Research Article

A hospital-based study on determinants of breast-feeding initiation practices in post-natal ward of a tertiary care hospital

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Abstract

Background: Increasing evidence has highlightened the importance of initiation of breast feeding and its continuation in infancy. The global community recommends and promotes exclusive breast feeding as the method of choice especially for first six months of life. The study outcome will reveal important factors of determinants of breast feeding which in turn will be baseline data for formulation of public health policies pertaining to it.

Objective: To study the determinants of exclusive breast feeding in newborn infants in a tertiary care hospital in Kashmir valley.

Material and Methods: A hospital-based descriptive cross-sectional study design was conducted among lactating women in post-natal ward who had delivered at Trust Hospital, Sheri-Kashmir Institute of Medical Sciences, Soura, J&K, for a period of 4 months (October 13–January 14). The study population consisted of 720 mothers with their babies who attended the hospital during the study period out of which 218 were selected through non-probability convenient sampling method. Obstetric/health service-related factors, breast feeding initiation practices, and difficulties faced were assessed for any influence on exclusive breast feeding.

Results: A total of 218 mothers with their infants were included and belonged to 25–34 years of age group. Majority (95.4%) of newborns received exclusive breast feeding. Further it was found that the factors like parity, mode of delivery, antenatal counseling had a significant impact on type of breast feeding ($P < 0.05$).

Conclusion: Exclusive breast feeding prevalence rate revealed in our study was more than the national level which indicates comparatively better feeding practices in our hospital. Further the factors classically found as supportive for breast feeding had shown association with exclusive breast feeding pattern.

KEY WORDS: Exclusive breast feeding, mixed feeding, post-natal ward.

Introduction

Breast feeding refers to feeding of infants with breast milk directly from the female human breasts as opposed to using formula feeds from baby bottles or any other containers.[1]

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Breast milk is not only an good and safe nutritive source for the developing infant but also gives a rich source of immunity such as antibodies, leucocytes, growth factors, cytokines, and antimicrobial substances which support the immature immune system of the newborn till immunological maturity is attained.[2] Breast feeding has also proven to be beneficial to nursing mothers by affording protection against breast and ovarian cancer risk, diabetes mellitus, and providing better maternal weight regulation.[3–5] It also assists in birth spacing and the development of an emotional attachment between the mother and the baby thereby resulting in increased maternal sensitivity.[6]

Exclusive breast feeding (EBF) as per the World Health Organization and the United Nations Children's Fund (UNICEF) is defined as the feeding of an infant with only breast milk for a period of at least 6 months with the exclusion

of all the food stuffs, even water. It has been recommended that breast feeding be continued up to 2 years of age while nutritionally adequate complementary feeding is introduced beyond the 6th month.[7] Exclusive breast feeding is globally recognized as the most chosen way of infant feeding for the initial 6 months and is the most exemplary form of prevention as it is an intervention that reduces neonatal, infant and child mortality while also being beneficial for the environment and economy.[8] Exclusive breast feeding promotion in accordance with WHO regulations is found to be the most important and safe strategy for reducing child mortality in low income settings.[9,10] Efforts are being made to increase breast feeding practices which has to be applied to entire phase of a females reproductive life stage; from preconception to prenatal periods, within 24 h following delivery and throughout the rest of the post partum period, as part of hospital care as well as domiciliary care.[11]

The duration of breast feeding seen in practice is highly variable and is much lower than the WHO and UNICEF prescribed recommendations. In actuality, a significant proportion of mothers cannot practice exclusive breast feeding as advocated. This can be attributed to a variety of causes and apprehensions faced by lactating women such as lack of confidence, difficulties with infant positioning, attachment and suckling, breast tenderness or sore or cracked nipples, true or perceived inadequate milk supply, and absence of individualized counseling by their concerned physicians; these factors can contribute to early discontinuation of breast feeding.[12] Breast feeding rates have been observed to be lower among mothers having undergone delivery by cesarean section. Family's and partner's attitude and support have been found as important criteria in mothers decision regarding breast feeding initiation and continuation.[13,14] The present study was undertaken with the aim to assess the problems faced by mothers in initiating and maintaining breast feeding in the postnatal ward of a tertiary care hospital.

Materials and Methods

A hospital-based, descriptive cross-sectional study was conducted using a convenient sample of postpartum mothers admitted in the post natal ward of the Department of Obstetrics and Gynaecology, SKIMS, Soura. The hospital caters to patient inflow from an extended catchment area. A four month study was conducted where in nursing mothers and breast feeding neonates were included. On an average, six mothers deliver in the hospital every day. Thus, the study subjects included 720 mothers with their baby pairs who attended the hospital, out of which 218 were selected by non-probability convenient sampling method using the inclusion criteria, viz., those mother–baby units attending the hospital at the time of the study: emotional, physical, and mental well-being of the mother–baby unit: willingness to participate in the study. A 40-item questionnaire was used for the collection of data with the help of previous literature available and interview guide to fulfill the objectives of the study. The questionnaire consisted of both open and closed ended questions. The validity and reliability of the questionnaire was checked. After the pilot testing, some questions/items were modified and reframed without the deviation from the original meaning to facilitate patient's easy understanding. One research assistant was trained on the use of the study instrument. Informed consent was taken from the respondents, purpose of the study was made clear to them and strict confidentiality was maintained. Data was collected until the required sample size was reached. A response rate of 100% was achieved.

The main outcome variables to be studied were:

- Breast feeding initiation practices among mothers admitted in postnatal ward of the hospital.
- Problems and difficulties encountered by nursing mothers during 48 h following delivery in hospital setting.

Thus the collected data was coded and analyzed using various statistical tests like Epi-info and SPSS version 20. *P*-value < 0.05 was taken as significant.

Results

A total of 218 mothers with their infants were included in the study. Most of the mothers included in the study belonged to the age bracket of 25–34 years (43.57%). Briefly, 37.15% were less than 25 years of age while 19.26% were 35 years or older. 46.78% of the study subjects were illiterate and 72.01% were unemployed (Table 1). Among

Table 1: Socio-demographic characteristics of the study population (*n* = 218)

Socio-demographic profile	Number	Percentage
Age (in years)		
< 25	81	37.15
25–34	95	43.57
≥ 35	42	19.26
Education		
Illiterate	102	46.78
Primary level	63	28.89
Secondary level	28	12.84
Higher secondary and above	25	11.46
Occupation		
Employed	61	27.98
Unemployed	157	72.01
Parity		
Primiparous	89	40.82
Multiparous	129	59.17
Mode of delivery		
Normal vaginal delivery	177	81.19
Cesarean section	41	18.8

218 infants, 95.4 % were exclusively breast fed whereas the remaining 4.58 % received artificial milk in addition to breast milk. None of the neonates was exclusively formula fed (Table 2). Of the 89 primiparous mothers and 129 multiparous females 94.38% and 96.12% were practicing exclusive breast feeding whereas 5.6% and 3.78% had introduced formula feeding as well. The association between the parity and type of breast feeding was found to be significant ($P < 0.05$) (Table 3). Of a total of 177 females having undergone Cesarean section, 167 (94.35%) were exclusively breast feeding their infants while the remaining 10 (5.65%) had introduced formula feeding. As opposed to this, all of the 41 (100%) females having undergone normal vaginal delivery were practicing EBF. The association between mode of delivery and type of breast feeding was found to be highly statistically significant (p<0.001) (Table 4). Of the 21 mothers who encountered problems at the time of initiation of breast feeding such as sore, cracked or inverted nipples or pain in the stitch line, 5 (23.8%) resorted to mixed feeding. Among the 197 mothers who had not encountered such problems, 192(97.46%) were practicing EBF. The association between problems encountered at initiation of breast feeding and type of breast feeding was found to be significant ($P < 0.05$) (Table 5). Of the 135 females who had received counseling regarding breast feeding at antenatal visits, 129(95.5%) were exclusively breast feeding while 6(4.4%) were practicing mixed feeding.

Briefly, 83 females had not received any counseling pertaining to breast feeding and of these, 79(95.18%) were practicing exclusive breast feeding while 4(4.81%) had resorted to formula feeding as an added advantage. The association between antenatal counseling and type of breast feeding was found to be significant ($P < 0.05$) (Table 6). A comparable percentage of mothers who had received counseling at antenatal visits as well as those who had not received any such counseling knew that the breast feeding should be started soon after birth and to be continued exclusively for 6 months. Awareness regarding the correct technique of breast feeding was also comparable among the two groups. There was greater awareness among mothers who had received counseling regarding avoidance of pre-lacteal feeds, myths surrounding maternal dietary restrictions or baby's need for extra water and breast feeding requirements during periods of illness in baby or mother (Table 7).

Table 2: Infant feeding practices ($n = 218$)

Feeding practice	Number	Percentage
Fully breast fed	208	95.4
Partial breast fed	10	4.58
Fully formula fed	0	0
Pre-lacteal feeds given	90	41.28

Discussion

Our study aimed to assess the breast feeding practices in the maternity ward of our hospital, a tertiary care institution. In our study, we found that 95.4% of the babies were exclusively breast fed whereas only 4.6% received mixed feeding. This is significantly higher than the national breast feeding prevalence rate of 41%.[15] Previous studies in Kashmir have

Table 3: Showing the relation between parity and type of breast feeding

Parity	Type of breast feeding			*P*-value
	Exclusive breast feeding	Mixed breast feeding	Total	$\chi^2 = 16.23$, df = 1, $P < 0.001$
Primiparous	84(94.38%)	5(5.6%)	89	
Multiparous	124(96.12%)	5(3.87%)	129	
Total	208	10	218	

Table 4: Relationship between mode of delivery and type of breast feeding

Type of delivery	Type of breast feeding			*P*-value
	Exclusive breast feeding	Mixed breast feeding	Total	$\chi^2 = 10.13$, df = 1, $P < 0.05$
Normal delivery	167(94.35%)	10(5.65%)	177	
LSCS	41(100%)	0(0%)	41	
Total	208	10	218	

Table 5: Showing relationship between type of breast feeding and problems encountered at initiation of breast feeding

Characteristics	Exclusive breast feeding	Mixed feeding	Total	*P*-value
Problems faced at initiation of breast feeding	16(76.1%)	5(23.8%)	21	$\chi^2 = 4.56$, df = 1, $P < 0.05$
No problem faced at initiation of breast feeding	192(97.46%)	5(2.53%)	197	
Total	208	10	218	

Table 6: Showing relationship between counseling at ANC and type of breast feeding

Counseling at ANC on breast feeding	Type of breast feeding			*P*-value
	Exclusive breast feeding	Mixed breast feeding	Total	$\chi^2 = 7.83$, df = 1, $P < 0.05$
Received	129(95.5%)	6(4.4%)	135	
Not received	79(95.18%)	4(4.81%)	83	
Total	208	10	218	

Table 7: Breast feeding awareness among mothers who had and had not received counseling

Health awareness received	Mothers received counseling (*n* = 135)		Mothers did not receive any counseling (*n* = 83)	
	Aware	%	Aware	%
Start breast feeding immediately after birth	120	88.88	62	78.31
Correct technique of breast feeding[a]	92	68.14	56	67.47
No diet control for lactating mother	83	61.48	26	31.32
For first 6 months exclusive breast feeding	116	85.92	70	84.33
Nothing required for breast feeding babies up to 6 months	97	71.85	23	27.71
No pre-lacteal feeds to be given	85	62.96	31	37.34
Breast feeding to be continued by the mother even in common ailments of the baby	101	74.81	41	49.39

[a]Appropriate flash cards with pictures shown to mothers.

also reported low rates of exclusive breast feeding. A study by Khan and Khan revealed exclusive breast feeding rate to be 52.6% among the Kashmiri population.[16] However, comparable rates have been shown in a study by Dashti et al at 92.5%.[17] Similar results were reported by Agampodi et al with a prevalence of 100%.[18]

In our study, 95.5% of the mothers who had received counseling regarding breast feeding at antenatal visits had initiated exclusive breast feeding. Also, 95.18% of mothers who had not received such counseling were exclusively breast feeding their infants. Alexander et al in his study suggested that routine breast examination and antenatal counseling has not increased the chances of breast feeding,[19] however, detection of retractile nipples in the antenatal period followed by appropriate measures may help in promoting successful breast feeding.[20] However, a study by Imdad et al stated that the targeted interventions done for breast feeding promotion increased exclusive breast feeding rates.[21]

In the present study, we observed that 94.35% of mothers who delivered by a normal vaginal delivery had initiated exclusive breast feeding whereas 100% of mothers who had delivered by Cesarean section were exclusively breast feeding their babies. In this regard, our findings were in contrast to those reported in world literature stating that Cesarean section negatively impacts breast feeding such as studies by Zanardo et al[22] and Prior et al who conducted a meta -analysis of world literature.[23]

It was found that 94.38% of primiparous mothers initiated exclusively breast feeding and 96.12% of multiparous mothers practiced exclusive breast feeding. Amatayakul et al reported similar findings in their study suggesting that parity did not affect breast feeding pattern.[24] However, Motee et al in her study found that multiparous women were more likely to exclusively breast feed their children.[25]

In our study, we also found that of the mothers who faced breast feeding challenges such as sore nipples, cracked or inverted nipples or breast engorgement, 23.8% resorted to mixed feeding. This percentage was only 2.53% among women who did not encounter such problems. Similar findings have been reported by Ashmika et al stating that breast engorgement problems, cracked nipples, inverted nipples, back pain and fatigue negatively affected breast feeding.[25] In another cohort study done by Vazirinejad et al, it was shown that anatomical variations of the breast had adverse effects on breast feeding.[26]

The study had some limitations. The sample taken by us may not be the overall representation of the general population which results in selection bias. The probable reason can be the overestimation of exclusively breast fed infants.

Conclusion

Exclusive breast feeding prevalence was found to be higher than the national average depicting good feeding practices which are an encouraging observation. Also, factors which might negatively impact breast feeding need to be addressed while maintaining emphasis on factors that promote exclusive breast feeding.

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