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Knowledge and attitude of medical students towards breastfeeding practices

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Abstract

Background: Breastfeeding is the supreme economical and certainly accessible absolute nutrition for every newborn baby. The child health indicators are alarming in our country and enable us to understand the importance of investing in mother's and children's nutrition.

Methodology: This cross-sectional study was conducted on 250 undergraduate MBBS students at Hamdard University from April 2019 till June 2019, and the samples were collected by convenient sampling technique. The sample size was calculated online by open epi website. All the undergraduate MBBS students from Hamdard University were included, and other students from Hamdard University was excluded. Oral informed consent was obtained, and the research ethics committee approved the study protocol. SPSS Version 19 was used to analyze the data.

Results: Among all 250 students, there were 106(42%) males, and year wise participation were presented. Upon asking about bottle feeding's adverse event, 160(64%) opted 'yes' answer. The majority 128(51%) oppose the statement that 'Pre-lacteal feed is the food except mother's milk can be provided to a newborn before initiating breastfeeding. It was well-known among most of the participants, 149(60%), that breastfeeding duration is two years. It was found that 76 (30%) thought that it is easy to digest, 61(24%) thought that it is an easily available product and prevent diarrhea and acute respiratory infections among babies, 27(11%) rated it cheap, 25(10%) opted sterile among advantages of breastfeeding.

Conclusion: Medical students can benefit from targeted programs to increase breastfeeding knowledge and attitudes and confidence in guiding breastfeeding mothers.

Keywords

Medical Students, Breastfeeding, Newborn.

Introduction

World Health Organization (WHO) defines breastfeeding as the standard means of nourishing infants with all the necessary nutrients that help in growth and development. WHO recommends feeding colostrum (first breast milk produced by mammary glands immediately after the delivery of newborn) must be started in the first hour after delivery. Further, the WHO recommends special breastfeeding during the early six months of life. Breastfeeding should be continued for up to two years, along with additional nutritious food[1]. Colostrum plays a role in maturing an infant's immune system as it contains proteins, immunoglobulins (Ig), non-protein nitrogen, fats, vitamins and minerals[2]. In developing countries, major causes of infant morbidity and mortality are nutritional disorders and infectious diseases like pneumonia and diarrhea, which can be reduced by breastfeeding[3].

Approximately 37% of infants up to 6 months of age are breastfed in middle and low-income countries[4]. In Pakistan, only 18% of mothers go for early breastfeeding initiation, while 37.7% of mothers entirely breastfeeding till six months. According to statistics, 44% of Pakistani children are stunted, and stunting could be reduced by the initiation of early breastfeeding, complete breastfeeding and complementary food for two years[5].

Cooperation and encouragement from health care providers, families, communities, and governments should be provided to women to support breastfeeding, leading to the protection of posterity's health and well-being. In 1991, WHO and UNICEF together launched "The Baby-Friendly Hospital Initiative" that targets to increase breastfeeding practice[6, 7]. The training and motivation of healthcare providers may have a vital impact on breastfeeding initiation and maintenance[8]. Recent researches carried on female college students and school educators also identified deficient awareness and fallacy concerning breastfeeding[9,10].

So the current study is designed to evaluate the knowledge of undergraduate medical students regarding breastfeeding.

Methodology

This cross-sectional study was conducted among the undergraduate MBBS students at Hamdard University from April 2019 till June 2019, and the samples were collected by convenient sampling technique. The sample size was calculated online by open epi website. All the undergraduate MBBS students from Hamdard University were included, and other students from Hamdard University were excluded. Our results are predictive that the undergraduate medical student's percentage having awareness about necessary breastfeeding duration was certainly unknown. Therefore, we expected that 50% knows that complete breastfeeding must be continued till six months. The calculated size of the sample was about 235 at a confidence level of 95%. Therefore the absolute sample size was about 250 undergraduate medical students of different academic years. A self-administered form was used as a data collection tool, whereas SPSS version 19.0 was used to analyze it. The structured questionnaires were distributed among the participants. Verbal informed consent was taken from all the participants once study objectives were explained. Strict confidentiality was considered. The research ethics committee approved the project protocol.

Results

Among all 250 students, there were 106(42%) males, and year wise participation was presented in Figure 1. There were very few individuals (36.8%) who received any lecture regarding breastfeeding.

Exclusive breastfeeding: Overall results found that most of the individuals, 149(60%), knew that the most appropriate time to start breastfeeding is immediately after birth, whereas the participant's responses on the duration of exclusive breastfeeding are presented in Figure 2. Upon asking about bottle feeding's adverse event, 160(64%) opted 'yes' answer. The majority 128(51%) oppose the statement that 'Prelacteal feed is the can be given to the newborn earlier than starting

breastfeeding. It was reported among students that 113(45%) ghutti were used as a prelacteal feed, 120(48%) honey and saunf water 17(7%). The correct age to start weaning was reported as 6 months by 130(52%) students. The majority, 167(67%), said the colostrum should not be discarded and reported its effects as 'beneficial.' On inquiring, what must be provided to exclusively breastfed babies? 129(52%) participants opted for nothing, 102(41%) formula milk water, 10(4%) tea and 9(3.6%) qehwa. There was a misconception among individuals upon asking about how often a mother should feed the baby; 102(41%) said every time baby seems hungry whereas the right option, every 2-3 hours, was opted only 52(21%) of students. It was well-known among most of the participants, 149(60%), that breastfeeding duration is 2 years. It was found that 76(30%) thought that it is easy to digest, 61(24%) thought that it is the easily available product and prevent diarrhea and acute respiratory infections among babies, 27(11%) rated it cheap, 25(10%) opted sterile among advantages of breastfeeding. The stratified analysis was performed regarding exclusive breastfeeding based on their educational level and presented in table 1.

Table 1: Knowledge of students regarding exclusive breastfeeding

Variables	First year	Second Year	Third Year	Fourth year	Fifth year	p-value
Received any lecture regarding breastfeeding	12(13)	6(30)	24(26)	24(46)	44(69)	<0.001
The most appropriate time to start breastfeeding						
Immediately after birth	34(37)	11(55)	14(61)	37(71)	53(82)	<0.001
6 hours after birth	40(44)	6(30)	7(30)	12(23)	6(9.4)	
12 hours after birth	17(19)	3(15)	2(9)	3(6)	5(8)	
Duration of exclusive breastfeeding						
4-6 months	6(6.6)	-	8(34.8)	12(34.8)	18(28)	0.004
6-8 months	8(9)	1(5)	4(17)	6(11.5)	6(9.4)	
8-12 months	15(16.5)	5(25)	2(9)	9(17)	6(9)	
Adverse effect of bottle feeding	58(64)	7(35)	13(56.5)	29(56)	53(83)	0.007
Prelacteal feed is any food except mother's milk provided to a newborn before initiating breastfeeding	22(24)	6(30)	5(22)	16(31)	20(31)	0.027
Most commonly used prelacteal feed						
Ghutti	52(57)	8(40)	8(35)	19(36.5)	26(41)	0.017
Honey	29(32)	10(50)	15(65)	30(58)	36(56)	
Saunf water	10(11)	2(10)	-	3(6)	2(3)	
6 months is the age to start weaning	45(49.5)	12(60)	9(39)	25(48)	39(61)	0.509
Colostrum should not be discarded	45(49.5)	16(80)	12(52)	42(81)	52(81)	<0.001
Colostrum provides beneficial effect	49(54)	16(80)	13(56.5)	36(70)	54(84)	0.004
Nothing should be given while mothers doing exclusively breastfed babies	44(48)	9(45)	10(43.5)	30(58)	36(56)	0.767
How often a mother should feed the baby						
Every time my baby seems hungry	35(38.5)	9(45)	9(39)	20(38.5)	29(45)	0.212
Every hour	14(15)	3(15)	8(35)	16(31)	8(12.5)	
Every 1-2 hours	24(26)	3(15)	2(9)	7(13.5)	11(17)	
Every 2-3 hours	18(20)	5(25)	4(17)	9(17)	16(25)	
Duration to continue breastfeeding						

6 months	14(15)	3(15)	4(17)	15(29)	7(11)	
1 year	27(30)	6(30)	9(39)	9(17)	6(9)	0.017
2 year	49(54)	11(55)	10(43.5)	28(54)	51(80)	

*Values are presented in frequency and percentages.

*p-vales< 0.05 is considered significant.

Breast Feeding in Special Conditions: Overall, 147(59%) participants answered yes, asking that a mother should do exclusive breastfeeding to their twin babies. Mother Breastfeed to twin babies one by one 189(76%) and together was opted by 40(16%). After C-section, 65(26%) thought that breastfeeding could be started immediately, whereas 77(31%) opted after 6 hours, 50(20%) opted after 12 hours. Out of 250, 200(80%) individuals said that working mothers should breastfeed her baby. It was found that 136(54%) students said that you need to consult a physician if a baby develops any infectious disease like diarrhea or pneumonia, 62(25%) said to continue breastfeeding, and 31(12.4%) said to stop the top feed. If the mother has TB, AIDS or Hepatitis B, 22(9%) only opted to continue breastfeeding in this situation. If the mothers' nipple gets sore, 138(55%) said to feed the baby with the unaffected nipple, 24(10%) continue breastfeeding with the affected nipple, 16(6.4%) breastfeed a baby with the same nipple after applying topically. If the mother gets pregnant while breastfeeding, 73(29%) said continue breastfeeding throughout pregnancy, 66(26%) discontinue breastfeeding instantaneously, 57(23%) carry on for few more weeks. Out of all, 108(43%) breastfeeding reduces the chances of the subsequent pregnancy.

The gender-wise stratification showed a significant difference when asked a mother should do exclusive breastfeeding to twin babies ($p<0.05$). It was found that women had significant knowledge of 49(34%) than males 16(15%) about mothers should breastfeed immediately after C-section ($p<0.001$). Upon asking baby develops any infectious disease like diarrhea or pneumonia, we found a significant difference among females and males ($p<0.001$), 38(26.4%) females and 24(23%) males opted continue to breastfeed whereas 85(59%) females and 51(48%) male opted to consult a physician. Education level-wise stratification was done and presented in Table 2.

Table 2: Student's Knowledge concerning Breast Feeding in Special Conditions

Variables	First year	Second Year	Third Year	Fourth year	Fifth year	p-value
Mother should do exclusive breastfeeding to twin babies	53(58)	9(45)	13(56)	22(42)	50(78)	0.016
How can a mother breastfeed twin babies?						
Both together	14(15)	4(20)	8(35)	8(15)	6(9)	0.048
One by one	68(75)	12(60)	13(56.5)	40(77)	56(87.5)	
Don't know	9(10)	4(20)	2(9)	4(8)	2(3)	
Mother can immediately breastfeed after C-section	16(18)	3(15)	7(30)	12(23)	27(42)	0.037
A working mother should breastfeed her baby	68(75)	16(80)	18(78)	42(81)	56(87.5)	0.635
If a baby develops any infectious disease like diarrhea or pneumonia						
Mother should continue breastfeed	18(20)	4(20)	6(26)	8(15)	26(41)	0.082
Mother should stop top feed	10(11)	4(20)	4(17)	8(15)	5(8)	
Mother should consult a physician	53(58)	11(55)	11(48)	29(56)	32(50)	
Don't know	10(11)	1(5)	2(9)	7(13.5)	1(2)	
Breastfeeding should be continued if the mother has TB or AIDS, or Hepatitis B	10(11)	1(5)	1(4)	6(11.5)	4(6)	0.585
What should a mother do if nipples get sore?						

Mother should Continue breastfeeding with an affected nipple	5(5.5)	6(30)	5(22)	5(10)	3(5)	<0.001
Feed the baby with unaffected nipple	36(40)	8(40)	14(61)	28(54)	52(81)	
Breastfeed baby with the same nipple after applying topical	7(8)	-	-	7(13.5)	2(3)	
Don't know	43(47)	6(30)	4(17)	12(23)	7(11)	
If a mother becomes pregnant while breastfeeding, she needs to continue breastfeeding	29(32)	6(30)	6(26)	15(29)	17(27)	0.614
Breastfeeding reduces the chances of subsequent pregnancy	19(21)	5(25)	9(39)	32(61.5)	43(67)	<0.001

Values are presented in frequency and percentages. The Chi-Square test was applied to determine the p-value.

Discussion

Pakistan where exclusive breast feeding practice is limited as shown by the UNICEF report which states the rate to be at 38%[11], requires all possible measures for the promotion of breastfeeding so as to prevent malnutrition and to reduce infant mortality rate. This study was conducted to evaluate knowledge and attitude related to exclusive breastfeeding among undergraduate medical students. Study shows that undergraduate MBBS students had insufficient knowledge regarding the timely initiation breastfeeding, benefits of colostrum, idea and period of necessary breastfeeding and exact age to initiate weaning. Previously, the study carried amongst female medical students in Pakistan concluded educational level is strongly associated with awareness concerning the beginning and period of breastfeeding[12]. We explore that future medical professionals are not aware of breastfeeding benefits; less than half knew breastfeeding as a natural contraception method that lessens the consequent pregnancy rate, same as in previous research being carried out in Pakistan[9,13].

Healthcare workers have trouble with lactation difficulties in new mothers and prefer to suggest formula milk to avoid additional problems[14]. In our study, some special conditions associated with breastfeeding practices were also investigated. The results show that only 29% of students appreciate that once a mother conceives even though she's breastfeeding, she can continue breastfeeding. Whereas Iraqi research has explored that 64% of healthcare providers suggested continuing breastfeeding even though the mother conceives[15]. In one of the research conducted in the UK, 23% of the health workers agree that breastfeeding must be stopped in case of pregnancy[16], and 32% of health professionals would recommend immediately discontinue breastfeeding during pregnancy in Saudi Arabia[17].

Due to complications of Caesarean Delivery, i.e. pain conquers milk production, hence delays breastfeeding initiation and its continuity. Mothers who are lactating are more prone to suffer from sore nipples, which sometimes turn into a painful crack and hinders breastfeeding[18,19]. In this study majority of the student emphasize continuing breastfeeding with the unaffected nipple. According to Karachi's study, most healthcare professionals don't know that breastfeeding should not be discontinued when the baby has diarrhea[20]. However in this study, only 25% opted to continue breastfeeding if a baby is suffering from an infectious disease, most commonly diarrhea and pneumonia.

Overall knowledge of the Medical students and their attitude towards breastfeeding was not satisfactory. As future healthcare professionals, medical students will be in the vanguard to deal with the mothers' counselling on breastfeeding and complications related to it. Those students are the main core of health professionals. So, ideal breastfeeding practices should be taught in the medical curriculum and highlight counselling concerning maternal and child nutrition.

Conclusion

For health professional students, it is necessary to show an encouraging attitude concerning breastfeeding. They should be capable of providing breastfeeding mothers with mandatory basic knowledge. Prior studies have shown that undergraduate students lack basic breastfeeding knowledge. Most healthcare providers are not sufficiently capable, confident, and have great knowledge of counselling and breastfeeding difficulties. Conclusively, it seems that medical students must attend the targeted programs to raise awareness concerning breastfeeding and their confidence in assisting and guiding breastfeeding mothers.

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