25)	
Prelacteal feed					
Ghutti	45	(28)	130	(70)	<0.001
Honey	106	(67)	114	(62)	
Saunf water	49	(31)	27	(15)	
Correct age to start weaning					
4-6 months	41	(26)	132	(71)	<0.001
7-9 months	69	(43)	44	()	
10-12 months	49	(26)	9	(5)	
Should colostrum be discarded					
Yes	22	(14)	25	(13)	0.98
No / Don't Know	137	(86)	160	(87)	
Effects of colostrum					
Harmful / Useless	37	(33)	43	(33)	0.99
Beneficial	122	(77)	142	(77)	

Table 2. Knowledge regarding breastfeeding practices.

	Preclinical		Clinical		P-Value
	n=159	(%)	n=185	(%)	
What should be given to exclusively breastfed babies					
Nothing	53	(33)	100	(54)	<0.001
Formula milk	37	(23)	20	(11)	
Water	34	(21)	21	(11)	
Banana/Khitchri		(15)	38	(21)	
Home remedies	11	(7)	6	(3)	
Duration to continue breastfeeding					
6 months	33	(21)	26	(14)	<0.001
1 year	45	(28)	30	(16)	
2 year	81	(51)	129	(70)	
Breastfeeding reduces chances of subsequent pregnancy					
Yes	52	(33)	127	(69)	
No / Don't Know	107	(67)	58	(31)	<0.001
Advantages of breastfeeding					
Cheap, easily available	91	(57)	137	(74)	0.004
Easier to digest	107	(67)	131	(71)	0.778
Always sterile	90	(57)	117	(63)	0.455
Prevents diarrhea and acute respiratory infection in babies	111	(70)	136	(74)	0.727

Table 3. Breastfeeding in special situations.

	Preclinical		Clinical		P-Value
	n=159	(%)	n=185	(%)	
Exclusive breastfeeding to twin babies					
Yes	82	(52)	107	(58)	0.013
No / Don't Know	77	(48)	78	(42)	
How can mother breast feed twin babies					
Both together	28	(18)	26	(14)	0.477
One by one	103	(65)	132	(71)	
Don't Know	28	(18)	27	(15)	
When should mother breastfeed after C-section					
Immediately	46	(30)	90	(49)	<0.001
After 6 hrs	48	(30)	47	(25)	
After 24 hrs	27	(17)	37	(20)	
Don't Know	38	()	11	(6)	
Should working mother breast feed her baby					
Yes	110	(69)	160	(86)	<0.001
No / Don't Know	49	(31)	25	(14)	
What should mother do if baby develops diarrhoea					
Continue breastfeeding	91	(57)	137	(74)	0.004
Start top feed	27	(17)		(13)	
Consult physician	17	(11)	13	(7)	
Don't Know		(15)	11	(6)	
Should breastfeeding be continued during TB, AIDS and Hepatitis B					
Yes	49	(31)	82	(44)	0.036
No / Don't know	110	(69)	103	(56)	
What should mother do if nipples get sore					
Continue breastfeeding with affected nipple	21	(13)	32	(17)	<0.001
Feed the baby with unaffected nipple	87	(55)	125	(68)	
Breastfeed baby with same nipple after applying topicals	16	(10)	7	(4)	
Don't know	35	(22)	21	(11)	
What should mother do if pregnant while breastfeeding					
Continue breastfeeding throughout pregnancy	50	(31)	83	(45)	0.005
Stop breastfeeding immediately	29	(18)	43	(23)	
Continue for few more weeks	41	(26)	27	(15)	
Continue for few more months	19	(12)	21	(11)	
Don't know	20	(13)	11	(6)	

identified ghutti whereas 67% from the preclinical group regarded honey as a prelacteal (p<0.001). Correct age to start weaning was identified by 71% of the clinical group, whereas 43% of the preclinical group stated it to be 7 to 9 months of age (p<0.001).

On asking that what should be given to exclusive breastfed babies, only 54% from clinical group and 33% from preclinical group were aware that nothing is required except breastfeeding for initial few months of life (p<0.001). Approximately half (51%) from preclinical group and 70% from clinical group knew that breastfeeding should be continued up to two years of age. One third (33%) from preclinical group and 69% from clinical group stated that breastfeeding reduces the chances of a subsequent pregnancy (p<0.001). The knowledge related to the advantages of breastfeeding is shown in Table 2.

The knowledge of students regarding breastfeeding practices in certain special situations is given in Table 3. Only 58% from clinical group and 52% from preclinical group thought that twin babies should also be exclusively breastfed during the initial few months (p=0.013). Assessing knowledge of students regarding initiation of breastfeeding after caesarian section, 49% from clinical group and 30% from preclinical group said that it should be started immediately (p<0.001). On questioning whether a working mother should breastfeed her baby, 87% from clinical group and 69% from preclinical group were affirmative (p<0.001). Almost three-fourth (74%) from clinical group and over half (57%) from preclinical were aware that breastfeeding should be continued in a baby even if the baby develops diarrhoea (p=0.004). Regarding continuation of breastfeeding in infectious diseases like Tuberculosis, Hepatitis B and HIV/AIDS, 31% from the preclinical and 44% from the clinical group were of the opinion that breastfeeding should be continued (p=0.036). Related to feeding with sore nipples, 55% from preclinical group and 68% from clinical group knew that it should be continued with the unaffected nipple (p<0.001). If a mother becomes pregnant while breastfeeding, only 31% from preclinical group and 45% from the clinical group had correct knowledge that breastfeeding should be continued (p=0.005).

Discussion

This study aimed to assess knowledge of medical students regarding breastfeeding practices. The overall knowledge of medical students was low, while the clinical year students had better knowledge as compared to the preclinical students. Similar results were observed in a study done among Malaysian students, although the authors assessed different parameters related to knowledge regarding breastfeeding.[7] The correct time to initiate breastfeeding and weaning was identified by almost two-thirds of the students from clinical years in this study. A small number of students said that colostrum should be discarded whereas research shows that it is most important for the newborn as it contains antibodies that are essential

for health.[8] This is comparable to another local study revealing that 56% school teachers gave correct responses to questions related to colostrums.[6]

Bottle feeding is regarded as a risk factor for common childhood illnesses like diarrhoea and upper respiratory infections, which are major causes of infant mortality.[9,10] Exclusive breastfeeding demands nothing except breast milk; therefore, giving prelacteals as a custom should be discouraged. In this study, students identified ghutti and honey as commonly given prelacteals, similar to another study done on college female students showing that approximately 20% girls identified ghutti and honey as prelacteals.[5]

Breastfeeding is one of the natural methods of contraception if practiced exclusively. Overall 52% students knew that breastfeeding reduces the rate of subsequent pregnancy. The study on college girls also showed that 48% knew about lactation's contraceptive role.[5] Majority of the students in this study were aware of the advantages of breastfeeding. A couple of studies have evaluated maternal knowledge regarding advantages of breastfeeding. Study from Bolivia showed that 92.6% mothers mentioned at least one advantage[11], whereas a study from Vietnam revealed insufficient knowledge of mothers.[12] In order to promote breastfeeding among mothers, the health care professionals must be aware of the potential advantages.

Certain special situations related to breastfeeding practices were inquired from the students. Those related to children were twin babies and continuation of breastfeeding in babies with diarrhoea and acute respiratory infections, while those related to mothers were caesarian section, subsequent pregnancy, working mothers and sore nipples. Clinical group in this study showed better responses to all these questions as compared to the preclinical group. This might be due to the ward rotations and practical experience in the clinical years. A study done on college students in Saudi Arabia revealed that 64% of college girls believed that a mother should stop breastfeeding immediately, if she is a pregnant and 86% thought that working mothers could breastfeed their babies.[13] In the same study, only half of them were of the opinion to continue breastfeeding even if the child has diarrhoea.[13] Another study done on nurses in Karachi also showed that less than half of them were aware that breastfeeding should be continued in a child having diarrhea.[14]

The knowledge of students regarding breastfeeding was more in the clinical group as compared to the preclinical group, whereas, overall knowledge of the students regarding breastfeeding was low. Medical students being the future physicians will be in the forefront for dealing with mothers on breastfeeding related problems. These students are an important cadre of health professionals; therefore, the medical curriculum should lay emphasis on counseling regarding maternal and child nutrition. Optimal breastfeeding practices must be taught at all levels of medical education.

References

1. Innocenti Declaration. On the Protection, Promotion and Support of Breastfeeding. [online] 1990 [cited 4 April 2007]. Available at: http://www.unicef.org/programme/breastfeeding/innocenti.htm. [Accessed on 26-07-2007].
2. State of the World's Children UNICEF, 2005. pp. 110-3. Available at: http://www.unicef.org/publications/index_432.html.
3. State of the World's Children UNICEF, 2007. pp. 104 and 108. Available at: http://news.bbc.co.uk/2/shared/bsp/hi/pdfs/11_12_06SOWC2007.pdf.
4. Al-Nassaj HH, Al-Ward NJA, Al-Awqati NA. Knowledge, attitudes and sources of information on breastfeeding among medical professionals in Baghdad. East Med J 2004;10:871-8.
5. Bukhari SSI, Najmi K, Adeeb H, Shareef T, Zahid S, Khan AS. Perception of college going females regarding breastfeeding: an epidemiological profile. J Pak Med Assoc 2003; 53: 258-60.
6. Arif MA, Mehndi Z. Knowledge and attitude of school teachers regarding breast-feeding. J Pak Med Sci 2002;18:99-107.
7. Amalina E, Lattif AL, Nor Afiah MZ, ShukorA M N, Yew K M. Knowledge and attitude towards breastfeeding among medical students in a public university in Malaysia. Int Med J 2004. Available at: http://www.e-imj.com/Vol3-No2/Vol3-No2-B3.htm. [Accessed on 26-07-2007].
8. Playford RJ, Macdonald CE, Johnson WS. Colostrum and milk-derived peptide growth factors for the treatment of gastrointestinal disorders. Am J Cli Nutr 2000;72:5-14.
9. Gurung K, Vaidya K, Bhambal S. Lower respiratory tract infection in infancy in relation to feeding pattern. Nepal Med Coll J 2003;5:37-40.
10. Khadivzadeh T, Parsai S. Effect of exclusive breastfeeding and complementary feeding on infant growth and morbidity. East Mediterr Health J 2004;10:289-94.
11. Ludvigsson JF. Breastfeeding in Bolivia - information and attitudes. BMC Paediatrics 2003;3:4. Epub 2003 May 26. [online] 2003 [cited 5 April 2007]. Available at: http://www.biomedcentral.com/1471-31/3/4.
12. Li L, Lan DTP, Hoa NT, Ushijima H. Prevalence of breastfeeding and its correlates in Ho Chi Minh City, Vietnam. Paed Int 2002;44:47-54.
13. Bella H, Dabal BK. Misperceptions about breastfeeding among Saudi female college students. Ann Saudi Med 1998;18:69-72.
14. Rasheed S, Baig LA, Siddiqui IJ. Decline in breastfeeding, who is to be blamed? A study of knowledge, attitude and practice of breastfeeding amongst nurses. J Pak Med Assoc 2000;50:8-11.