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Original Research Article

Study of the knowledge attitude and practice of breastfeeding among mothers admitted in post-natal ward of Dhiraj hospital, Piparia, Vadodara

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ABSTRACT

Background: Objective of the study to assess the knowledge attitude and practice of breastfeeding (BF) among mothers admitted in postnatal ward of Dhiraj hospital, Piparia, Vodadara.
Methods: This cross-sectional study was carried out among 340 mothers who admitted in the postnatal ward of Tertiary care hospital during January 2018 to June 2019 after approval from institutional ethics committee.
Results: Total 138 mother (40.6%) had correct knowledge regarding initiation of BF within 30 min-43 (12.6%) and within 1 hour-95 (27.9%). Remaining mothers believed that BF should be started within 2 hours (169, 49.7%) or within 4 hours (33, 9.7%). In this study 214 (62.9%) mothers had adequate knowledge about positioning. Whereas 133 (39.1%) mothers had adequate knowledge about attachment. Most known sign (145, 42.6%) was "the baby's mouth is wide open." And least known sign (83, 24.4%) was "baby's chin touches the breast." The 249 (70.6%) mothers said that frequent feeding increases the quantity of breast milk secretion. 128 (37.6%) mothers said that relaxation, 138 (40.6%) mothers said that pre lacteal feed, and 24 (7.1%) mothers said that uses of bottle increase quantity of breast milk secretion. The 258 (75.8%) mothers said that exclusive breast feeding (EBF) should be continued up to 6 months.
Conclusions: Majority of mother have knowledge of early initiation of BF, colostrum, position of BF. Majority of mother have knowledge of expression of BF but less number of mother have idea about technique of expression and storage and less number of mother believe in pre lacteal feed.

Keywords: BF, Pre lacteal feeding, Breast milk, Mother

INTRODUCTION

The most effective methods of protecting the health of infant and mother are BF. It is of great economic value to societies and households.[1] It has been recognized that BF has many advantages. Promotion and education of BF has become a centre of public health interest all over world. The WHO suggests that young infants should be breastfed exclusively for the initial six months of their life to achieve appropriate development, growth and health. After 6 months, they should be given nutritionally safe and balance alternative foods and continue to give BF till two years.[2] There has been an increase interest in the awareness and promotion of exclusive BF and as the 'best' feeding method for newborn babies over the last two decades. Large scientific evidence tells that exclusive BF reduce infant mortality and morbidity. Main reason more than half of all infant deaths occurs due to poor and suboptimal BF practices in place of limited resources settings. Exclusive BF is a crucial parameter for child's survival. It has been observed that exclusive BF practices could have save 1 million children out of total 6.9 million

death of under five children all over world in the year of 2011.[3] UNICEF and WHO have recommended that first six months of new born babies should have exclusive BF and after six-month introduction of supplementary foods after 6 along with BF for 2 years or more.[4]

Aims and objectives

Aim of the study was to assess the knowledge attitude and practice of BF among mothers admitted in postnatal ward of Dhiraj hospital, Piparia, Vadodara.

Objectives were to assess the knowledge of mothers about breast feeding, to assess breast feeding practices among mothers and to assess various factors affecting knowledge, attitude and practice of BF.

METHODS

Study design

The present study was a cross-sectional study to find out knowledge, attitude and practice of breast feeding among mothers admitted in postnatal ward of Dhiraj hospital, Piparia, Vadodara.

Total 340 mothers were enrolled for the present study.

Inclusion criteria

Mothers who were admitted in postnatal ward of Dhiraj hospital, Piparia, mothers who were not sick and mothers who were willing to participate in the study.

Exclusion criteria

Mothers whom babies were kept in NICU were excluded from the study.

Methodology

This cross-sectional study was carried out among 340 mothers who admitted in the postnatal ward of tertiary care hospital, during January 2018 to June 2019 after approval from institutional ethics committee. Mothers meeting the inclusion criteria were included in study after taking written and informed consent from them.

Data was collected by investigator using a standard questionnaire. It was read out to mothers at discharge from postnatal ward and responses were recorded. For validation of questionnaire, a short pilot study was conducted among mothers admitted in postnatal ward Dhiraj hospital, Piparia, Vadodara. Questionnaire had two sections. First section included socio demographic information such as age, education, occupation, residence, type of family, family income etc. Second section included 16 questions of knowledge, 3 questions of source of knowledge, 7 questions of attitude, and 9 questions of practice regarding breast feeding. Out of this many questions were those which included in knowledge, practice and attitude so, overlapping of questions are there. After that we compare the knowledge, attitude and practice of mothers to various demographic factors like parity and literacy. Questionnaire is attached to annexure no 2.

Statistical analysis

Data were entered into Microsoft excel 2010. The data was then analyzed using EPI INFO. Version 7 software. Qualitative data is presented as frequency and percentage and compared by chi square test. Quantitative data of two groups was presented with mean and standard deviation and compared by Z test. The “p” values equal to or less than 0.05 was considered as significant.

RESULTS

Total participants were 340 mothers out of them 27 (8.0%) mothers were below 21 years of age, 295 (86.7%) mothers were between 21 to 30 years of age group and 18 (5.3%) mothers were more than 30 years of age. Minimum age of mothers was 18 years where as maximum age of mothers were 36 years average age of all mother were 25.2 years.

In this study 268 (78.8%) of mothers were coming from rural area where as only 72 (21.2%) of mothers were coming from urban area of residence. Total 288 (84.7%) of mothers were from lower socio-economic class whereas 52 (15.3%) of mothers were from middle socio economic class. Total 241 (70.9%) of mothers belong to nuclear family whereas 99 (29.1%) of mothers belong to joint family. Total 133(39.1%) of mothers were primi parous whereas 207 (60.9%) of mothers were multipara.

The 69 (20.3%) mothers were just literate out of them 39 (11.5%) mothers were illiterate. And 271 (79.7 %) mothers were literate out of them 146 (42.9%) of mothers studied between 5^{th}-9^{th} std, 109 (32.1%) of mothers studied between 10^{th}-12^{th} std, 13 (3.8%) mothers were graduate and only 3 (0.9%) mothers were post graduate.

Table 1: Knowledge of mothers regarding early initiation of BF.

Knowledge	Initiation	N	Percentage (%)
Correct (138, 40.6%)	Within 30 min	43	12.6
	Within 1 hour	95	27.9
Incorrect (202, 59.4%)	Within 2 hours	169	49.7
	Within 4 hours	33	9.7
Total		340	100.0

In this study to check the knowledge of mother regarding

initiation of BF we took within 30 mins and within 1 hr as a correct answer where as other two as an incorrect.

Total 138 mother (40.6%) had correct knowledge regarding initiation of BF within 30 min-43 (12.6%) and within 1 hour-95 (27.9%). Remaining mothers believed that BF should be started within 2 hours (169, 49.7%) or within 4 hours (33, 9.7%).

Table 2: Knowledge of mothers according position and attachment during BF.

Variables	N	Percentage (%)
Knowledge of ideal position of breast feeding		
Yes	214	62.9
No	126	37.1
Ideal attachment*		
Baby's mouth is wide open	145	42.6
Baby's chin touches breast	83	24.4
Baby's lower lip is everted	128	37.6
Most of the nipple and areola in mouth, only upper areola visible not lower one	104	30.6
Knowledge about more than 2 sign of attachment	133	39.1
All of the above	79	23.2

*Multiple responses were obtained.

In this questions if mothers know more than two answers in positioning and attachment then only we took as a mothers have a knowledge about positioning and attachment. In this study 214 (62.9%) mothers had adequate knowledge about positioning. Whereas 133 (39.1%) mothers had adequate knowledge about attachment. Most known sign (145, 42.6%) was "The baby's mouth is wide open." And least known sign (83, 24.4%) was "baby's chin touches the breast."

Table 3: Knowledge of mothers regarding burping.

Knowledge of burping	N	Percentage (%)
Yes	294	86.5
No	46	13.5

In this study 294 (86.5%) mothers had knowledge about burping.

The 312 (91.7%) mothers responded that breast milk should be given first after birth. Rest 28 (8.3%) mothers believed that prelacteal feed should be given. Plain water-18 (5.2%), cow's milk-8 (2.4%), sugar water-1 (0.3%), honey-1 (0.3%). The 38 (11.2%) mothers believed that 1st feed should be given by spoon and 13 (3.8%) mothers believed that first feed should be given by bottle. The 294 (86.5%) mothers knew about colostrum.

The 249 (70.6%) mothers said that frequent feeding increases the quantity of breast milk secretion. The 128 (37.6%) mothers said that relaxation, 138 (40.6%) mothers said that prelacteal feed, and 24 (7.1%) mothers said that uses of bottle increase quantity of breast milk secretion. No one mother said that stress and worry increase the quantity of breastmilk secretion.

Table 4: Knowledge of mothers regarding prelacteal feeding and colostrum.

Variables	N	Percentage (%)
First feed to be given to the baby after birth		
Breast milk	312	91.7
Plain water	18	5.2
Cow's milk	8	2.4
Sugar water	1	0.3
Honey	1	0.3
How do you give first feed to the baby		
Direct breast feeding	289	85.0
With spoon	38	11.2
With bottle	13	3.8
Knowledge about colostrum		
Yes	260	76.4
No	80	23.6
Total	340	100.0

Table 5: Knowledge regarding factors which increases the quantity of breast milk.*

Factors	N	Percentage (%)
Frequent feeding	249	70.6
Relaxation	128	37.6
Pre-lacteal feed	138	40.6
Use of bottles	24	7.1
Stress, worry	0	0

*Multiple responses were obtained.

Table 6: Knowledge of mothers regarding EBF.

Variables	N	Percentage (%)
Exclusive breast feeding		
Only breast milk should be given to the baby	45	13.3
Only breast milk and medication prescribed by doctors	220	65.3
Breast milk and cows/goat milk can be given	23	6.7
Breast milk and some amount of water	50	14.7
How long you will continue EBF		
4 months	37	10.9
6 months	258	75.8
8 months	32	9.4
12 months	13	3.8
BF should be continuing up to		
12 months	177	52.1
18 months	134	39.4
24 months	27	7.9
As long as baby likes	2	0.6
Total	340	100.0

Total 222 (65.3%) mothers had correctly responded that EBF was "only breast milk and medication prescribed by doctors". The 258 (75.8%) mothers said that EBF should be continued up to 6 months. However, only 27 mothers (7.9%) responded that BF should be continued up to 24 months.

Table 7: Knowledge of mothers regarding expressed breast milk.

Breast milk can be expressed?	N	Percentage (%)
Yes	212	63.4
No	128	37.6
Total	340	100.0

Table 8: Knowledge of mothers regarding storage of expressed breast milk.

Variables	N	Percentage (%)
Storage of expressed breast milk		
In clean and closed container at room temperature	99	37.2
In the refrigerator	38	14.3
Cannot keep it stored	59	22.2
Don't know	70	26.3
Total	266	100.0
How long can you keep expressed breast milk at room temperature		
6 hours	64	64.6
12 hours	13	13.1
Don't know	22	22.2
Total	99	100.0
Knowledge of the technique of expressing breast milk		
Yes	58	21.8
No	208	79.2
Total	266	100.0
Knowledge of breast pump		
Yes	72	27.1
No	194	72.9
Total	266	100.0

In this study 266 (78.2%) mothers had knowledge that breast milk could be expressed. Of them 137 mothers (51.5%) had knowledge about storage of expressed breast milk. Of them 38 mothers (14.3%) stated that breast milk should be stored in refrigerator and another 99 mothers (37.2%) stated that it should be stored in clean and closed container at room temperature. Only 64 (64.6%) responded that breast milk should be stored at room temperature up to 6 hours. Out of 266 mothers, 58 (21.8%) mothers knew techniques of expressing breast milk and 72 (27.1%) mothers knew techniques of breast pump (72, 27.1%).

Table 9: Source of knowledge regarding BF (n=340).*

Variables	N	Percentage (%)
Source of information regarding BF		
Doctor during antenatal visits	271	79.7
Nursing staff	269	79.1
Relatives	256	75.3
Magazines/books	13	3.8
Source of information for proper positioning and attachment of baby, (n=340)		
Doctor	330	97.1
Relative	147	43.2
Nursing staff	119	35.0
Other	10	2.9
Source of information about expressed breast milk, (n=266)		
Doctor	266	100.0
Nursing staff	166	62.4
ASHA worker	23	8.6
Relatives	85	32.0

*Multiple responses were obtained.

Major source of BF information (early initiation of BF, EBF, BF duration etc.) were doctors (271, 79.7%) and nursing staff (269, 79.1%) during antenatal visit and relatives (256, 75.7%). Majority of mothers also received information regarding

ideal attachment and position from doctors (330, 97.1%) and relative (147, 43.2%). The 165 (62.4%) mothers had information from nursing staff whereas 175 (65.8%) mothers had multiple sources of information about expressed breastmilk.

DISCUSSION

In the present study, total 138 (40.5%) mothers had corrected knowledge regarding initiation of BF (within 30 min-12.6% and within 1 hour-27.9%) and similar proportion 145 (42.7%) mothers started BF within one hour. There was no any gap between knowledge and practice. Chinnasami et al observed that only 34.5% initiated early BF after delivery.[13]

Practice of early initiation of BF found (42.7%) in the present study is in similar with Mise et al (38.4%).[11]

Various discussion 55 studies from different part of country reported practice of starting BF within 1-hour ranges from 19% (Kishore et al) to 57.5% (Patel et al).[8,10,16]

Improper attachment and position are one of the main causes for lactation failure. In the present study, 214 (62.9%) mothers had adequate knowledge about position of BF. However, 133 (39.1%) mothers had adequate knowledge about attachment. Lower knowledge of

position and attachment was observed in previous studies by Chaudhary et al (40.0%), Pandey et al (28.0%) and Bharani et al (18.0%).[15,17]

As present study is done in hospital settings so mothers were counselled by health workers so there is gap in knowledge compared to other studies. However, in the present study, 312 (91.7%) mothers responded that breast milk should be given first after birth. Rest of mothers 28 (8.2%) believed that prelacteal feed can be given. (Plain water-5.2%, cow's milk-2.4%, sugar water-0.3%, honey 0.3%). The 260 (76.4%) were aware about colostrum, and 253 (74.4%) mothers had positive attitude for colostrum. Similar attitude was reported in the study of Chinnasami et al colostrum has been considered bad by 25.0% of mothers (25.6% in present study).[13]

About 10.0% mothers have given prelacteal feed like sugar, honey in study conducted by Chinnasami et al. The finding similar to present study (8.3%) Mamtarani et al reported that prelacteal feed was given by 34.2% babies and honey was the commonest (50.2%) followed by plain/boiled water (34.6%), sugar water (8.3 %), animal milk (4.9%) and ghutti (1.5%).[12] Mise et al observed that 24.1% of the lactating mothers gave pre-lacteal feeds to their babies.[11]

About 14.3% mothers used honey as pre-lacteal feeds followed by cow's milk (4.5%), water (3.6%) and sugar water (1.8%). Prevalence of giving colostrum was varying in different studies. About 76.3%, and 95% mothers gave colostrum to the babies in the study conducted by Bhandari discussion et al and Mohan et al respectively as these studies are community based.[12,14]

In present study all babies (100%) were breastfed within first four hours of life.[8,14] This difference in results is because of the study setting which is hospital based in current study and studies by Bhandari et al and Mohan et al were community based.[12,14]

In the present study, 222 (65.3%) mothers had correctly responded that EBF was "only breast milk and medication prescribed by doctors". Vijayalakshmi et al reported that 85.2% mothers were aware of EBF.[5]

In the present study, 258 (75.8%) mothers stated that EBF should be continued up to 6 months. Chaudhary et al, Vijayalakshmi et al and Bharani et al reported that correct knowledge of BF duration for 6 months was observed in 75.0%, 68.0% and 58.0% respectively which is similar to current study.[5,15,17]

In the present study, 294 (86.5%) mothers had knowledge about burping. However, burping was practiced by only 56.8% of mothers. Similar results were reported (91.8%) in the study in Karnataka by Vijayalakshmi et al.[5] A study by Premlata et al and Sultania et al showed that 77.2% and 92.0% mothers practiced burping after feeds respectively.[6,7]

In the present study, 212 (63.4%) mothers had knowledge that breast milk could be expressed. About 99 (37.2%) mothers had knowledge that it could be stored at room temperature in clean and closes container. About 58 (21.8%) mothers had knowledge about techniques of expression. Prabhu et al observed that correct knowledge about EBM, storage and technique of milk expression was present in 93.7%, 35.7%, and 17.9% of study participants.[19] Rai et al reported that 68.0% mothers knew that breast milk could be expressed.

About 34.0% of mothers had knowledge that It could be stored at room temperature up to 6 hours. Attahiru et al reported that only 8.1% mothers had corrected knowledge about BF.

In the present study, 212 (63.4%) mothers had knowledge expression of breast milk, only 72 (27.1%) mothers ever expressed breast milk. Out of those who ever has expressed the breast milk only 26 (36.1%) mothers ever used breast pump or syringing for breast milk expression. Other studies from India also reported lower practice of expressed breast milk [Rai et al (11.0%) and Prabhu et al (17.9%)].[18,19]

In the present study, majority of mothers reported to receive information on breast feeding (early initiation of BF, EBF, BF duration etc.) equally from doctors (79.7%), nursing staff (79.1%) and relatives (75.7%). Majority of mothers also received information regarding ideal attachment and position from doctors (97.1%) and relative (43.2%). In the present study, most of the mothers were regularly counselled by doctors during their antenatal visits therefore their knowledge regarding BF, EBF, BF duration etc. was good.

Therefore, doctors and health workers play an important role in promoting good BF practices. Study done in Saudi by Aswathaman et al reported that only 45.4% mothers' source of knowledge regarding breast feeding were medical professional (36.3% by nurses and 9.1% by doctors) and rest of them (54.5%) by relatives, own experience or neighbour which means ignorance on the part of health care professionals.[9]

Limitations

As the study was tertiary care level hospital based, it has some selection bias. It is not truly reflective of prevalence of knowledge, attitude and practice of BF in community.

Further community-based study with appropriate sample size should be carried out to assess factors affecting the KAP of BF.

All the mothers were admitted in Dhiraj hospital so, all the mothers were counselled by doctors so knowledge, attitude and practice of BF among mothers were influenced by study setting.

Most of the mothers enrolled in the study were from rural area so the knowledge, attitude and practices of urban mothers could not be factored into the study.

CONCLUSION

This ignorance affects the promotion and support of BF. Therefore, antenatal counselling of mothers by trained health personnel is very important and it has a vital role to play in promotion of BF. Majority of mother have knowledge of early initiation of BF, colostrum, position of BF. Majority of mother have knowledge of expression of BF but less number of mother have idea about technique of expression and storage and less number of mother believe in pre lacteal feed. Doctors and nurses plays vital role in successful BF.

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