

BREASTFEEDING PRACTICES IN NEONATAL UNITS

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ABSTRACT

Objective: To assess the breast feeding practices by mothers in neonatal units.

Material and Methods: This descriptive cross sectional study was conducted in Khyber Teaching Hospital, Peshawar from January 2012 to December 2012. One hundred mother–neonate (preterm and full-term) units were selected. Positions of the mother and baby; baby's responses; emotional bonding; anatomy and effective suckling were observed and recorded. The information on parity, breast problems, baby's age, gender and gestational age was also obtained and analysed for frequency counts.

Results: In Primiparas Position (64% vs. 38.5%), Response (50% vs. 15%), Bonding (50% vs. 22%), Anatomy (23% vs. 3%) and suckling (59% vs. 22%) were poorer as compared to multiparas. Mothers with breast lesions had Poorer Position (90% vs. 39%), Response (80% vs. 17%), Bonding (70% vs. 24%) and suckling (90% vs. 13%) as compared to mothers with normal breasts. There was no statistically significant association between the age of the babies and Position ($p=0.8$), Response ($p=0.25$), Bonding ($p=0.28$), and attachment ($p=0.15$). Also there was no significant association between Gestational age and position, response, bonding and suckling ($p>0.05$).

Conclusion: Breast feeding practices are comparatively poor in primipara as compared to multiparas.

Key Words: Positioning, Responses, Bonding, Breast Anatomy, Suckling.

INTRODUCTION

Breastfeeding is a natural act, also a learned behavior. The mother/caregivers requires active support from the health care system¹. Good positioning and attachment of the baby during breastfeeding facilitates milk production and release and helps in preventing sore nipples, engorgement and mastitis².

Breastfeeding protects children against a variety of acute and chronic disorders and confers short-term and long-term benefits on both child and mother. Researchers from developing countries reported that infants who are not breastfed are 6–10 times more likely to die in the first few months of life³.

Effective breastfeeding depends on the proper positioning of mother and baby and attachment of baby to the mother's breast⁴. Most difficulties can be avoided altogether if good attachment and positioning are achieved at the first and early feeds⁵.

An effective sucking technique is considered important to establish breastfeeding, to ensure milk

transfer, and to prevent breastfeeding problems^{6,7,8}. This effective technique is defined by the baby's positioning, latch on, and sucking behavior at the mother's breast^{9,10}. The mechanics of effective sucking technique has been explained as the baby expels milk from the lactiferous sinuses beneath the areola^{11,12,13}. However, recent studies point to the influence of the vacuum the baby establishes as important factor for the baby's milk consumption^{14,15-16}.

There has been rising concern regarding the changing pattern of breastfeeding. A study by Abudejaja A et al in 1981 reported that only 54.8% of mothers breastfed for more than 6 months¹⁸. Another study from Benghazi showed that breastfeeding was ever initiated in 90.5%. After 3 months, exclusive breastfeeding was continued in less than 30%, mixed feeding in 44-71% and supplementary feeding (with and without breastfeeding) in 65-97%¹⁷. At 3 months of age, 46.4% of the infants were exclusively breastfed, 27.0% were exclusively bottle-fed, and 26.5% were fed by mixed methods^{18,19}.

Nipple trauma has been attributed to the baby's positioning and attachment to the breast during breastfeeding. Researchers from Brazil showed that a greater proportion of primigravida displayed nipple lesion (57.4%) followed by 54.9% of primipara (with one live birth) and 45.1% of multipara. Improper suction is also

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described as a source of trauma, which if corrected can become a protective factor^{20,21,22}.

MATERIAL AND METHODS

This Descriptive, cross-sectional study was conducted in Paediatric Department of Khyber Teaching Hospital, Peshawar, Pakistan, from January 2013 to December 2013. Inclusion criteria was mothers bearing neonates age between 1-30 days, hungry or crying babies without any physiological or pathological cause for crying and mothers complaining of insufficient milk. A total of 100 mother–neonate units were included in the study using consecutive (non-probability) sampling. These mother–neonate units were observed for the following variables mentioned in WHO B-R-E-A-S-T-Feed observation form i.e., mother and baby's position during breast feeding, baby's responses, emotional bonding, Breast Anatomical lesions and effective suckling. Informed verbal consent was obtained before data collection.

Female volunteer students were trained by demonstration in the hospital to observe and collect data. The information on the maternal and Neonatal characteristics like, parity, breast problems, baby's age, baby's gender and gestational age i.e., preterm/full term was obtained using pre-designed questionnaire. They observed the breastfeeding process for 5 minutes and recorded the variables data as per WHO B-R-E-A-S-T-Feed observation form. The following arbitrary grading system was developed and adopted to grade the variables. All the data was analyzed using SPSS version 17.0. All the non-parametric variables were analyzed using Chi-square test of independence (χ^2).

RESULTS

There were a total of 100 Mother-Neonate Units in our study, out of which 78% mothers were multiparous and 22% were primiparous. The criteria for the grading of the variables mentioned in WHO B-R-E-A-S-T feed form is shown in Table 1. In multiparous mothers, low percentages of poor position, Response, Bonding, Anatomy and Suckling were observed as compared to primiparous mothers. Parity was significantly associated with Response, Bonding, Anatomy and suckling ($p < 0.05$), but not associated with Position ($p = 0.06$). Table 2.

In Mothers with Breast lesions such as flat or inverted nipples, engorged breasts, fissures and stretched breast had high percentage of poor position, Response, Bonding, and suckling. The findings were highly significant at $P = 0.006$ for position and bonding and at $P < 0.0001$ for response and suckling Table 3.

A total of 20% infants were less than or 1 week old (early neonatal period) and 80% were between 8 and 30 days (late neonatal period) of age. All infants were observed for Position, Response, Bonding and effective suckling. Position was almost similar in early neonatal period and late Neonatal Period. However neonates in early neonatal period had poor Response, Bonding and Suckling as compared to neonates in late neonatal period. The association between the age of the babies and Position ($p = 0.8$), Response ($p = 0.25$), Bonding ($p = 0.28$), and attachment ($p = 0.15$) was not statistically significant Table 4.

Most of the neonates were full term (92%) and only 8% were preterm. Preterm babies had poorer position, Response, Bonding and suckling as compared to full term babies. The association between Gestational age and position, response, bonding and suckling ($p > 0.05$) was not statistically significant.

There were 80% male and 20% female neonates. Female neonates had poorer position, Response, Bonding and suckling as compared to male neonates. The association between gender and Position ($p = 0.06$), Response ($p = 1.0$), Bonding ($p = 0.6$) and suckling ($p = 0.15$) was not statistically significant.

DISCUSSION

Our study results indicate that a majority of multiparous mothers had good position, with good baby's responses, emotional bonding, breast anatomy and baby's suckling, which could be the result of their previous experience. Parity was significantly associated with all variables except positioning. Similar findings are shown by Goyal et al²³ where there was poorer positioning among primipara (24.0%) than multipara (8.9–12.5%) mothers. Poorer attachment was also more evident among primipara (30.0%) compared to multipara (20.9%) mothers. In contrast to our finding, Parity was significantly associated with poor position ($P = 0.028$). But Similar to our finding Parity was associated with attachment ($P = 0.002$) 25. Similarly Coca et al²⁴ and Kronborg et al²⁵, also reported that parity was significantly associated with effective breastfeeding (position and attachment)²⁶. However, Gupta et al. from North India did not find any statistically significant association²⁷.

It has been well documented that there is poor awareness about exclusive breast feeding, fear of inadequacy of the breast milk and poor support at the family²⁸; however, the information on the mother's skills on the positioning and the attachment of the baby to the breast have not been well documented²⁹. A study from rural areas of north India reported that significantly

Table 1 Criteria for grading the variables mentioned in WHO Breast feed form

	Good	Poor
Body Position	Any 3 or more signs of breast-feeding going well	Any 2 or more signs of possible difficulty OR Less than 3 signs of breastfeeding going well
Responses	Any 3 or more signs of breast-feeding going well	Any 2 or more signs of possible difficulty OR Less than 3 signs of breastfeeding going well
Emotional Bonding	Any 2 or more signs of breast-feeding going well	Any 2 or more signs of possible difficulty OR Less than 2 signs of breastfeeding going well
Breast Anatomy	Any 2 or more signs of breast-feeding going well	Any 2 or more signs of possible difficulty OR Less than 2 signs of breastfeeding going well
Suckling	Any 4 or more signs of breast-feeding going well	Any 2 or more signs of possible difficulty OR Less than 4 signs of breastfeeding going well

Table 2 Parity and Position, response, bonding, anatomy and suckling during breast feeding

Indicator	Primigravida(n=22)	Multigravida(n=78)	Chi Square	P value
Position			3.45	0.06
Good	8(36%)	48(61.5%)		
Poor	14(64%)	30(38.5%)		
Response			9.73	0.002*
Good	11(50%)	66(85%)		
Poor	11(50%)	12(15%)		
Bonding			5.44	0.02*
Good	11(50%)	61(78%)		
Poor	11(50%)	17(22%)		
Anatomy			7.48	0.005*
Good	17(77%)	76(97%)		
Poor	5(23%)	2(3%)		
Suckling			21.81	<0.0001*
Good	9(41%)	70(90%)		
Poor	13(59%)	8(10%)		

*Significant at 95% level of significance

Table 3 Breast Lesions and parity, Response, Bonding and suckling during breastfeeding

Indicator	Present(n=10)	Absent(n=90)	Chi Square	P value
Position			7.58	0.006*
Good	1(10%)	55(61%)		
Poor	9(90%)	35(39%)		
Response			16.96	<0.0001*
Good	2(20%)	75(83%)		
Poor	8(80%)	15(17%)		
Bonding			7.54	0.006*
Good	3(30%)	69(76%)		
Poor	7(70%)	21(24%)		
Suckling			27.43	<0.0001*
Good	1(10%)	78(87%)		
Poor	9(90%)	12(13%)		

*Significant at 95% level of significance

Table 4 Age of neonate and Position, Response, Bonding and Suckling

Indicator	Age 0-7days(n=20)	Age 8-30days(n=80)	Chi Square	P value
Position			0.02	0.8
Good	11(55%)	45(56%)		
Poor	9(45%)	35(44%)		
Response			1.27	0.25
Good	13(65%)	64(80%)		
Poor	7(35%)	16(20%)		
Bonding			1.12	0.28
Good	12(60%)	60(75%)		
Poor	8(40%)	20(15%)		
Suckling			1.99	0.15
Good	13(65%)	66(82.5%)		
Poor	7(35%)	14(17.5%)		

*Significant at 95% level of significance

more number of mothers of the babies with feeding problems had problems in the attachment of the baby to the breast as well as in the positioning of the infant to the breast³⁰.

Our findings reveal that breast lesions like flat or inverted nipples, engorged breasts, fissures and stretched breast were significantly associated with poor Position, Response, Bonding (attachment to the breast) and effective suckling which are essential for effective breastfeeding. A finding similar to our study has been reported by Carvalhaes from Brazil that breast engorgement makes it more difficult for newborn infants to latch-on correctly because of distension and edema of the nipple and areolar region³⁰. Another study conducted at Brazil by Coca et al. confirmed that nursing mothers with turgid and/or engorged breasts were more likely to develop nipple injury³¹. Tait et al also identified nipple trauma as a disorder that resulted from incorrect positioning and latching-on in breastfeeding³². Coca et al. (Sao Paulo, Brazil) reported that women whose infants were incorrectly positioned were 1.94 times at risk of developing nipple trauma compared with women whose infants were correctly positioned²³. Another study from Brazil reported that as per parity, the highest incidence of nipple trauma was found in primiparous women, which may be explained by lack of experience in the breastfeeding technique³³.

The present study indicates that preterm infants (<37 weeks of gestation) had poor position, response, bonding and suckling but there is no association between gestational age and these variables. Again these results were comparable to study by Coca et al. where they did not find any association between weeks of gestation and strength of suckling³¹.

In the immediate postnatal period, if mothers are taught good breastfeeding technique by midwives in a 'hands-off' style, which enables mothers to position and attach their babies for themselves, and which is based on a physiological approach, breastfeeding rates are increased and the incidence of perceived milk insufficiency decreases³⁴.

Our study was able to demonstrate the association between mother-neonate characteristics and positioning, response, bonding, anatomy and suckling in breastfeeding. Nevertheless, the use of a larger sample size may make it possible to identify the other risk factors.

CONCLUSION

Primipara mothers need more support and guidance for appropriate breastfeeding techniques than grand multipara mothers.

Recommendations

It is recommended that each mother should be observed for mother's and infant's positioning and attachment at the onset of breastfeeding and if needed given counseling on correct positioning and attachment. All Maternal and Child Health (MCH) care agencies should highlight and formulate a policy for successful and effective initiation of breastfeeding as a part of an integrated neonatal care.

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