

EFFECT OF BREASTFEEDING AMONG UNDER 2 YEARS CHILDREN IN KASKI DISTRICT, NEPAL

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ABSTRACT

Background:

Breastfeeding is one of the most important determinants of child survival, birth spacing, and the prevention of childhood infections. The beneficial effects of breastfeeding depend on its initiation, duration, and the age at which the breastfed child is weaned. Breastfeeding positively influences cognitive development.

Methods

A descriptive cross-sectional study design was used to study impacts of breastfeeding among under 2 year's children in Kaski district. Interview schedule as a structured questionnaire was used as data collection tool. Data was entered in Epi-data and analysis was performed with the help of the Statistical Package for Social Science.

Results

The result showed nearly one-third (30.9%) of the respondents had fed bottle milk to their children. Majority (85.7%) of respondents had knowledge about effect of breastfeeding. Majority (78.9%) of the children were stunted and 27.8% of children are underweight. Very few (5.3%) of children were found wasted. Sex (p 0.044), suffering from disease (p 0.046), duration of breastfeeding (p 0.001), breastfeeding interval (p 0.001), breastfeeding time in day (p 0.001) were statistically associated with effect of breastfeeding. Height and weight, age and weight was found positively correlated (p<0.05).

Conclusion

The study showed child who were breastfed frequently were normal in weight; their physical development is found good. There is positive co-relation between height and weight as well as age

and weight. BCC programme should be conducted for breastfeeding mothers on time, interval, duration of breastfeeding.

Keywords: Breastfeeding, Under 2 years, Children, Nepal

INTRODUCTION

Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants; it is also an integral part of the reproductive process with important implications for the health of mothers. Breast milk is the natural first food for babies. It provides all the energy and nutrients that the infant needs for the first months of life. It continues to provide up to half or more of a child's nutritional needs during the second half of the first year, and up to one third during the second year of life.¹

Breastfeeding is one of the most important determinants of child survival, birth spacing, and the prevention of childhood infections. The beneficial effects of breastfeeding depend on its initiation, duration, and the age at which the breastfed child is weaned. Breastfeeding practices vary among different regions and communities.²

Breast-feeding is more than nourishing infants with mother's milk; it provides comfort as well as serves as a pacifier for a non-pharmacological pain relieving during painful procedure. Routine immunization injections are the most common painful procedures in childhood. Most of these injections are administered early in child's life.³

Studies suggested that age at first breastfeeding modifies the protective association of duration of breastfeeding on the development of premenopausal breast cancer but it is unclear whether the observed protective Association of young age at first breastfeeding is independent of an effect of young age at first birth. Whether the protective effect of breastfeeding is modified by the number of children breastfed is also unresolved.⁴

Breast milk provides the optimal nutrition for infants and offers health benefits as well as immunity from infections. Maternal benefits of breastfeeding can include more rapid return of postpartum uterine tone and postpartum weight loss, delay of ovulation (temporary contraception), and decreased risk of breast, ovarian, and endometrial cancers.⁵

Infant feeding practices directly affect the nutritional status and child survival below 1 years of age. Breastfeeding including exclusive and complimentary feeding practices which provides adequate nutritional requirement for a child. NDHS 2006 has reported 88% prevalence of exclusive breastfeeding but only 57% children are fed according to the IYCF practices.⁶ This shows a huge gap and inequity between the progress of breastfeeding and complimentary feeding

which is of great public health concern. The study aimed to assess the effects of breastfeeding among under-5 children on physical development.

MATERIAL AND METHODS

A descriptive cross-sectional study design was used to study impacts of breastfeeding among under 2 year's children in Kaski district. Interview schedule as a structured questionnaire was used as data collection tools. Study population were the mothers having under two children. The sample size of 266 was taken. Three wards of Pokhara metropolitan were selected randomly Respondents were selected purposively to reach the number of participants.

To ensure validity of the study, tool was developed by using standard questionnaire for impact of breastfeeding and in consultation with supervisor. Reliability was ensured by pretesting the tool among 10% of the estimated sample size. Tools was developed in both English and Nepali language. Data entry was done in Epi-data and exported to IBM SPSS version 20 for analysis. WHO anthro software version 3.2.2 was used. Descriptive statistics (like mean, range, frequencies, and percentages) was performed to describe the study population. Chi-square test was done to observe the association between dependent and independent variables.

Ethical approval was obtained from Institutional Review Committee (IRC), Pokhara University. Permission was obtained from DHO Kaski and selected wards. The participants were fully informed about the nature and benefits of the research and written informed consent was taken.

RESULTS

Table 1 shows more than half (50.8%) of respondents were of age group 15-25 years. The mean age of respondents was 24.87 ± 4.19 years. The mean age of the child was 12.94 ± 6.39 month. Most of the respondents followed Hinduism. Half (50.4%) of respondents were from joint family.

Table 1: Distribution of respondents by their socio demographic and background information

Characteristics	Frequency (n)	Percentage (%)
Age of Mothers		

15-25 Years	135	50.8
25-35 Years	120	45.1
> 35 Years	11	4.1
Mean = 24.87 SD± 4.19, Min= 16 year, Max= 40 year		
Age of child		
1-6 Months	37	13.9
6-12 Months	73	27.4
12-18 Months	75	28.2
18-24 Months	81	30.5
Mean = 12.94 SD± 6.39, Min= 1 Month, Max= 24 Month		
Sex		
Male	121	45.5
Female	145	54.5
Religion		
Hindu	242	91
Buddhist	18	6.8
Christian	4	1.5
Islam	2	.8
Ethnicity		
Dalit	97	36.5
Brahman	88	33.1
Janajati	49	18.4
Kshetri	30	11.3
Muslim	2	0.8
Family types		
Joint	134	50.4
Nuclear	122	45.9
Extended	10	3.8
Education of Mothers		
Primary	81	31.4
Secondary	92	35.7
Higher Secondary	43	16.7
Bachelor	35	13.6
Master	7	2.7
Education of Husband's		
Primary	66	25.5
Secondary	86	33.2
Higher Secondary	61	23.6
Bachelor	31	12.0
Master	15	5.7

Table 2 shows that around one-third (30.9%) of respondents had fed bottle milk to their children. Among those who feed bottle milk; more than half (58.5%) of respondents had answered that they used normal water to wash the bottle. Majority (76.9%) of respondents feed cow's and buffalo's milk. nearly one-third (29.3%) of children did not suffer from disease in past and more than two-

third (70.7%) of child suffered from different types of diseases included by majority (41.5%) had ARI/Pneumonia followed by fever (28.7%). Majority (75.3%) of child weren't suffered from any disease from 3 weeks and one-fourth (24.7%) of respondents were suffered from any disease on which two-fifth (40%) were suffered from ARI/Pneumonia.

Table 2: Distribution of respondents on child health condition

Characteristics	Frequency (n)	Percentage (%)
Bottle feeding		
No	184	69.1
Yes	82	30.9
Cleaning technique of bottle (n=82)		
Wash the bottle with normal water	48	58.5
Wash and boil the bottle	15	18.3
Wash the bottle with soap water	10	12.2
Clean Hot water	9	11.0
Things for bottle feeding (n=82)*		
Milk of Cow or Buffalo	63	76.9
Powder's milk	16	19.5
Honey, water	3	3.6
Child suffered from any disease in past (n=266)		
No	78	29.3
Yes	188	70.7
Diseases * (n=188)		
ARI / Pneumonia	78	41.5
Fever	54	28.7
Diarrhea	32	17.0
Cough	11	5.9
Jaundice	9	4.8
Ear Problem	4	2.1
Kwashiorkor	3	1.6
Anemia	1	0.5
Measles	1	0.5
Others (Chest pain and Liver problem)	3	1.6
Child is suffering from any disease from 3 weeks now (n=263)		
No	198	75.3
Yes	65	24.7
Diseases*(n=65)		
ARI / Pneumonia	26	40.0

Fever	13	20.0
Diarrhea	8	12.3
Ear Problem	8	12.3
Cough	6	9.2
Mumps	1	1.5
Others (skin Problem, Eye and Liver Problem)	5	7.7

* Multiple Responses

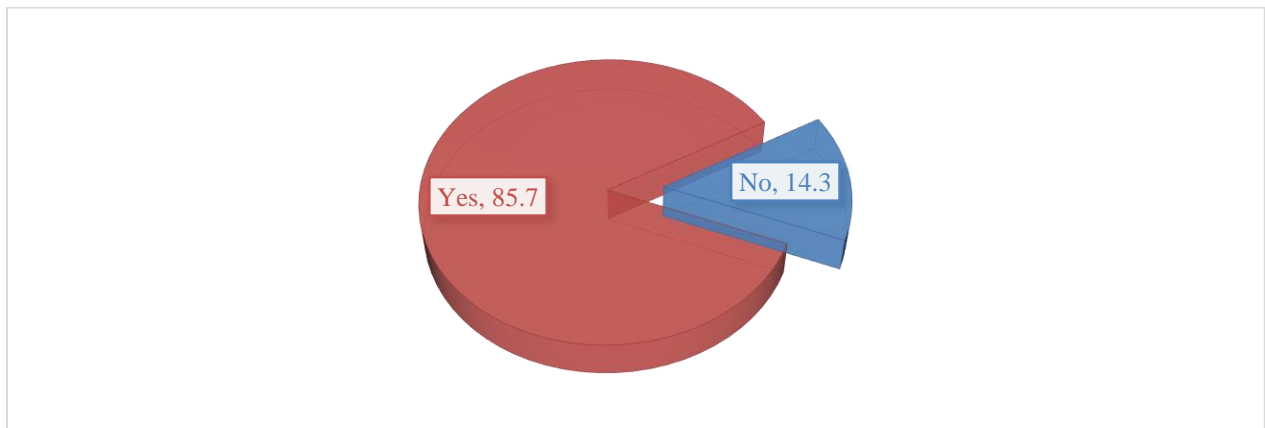


Figure 1: Distribution of respondents on knowledge about effect of breastfeeding

Figure 1 shows that majority (85.7%) of respondents had knowledge about effect of breastfeeding.

Table 3 revealed that nearly three-fourth (72.2%) of the children weight is normal for age and 27.8% children are under weight. Among underweight, more than half (55.4%) of children are mild. Majority (78.9%) of the children were stunted and one-fifth (21.1%) were normal according to the length of age. Nutritional status of children according to MUAC; one-fourth (25.7%) of the respondents' children's were normal.

Table 3 Nutritional Status of Children

Nutritional Status	Frequency (n)	Percentage (%)
Weight for Age (Under- weight)		
Normal	192	72.2
Under Weight	74	27.8

Under Weight		
Mild	41	55.4
Moderate	24	32.4
Severe	9	12.2
Length for Age (Stunting)		
Normal	56	21.1
Stunting	210	78.9
Stunting		
Mild	26	12.4
Moderate	30	14.3
Severe	154	73.3
Weight for Length (Wasting)		
Normal	252	94.7
Wasting	14	5.3
Wasting		
Mild	8	57.1
Moderate	6	42.9
Nutritional status of children according to MUAC		
Normal (Green)	52	25.7
Mild to Moderate (Yellow)	59	29.3
Severe (Red)	91	40

Table 4 showed sex (p 0.044), suffering from disease (p 0.046), Duration of breastfeeding (p 0.001), breastfeeding interval (p 0.001), breastfeeding time in day (p 0.001) were statistically associated with effect of breastfeeding.

Table 4: Distribution of respondents by the association between independent variable and weight for age

Characteristics	Effect of Breastfeeding		Chi-square value	p-value
	Normal (%)	Underweight (%)		
Age of children				
<12 Months	84 (76.4)	26 (23.6)	1.631	0.201
>12 Months	108 (69.2)	48 (20.8)		
Sex of Child				
Male	112(77.2)	33 (22.8)	4.066	0.044*
Female	80 (66.1)	41 (33.9)		
Suffering from diseases				
Yes	60 (92.3)	5 (7.7)	1.751	0.046*
No	189 (95.5)	9 (4.5)		
Duration of Breastfeeding				
<15 Minutes	90 (62.9)	53 (37.1)	12.882	0.001**

>15 Minutes	101 (82.8)	21 (17.2)		
Breast feeding Interval				
<2 Hours	123 (84.2)	23 (15.8)	23.462	0.001**
>2 Hours	68 (57.1)	51 (42.9)		
Breast feeding time in day				
<6 Times	79 (61.7)	49 (38.3)	12.631	0.001**
>6 Times	112 (81.8)	25 (18.2)		

Table 5 revealed height and weight is positively correlated i.e 0.51 and age and weight is also found positively correlated and statistically significant with p value less than <0.001.

Table 5 Distribution of respondent's children with correlation between weight and height, age and weight

Variables	R	p-value
Height and Weight	0.51	< 0.001
Age and Weight	0.72	< 0.001

DISCUSSION

In our study 54.5% of the children were male and 45.5% were female which is similar to study done by Khan M⁷ which showed 53.5% were male and 47.5% were female. In our study 28.7% of the children had fever where contrasts finding was found in the study done by UNICEF which showed⁸ 71% of the children had fever. This differences might be due to the differences in region, the study was done in Far west Terai region where climate and geographical condition is worse than Kaski district.

In this study 28.1% of children was bottle feed where the study done by Ali M⁹ showed 32.8% of children was bottle feed which is higher than this study. It might be because of the mother 's economic status as it was found poor compared to our study which ultimately shows malnutrition status higher among those mothers compared to our study so they couldn't have in off amount of their breast and to feed the child they followed bottle feeding.

In our study, 27.8% of children were under-weight which is similar to the study done by Nguyen NH^[10] which showed 27.78% of children were under-weight. In this study 78.9 % of children were stunted whereas contrasts finding was showed in this study done by Nguyen NH¹⁰ which showed 36.3% of children were stunted which is higher than this study. This might be because of educational level of respondents which is lower in our study and breastfeeding practices is lower in our study. Our study found 5.3% of children were wasted which is corresponds with the finding of the study by Henry W¹¹ which showed 4% children were wasted.

In this study according to weight for age the nutritional status of children was 72.2% normal, 15.4% mild and 9% moderate which is lower than the study done by Dhungana GP¹² which showed weight for age the nutritional status of children as 60% normal, 32% mild and 4% moderate. The differences might be because of mother's level of education which is higher in this study and child caring practice by mothers themselves is also higher in this study but in the study by Dhungana GP child caring practices by other family members is higher and their educational level is lower than our mothers group which shows imbalance of nutritional diets to children. In this study according to weight for age the nutritional status of children was 3.4% severe malnutrition which is similar to the study by Dhungana GP¹² which found weight for age the nutritional status of children was 4% severe malnutrition. The study has several limitations. The cross-sectional nature of this study is a drawback in that causal relationships cannot be inferred. The study design was not further supported by qualitative approaches. It would be stronger if we use further analytical approaches to assess the effect of breastfeeding on under 5 children and complement the study with a qualitative data collection approach.

CONCLUSION

The study showed child who were breastfed frequently were normal in weight; their physical development is found good. There is statistically significant relationship between any disease suffering now and past history, sources of information and heard about impacts of breastfeeding, weight for age and sex, breastfeed duration, interval of breastfeeding and times of breastfeeding. There is positive co-relation between height and weight as well as age and weight. It is essential for the sick child to give greater attention to a nourishing diet and consistent breastfeeding.

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