

Health Problems Faced By Lactating Mothers and Children under Three Years in Duhabi - Bhaluwa Municipality, Eastern Region of Nepal

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ABSTRACT

Background: *Breastfeeding practices play an important role in reducing child mortality and morbidity. Inadequate knowledge or inappropriate practice of breastfeeding may lead to undesirable consequences.*

Objectives: To measure the association between socio-demographic characteristics with health problems faced by lactating mother and child under three years.

Material and methods: The cross-sectional study was conducted among the 160 lactating mothers of under three year's children in Duhabi-Bhaluwa Municipality of Nepal. Semi-structured questionnaire was used for data collection. Chi-square test was used to measure the association between socio-demographic characteristics with health problems faced by lactating mother and child under three years.

Results: Almost 44.4% of the lactating mothers have problems in the breast. Almost 26.9% of the children have feeding problems and 41.9% have any illness during first six months. The prevalence of health problems faced by lactating mother was seen 32.5% and child under three years (52.5%) in our study. All the Dalit lactating mothers and children were faced by health problems ($p < 0.05$). Health problems faced by lactating mother and children were seen significantly higher among those who was illiterate than SLC pass and above ($p < 0.05$). The prevalence of health problems faced by lactating mother was seen significantly higher in those who were below poverty line (55.6%) than those above poverty line (20.8%) (< 0.001).

Conclusions: Overall prevalence of health problems faced by lactating mother and child under three years was seen high in our study. The prevalence of health problems faced by lactating mother and child under three years was found higher in Dalit ethnic group, lack of education and poor economic condition.

Key words: *Health problems, Lactating mothers, children, Duhabi-Bhaluwa, Nepal*

INTRODUCTION

Breastfeeding has a major role to play in optimizing public health. It promotes health and prevents disease in the short and long-term for both mother and baby.¹ Long-term beneficial effects of breastfeeding are also described, such as increasing mother infant bonding², improving development of the oral motor system and decreasing frequency of diseases such as arterial hypertension, type 2 diabetes, hypercholesterolemia and obesity³.

Sometimes breastfeeding can be challenging for both the mother and baby. The most common reasons reported during breastfeeding include the mother not having enough milk, sore nipples and engorged breasts.⁴ Mothers in their breastfeeding period may encounter with the acute or chronic health problems such as colds, infections, bowel problems, mastitis, headache / migraine, hypertension, and depression and may need to be treated with medication.⁵ Based on their properties, the drugs may be transferred into breast milk through plasma. Drug concentration in the breast milk is directly related to the amount of the dose, duration of drug consumption, the Daily frequency of breastfeeding and the mother's health condition.⁶

Moreover, adverse effects of the drugs in breast milk may be aggravated due to the infant's limited liver metabolizing rate, kidney glomerular filtration and tubular secretion velocity of the plasma in the infant's first week, and the low rate of bonding of the drugs to protein.^{6,7} The delivery of primary care management of these common breastfeeding problems will promote longer breastfeeding duration.⁴ Therefore the present study was designed to measure the association between socio-demographic characteristics with health problems faced by lactating mother and child under three years.

METHODOLOGY

The cross sectional study was conducted from 20th November 2015 to 5th August 2016 among the mothers of under three years children in Duhabi-Bhaluwa Municipality of Nepal. Duhabi-Bhaluwa is located in the eastern development region of Nepal. This study considered 53% exclusive breast feeding for sample size estimation. It was calculated as 160 women as sample based on the prevalence of 53%, 95% confidence level and 15% allowable error. The required sample size is 160 women's aged 15-49 years (NDHS 2006). Duhabi-Bhaluwa Municipality is divided into 14 municipal wards. Among 14 wards, 4 wards were randomly selected. The list of households of four selected wards was prepared and equal number of households (40) from each ward was selected on the basis of simple random sampling.

Pretested semi structured questionnaire was used for data collection. Those mothers who were available after three visits and willing to give written consents and having children under three years of age was included in the study. The information obtained from informants other than the mothers was not reliable, therefore other informants was excluded from the study. Other exclusion criteria was mothers of children with known anomalies, mothers whose children was very sick needing emergency care was also excluded from the study.

The ethical approval was taken from the Institutional Review Committee (IRC) of B. P. Koirala Institute of Health Sciences. Written permission was taken from concerned authority (head of house) and the participants of the study. Participants were first explained the purpose of study, its implications and assurance about the confidentiality of the information provided was given to the participants. Name of the individuals or participating group was not disclose after the study. Participation was voluntary and respondents were free to withdraw from the study at any time.

The collected data was entered in MS Excel 2007 and collected data was converted into Statistical Package for the Social Sciences (SPSS) software package for statistical analysis. Chi-square test was used to measure the association between socio-demographic

characteristics with health problems faced by lactating mother and child under three years. The probability of occurrence by chance is significant if $P < 0.05$ with 95% Confidence Interval.

Result

Table 1: Health problems faced by lactating mother and child under three years

Characteristics	Frequency	Percent
Clean breast before feeding the child		
Yes	37	23.1
No	123	76.9
If yes, how (n=37)		
With soap and water	10	27.0
With water only	27	73.0
Bathing		
Regular	106	66.3
Irregular	54	33.8
Smoke, chew tobacco and alcohol consume		
Yes	29	18.1
No	131	81.9
Know about lactational amenorrhea		
Yes	18	11.3
No	142	88.8
Problems in the breast		
Sore nipple	27	16.9
Nipple retraction	13	8.1
Mastitis	31	19.4
None	89	55.6
Support you want to prefer during illness		
At home	10	6.3
At hospital	142	88.8
Other relatives	8	5.0
Child have any feeding problems		
Yes	43	26.9
No	117	73.1
If yes, what (n=43)		
Vomiting after feed	19	44.2
Sucking and swallowing difficulty	24	55.8
Child have any illness during the first six months		
Yes	67	41.9
No	93	58.1
If yes, what (n=67)		
Acute respiratory infections	44	65.7
Diarrheal diseases	23	34.3
Number of episodes (n=67)		
1-2 episodes	34	50.7
3-5 episodes	33	49.3
Any hospital admission (n=67)		

Yes	42	62.7
No	25	37.3
Child have any ear problems		
Yes	53	33.1
No	107	66.9
If yes, did you breast feed to the child in sleeping position (n=53)		
Yes	32	60.4
No	21	39.6
Do you breast feed to the child when you are ill		
Yes	86	53.8
No	74	46.3
If no, what is given to the baby (n=74)		
Cow milk	50	67.6
Formula feed	24	32.4
Do you breast feed when the child is ill		
Yes	136	85.0
No	24	15.0
If no, what is fed to the baby (n=24)		
Cow milk	9	37.5
Formula feed	15	62.5
Total	160	100.0

Majority of respondents did not clean the breast before feeding the child but bathing regularly. Almost 44.4% of the respondents have problems in the breast. Some of the children have feeding problems and any illness during the first six months. Most of the respondents fed cow milk to the child when mothers were ill. (Table 1)

Table 2: Association between socio-demographic characteristics with health problems faced by lactating mother

Characteristics	Health problems faced by lactating mother		Total	P-Value
	Yes	No		
Mothers age				
<18 years	5 (62.5)	3 (37.5)	8	0.063
≥18 years	47 (30.9)	105 (69.1)	152	
Religion				
Hindu	27 (22.3)	94 (77.7)	121	<0.001
Muslim	25 (64.1)	14 (35.9)	39	
Ethnicity				
Brahmin/Chhetri	1 (8.3)	11 (91.7)	12	0.001
Janajati	0 (0.0)	12 (100.0)	12	
Dalit	3 (100.0)	0 (0.0)	3	
Terai caste	48 (36.1)	85 (63.9)	133	
Mother's education				
Illiterate	29 (52.7)	26 (47.3)	55	<0.001

Below SLC	16 (38.1)	26 (61.9)	42	
SLC & above SLC	7 (11.1)	56 (88.9)	63	
Mother's occupation				
Service	0 (0.0)	1 (100.0)	1	0.102
Business	1 (6.2)	15 (93.8)	16	
Farmer	5 (38.5)	8 (61.5)	13	
Housewife	46 (35.4)	84 (64.6)	130	
Economic status				
Below poverty line (<1.9 US\$)	30 (55.6)	24 (44.4)	54	<0.001
Above poverty line ($\geq$ 1.9US \$)	22 (20.8)	84 (79.2)	106	
Total	52 (32.5)	108 (67.5)	160	

SLC: School leaving certificate

The prevalence of health problems faced by lactating mother was seen 32.5% in our study. All the Dalit lactating mothers were faced by health problems ($p < 0.05$). Health problems faced by lactating mother were seen significantly higher those who was illiterate than below School leaving certificate (SLC) and SLC pass and above ($p < 0.001$). The prevalence of health problems faced by lactating mother was seen significantly higher in those who were below poverty line than those above poverty line (< 0.001). (Table 2)

Table 3: Association between socio-demographic characteristics with health problems faced by child under three years

Characteristics	Health problems faced by child under three years		Total	P-Value
	Yes	No		
Mothers age				
<18 years	7 (87.5)	1 (12.5)	8	0.042
$\geq$ 18 years	77 (50.7)	75 (49.3)	152	
Religion				
Hindu	58 (47.9)	63 (52.1)	121	0.042
Muslim	26 (66.7)	13 (33.3)	39	
Ethnicity				
Brahmin/Chhetri	2 (16.7)	10 (83.3)	12	<0.001
Janajati	0 (0.0)	12 (100.0)	12	
Dalit	3 (100.0)	0 (0.0)	3	
Terai caste	79 (59.4)	54 (40.6)	133	
Mother's education				
Illiterate	36 (65.5)	19 (34.5)	55	0.041
Below SLC	17 (40.5)	25 (59.5)	42	
SLC & above SLC	31 (49.2)	32 (50.8)	63	
Mother's occupation				
Service	0 (0.0)	1 (100.0)	1	0.078
Business	4 (25.0)	12 (75.0)	16	
Farmer	8 (61.5)	5 (38.5)	13	
Housewife	72 (55.4)	58 (44.6)	130	
Economic status				

Below poverty line (<1.9 US\$)	36 (66.7)	18 (33.3)	54	0.010
Above poverty line (≥ 1.9 US \$)	48 (45.3)	58 (54.7)	106	
Total	84 (52.5)	76 (47.5)	160	

SLC: School leaving certificate

The prevalence of health problems faced by child under three years was seen 52.5%. All the Dalit children were faced by health problems ($p < 0.001$). Health problems faced by children were significantly higher whose mother was illiterate than below School leaving certificate (SLC) and SLC pass and above ($p < 0.05$). The prevalence of health problems faced by children was seen significantly higher in those whose mother was below poverty line than those above poverty line ($p < 0.05$). (Table 3)

DISCUSSION

Breastfeeding rates are high in the early weeks, yet many women seek help while they are learning this new skill.⁸ Breastfeeding is an important public health strategy for improving infant and child morbidity and mortality, improving maternal morbidity, and helping to control health care costs. Breastfeeding is associated with a reduced risk of otitis media, gastroenteritis, respiratory illness, sudden infant death syndrome, necrotizing enterocolitis, obesity, and hypertension.⁹ Exclusive breastfeeding provides low cost, complete nutrition for the infant, protects him/her against infections including infant diarrhea, and prolongs lactation amenorrhea, thereby increasing birth spacing.¹⁰

In this study almost 44.4% of the lactating mother have problems in the breast. Among which 16.9% of women have sore nipple followed by nipple retraction (8.1%) and mastitis (19.4%) respectively. When the nipple is damaged and purulent exudate is visible, a bacterial infection is likely.¹¹ When nipple pain is persistent and occurs constantly, not just on attachment, Candida infection may be considered. The areola usually appears pink and may be associated with radiating breast pain.¹² Rarely, a Herpes simplex infection presents as an isolated, extremely painful vesicular eruption that develops into sores on the nipple and areola.¹³ The infant should not breastfeed or drink expressed milk from the affected side until the sores have healed.

Another cause of radiating nipple and breast pain is vasospasm (or Raynaud's phenomenon of the nipple). Women typically experience pain when the temperature drops, and may notice that the nipple tip becomes white or sometimes purple in the cold.¹⁴ Nipple atopic eczema or contact dermatitis usually occurs in mothers feeding slightly older infants, often around six months of age. Women describe a red, itchy rash that tends to spread, but with a definite edge. If a rash is crusty or weepy, a secondary bacterial infection is likely and should be treated as well. If the rash does not respond, the rare breast cancer, Paget's disease, should be considered. Persistent pain with breastfeeding can be complex and multifactorial.¹⁵

In mastitis, a segment of the breast is red, swollen and tender, and there is concurrent fever, myalgia, shaking, headache and nausea.¹⁶ If symptoms persist for longer than 24 hours, if the woman is unwell, or if the nipple is obviously damaged and a portal for bacteria. A breast abscess may occur about one week after the initial infection, causing localized symptoms. The acute systemic symptoms may have resolved.¹⁷

Breastfeeding is one of the most cost effective and cost benefit ways of reducing infant mortality and improve the child health.¹⁸ Six months of exclusive breastfeeding and continued breastfeeding in first year of life could also prevent 1.3 million child deaths worldwide according to systematic reviews from the Bellagio Child Survival Study Group.¹⁹ According to WHO, early initiation of breastfeeding, it says within an hour after birth should bring infant mortality rate down by 22%. Breastfeeding alone contributes to 11.6% reduction of infant mortality rate if coverage of population is 99% through one to one group counselling.²⁰

In current study, some of the children have feeding problems (26.9%). Breastfeeding may be more challenging for infants born prematurely and for low birth weight infants. Late-preterm (34-36 weeks gestation) infants may appear mature, but are often poor feeders. Challenges with feeding also occur in infants with abnormalities of their oral anatomy, such as cleft lip/palate, laryngomalacia or tongue tie, or experiencing trauma from delivery (e.g. cephalhaematoma).²¹

In current study almost 41.9% of child have any illness during the first six months among which 65.7% of child have suffered from acute respiratory infections followed by Diarrheal diseases (34.3%). In the first six to eight weeks, a fully breastfed infant should pass two or more soft motions per day. From eight weeks, the stooling patterns can be highly variable, ranging from a motion after every feed to one every 10 days.²² Stools of a breastfed infant can vary in colour and consistency. Commonly, they have a non-offensive smell and appear loose like seedy mustard or pumpkin soup. If an infant is happy and gaining weight appropriately, further investigation is not required.²²

Almost 18.1% of lactating mother have smoking, chewing tobacco and consuming alcohol in this study. An acute episode of smoking by lactating mothers altered their infants' sleep/wake patterning. Infants spent significantly less time in active and quiet sleep and woke from their naps sooner.²³ Moreover, compensatory increases in sleep have been reported for the sleep deficits induced by alcohol exposure in mothers' milk.²⁴

Health problems faced by lactating mother and their children were seen significantly higher those who was illiterate than below School leaving certificate (SLC) and SLC pass and above ($p < 0.05$). Variables that may influence breastfeeding include maternal employment, level of education of mothers, socio-economic status, infant health problems, smoking, and other related factors.²⁵ Discarding the colostrum and feeding the child with honey or sugar water makes the child vulnerable to infections. Sharma and Kanani have also found similar practices in the community and it is largely influenced by the relatives and the primary care providers during childbirth.²⁶

Study shows a practice of exclusive breast feeding has dramatically reduced infant mortality in developing countries due to reduction in diarrhoea & infectious diseases.²⁷ EBF contributes in reducing the risk of mother to child transmission of HIV.²⁸ Further non-exclusive breastfed infants have been shown to have significantly higher rates of stunting compared to EBF children.²⁹

CONCLUSION

Overall prevalence of health problems faced by lactating mother and child under three years was seen high in our study. The prevalence of health problems faced by lactating mother and

child under three years was found higher in Dalit ethnic group, lack of education and poor economic condition.

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