

Child Weaning Practices among Selected Urban Slums of Dhaka City, Bangladesh

H. Afroz¹, M. N. I. Khan^{2,*}, M. N. Hasan²

¹National College of Home Economics, University of Dhaka, Dhaka-1000, Bangladesh

²Institute of Nutrition and Food Science, University of Dhaka, Dhaka-1000, Bangladesh

Received 24 July 2016, accepted in final revised form 14 November 2016

Abstract

When a baby reaches 4-6 months, milk alone is not sufficient to meet the increased nutritional needs of the baby. Weaning is the process by which a baby slowly gets used to eating family or adult foods along with breast milk. The aim of the study was to assess the weaning practices in the selected urban slums of Dhaka city, Bangladesh among male and female children in the age group of 6 months to 1 year by random sampling. It revealed that 54% infants were fed breast milk and 38.5% infants were fed honey as their first food. About 94.5% infants were given breast milk within (1-24) h, 5% within (24-48) h and 0.5% within (48-72) h. As a weaning food majority of the respondents (39%) used khichuri, 24.5% used mashed potato/banana, 19% used powdered rice, 17% used suzi and 0.5% used others. 33% respondents had no knowledge about nutritious food. About 54%, 38.5%, 6.5% and 1.0% mothers fed their baby breast milk, honey, sugar and other food items respectively just after birth. The studied population group is not only poverty stricken, but also has poor knowledge, attitude and practice on health, hygiene, nutrition and nutritious food.

Keywords: Weaning; Supplementary food; Complementary food; Infection; Diarrhea; LBW; PEM.

© 2017 JSR Publications. ISSN: 2070-0237 (Print); 2070-0245 (Online). All rights reserved.
doi: <http://dx.doi.org/10.3329/jsr.v9i1.28894> J. Sci. Res. 9 (1), 127-133 (2017)

1. Introduction

The term “weaning” is used to describe the introduction of foods and fluids other than breast milk and the transition to a solid diet along with breast-milk [1]. Weaning foods are specially formulated for infants aged from 3 to 9 months for the transition between breast-feeding and normal intake of solid foods. It is a gradual process starting around the age of 4 to 6 months. Breast milk in reasonable quantities alone cannot provide all the energy and protein required for maintaining adequate growth rate for the infant after the age of 4 to 6 months [2,3]. Children for whom weaning were started at the recommended age of 4-

* Corresponding author: nik_infs@yahoo.com

6 months were found to be significantly less malnourished on anthropometric measurements as compared to the other set in which weaning was started at an earlier or later age [4]. At this age baby enters a whole new world of tastes and textures, and people want to feel safe in the knowledge that they are giving them the right foods for the very best start in life. So, introduction to more diversified and more concentrated nutritional supplements are necessary at this age [5]. The semi-solid food is added at a time in small quantities and the quantity is increased gradually [6]. The whole process of weaning is gradually completed by 4 months to 6 months of age, because after the age children are less willing to try new tests and new foods [7,8]. If this period is not done properly, nutritional disturbance especially PEM (protein energy malnutrition), growth failure, infection, diarrhea and psychogenic trauma may occur [9,10].

Malnutrition of infant and child is one of the major problems in developing country like Bangladesh, where a large number of people live in under socio-economic condition [11]. Although Bangladesh has achieved commendable success in overall coverage of water supply and sanitation services, still urban WASH (Water, Sanitation and Hygiene) remains a major challenge in the slums area. In the country, people live in the slums are more vulnerable to communicable diseases and malnutrition e.g. woman of child bearing age, lactating mother, infant and children are particularly at risk. Children are the future wealth of the nation. The first year of the children's life is crucial in laying the foundation of good health but about 50% of all babies born alive have low birth weight (LBW < 2.5 kg). To assess the children's development, it is essential to know how they develop physically and psychologically where weaning food and its practice play a vital role for infants overall development. Therefore, the aim of the study was to assess the weaning practices in the selected urban slums of Dhaka city, Bangladesh. The study was conducted in five slums (Mirpur, Vasantak, Mohammadpur, Shyamoly, and Azimpur) among male and female children in the age group of 6 months to 1 year by random sampling.

2. Results

The Study was undertaken in selected slum dwellers to assess the prevalent situation of weaning practices.

Table 1. Distribution of families according to their monthly income.

Information	Frequency <i>N = 200</i>	Percentage
<i>Monthly Family Income</i>		
< BDT 6500.00	54	27.0
BDT 6500.00 to 7500.00	91	45.5
> BDT 7500.00	55	27.5
Mean \pm SD	BDT 7005.45 \pm 1331.21	
<i>Per Capita Monthly Family Income</i>		
< BDT 1200.00	67	33.5
BDT 1200.00 to 1500.00	100	50.0
>BDT 1500.00	33	16.5
Mean \pm SD	BDT 1344.92 \pm 328.19	

Table 1 shows that the average of the monthly income of the families was BDT 7005.45 with a standard deviation of BDT 1331.21, where almost half of the families (45.5%) earned between BDT 6500.00 and BDT 7500.00 per month. In the monthly family income per capita, the range was BDT 1200.00 to 1500.00 clearly belongs to the half (50%) of the population with a total average of BDT 1344.92.

Table 2 shows that 96% families took meals three times per day. A satisfactory amount (63.5%) of households used tube-well for their drinking water source and 87.5% used iodized salt.

Table 2. Distribution of families by food consumption pattern.

Information	Frequency <i>N</i> = 200	Percentage
<i>Frequency of Taking Meal</i>		
Three Times	192	96.0
More than Three Times	8	4.0
<i>Decision Maker for Food Buying, Cooking and Serving</i>		
Self	163	81.5
Both	22	11.0
Others	15	7.5
<i>Place of Cooking</i>		
Separate Kitchen	41	20.5
Open Space	106	53.0
Bed Room	53	26.5
<i>Drinking Water Source</i>		
Tube-Well	127	63.5
Tap	73	36.5
<i>Use of Iodized Salt</i>		
Yes	175	87.5
No	25	12.5
<i>Use of Gruel after Cooking Rice</i>		
Throw Away	170	85.0
Do not Throw Away	30	15.0

It is unsatisfactory that only 54% of the children were fed breast milk just after birth. But, 94.5% of total were fed breast milk between 1 and 24 h which was bit satisfactory (Table 3).

Table 3. Distribution of households by their colostrum feeding pattern to their infants.

Information	Frequency <i>N</i> = 200	Percentage
<i>After Birth Child was First Fed by</i>		
Breast Milk	108	54.0
Honey	77	38.5
Sugar	13	6.5
Others	2	1.0
<i>Problem During Birth Time</i>		
Yes	35	17.5
No	165	82.5

Information	Frequency <i>N</i> = 200	Percentage
<i>Best Milk for Child</i>		
Breast Milk	126	63.0
Do not Know	74	37.0
<i>Child was Fed Breast milk First Time at</i>		
Between 1-24 h	189	94.5
Between 24-48 h	10	5.0
Between 48-72 h	1	0.5
<i>Child is fed Breast milk Regularly</i>		
Yes	161	80.5
No	39	19.5

In Table 4, 49% of mothers thought that child should be fed breast milk as much as it gets and 95% mothers fed sufficiently along with breastfeeding. Though, they had diversified idea about weaning food, 39% of them thought khichuri was the best among the listed items. 73% fed gradually and 55.5% of the care givers fed as per the need of the child. Home-made foods were most common (75.5%) as weaning food item and 75% children had no apathy towards any specific food item.

Table 4. Distribution of total breast-feeding and weaning practice.

Information	Frequency <i>N</i> = 200	Percentage
<i>Exclusively Breast milk will be fed for</i>		
< Six Months	21	10.5
Six Months	61	30.5
> Six Months	20	10.0
As Much as the Child gets	98	49.0
<i>Mother's Sufficient Eating along with Breastfeeding</i>		
Yes	190	95.0
No	10	5.0
<i>Knowledge about Weaning Food</i>		
Powdered Rice	38	19.0
Suzi	34	17.0
Mashed Potato/ Banana	49	24.5
Khichuri	78	39.0
Others	1	0.5
<i>Process of feeding weaning food to Child</i>		
Abruptly	54	27.0
Gradually	146	73.0
<i>Frequency of Weaning Food per Day</i>		
Five to Six Times	83	41.5
Seven to Eight Times	6	3.0
As per Need	111	55.5
<i>Type of Weaning Food</i>		
Home Made	151	75.5
Tinned/ Canned	47	23.5
Others	2	1.0
<i>Child's Apathy towards any Specific Food Item</i>		
Yes	50	25.0
No	150	75.0

Wasted and malnourished children were less prevalent than stunted as the percentages were 62.5 and 94.0 for $-2SD$ and above category respectively. 67.5% children were not suffering from any illness, 99% of them were properly vaccinated (Table 5).

Table 5. Distribution of children by their anthropometric and health status.

Information	Frequency <i>N</i> = 200	Percentage
<i>Child's Weight for Age Z Score</i>		
< -2SD	75	37.5
-2SD and Above	125	62.5
Mean \pm SD	-1.55 \pm 1.30	
<i>Child's Weight for Height Z Score</i>		
< -2SD	12	6.0
-2SD and Above	188	94.0
Mean \pm SD	1.55 \pm 2.22	
<i>Child is Suffering for any Illness</i>		
Yes	65	32.5
No	135	67.5
<i>Child is Vaccinated</i>		
Yes	198	99.0
No	2	1.0
<i>Child is Showered Regularly</i>		
Yes	187	93.5
No	13	6.5
<i>For Treatment purpose, Child is Brought to</i>		
Allopathic Doctor having a Degree	94	47.0
Homeopathic	94	47.0
Kobiraj	11	5.5
Others	1	0.5

Table 6 states that there was no significant association found between the nutritional status of the children and the per capita monthly family income.

Table 6. Cross tabulations of per capita monthly family income along with children's Nutritional status.

Information	<BDT 1200.00 <i>N</i> (%)	BDT 1200.00 to 1500.00 <i>N</i> (%)	>BDT 1500.00 <i>N</i> (%)	χ^2	<i>P</i>
<i>Child's Weight for Age Z Score</i>					
< -2SD	51 (76.1)	73 (73)	22 (66.7)	1.002	0.606
-2SD and Above	16 (23.9)	27 (27)	11 (33.3)		
<i>Child's Height for Age Z Score</i>					
< -2SD	28 (41.8)	33 (33)	14 (42.4)	1.732	0.421
-2SD and Above	39 (58.2)	67 (67)	19 (57.6)		
<i>Child's Weight for Height Z Score</i>					
< -2SD	4 (6)	4 (4)	4 (12.1)	2.902	0.234
-2SD and Above	63 (94)	96 (96)	29 (87.9)		

3. Discussion

The socio-economic conditions of the respondents varied according to their income of the family. It was observed that 33.5%, 50% and 16.5% of the families had monthly income per capita less than BDT 1200.00, 1200.00-1500.00 and more than 1500.00, respectively. Where, almost half of the families (45.5%) earned between BDT 6500.00 and 7500.00 per month. 96% families took meals three times per day. A satisfactory amount (63.5%) of households used tube-well for their drinking water source and 87.5% used iodized salt. It was unsatisfactory that only 54% of children were fed breast milk just after birth. But, 94.5% of total were fed breast milk between 1 and 24 h which was little bit satisfactory. It showed that a total of 127 children were fed breast milk for six months or more and the average duration of exclusive breast feeding was 5.7 months, which is quite satisfactory. Though, mothers had diversified idea about weaning food, 39% of them thought khichuri was the best among the listed items. 73% mothers fed regularly and 55.5% of the caregivers fed as per the need of the children. Home-made foods were most common (75.5%) as weaning food item and 75% children had no apathy towards any specific food item.

The nutritional status was enforced by income level of children's family. 23.9% children's weight was $-2SD$ or above whose family income was below BDT 1200.00, 67% children's height was $-2SD$ or above whose family income BDT 1200.00-1500.00. Food habits of the slum people are affected by various superstition illiteracy and ignorance. Weaning food is not introduced to infant at right stage of early life for enough time duration. Sometimes, introduction of weaning foods is too late. Moreover, inappropriate weaning practice for infants leads to physical and psychological disturbance which ultimately raises morbidity and mortality rate of children. Children are the future leader of any country of the world. But at present they suffer from malnutrition and various diseases. To increase our conscious level, government and non-government organizations should increase their various health related activities. In this case, we observed in this study that the nutritional knowledge, nutritional status, food habit etc. were quite better. The present study considered about weaning practice in slum. However, that two-three month of surveying is not sufficient to give exact and proper information. The mother could not give adequate and exact information about the breast feeding along with supplementary feeding. The recommendations have been formulated based on issues that can be taken into consideration to improve the level of nutritional knowledge, ensure correct weaning practices, dispel food superstition and encourage breast feeding.

4. Conclusion

From the study, it is concluded that food habits of the slum people are affected by various superstition illiteracy and ignorance. Weaning food is not introduced to infant at right stage of early life for enough time duration. Sometimes, introduction of weaning foods is too late. Moreover, inappropriate weaning practice for infants leads to physical and psychological disturbance which ultimately raises morbidity and mortality rate of

children. Children's are the future leader of any country of the world. But at present they suffer from malnutrition and various diseases. To increase our conscious level, government and non-government organization should increase their various health related activities. In this case, we observed in this study that the nutritional knowledge, nutritional status, food habit etc. are quite better. The present study considered about weaning practice in slum. However, that two-three month of surveying was not sufficient to give exact and proper information. The mother could not give adequate and exact information about the breast feeding along with supplementary feeding. The recommendation have been formulated based on issues that can be taken into consideration to improve the level of nutritional knowledge, ensure correct weaning practices, dispel food superstition and encourage breast feeding.

References

1. M. C. Latham, Human Nutrition in the Developing World: FAO of the UN (Rome, 1997) **1**, 6, pp. 52.
2. M. N. Hasan, M. N. I. Khan, and M. Z. Sultan. J. Sci. Res. **8**(1), 55 (2016).
<http://dx.doi.org/10.3329/jsr.v8i1.23951>
3. INFS, Studies on Practice and Attitude towards Breast-Feeding in Bangladesh, Dhaka and Khulna Districts (University of Dhaka, 1980).
4. S. Shamim, F. Naz, S.W. Jamalvi, and S. S. Ali. J. Coll. Physicians Surg. Pak. **16**, 529 (2006).
5. M. N. Hasan, M. Akhtaruzzaman, and M. Z. Sultan, J. Anal. Sci. Methods Instr. **3**, 24 (2013).
<http://dx.doi.org/10.4236/jasmi.2013.33A004>
6. M. N. Hasan, M. Z. Sultan, and M. Mar-E-Um, J. Sci. Res. **6**, 373 (2014).
<http://dx.doi.org/10.3329/jsr.v6i2.16530>
7. Weaning from Breast Milk to Family Food, A Guide for Health and Community Workers (WHO, Geneva, 1988).
8. R. Bhatia and U. Jain, Int. J. Med. Sci. Public Health **3**, 1251 (2014).
<http://dx.doi.org/10.5455/ijmsph.2014.100720141>
9. R. H. Dandekar, M. Shafee, and R. Kumar, Health Agenda **2**, 1 (2014).
10. E. W. Kinmani-Murage, F. Wekesah, M. Wanjohi, C. Kyobutungi, A. C. Ezeh, R. N. Musoke, S. A. Norris, N. J. Madise, and P. Griffiths, Maternal Child Nutr. **11**, 314 (2015).
<https://doi.org/10.1111/mcn.12161>
11. M. Hoque, M. W. Hossain, M. N. Parvin, M. A. Rahman, and M. M. Haque, Am. J. Innovative Res. App. Sci. **1**, 94 (2015).
12. M. S. Islam, A. Sultana, M. S. Sultana, M. Shammi, and M. K. Uddin. J. Sci. Res. **8**, 413 (2016). <http://dx.doi.org/10.3329/jsr.v8i3.27819>