

Characteristics of Feeding Practices and Nutritional Status of Infants in Selected Villages at Dhamrai

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Abstract

Infants are the most vulnerable group among all the age groups in our society. Breastfeeding decisions and practices are influenced by multiple factors including knowledge, attitude and beliefs. This rural based cross sectional descriptive study carried out among 320 mothers having infant up to 1 year of selected villages at Dhamrai from 7th August to 31st January 2014, to determine the characteristics of feeding practices and nutritional status of infants. Near fifty percent infants belonged to age group 9-12 months and of them one third were more than 8 kg. Regarding feeding status 284(88.8%) of respondents got colostrum's bit about fifty-five percent mother did not know the benefit of exclusive breastfeeding. The observation regarding complementary feeding 142(50.9%) infants were started after six months of age and the common types of complementary food were khichuri (49.7%), shagu, suji (21.5%), fruit juice (6.8%) given as family food. It was found that 208(65%) mothers were encouraged by doctors to practice weaning food. The prevalence of severe underweight and moderate underweight in the studied children were 10.9% and 14.1% respectively, the prevalence of moderate and severe wasting children was 6.2% and 3.2% respectively and the prevalence of severely and moderately stunted children were 8.3% and 10.9% respectively. Proper breastfeeding practices are effective ways for reducing infant morbidity and mortality. So it may be concluded that correct breast feeding practices should be supported and promoted to improve the well-being of infants.

Key words: Exclusive breast feeding, complementary feeding, colostrums, weaning.

Introduction

Exclusive breastfeeding can be defined as a practice whereby the infants receive only breast milk and not even water, other liquids, tea, herbal preparations, or food during the first six months of life, with the exception of vitamins, mineral supplements, or medicines.¹ The major advantage of exclusive breastfeeding up to four to six months includes reduced morbidity due to gastrointestinal infection. The World Health Organization (WHO) recommends that infants be exclusively breastfed for the first six months, followed by breastfeeding along with complementary foods for up to two years of age or beyond.² Delayed breastfeeding initiation, colostrum deprivation, supplementary feeding of breast milk substitutes, early introduction of complementary feeding, and

incorrect weaning from breast milk are commonly found practices in communities around the world.³⁻⁷ Adequate nutrition during infancy and early childhood is essential to ensure the growth, health, and development of children to their full potential.⁸ It has been recognized worldwide that breastfeeding is beneficial for both the mother and child, as breast milk is considered the best source of nutrition for an infant.⁹ A meta-analysis from three developing countries showed that infants who were not breastfed had a six-fold greater risk of dying from infectious diseases within the first two months of life than those who were breastfed.¹⁰ Six months of exclusive breastfeeding and continued breastfeeding in the first year of life could also prevent 1.3 million child deaths worldwide according to systematic reviews from the Bellagio Child Survival Study Group. The

timely introduction of complementary feeding can prevent almost 6% of under-five mortality.¹¹ In addition, incorrect infant feeding practices pose significant risk for malnutrition among children under the age of five.^{3,12,13} To achieve the Millennium Development Goals (MDG 4) for child survival and the prevention of malnutrition (MDG 3), adequate nutrition and health during the first several years of life is fundamental.¹⁴ Proper feeding practice is the cornerstones of the care for infants and young children.¹⁵ Predictors of breastfeeding and weaning practices vary between and within countries. Urban or rural difference, age, breast problems, societal barriers, insufficient support from family, knowledge about good breastfeeding practices, mode of delivery, health system practices, and community beliefs have all been found to influence breastfeeding in different areas of developing countries.^{1,16,17} In Bangladesh, the prevalence of feeding practices has remained largely unchanged for nearly two decades. It was around 45% in 1993-94 and 1999-2000,¹⁸⁻¹⁹ then declined to 42% in 2004²⁰ and was 43% in 2007.²¹ However, in 2011, a prevalence of 64% was reported, an increase of 21% points.²² In Bangladesh, health planners and health managers need continuous, up-dated data on infant well-being to reduce morbidity and mortality of this highly critical, vulnerable age segment of the population. Thus for greater understanding and addressing the issue further, the present study was conducted in a rural setting with the aim to determine the characteristics and nutritional status of infants.

Materials and Methods

This was a community based cross sectional study to determine the characteristics of feeding practices and nutritional status of infants in selected villages, at Dhamrai conducted from August to January, 2014. A total of 320 children were selected conveniently for the study. The sample was selected from Dautia, Barachandra, Kalampur villages of Dhamrai where the lactating mothers who had baby up to one year were included as the study population. Those who were aged one year and above, severely sick children, mothers requiring hospitalization and motherless

children were excluded from the study. A structured pre-tested questionnaire was developed consisting of two parts- socio-demographic characteristics and feeding related variables. Face to face interview technique was used to collect data. The collected data were checked, verified and then entered into the computer. Only the fully completed questionnaire was entered into the computer for final analysis with the help of SPSS (Statistical Package of Social Science, version-17), Windows software program.

Result

It was found that 261(81.5%) of the respondents were from the age group 20-30 years with mean age was 25.34 ± 4.281 .

Table I: Socioeconomic characteristic

Socioeconomic characteristics of the mothers	Frequency	Percent (%)
Age		
<20 years	33	10.3
20-30 years	261	81.5
>30 years	26	08.1
Mean=25.34,SD=(±)4.281		
Education		
Illiterate	71	22.2
Primary	151	47.2
Secondary	96	30.0
Higher secondary & above	02	0.6
Occupation		
House wife	301	94.1
Farmer	05	1.6
Service holder	14	4.4
Monthly family income		
Taka <5000	132	41.3
Taka 5000-10000	149	46.6
Taka >10000	39	12.2
Mean=7626.56,SD=(±)3171.25 Tk		
Type of family		
Nuclear	190	59.4
Joint family	130	40.6
BMI (Mother)		
<18.5	75	23.4
>18.5	245	76.5

Table I: Near fifty percent of the respondents were educated up to primary level. According to the occupational status majority 301(94.1%) participants were housewives. The mean monthly family income of the respondents was 7626.56 ± 3171.248 Taka. Most 190(59.4%) of the respondents were nuclear family and 130(40.6%) belongs to joint family. About 75 (23.4%) of the mothers' BMI were <18.5 which is the cut off value for chronic energy deficiency/maternal malnutrition. (Table I) Regarding characteristics

of the infants 169(52.8%) were male and 151(47.2%) were female. Out of 320 respondents 137(42.8%) belongs to age group 9-12 months, among others 124(38.8%), 59(18.4%) of the respondents were 6-9 months and less than six month of age group respectively. Near about one third were more than 8 kg and 95(29.7%) were 6-8 kg and 53(16.6%) were less than 4 kg.

Table II: Characteristics of infant(n=320)

Characteristics of the respondents(infant)	Frequency	Percent (%)
Sex		
Male	169	52.8
Female	151	47.2
Age of infant		
< 6 months	59	18.4
6-9 months	124	38.8
9-12 months	137	42.8
Mean=8.44, SD=(±)3.082		
Weight of infant		
< 4 kg	53	16.6
4-6 kg	76	23.8
6-8 kg	95	29.7
>8 kg	96	30.0
Mean=7.049,SD=(±)2.5827		

(Table II) According feeding status 284(88.8%) of the respondents were getting colostrums and the rest 36(11.3%) did not due to ignorance 20(55.5%), illness 07(19.4%) and insufficient breast milk. The observation regarding complementary feeding 142(50.9%) respondents were started after six months of age and only 27(9.7%) started at four months of age. The common types of complementary food were khichuri (49.7%), shagu, suji (21.5%), fruit juice (6.8%) given as family food. It was found that 208(65%) mothers were encouraged by doctors to practice weaning food for children, while 64(20%) encouraged by their relatives.

(Table III) The prevalence of severe underweight and moderate underweight in the studied children were 10.9% and 14.1% respectively, the prevalence of moderate and severe wasting children was 6.2% and 3.2% respectively and the prevalence of severely and moderately stunted children were 8.3% and 10.9% respectively.

Table III: Feeding status of infants (n=320)

	Frequency	Percent (%)
Colostrums		
Given	284	88.8
Not given	36	11.3
Reasons for not getting EBF		
Ignorance	07	19.4
Illness of mother	09	25.0
Insufficient of breast milk		
Time of introduce of complementary feeding		
4 months	27	9.7
5 months	35	12.5
6 months	75	26.9
>6 months	142	50.9
Types of complementary food		
Solid food (Khichuri)	92	49.7
Semisolid food (Shagu, suji)	47	21.5
Liquid (Fruit juice)	15	6.8
Information about the use of weaning food		
Doctor	208	65.0
Relative	64	20.0
Neighbor	26	7.9
Radio/Television	14	4.5
Others	08	2.6

Table IV: Growth and development of infant

	Weight for age		Weight for height		Height for age	
	Freq.	%	Freq.	%	Freq.	%
Normal	240	75	290	90.6	258	80.8
Moderate (Z score-3 to-2.01)	45	14.1	20	6.2	35	10.9
Severe (Z score <-3)	35	10.9	10	3.2	27	8.3
Total	320	100	320	100	320	100

* Freq. = Frequency

Table V: Logistic regression independent variables on dependent variable (Sufficient breast feeding)

Variables	B	S.E.	Wald	Sig.	Exp(B)
Monthly income	.000	.000	.174	.676	1.000
Type of family			5.941	.051*	
Nuclear family	-.013	41599.857	.000	1.000	.987
Extended family	-1.063	41599.857	.000	1.000	.345
Occupation			2.676	.262	
Housewife	19.091	10728.109	.000	.999	1.955E8
Agriculture	20.907	10728.109	.000	.998	1.202E9
Education			5.027	.170	
Illiterate	18.871	28420.969	.000	.999	1.568E8
Primary	19.123	28420.969	.000	.999	2.018E8
Secondary	19.938	28420.969	.000	.999	4.561E8
Age of mother	.036	.048	.556	.456	1.036
Constant	-40.871	49225.788	.000	.999	.000

Logistic regression analysis shows that the effects of leveled variables on sufficient breast feeding in which only type of family has significant influence (Table V).

Discussion

The first year of an infant's life is the period of most rapid growth and an important nutrition transition, whereas poor infant feeding practices (IFP) directly or indirectly contribute to under nutrition, morbidity and mortality. The present study was done with a view to determine the characteristics of feeding practices and nutritional status of infants in selected villages at Dhamrai. It was found that 261(81.5%) of the mothers were from the age group of 20-30 years and their mean age was 25.34 ± 4.281 years. About half of the respondents 151(47.2%) had completed primary education and 96(30%) had secondary education. In Bangladesh, Mahejabin, et al.²³ observed the same findings. Most of the respondents 301(94.1%) were housewives, 14(4.4%) were service holders and 5(1.6%) were agriculture workers. Haque and his colleagues²⁴ conducted a study in a selected peri urban area of Bangladesh where most of the mothers 307(98.4%) were housewife. The mean monthly family income of the respondents was 7626.56 ± 3171.248 Taka. This was quite high per capita income of Bangladesh.²⁵ It might be due to location of study place and overall educational status of the respondents. More than 190(59.4%) of the respondents were belonged to nuclear family and about 75 (23.4%) of the mothers' BMI were <18.5 which is the cut off value for chronic energy deficiency /maternal malnutrition. This observation is more close to Shaili (2012) study.²⁶ Regarding age of infants, 137(42.8%) belongs to age group 9-12 months, among others 124(38.8%), 59(18.4%) of the respondents were 6-9 months and less than six month of age group respectively. Near about one third infants were more than 8 kg and 95(29.7%) were 6-8 kg and 53(16.6%) were less than 4 kg. The study found that 284(88.8%) newborns were breastfed and were given colostrums as first fed which was similar to that of results of NDHS 2011.²⁷ The few difficulties faced by mothers for exclusive breast feeding in the current study were ignorance, illness and insufficient breast milk. These findings

were more or less similar with findings conducted by Awogbenja, et al¹⁴ in Nasarawa state, North Central Nigeria, where the dominant reasons are mother's health, child's refusal to suck and tradition / culture. Another study conducted in Morogoro Municipality in Tanzania, where eight percent of the mothers discarded colostrum on the account that it was not good for their neonates.²⁸ Fifty percent mothers started complementary feeding after six months' completion of age and only 27(9.7%) at four months of age. This finding is in conformity with the findings of Meshram and co-workers which established that about 57% children of 6-11 months old received complementary feeding in rural Madhya Pradesh.²⁹ The common types of complementary food were khichuri (49.7%), shagu/suji (21.5%), fruit juice (6.8%) given as family food. Haque, et al.³⁰ conducted a study where the results show that the common weaning food were suji (43.5%), khichuri (36.1%), boiled eggs (25.6%) and fruit juice (24.4%) which was more or less similar to the study. In the present study 208(65%) mothers were encouraged by doctors to practice weaning food for children, while 64(20%) encouraged by their relatives. This goes in line with results from Netrakona district Bangladesh; where the doctor mainly encouraged the mothers for practicing weaning food for their babies.³¹ The prevalence of severe underweight and moderate underweight in the studied children were 10.9% and 14.1% respectively, the prevalence of moderate and severe wasting children was 6.2% and 3.2% respectively and the prevalence of severely and moderately stunted children were 8.3% and 10.9% respectively. The findings of Safari, Kimambo and Lwelamira²⁸ are in the agreement with the present study. Logistic regression analysis shows that the effects of leveled variables on sufficient breast feeding in which only type of family has significant influence.

Thus it can be concluded from the results that breast feeding was popular in rural women though their knowledge about the same needs should be improved. As their perceptions regarding the feeding practices directly influence the health of the infant therefore false beliefs and myths attached to infant's feeding deeply rooted in all strata of community need to be replaced.

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