

Factors Affecting Breastfeeding in Early Postnatal Period in Tertiary Care Centre

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Abstract

Background: Breastfeeding is a learnt skill. Most mothers if encouraged and counseled can successfully breastfeed. **Aims and Objectives:** To aim of the study is to identify the factors related to difficulty in breastfeeding to mothers and baby in early postpartum period. **Materials and Methods:** This observational study was carried out between August 2017 to December 2019, on 292 mothers-baby pairs were randomly selected. Data was collected through questionnaire and qualitative data was presented as frequency and percentage and analyzed by chi-square test. Quantitative data was presented as mean and SD and compared to t-test. **Results:** The mean age of women in the present study was 21 to 25 years. The majority of women were illiterate (87%), living in joint family (54%), belonged to lower socioeconomic status (34%), were multipara (55%) and were housewives (86%). The main factors indicating difficulties to initiate breastfeeding were inappropriate positioning (45%), delayed milk production (33%), and breast disorders (32%). The main neonatal factors associated with breastfeeding problems were problem with latching/sucking and positioning (33%). **Conclusion:** A thorough health education campaign aimed at educating lactating mothers on need to practice EBF should address the identified factors.

Keywords: Breastfeeding, Postnatal, Neonatal Factors, Latching

1. Introduction

According to WHO, breastfeeding is defined as the 'normal way of providing nutrients for healthy growth and development' of the baby and help mothers to overcome the stress and changes of pregnancy. It is studied that breastfeeding infants have reduced mortality and morbidity and also lowers the risk of infections. Breastfeeding has maternal benefits such as pregnancy spacing, decreased postpartum hemorrhage, rapid uterine involution, reduced risk of breast cancer and higher bone mineral density¹.

Breastfeeding doesn't come naturally to mothers specially primigravidas, it is a learnt skill. All mothers should be encouraged and educated about breastfeeding

techniques and signs like rooting, lip smacking, sucking on fingers and putting hands to mouth and should offer breastfeeding at that time¹. Effective breastfeeding techniques involve correct positioning, latching, attachment and sucking.

Goal of this study is to assess the incidence and evaluate factors associated with difficulty in breast feeding both to mother and baby (lack of knowledge, poor positioning, breast engorgement, sore, flat or cracked nipples, mastitis, etc.) and to acknowledge mothers about breastfeeding in tertiary care centre, during their hospital stay. Because many mothers face a few challenges along the way, this study is to bring out problems faced by them and solutions to it

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2. Aim and Objectives

To study the factors related to difficulty in breastfeeding to mothers and baby in early postpartum period.

3. Materials and Methods

- A. **Type of Study:** Observational study
- B. **Study Centre:** Department of Obstetrics and Gynecology of Dr. Vasantrao Pawar Medical College, Hospital and Research Centre, Nashik
- C. **Study Period:** From August 2017 to December 2019.
- D. **Study Population:** All full term normal vaginal deliveries.
- E. **Sample size:** $N = Z^2 pq/d^2$ (where, N=the required sample; p=proportion of breast feeding problems from previous study that is, 30%; Z= z value; q=1-p and d= error [precision] i.e., 7%).

Thus the calculated sample size was n=292.

3.1 Eligibility Criteria

3.1.1 Inclusion Criteria

All full term vaginal delivery without any complications and irrespective of birth weight of baby.

3.1.2 Exclusion Criteria

Maternal

1. All mothers in intensive care unit.
2. Twins, triplets, quadruplet pregnancies.
3. Mothers who are on medications which are contraindicated during breastfeeding period

(radioactive isotopes, cancer chemotherapy, antimetabolites, thyrotoxic agents).

4. Mother having active herpes lesion on breast.
5. Mother having sputum positive tuberculosis (not taking AKT) and T-cell lymphoma.

Neonatal

1. All babies with congenital anomalies (cleft palate, cleft lip, esophageal atresia).
2. Infants with metabolic disorders (galactosemia, lactose intolerance).
3. Newborns admitted in NICU.

3.2 Methodology

After all exclusion and inclusion criteria were fulfilled, after approval from ethics committee and after written informed consent from patients, all patients were observed during their hospital stay after delivery. All breastfeeding related problems and clinical data were collected in form of a proforma and analysed. Lastly patients were advised and treated accordingly regarding specific problems.

Data was entered in Microsoft Excel sheet and then transformed to SPSS software version 22 for analysis. Qualitative data was presented as frequency and percentage and analyzed by chi-square test. Quantitative data was presented as mean and SD and compared to t-test.

4. Results

Most of the mothers were between 21 to 25 years of age (56%), multiparous (55%), living in a joint family (54%) and were housewives (86%) (Table 1). Majority of

Table 1. Socio Demographic variables of study participants

Socio Demographic variables	Frequency	Percent%
Age group		
< 20 year	9	3
21 to 25 years	164	56
26 to 30 years	93	32
more than 30 years	26	9
Total	292	100

Table 1 Continued

Parity		
Primi	131	45
Multi	161	55
Total	292	100
Type of family		
Nuclear	134	46
Joint	158	54
Total	292	100
Maternal occupation		
Working	40	14
Non-working	252	86
Total	292	100

Table 2. Distribution of neonates according to birth weight

Birth Weight	Frequency	Percent
< 2.5 kg	61	21
2.6 to 3 kg	158	54
more than 3 kg	73	25
Total	292	100

Table 3. Distribution of study participants as per the time of start of breastfeeding after delivery

Start of breast feeding	Frequency	Percent(%)
<1 hour of life	9	3%
1-6 hours of life	131	45%
>6hours of life	152	52%
Total	292	100%

newborns were male (64%) and weighed between 2.6 to 3kgs (54%) (Table 2).

As seen in Table 3, most of the study population started breast feeding at >6hours of life (52%) followed by 1-6 hours of life (45%) and <1 hour of life (3%).

As seen in Table 4, amongst maternal factors, inappropriate positioning (45%) was the most common breast feeding problem followed by unaware when to start feeding (35%), delayed milk production (33%), inability to express breast milk (29%), nipple problems like retracted/

flat/cracked/sore/painful nipples and abnormal discharge (15%), and psychological problem/stress (1%) .

As seen in Table 5, amongst neonatal factors, problem with latching/sucking/positioning (33%) was the most common breast feeding problem followed by baby

always sleeps and do not feed regularly (11%), any other problem(4%) and Cold/stuffy nose (2%) .

Lack of knowledge when to start breastfeeding, delayed milk production, inability to express breast milk, nipple problems and inappropriate positioning while feeding

Table 4. Possible Maternal factors leading to delay in the start of breastfeeding (Multiple response data)

Maternal Factors	Frequency	Percent(%)
Unaware when to start feeding	102	35%
Delayed milk production	96	33%
Unable to express breast milk	85	29%
Nipple-Retracted/flat/cracked/sore/pain/abnormal discharge	44	15%
Inappropriate positioning	131	45%
Psychological problem/stress	3	1%

Table 5. Possible Maternal factors leading to delay in the start of breastfeeding (Multiple response data)

Neonatal factors	Frequency	Percent(%)
Problem with latching/sucking/positioning	96	33%
Cold/stuffy nose	6	2%
Baby always sleep and do not feed regularly	32	11%
Any other problem	12	4%

Table 6. Association of maternal education with various factors for delayed start of breastfeeding (Multiple response data)

Maternal Factors	Illiterate		Literate		Total	P value
	N	%	N	%		
Unaware when to start feeding	30	79%	72	28%	102	0.001
Delayed milk production	14	37%	82	32%	96	0.246
Unable to express breast milk	27	71%	58	23%	85	0.001
Nipple-Retracted/flat/cracked/sore/pain/abnormal discharge	10	26%	34	13%	44	0.483
Inappropriate positioning	34	89%	97	38%	131	0.001
Psychological problem/stress	1	3%	2	0.8%	3	0.248

Table 7. Association of parity with various factors for delayed start of breastfeeding (Multiple response data)

Maternal Factors	Primi		Multi		Total		P value
	N	%	N	%	N	%	
Unaware when to start feeding	78	76%	24	24%	102	100%	0.001
Delayed milk production	55	57%	41	43%	96	100%	0.001
Unable to express breast milk	47	55%	38	45%	85	100%	0.02
Nipple-Retracted/flat/cracked/sore/ pain/abnormal discharge	19	43%	25	57%	44	100%	0.200
Inappropriate positioning	97	74%	34	26%	131	100%	0.001
Psychological problem/stress	3	100%	0	0%	3	100%	0.054

Table 8. Association of maternal age with various factors for delayed start of breastfeeding (Multiple response data)

Maternal Factors	Less than 25 year		more than 25 years		Total		P value
	N	%	N	%	N	%	
Unaware when to start feeding	77	75%	25	25%	102	100%	0.001
Delayed milk production	53	55%	43	45%	96	100%	0.326
Unable to express breast milk	52	61%	33	39%	85	100%	0.667
Nipple-Retracted/flat/cracked/sore/ pain/abnormal discharge	16	36%	28	64%	44	100%	0.638
Inappropriate positioning	87	66%	44	34%	131	100%	0.02
Psychological problem/stress	3	100%	0	0%	3	100%	0.054

was observed in higher percentage in illiterate study population (79%, 37%, 71%, 26%, and 89% respectively) as compared to literate population (28%, 32%, 23%, 13%, 38% respectively) (Table 6).

Lack of knowledge when to start breastfeeding, inability to express breast milk, and inappropriate positioning while breastfeeding was found to be statistically significant (p value 0.001).

Table 9. Association of birth weight with various neonatal factors for delayed start of breastfeeding (Multiple response data)

Neonatal factors	< 2.5 kg		2.6 to 3 kg		more than 3 kg		Total		P value
	N	%	N	%	N	%	N	%	
Problem with latching/sucking/positioning	46	48%	23	24%	27	28%	96	100%	0.001
Cold/stuffy nose	4	66%	1	17%	1	17%	6	100%	0.32
Baby always sleep and do not feed regularly	6	19%	7	22%	19	59%	32	100%	0.001

As seen in Table 7, maternal factors like being unaware when to start feeding, delayed milk production, inability to express breast milk, inappropriate positioning, psychological problem/stress was observed in higher number in primipara cases (76%,57%, 55%,74%, 100% respectively) as compared to multipara cases (24%,43%, 45%, 26%, 0% respectively). Whereas, no significant difference was seen in nipple problems in primi and multipara (43% and 57% respectively).

Lack of knowledge when to start breastfeeding, delayed milk production and inappropriate positioning was statistically significant in relation to parity score, more in primipara (p value 0.001).

From Table 8, lack of knowledge about when to start feeding was more common in mothers with mothers aged less than 25 years which was statistically significant. (p value 0.001).

As seen in Table 9, neonatal factors like problem with latching/sucking/positioning was observed in higher

number in babies with birth weight <2.5kgs (48%) followed by babies with weight more than 3 kg (28%). This finding is statistically significant with p value 0.001.

Baby always sleeping and feeding irregularly was observed in higher number in babies of birth weight more than 3 kg baby (59%) followed by less than 2.5 kg (19%). There was statistically significant association with p value of 0.001.

5. Discussion

5.1 Time of Initiation of Breastfeeding

In the present study, most of the study population started breast feeding their babies at >6 hours of post delivery (52%), followed by within 1–6 hours after delivery (45%), and only 3% of population started feeding within 1 hour of delivery. The following studies were compared and similar findings were noted.

Start of breast feeding	Buttham et al. ²	Elwelely et al. ³	Present study (%)
<1 hour of life	34.2%	25%	3%
1–6 hours of life			45%
>6hours of life	65.8%	75%	52%
Total	100%	100%	100%

5.2 Maternal Factors Associated with Breastfeeding Problems

Maternal Factors	Prasad et al. ⁴	Suresh et al. ⁵	Present study
Delayed milk production	13.1%	-	33%
Nipple-Retracted/flat/cracked/sore/ pain/abnormal discharge	9.8%	19%	15%
Inappropriate positioning	64%	88.5%	45%

In the present study, amongst maternal factors, Inappropriate positioning (45%) was the most common breast feeding problem followed by delayed milk production (33%) and Nipple problems (Retracted/flat/cracked/sore/pain/abnormal discharge) (32%). The following studies were compared and similar findings were noted.

5.3 Maternal Factors vs. Maternal Education

In the present study, maternal factor of breastfeeding problem were more in illiterate group as compared to literate group with a p value 0.001 which was statistically significant. Similarly, in the study by Elwelely et al.³ and Acharya *et al.*⁶ (2015) reported that low level of education was significantly more likely to have breast feeding problem.

5.4 Maternal Factors vs. Parity

In the present study, maternal factors like unaware when to start feeding, delayed milk production, inability to express breast milk, inappropriate positioning, psychological problem/stress was observed in higher number of primipara cases as compared to multiparas.

In a study by De *et al.*⁷ (2015) reported that awareness about breast feeding was less in primigravidas (13% satisfactory and 87% unsatisfactory awareness score) as compared to multigravidas (57.1% satisfactory and 42.9% unsatisfactory awareness score).

In a study conducted by Banginwar et al. (2011)⁸ there was poorer positioning among primipara (24.0%) as compared to multipara (8.9–12.5%) mothers. Similarly,

primiparas had poorer attachment (30.0%) as compared to multipara (20.9%).

5.5 Maternal Factors vs. Age of Mother

In the present study, mothers aged less than 25 years were more unaware when to start feeding as compare to those more than 25 years. This finding is partially in agreement with Chalmers *et al.* (2009)² who reported that with increased age, there is often an increase in the level of education; both factors are associated with higher breastfeeding rates.

5.6 Neonatal Factors vs. Baby Birth Weight

In the present study, neonatal factors like problem with latching/sucking/positioning/attachment/cold/stuffy nose were higher in number in babies of birth weight < 2.5 kg as compared to babies of birthweight more than 3kgs. Baby always sleep and do not feed regularly was observed in higher number in babies of birthweight more than 3 kg baby (26%) followed by less than 2.5 kg (10%). This finding is in agreement with study by Goyal et al., (2011)⁸ poor attachment (50.0%) and poor suckling (58.3%) were more in babies with birth weight <2.5kgs as compared to babies of birthweight >2.5kgs (25.0% and 24.4%, respectively).

6. Conclusion

From this study we conclude that, primigravidas, mothers with age less than 25 years, and mothers who were uneducated faced most problems during breastfeeding.

Most common breastfeeding problems were inappropriate positioning during breastfeeding, followed by lack of knowledge when to start feeding, delayed milk production, inability to express breast milk and lastly nipple problems (cracked, flat, sore, inverted nipples).

This study looked at the breastfeeding problems among mother-newborn pair during the hospital stay. Prenatal and postnatal breastfeeding support should differentially target primiparous women to improve breastfeeding outcomes, including prenatal education, counselling program and parity-specific lactation support during the hospital stay and discharge. Awareness about breastfeeding amongst antenatal mothers should be increased by IEC (Information, Education and Communication) activities by ANM, ASHA and workers. Greater involvement of media (TV, Radio and Newspaper) will also help a wider population including family members and peer groups to facilitate awareness and translate knowledge to practice.

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