Students' Corner
Original Article

Knowledge about breastfeeding in accordance with the national policy among doctors, paramedics and mothers in baby-friendly hospitals

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Abstract

Objective: To assess the knowledge about the National Breastfeeding Policy among paramedics, doctors and mothers in baby-friendly hospitals.

Methods: A cross-sectional questionnaire based survey was conducted at the Paediatrics and Obstetrics department of Civil Hospital, Karachi, Jinnah Postgraduate Medical Centre and Liaquat National Hospital in May 2008. A questionnaire was developed which was based on National Breastfeeding Policy by the investigators after literature search. The respondents were mothers, doctors and paramedics. The questionnaire included demographic profile of participants and questions related to the National breastfeeding policy.

Sampling was based on convenient method. Inclusion and exclusion criteria were defined. The investigators interviewed the participants and filled out the questionnaire after taking verbal informed consent. SPSS version 15.0 was used for data analysis

Result: Total of 515 participants were interviewed which included 197 doctors, 99 paramedics and 218 mothers. The mean age (years) of mothers' was 27.6 ± 7.06, doctors' 29.96 ± 6.024, and paramedics 27.76 ± 9.106. A substantial majority of mothers, paramedics & doctors agreed that breast milk is better than any formula milk. More than three-fourths of the doctors and paramedics responded that prelacteal feed should not be given in comparison to 64.7% of mothers. Nearly half of doctors and paramedics never attended any workshop or training programme on lactation management. Similarly, 63.7% mothers were not counseled for lactation during their antenatal visits.

Conclusion: In this study doctors and paramedics are well aware of the recommendations of the National breastfeeding policy. But nearly two-thirds of the mothers were never educated for the management of the breastfeeding. This point towards the lack of implementation of the national policy on part of healthcare providers (JPMA 60:881; 2010).

Introduction

Breast feeding is a universal phenomenon common to all cultures. In the last 2 decades, there is a universal awareness of advantages of breast milk. In the western world, there have been increased trends of breast feeding in recent years. On the other hand, there has been a decline in the breast feeding in the developing countries.[1] Breast feeding should be initiated within the first hour after birth, and it includes the feeding of colostrums which is recommended by WHO as the perfect food for the newborn.[2]

Exclusive breastfeeding is recommended for the first six months of life for healthy term infants,[2] which according to WHO refers to the practice of feeding only breast milk (including expressed breast milk) breastmilk without any additional food or drink, not even water. Breast milk is the natural first food for babies, it provides all the energy and nutrients that the infant needs for the first months of life. Breast milk promotes sensory and cognitive development, and protects the infant against infectious and chronic diseases.[3] Exclusive breastfeeding reduces infant mortality due to common childhood illnesses.[4] After the first six months the breastfeeding should be supplemented by weaning food. Weaning is the process of gradually introducing a mammal infant, either human or animal, to what will be its adult diet and withdrawing the supply of its mother's milk.[5] Infants should be introduced to nutrient-rich, solid foods with particular attention to iron[6] at six months with continued breastfeeding for up to two years.[3] These recommendations are mostly consistent with Islamic religion.[7] In first half of twentieth century the formula milk companies influenced most of western mothers which later on affected our population as well in 1950s. To prevent the falling rate of breastfeeding Baby-Friendly Hospital Initiative was launched in 1991.[8]

The Baby-Friendly Hospital Initiative (BFHI) is based on the Ten Steps to Successful Breast Feeding, a programme

which summarizes the practices that maternity wards need to adopt to support breastfeeding.[9] The internationally defined term 'Baby-Friendly' may be used only by maternity services that have passed external assessment according to the Global Criteria for the BFHI.[8] There are around 15, 000 Baby-Friendly Hospitals throughout the world[8] and of these only 35 are in Pakistan.[10]

So this study was designed to assess the knowledge of health workers and mothers regarding breastfeeding.

Subjects and Methods

A questionnaire based survey was conducted at the Paediatrics and Obstetrics Department of Civil Hospital, Karachi, Jinnah Postgraduate Medical Centre and Liaquat National Hospital in May 2008. This study was assigned to students by the research department of Dow University of Health Sciences and was approved by it. The ethical approval was also obtained from the hospitals included in the study.

A questionnaire was developed by the investigators after literature search. The questionnaire included certain terms which are defined as:

a. **Prelacteal feed:** Anything given to baby before initiating breastfeeding

b. **Exclusive breastfeeding:** It means giving baby no other food or drink, including no water in addition to breastfeeding

c. **Colostrum:** It is the breastmilk that women produce in the first few days after delivery. It is thick and yellowish or clear in colour.

d. **Weaning:** Giving a baby other food in addition to breastfeeding when it is appropriate usually from 6 months

The respondents were mothers, doctors and nurses selected on certain criteria. Mothers included were those who recently delivered normal healthy single or multiple babies, breastfed their babies within past 3 years, expecting mother should have had at least 3 antenatal visits to a health facility. Mothers of recently delivered dead babies, those who breastfed more than 3 years back and with no or less than 3 antenatal visits to health facility were excluded from sample. Houseofficers, postgraduates, resident medical officers, consultants and faculty members with minimum of 2 months of experience in the concerned departments were included. Houseofficers, postgraduates, resident medical officers of less than 2 months of experience in the concerned departments were excluded. Paramedics included were staff nurses, student nurses, wardboys and ayas with minimum of 6 months of experience in concerned departments. Staff nurses, student nurses, wardboys and ayas of less than 6 months of experience in the concerned departments were not considered for the study.

The questionnaire included the demographic profile of participants including age, gender, education, occupational status and questions according to the National Breastfeeding policy. This policy includes the following points:

1. Formation of relevant healthcare staff team

2. Training of healthcare staff

3. Education of all expectant mothers for benefits of breastfeeding and dangers of bottle feeding and their dietary needs

4. Initiation of breast feeding within one hour of delivery followed by on demand feeding

5. Exclusive breastfeeding upto 4-6 months. No prelacteal feed

6. Weaning at 4-6 months with continued breast feeding upto 2 years

7. No use of feeding bottles and pacifiers

8. No promotional material about formula, feeding bottles and pacifiers in the facility nor shall they be given to the mother

9. No benefits for healthcare staff

10. Mothers should be educated for:

A. Initiation of breastfeeding within one hour if delivery because colostrum protects baby from infection

B. Frequent breastfeeding increases breastmilk production

C. Exclusive breastfeeding for first 6 months as it is the best food for babies and prevents infection

D. Bottle feeding can cause serious illness and death

E. Weaning should be started at 6 months

F. Pregnant and lactating mothers should eat more food and drink more liquids

Sampling was based on convenient method. The investigators interviewed the participants and filled out the questionnaire after taking verbal informed consent. Participants' confidentiality was maintained; names were not asked and data was only available for research and publication purposes. Additionally, the data obtained were grouped before being subjected to analysis as against analyzing individuals separately. SPSS version 15.0 was used for data analysis. Continous variable were analysed by mean and standard deviation, and other variables by frequencies. Non-parametric (Kruskal-Wallis) test was used to evaluate the significance of difference. A p-value of <0.05 was accepted as statistically significant.

Result

This study was conducted during thirty days of May 2008. Total of 515 participants were interviewed which include 218 mothers, 197 doctors and 99 paramedics. The

Table-1: Knowledge about exclusive breast feeding & its advantages among mother & healthcare workers.

	Mothers n (%)	Doctors n(%)	Paramedics n(%)	p-value
Beneficial for baby				
Breast milk	215(98.6)	197(100)	99(100)	0.129
Formula milk	1(0.5)		-	-
Dairy milk	2(0.9)		-	-
Advantages of Breast Feeding (multiresponse question)				
Protects against Infection	194(88.6)	170(86.3)	76(76.8)	
Forms bond between mother & baby	86(39.26)	89(45.17)	60(60.6)	
Breast feeding should be started after delivery				
Within 1st half hour	151(69.3)	178(90.4)	88(88.9)	0
Within 12 hour	40(18.3)	13(6.5)	10(10.1)	
Within 24 hour	27(12.3)	6(3.1)	1(1.0)	
Prelacteal feed should be given				
Yes	76(34.9)	18(9.13)	19(19.2)	0
Preferred prelacteal feed (if chosen)				
Honey	50(65.8)	8(44.4)	10(52.6)	
Gutti	20(26.3)	4(22.2)	5(26.3)	
Anyother	6(7.9)	6(33.3)	4(21.1)	
Colostrum should be given				
Yes	176(88.8)	200(91.74)	89(89.9)	0.692
Frequency of breastfeeding				
On demand	171(78.5)	16(8.12)	68(68.7)	0.086
1-5 times/day	9(4.1)	38(19.3)	6(6.1)	
6-10 times/day	13(6.0)	16 (8.12)	7(7.1)	
11-15 times/day	25(11.5)	38 (19.3)	18(18.2)	
Any food/drink be given along with breast feeding before weaning age				
Yes	64(29.4)	19(9.6)	20(20.2)	
Frequent breast feeding:	210(96.3)	186(94.4)	86(86.8)	
Increases breast milk production	8(3.66)	3(1.5)	1(1.0)	
Decreases breast milk production	-	8(4.1)	12(12.1)	
Does not effect breast milk production				
Diet of pregnant & lactating mother should be increased				
Yes	207(94.95)	195(98.98)	95(95.9)	

mean age of mothers' was 27.6 ± 7.06 years, doctors' 29.96 ± 6.024 years, and paramedics' 27.76 ± 9.106 years. Table-1 demonstrate that 215 (98.6%) mothers agreed that breast milk is beneficial for baby and this view scores 100% (p-value=0.129) among doctors and paramedics. Regarding advantages of breastfeeding that it protects against infection scored highest that is more than 85% among mothers and doctors. And that it forms bonding between mother and baby was supported by 86 (39.26%) mothers, 89 (45.17%) doctors and 60 (60.6%) paramedics. Breastfeeding was initiated within half hour of delivery was supported by 151 (69.3%) mothers, 178 (90.4%) doctors & 88 (88.9%) paramedics (p-value=0.000). Practice of prelacteal feed was not supported by majority of all the three groups (p-value=0.000). However, those who favour it, honey was mainly selected as a choice. Colostrums shall be given to the baby was positively supported by approximately 90% (p-value=0.692)of all the three groups of respondents . The knowledge of on demand feeding was reported in 171 (78.5%) mothers, which was a bit higher than what is reported against doctors and paramedics, however, this was not statistically significant (p-value=0.086).

Table-2 shows that 95 (43.6%) mothers and 42 (42.4%) paramedics believed that weaning age was 4 months (p-value=0.232). However, 98 (49.74%) doctors

Table-2: Knowledge of timely complementary feeding, artificial feeding & pacifiers.

	Mothers n (%)	Doctors n(%)	Paramedics n(%)	p-value
Weaning age				
4 months	95(43.6)	59(30)	42(42.4)	0.232
5 months	12(5.5)	13(6.6)	12(12.1)	
6 months	55(25.2)	98(49.74)	28(28.3)	
After 6 months	56(25.7)	27(13.7)	17(17.2)	
Bottle feeding can cause serious illness &/or death				
Yes	185(84.9)	171(87.2)	83(83.8)	0.758
No	33(15.1)	26(13.2)	16(16.2)	
Use of pacifiers/ Soothers				
Yes	21(9.6)	11(5.6)	13(13.3)	0.08
No	197(90.4)	186(94.4)	86(86.6)	
Breast feeding should be continued for:				
6 months	1(0.5)	6(3.0)	2(2.0)	0.001
7-12 months	2(0.9)	5(2.5)	3(3.0)	
13-18 months	21(9.6)	29(14.72)	6(6.1)	
24 months	153(70.2)	138(70.05)	67(67.7)	
> 24 months	41(18.8)	19(9.6)	21(21.2)	

Table-3: Knowledge of healthcare workers about prohibition of commercial promotion of breast milk subsitutes.

	Doctors n(%)	Paramedics n(%)	p-value
Promotional material about formula milk, feeding bottles and pacifiers should be allowed in hospital			
Yes	165(83.75)	25(25.2)	0
No	32(16.25)	74(74.7)	
Health care staff can receive gifts/free samples/donations/free training from formula feed/ milk manufacturers			
Yes	151(76.65)	32(32.3)	0
No	46(23.35)	67(67.7)	
Participation in any workshop or training organized in/by your hospital regarding lactation management			
Yes	94(47.7)	53(53.5)	0.346
No	103(52.3)	46(46.5)	

viewed that it is 6 months. More than 80% of all the three groups had a knowledge (p-value=0.758) that bottle feeding causes serious illness or death of a baby and therefore breast feeding should be continued for 24 months (p-value=0.001). Use of pacifiers or soothers was not supported by 90% of all participants.

Table-3 elaborates that a great majority of doctors were supported receiving promotional material (p-value=0.000), gifts, and donation (p-value=0.000) from the formula milk/feeding bottles manufacturers. However paramedics mostly did not. Nearly half (p-value=0.346) of all the doctors and paramedics had not attended workshops or training programme in their hospitals.

Out of 218 mothers, 139 (63.77 %) were not counseled for benefits and management of breastfeeding during their antenatal visits.

Discussion

Pakistan being the 7th populous country is facing a high Neonatal Mortality Rate[11] which can be decreased by a number of measures including breast feeding which provides significant health benefits for infants and mothers.[12] In order to identify the knowledge about breast feeding among doctors, paramedics and mothers we designed this study.

According to our study only a slight minority of mothers considered formula (0.5%) or dairy milk (1.4%) more beneficial as compared to breast milk whereas a large majority of mothers and all doctors and paramedics agreed on breast milk being most beneficial.

More than 3/4ths of all participants believed that breast milk protects the child against infections. Views were variable and were lowest for mothers (39.26%) regarding breast feeding forms bond between mother and

child. Most doctors and 89% paramedics recommended initiation of breast feeding within half an hour after delivery. Our study revealed that a large numberof mothers initiated breast feeding within half an hour of giving birth. Similar results are quoted about urban mothers in research done in Peshawar.[13]

A majority of mothers, doctors and paramedics refused to give any prelacteal feed to the new born baby. A study done in Nepal had the same results.[14] Two studies of Lahore showed that many mothers still give prelacteal feed to their newborns.[11,15] The mothers, doctors and nurses who were in favour of giving pre lacteal feed to the new born babies, preferred giving honey. This was supported by the research conducted in Lahore.[11]

A study from Pakistan stated that colostrums was not given to 65.4% neonates[15] however our study as supported by others[16,17] concluded that giving colostrums was favored by more than 90% mothers.

Regarding knowledge about frequency of breast feeding, a great majority of doctors, paramedics as well as mothers expressed that it should be given on demand while a few listed other options as well. Global recommendation for exclusive breastfeeding is the first six months of child's life. Thereafter, continued breastfeeding with the addition of nutritionally adequate complementary foods is recommended until at least a child's second birthday.[18] In our study, majority of doctors stated 6 months as the age of initiating complementary foods which is also the recommended age. Most of paramedics and mothers preferred 4 months. A similar study conducted in Karachi showed that in 25% cases weaning was started at 6 months while earlier weaning was experienced in 9% of population.[19] In another study conducted at Lahore, recommended age (6 months) was noticed in 42 (84%) of 50 breastfed infants.[20] A similar study at Lahore showed the mean age for initiating supplemental feeding with semi-solid food as 4.4 ± 0.99 months.[15]

We have based our study on national breast feeding policy but this has some contradictions with WHO BFHI 10 steps which recommend the initiation of breast feeding within half an hour after delivery and weaning at age of 6months. In contrast, national policy states to start breastfeeding 1 hour after delivery and weaning at age of 4-6 months. This difference in ten steps recommended by WHO and National breastfeeding policy explain the different opinions about initiating weaning of our respondents

Nearly 95% of mothers, doctors, paramedics agree that mothers should increase their diet during pregnancy and lactation. The study of Lahore showed that a large number of mothers had the knowledge of increasing their diet during pregnancy and lactation.[21]

About 84% of doctors and 25% paramedics said that promotional material about formula milk, feeding bottles and pacifiers should be allowed in hospitals. They also believed that health care staff could receive gifts/free samples/donations/free training from formula feed/milk manufacturers. This practice was also reviewed in a study of 3 urban government hospitals in Pakistan that revealed no adherence to the Code of Marketing of breast milk substitutes and breaching the law. More than one-third of the health workers interviewed confirmed that they had received gifts labeled with the names of infant formula Companies. In addition, some had received free samples of infant formula, and 53 (12.4%) confirmed that they had received sponsorship for attending conferences or training sessions.[22]

Lactation management workshops or training activities are organized in hospitals but only about half of doctors and paramedics claimed to have attended such workshops. This shows the deficit in training at these tertiary care hospitals even though they have been labeled as 'Baby-friendly'. This lack of training is also indicated in a study conducted by National Institute of Child Health, showed that the overall correct response rate about knowledge of breastfeeding was not greater than 64.27% among house officers and diploma students.[23]

Only 36.2% mothers said that they were counseled for breast feeding during ante-natal clinical visits. The role of counseling in Lactation Management is to provide information and motivation for mothers to improve breast feeding practices and to prevent, identify and manage breast feeding problems. According to a study conducted in Civil Hospital, Karachi in 1997 when health education to promote breast feeding was provided, 94% of intervention group mothers continued exclusive breast feeding till four months of age against 7% in the control group.[24]

Conclusion

In this study doctors and paramedics are well aware of the recommendations of the National breastfeeding policy. But nearly two-thirds of the mothers were never educated for the management of the breastfeeding. This points towards the lack of proper implementation of the policy on the part of healthcare providers.

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