



Factors Associated with Exclusive Breastfeeding among Working Mothers Attending Maternal and Child Health Clinic

Narayani Devi Sigdel¹, Sochana Sapkota², Sharada Acharya³

¹ Hospital Nursing Supervisor, Kanti Children's Hospital, Maharajgunj, Kathmandu, Nepal.

² Senior Hospital Nursing Administrator, National Trauma Center, Kathmandu, Nepal.

³ Assistant Professor, National Academy of Medical Sciences, Bir Hospital Nursing Campus, Kathmandu, Nepal

Article History

Received On – 2023 Apr 17

Accepted On – 2023 Jul 05

Funding sources: None

Conflict of Interest: None

Keywords:

Associated factors, Exclusive breastfeeding, Working mothers

Online Access



DOI: 10.60086/inps485

Corresponding Author

Narayani Devi Sigdel,
Hospital Nursing Supervisor,
Kanti Children's Hospital,
Maharajgunj, Kathmandu, Nepal.
Email: narayanisigdel26@gmail.com

Abstract

Introduction: Breast milk is a natural and perfect food that protects against illness and death by acting as the baby's first immunization. The employment of the mother is considered to be one of the most important barriers to exclusive breastfeeding (EBF).

Methods: A hospital-based descriptive cross-sectional study was done to find out the associated factors with EBF among working mothers. A total of 150 working mothers having children six to 24 months were selected. Self-developed semi-structured interview schedule was used. Pre-testing was done on 15 (10%) of the total sample and necessary modifications were done. Data were analyzed by using descriptive (Frequency, percentage) and inferential statistics (Chi-square and odds ratio).

Results: A total of 52 (34.66%) working mothers reported to have practice of EBF for six months. Majority (80%) of the working mothers fed colostrum. Majority (92.85%) of the working mothers gave powdered milk due to inadequate milk secretion. Regarding Expressed Breast Milk (EBM) storage, more than 50% had no idea about EBM and 47 (31.33%) of the mothers had a breastfeeding room at their workplace. 80 (53.33%) mothers had allowed children in their workplace while 47 (88.0%) had family support. EBF was associated with mode of delivery (OR = 0.440, 95% CI: 0.214 - 0.903), child hospitalization in the past (OR = 0.139, 95% CI: 0.031 - 0.618), facility of express breastmilk (OR = 4.087, 95% CI: 0.978 - 17.079) and flexible working environment (OR = 4.2, 95% CI: 1.789 - 9.863).

Conclusions: About only one-third of working mothers had given EBF to their child. Vaginal delivery, child hospitalization in the past, a facility of EBM at home, and a flexible working environment were associated factors with EBF among working mothers.

Introduction

Exclusive breastfeeding (EBF) is defined as the practice of only providing an infant breast milk for the first six months of age and no other food or water except medication which is recommended by the World Health Organization (WHO).¹ Breastmilk is a natural and perfect food that is universally available from the first hour of a baby's life through the age of two or later. Breastfeeding protects against illness and death by acts as the baby's first immunization, early childhood development, support for healthy brain development, increased I.Q. scores, better school performance and decreases the risk of non-communicable diseases, including childhood asthma, obesity, diabetes and heart disease later in life and protection for the nursing women against breast cancer and improves birth spacing as well as protect against ovarian cancer and type II diabetes.² The upgrading of breastfeeding to a near universal level could

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prevent 823000 annual deaths in children younger than five years and 20000 annual deaths from breast cancer.² Now worldwide there is an initiation of breastfeeding within one hour is 42% and EBF is 41% and both the targets are 70% by 2030.³ In Nepal, only half (55%) of the children are breastfed within the first hour of life.⁴

A study done by Udipu K et al showed that the prevalence of EBF among working mothers was found to be 17.5%. Around 52% of the mothers did not receive any maternity leave and only 11% of mothers were allowed breaks in between working hours but none of the mothers were provided nursery at their workplace.⁵ The commonest reason to discontinue EBF was the early resumption of work after childbirth. Factors such as educational status of working mother and her husband, place of delivery, sex of the newborn, frequency of breastfeeding per day, the practice of expressing and storing breastmilk before leaving for work and breaks during working hours were found to be statistically significant with EBF practice.⁵

According to the Sustainable Development Goal (SDG), Nepal has the target of reducing mortality of under five children to 25 / 1000 and neonatal mortality to 12 / 100 reducing the prevalence of stunting to 15%, underweight to 10% and wasting 4% by 2030 which may be possible by improving EBF.⁶

Various international and national level studies showed that EBF is low in working mothers. Various factors affected them to provide EBF. Supporting women to breastfeed is everyone's responsibility, including Governments, donors, international organizations and civil society etc. The objective of this study was to identify the factors associated with EBF among working mothers attending maternal and child health clinics at a tertiary hospital. This study will be the building blocks among the health care team members to assess the factors associated with EBF among working mothers.

Methods

This hospital-based descriptive cross-sectional study was conducted among working mothers having child six to 24 months attending the maternal and child health clinic (MCH) at Paropakar Maternity and Women's Hospital, Thapathali, Kathmandu, Nepal. The approval of the research proposal was taken from the research committee of Bir Hospital Nursing Campus, Gaushala, and the Institutional Review Board (IRB) of the National Academy of Medical Sciences (NAMS) (Letter ID 55/2078/79). The ethical approval was

also obtained from the Institutional Review Committee (IRC) of Paropakar Maternity and Women's Hospital (Letter ID 61/2712/August 12, 2021). Data was collected from 22 August 2021 to 18 September 2021 by using nonprobability convenience sampling. A total of 150 working mothers were taken as samples which were calculated from the previous prevalence of 11% in a study conducted at Dhulikhel Hospital.⁷ The semi-structured interview schedule was used to get information from selected key informants. Informed written consent was obtained from the study participants after explaining the purpose of conducting the study in their understandable language. Descriptive statistics such as frequency and percentage were used for categorical variables. The association of sociodemographic and obstetrics characteristics of mothers, child-related factors and work-related factors with EBF was shown by using the chi-square test. Odds ratio at 95% confidence interval was used to find the strength of association on selected variables

Results

A total of 150 working mothers participated in the study. Among them, 34.66% were 25 to 29 years. About 66.0% of the mothers were lived in a nuclear family. Majority 96.66% of the mothers can read and write (literate). Among them, 51.03% have up to secondary level education. About 92% of them were doing active services and majority (82.60%) were involved in private jobs. More than half (59.33%) of the mother's monthly income was between 13000 and 30000. Around 54.66% of mothers were primiparous. Majority (92%) of the working mothers have done four or more antenatal checkup (ANC). Only 24% received breastfeeding counseling during their antenatal visits. Majority (98.66%) had institutional delivery. Majority (60%) had vaginal delivery and 40% had Caesarean delivery. After delivery 73.33% of the working mothers were counseled about EBF. The study revealed that out of 150 children, 56.66% were from the first birth order and majority (58%) were males. Majority (92%) of the babies were term. About 43.33% of the children were up to six to nine months. Majority (93.33%) of the babies were normal birth weight.

Tables 1 to 6 have demonstrated the status of various factors correlated with EBF among mothers.

Table 1: Prevalence of EBF among Working Mothers (N = 150)

Variables	Frequency	Percentage (%)
Practiced	52	34.66
Not Practiced	98	65.33

Table 2 The practice of EBF among Working Mothers (N = 150)

	Frequency	Percentage (%)
Initiation of breastfeeding		
Within 1 hour	74	49.33
After 1 hour	76	50.66
Feed the child with colostrum		
Yes	120	80
No	30	20
Reason for not feeding colostrum (N = 30)		
Child's sickness	6	20
Did not have any ideas	7	23.33
Ritual Practices	17	56.66
If yes, Frequency of breast milk in 24 hours (N = 52)		
6-8times	2	3.84
10-12 times	35	67.30
Demand feeding	15	28.84
Alternate feeds (N = 98)		
Powder milk (Lactogen)	91	92.85
Raw milk (cow, buffalo)	22	22.44
Cerelac	45	45.91
Rice porridge	11	11.22
Causes of other feed*(N = 98)		
Inadequate knowledge	7	7.14
Inadequate milk secretion	83	84.69
Early return to work	42	42.85
Mother illness	3	3.06

Table 3. Association of Selected Socio-Demographic characteristics of Mothers with EBF (N = 150)

Variables	Exclusive breastfeeding		p-value
	No	Yes	
Type of Family			
Nuclear	36	63	0.370
Joint	35	16	
Educational status of mother			
Cannot read and write	2	3	0.065
Can read and write	50	95	
Occupation of the mother			
Service	48	90	1.482
Agriculture	3	3	
Labor	1	5	
If Service			
Government	7	17	0.404
Private	41	73	
Parity of mother			
Primiparous	22	58	6.042
Multiparous	30	40	

Table 4 Association of obstetrics characteristics of mothers with EBF (N = 150)

Variables	Exclusive breastfeeding		P value	OR (95%CI)
	No	Yes		
No of ANC Visits				
Up to three visits	10	2	0.342	
Four or more visits	88	50		
Breastfeeding counseling during ANC visit				
No	72	42	0.319	
Yes	26	10		
Place of Delivery				
Health Institution	97	51	0.646	
Home	1	1		
Type of Delivery				
Normal vaginal delivery	51	37	*0.024	0.440 (0.214-0.903)
Cesarean section	47	15		
Breastfeeding counseling after delivery				
No	27	13	0.737	
Yes	71	39		

p-value significant at 0.05 level, OR: Odds Ratio, CI: confidence Interval

Table 5. Association of child characteristics with EBF (N = 150)

Variables	EBF		p-value	OR (95%CI)
	No	Yes		
Sex of the child				
Male	54	33	0.324	
Female	44	19		
Maturity of the child				
(Pre-term (< 37 weeks	8	4	0.919	
(Term (> 37 weeks	90	48		
Birth weight				
Less than 2500 gram	7	3	0.748	
More than 2500 gram	91	49		
Child hospitalized in the past				
No	76	50	*0.003	0.139
Yes	22	2		

Table 6. Association of Work-related factors with EBF (N = 150)

Variables	EBF		p-value	(OR (95%CI)
	No	Yes		
Facility of express breastmilk				
No	95	46	*0.039	4.087 (0.978-17.079)
Yes	3	6		
Flexible working environment				
No	42	8	*0.001	4.200 (9.863 - 1.789)
Yes	56	44		
Maternity Leave				
No	17	7	0.537	
Yes	45	81		
Breastfeeding break on the job				
No	68	29	0.097	
Yes	30	23		
Breastfeeding room				
No	71	32	0.170	
Yes	27	20		
Family Support				
No	12	6	0.882	
Yes	86	46		

*

p-value significant at 0.05 level, OR: Odds Ratio, CI: confidence Interval

Discussion

This present study illustrated that the prevalence of EBF among working mothers was 34.66% which is comparatively higher than the previous study was done in Nepal on 2020 and 2019 at two places where the prevalence of exclusive breastfeeding among working mothers was 16.3% and 11% respectively.^{7,8} The present study also did not match the prevalence of EBF among working mothers in Mysore, India whereas only 15.9% of working women (p < 0.001) had continued EBF to their child.⁹ It might be due to the present study being conducted during Covid-19 pandemic where working mothers had allowed their children at their workplace.

Present study showed that around 49.33% of the working mothers had initiated breastfeeding within one hour of delivery and the majority (80%) of the children fed colostrum. Similar study conducted in India showed 61.3% of working mothers initiated breastfeeding within one hour of delivery and the majority 99.3% had given colostrum.⁵ Worldwide there is 42% of breastfeeding at one hour of delivery which is lower than this study.³ In this study around 60.7% of the working mothers gave their child powder milk, 30.0% gave cerelac and 14.7% gave raw milk (cow, buffalo) for the alternate feeds. A similar study conducted in India working mothers gave their child, water (18%), other kinds of milk (11%), and complementary foods (10%) for their alternate feeds.¹² However, another study contradicts this finding and only 29% of the working mothers had inadequate milk secretion.⁷ This discrepancy may have resulted due to various settings and the nature of study participants.

EBM can be a healthy feeding option as compared to the formula for working mothers. In this study, only 6% of the mother were managed to EBM feeding at their home and remaining (13.47%) mentioned inadequate time for EBM. Among them 66.66% had a flexible working environment whereas the majority (53.33%) have allowed their child at the workplace and 36% mentioned that they had an adequate break. This might be due to different nature of work during Covid-19 pandemic. Only 31.33% of the working place had a breastfeeding room which is supported by the findings of Dhulikhel Hospital.⁷ However, another study from Pakistan contradicts this finding where only 0.70% working mothers

had breastfeeding room at their work place.¹¹ In this study, majority (88%) responded that they had family support for breastfeeding. Another study showed that only 12% had got a feeding break in the work place which was very low⁷ in comparison to the present study of 34.66% but the study was supported by the findings of 12% at Pakistan.¹¹ Regarding maternity leave, 44% had got less than three months and 30% had got three months. This report is contradicted where similar study done in Pakistan reported 86% had received three months maternity leave.¹¹

In this study mothers with vaginal delivery had more EBF than those who delivered by Caesarean section, and this is statistically significant (OR = 0.440, 95% CI: 0.214 - 0.903, $p = 0.024$). This is supported by a similar study in Kathmandu, Nepal that the mean breastfeeding duration was longer for those participants who had normal vaginal delivery compared to cesarean section ($p = 0.05$).⁸

This study has to acknowledge some limitations. EBF practices seen here may have recall biased as it represents the view of mothers about past practices. Furthermore, due to Covid-19 pandemic and the nature of the work, mothers had been reluctant to stay for the appropriate time to give their information. In order to increase EBF among working mothers, it is recommended to have normal vaginal delivery, flexible working environment and facility of storage of EBM at home and work place.

Conclusions

The study concluded that the prevalence of EBF among working mothers is low. There is a significant association of EBF with mode of delivery, child hospitalization, facilities of EBM storage, and flexible working environment in the workplace. Mother's education, occupation, income, place of delivery, breastfeeding counseling during antenatal care, and after delivery, birth order, sex of the child, maturity of the child, period of maternity leave, breastfeeding break, and family support do not tend to have significant association with EBF.

Acknowledgment

We express our sincere thanks to the institutional review board of the NAMS for approving this research. We are grateful to all the respondents of the Maternal and Child health Clinic of Paropakar Maternity and Women's Hospital for providing valuable information.

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