

Knowledge, Attitude and Practice of Female Nurses on Complementary Feeding in a Tertiary level Hospital of Bangladesh

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Abstract:

Introduction: Inadequate knowledge on nutritious foods and feeding practices are determinant of malnutrition rather than lack of food. Health professionals particularly nurses pass long contact time with the mothers, so positive attitude among them can be used in motivating mothers for infant and young child feeding. There is little data available in this regard, therefore evaluation of nurses' knowledge, attitude and practice on complementary feeding is very important. This study was conducted among the female nurses in a tertiary level hospital of Bangladesh to find out the knowledge, attitude and practice of complementary feeding to their own under-2 children.

Methods: The descriptive study was carried out at Dhaka Medical College Hospital between September 2014 and August 2015. Total 95 nurses having children from 6 months up to 2 years of age were enrolled as sample.

Results: It showed that 63.1% of the nurses had good understanding on complementary feeding. But 46.3% of

them did not know the duration correctly and 27.4% considered infant formula as the complementary food. Almost all had the positive attitude but 28.4% stated that distraction during feeding is needed. Among the respondents, 97% strongly agreed about the importance of complementary feeding but 67.4% of the nurses introduced complementary food before 6 months of age. Only 58.9% of them continued breast feeding up to 2 years.

Conclusion: The study reflects that although most of the nurses have adequate knowledge and positive attitude towards complementary feeding but deviation was noted in timely introduction of complementary food and use of feeding bottle. This indicates clear disparity between knowledge and practice of the female nurses.

Key Words: Complementary feeding (CF), Infant and young child feeding (IYCF), Under 2 children

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Introduction

Fast decline in the nutritional status of a child occurs before 2 years of age, particularly during complementary feeding (CF)¹. As per World Health Organization (WHO), in 2020 globally 144 million children under 5 were stunted and 47 million were wasted, mostly as a result of poor feeding and recurrent infections. Rapid catch-up weight gain in the first two years is important for preventing

long-term undernutrition and achieving decreases in morbidity and mortality². It is important to emphasize appropriate complementary feeding practices from nutritional standpoint considering different age group. In Bangladesh, only 21% of children between 6-23 months are fed according to recommended infant and young child feeding practices³. Appropriate diverse diet was received by 28% of the children i.e., from four or more food groups and 64% are fed the recommended number of times among all children of 6–23 months. Appropriate CF depends on accurate information and skilled support from family, community and health care system⁴.

Better understanding of the health professionals on child nutrition is an important source of health information of the mothers in low income setting⁵. Health staffs particularly nurses, play a major role on the feeding practices especially CF practice in a health care facility. The nurses are not only playing their role in patient care but also disseminating health messages and can easily

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influence the people. So, their knowledge and practice level of feeding for their own children is also important in this context. This study was done to know the current knowledge, attitude and practice of CF of the female nurses to their own under 2 children.

Methods:

This descriptive cross-sectional study was conducted among female nurses who worked in Dhaka Medical College Hospital (DMCH) from September, 2014 to August, 2015. Among 480 female nurses, 95 were enrolled in the study based on inclusion criteria i.e., who had children between 6 months to 2 years and started foods other than breast milk. Nurses' who had children between 6 months to 2 years of age with serious illness were excluded from the study. Self-administered structured pretested questionnaire was developed. The respondents were recruited by voluntary participation and were interviewed to assess the nurses' knowledge on how they feed their own children.

Statistical analysis: All data were analyzed by SPSS (Statistical Package for Social Sciences) version 16. The summarized data were presented in the form of table and charts with due statistical interpretation. To evaluate nurses' practice objectively, their practice was scored. There were 6 discrete questions to assess the level of child feeding practices by the respondents. For right practice score 1 and for wrong practice score 0 was assigned. All these discrete scores were then summed together to find an integrated score, 0-6. The integrated scores obtained by the respondents were arbitrarily divided into three categories, score 0-2 (meaning poor practice), score 3-4 (meaning fair practice) and score 5-6 (meaning excellent practice)

Ethical issue: Informed written consent was taken from the respondents being explained the objectives of the study clearly and permission from Ethical review committee was obtained.

Results:

Total 95 nurses participated in this survey. 78.9% of the nurses had children aged 12 months or more and the rest were <12 months old. The studied nurses were knowledgeable in respect to IYCF. However, 46.3% do not know the correct duration of CF and 27.4% consider

infant formula as complementary food. Correct feeding frequency and amount was mentioned only by 49.3% and 46.7% of the nurses who had children between 12 to 24 months. Overall, 60 (63.1%) respondents had good level of knowledge and the rest 35 (36.9%) had excellent knowledge. Almost all the nurses had positive attitude towards the issues of CF but 28.4% stated that distraction during feeding was needed. Excellent attitude towards CF was observed among 97% of the respondents. In the study, 67.4% of the nurses Introduced complementary food before completion of 6 months. Only 58.9% of them continued breast feeding up to 2 years and the rest discontinued earlier. Hand washing was practiced by all the caregivers before feeding their children. Correct frequency and amount were practiced by 62.5% of the respondents in the age group 9-11 months. Feeding accessories such as bottle feeding were practiced by 71.6% of the female nurses besides using cup and spoon or plate and hand. Out of 95 nurses, 41 (43.2%) respondents had poor practice, 39 (41%) had fair and only 15 (15.8%) had good to excellent practice.

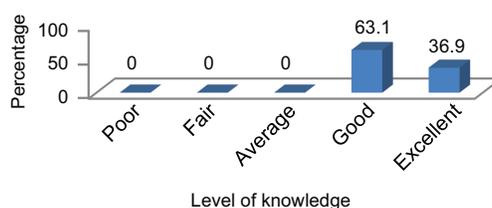
Table-I

Knowledge of the female nurses on CF (N= 95)

Knowledge of the female nurses	Number (n)	Percentage
1. Knowledge on the major components of IYCF	95	100.0
2. When to start CF After completion of 6 months	95	100.0
3. Infant formula as a complementary food		
Yes	26	27.4
No	69	72.6
4. Duration of CF		
Up to 2 years	51	53.7
<2 years	44	46.3
5. Ideal complementary food contains-protein, fat, carbohydrate, vitamin & mineral	95	100.0
6. Hand washing necessary before feeding	95	100.0

Table-II*Knowledge of the female nurses on CF (n = 95)*

Age group of children (n)	Correct frequency	Knowledge of the nurses	
		Correct response	Percentage (%)
6-8 months (12)	2-3 meal+ 1/2 snacks	10	83.4
9-11 months (08)	3-4 meal+ 2 snacks	06	75
12-24months (75)	3-4 meal+ 2 snacks	37	49.3
	Correct amount of feeding with 250 ml bowl		Knowledge of the nurses
6-8 months (12)	2-3 meal+ 1/2 snacks	09	75
9-11 months (08)	3-4 meal+ 2 snacks	07	87.5
12-24months (75)	3-4 meal+ 2 snacks	35	46.7

**Fig.-1:** Level of knowledge of the female nurses on CF (n=95)**Table-III***Attitude of the female nurses towards CF (N = 95)*

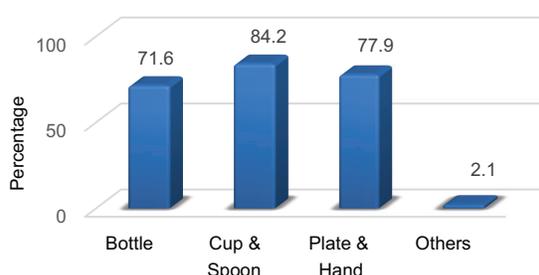
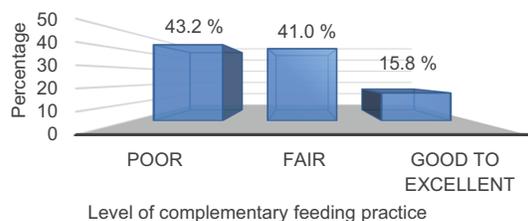
Issues of CF	Number (N)	Percentage (%)
1. Should know about CF	94	98.9
2. Timely initiation of CF is essential for child's growth	94	98.9
3. Timely initiation of CF is essential for child's development	94	98.9
4. Homemade complementary food is better than commercial one	94	98.9
5. Personal practice by the nurses is a prerequisite before counselling the mother	95	100.0
6. No distraction (watching TV/cartoon/music) of baby during feeding	68	71.6

Table-IV*Practice of CF by the female nurses (N=95)*

CF practice by the female nurses	Number (N)	Percentage (%)
1. Introduction of complementary food		
<6 months	64	67.4
After completion of 6 months	31	32.6
2. Continuing BF along with CF		
Continued BF up to 2 years	56	58.9
Earlier discontinuation of BF before 2 years	39	41.1
3. Caregiver to child		
Mothers	03	3.2
Mothers & others	92	96.8
4. Practiced hand washing before feeding	95	100.0

Table-V*Practice of CF by the female nurses (N = 95)*

Age group of children (n)	Correct frequency	Practice of the nurses	
		Correct response	Percentage (%)
6-8 months (12)	2-3 meal+ 1/2 snacks	06	54.5
9-11 months (08)	3-4 meal+ 2 snacks	05	62.5
12-24months (75)	3-4 meal+ 2 snacks	27	32
	Correct amount of feeding with 250 ml bowl		
6-8 months (12)	2-3 meal+ 1/2 snacks	05	41
9-11 months (08)	3-4 meal+ 2 snacks	05	62.5
12-24months (75)	3-4 meal+ 2 snacks	19	29.3

**Fig-2:** Feeding accessories used by the female nurses**Fig-2:** CF practice level of the female nurses**Discussion:**

In the study, the age of the children varied from 6 months to 24 months. The present study showed that all female nurses had knowledge on the major components of IYCF and they know that CF should be started after completion of 6 months of age. Among ninety-five female nurses, 53.7% mentioned recommended age of continuation of CF but the rest could not (Table I). A study in Delhi on working mothers showed that 69% were aware that CF should be started after 6 months but 61% practiced CF before 6 months while 70% continued breast feeding along with CF up to 2 years of age⁶. A study conducted on IYCF practices among adolescent girls and young mothers in rural Bangladesh revealed that IYCF knowledge of the participants was limited

and those who were aware of an IYCF recommendation, their interpretations were deviated from intended public health message⁷. A study in rural Egypt revealed that 92.5% of the mothers defined weaning as breastfeeding cessation, 4.2% defined weaning correctly and about 33.6% of the participants knew that the suitable age for starting weaning is after 6 months⁸. In the study, 49.3% and 46.7% of the respondents having children between 12 to 24 months answered correct frequency and amount of CF respectively. A study in Madagascar showed only 23.3% mothers knew the correct meal frequency for children aged 9–23 month⁹. This study revealed, 63.1% of the female nurses had good and 36.9% had excellent level knowledge on CF. Almost similar result was found in another study in Bangladesh, where 72.5% mothers had fair knowledge about weaning but 54.3% started delayed weaning¹⁰.

In this study, 98.9% of the female nurses stated that timely initiation of complementary feeding is essential for child's growth and development. Almost all of them held the idea that home-made complementary food is better than that of commercial one but only 28.4% opined that distraction during feeding should be avoided. As a whole, regarding attitude of the respondents, 97% had excellent attitude towards CF (Table III). Similar findings were found in a study in Ghana where 94% of the mothers had positive attitude towards recommended infant and young child feeding practices¹¹. The study revealed that CF was started by 67.4% of the female nurses before completion of 6 months of age which is an inappropriate practice (Table IV). This finding was lower among rural mothers in Bangladesh where 27.9% mothers initiated

complementary feeding before 6 months¹². Leong et al found that working women started early weaning compared to non-working women in Malaysia¹³. Studies from Pakistan and Ireland showed that 56.2% and 22.6% of infants were prematurely weaned onto solids at less than 6 months^{14,15}. A review 34 studies regarding complementary feeding practices in South Africa showed suboptimal complementary feeding practices and early introduction of foods and liquids other than breast milk is a common practice in South Africa¹⁶.

A study in Bangladesh showed that quantity of complementary foods per feed were inappropriate in 36%, 95% and 97.4% at seventh month, eighth month and twelfth to twenty-fourth month respectively¹⁷. This study revealed that correct amount was practiced by 41%, 62.5% and 29.3% of the respondents between age group 6-8 months, 9-11 months and 12-24 months respectively (Table V). A study in Bangladesh documented that the frequency, amount, adequate energy dense and food diversity remained important issues in CF¹⁸. In this study, feeding bottle was used by 78.8% of the female nurses which is against IYCF recommendation (Fig 2). Current recommendations strongly discourage bottle-feeding because of associated exposure to pathogens as it is difficult to clean and it interferes with successful breastfeeding. Prevalence of bottle feeding in below two years old children was reported in BDHS 2004, BDHS 2011 and BDHS 2017, where it has been estimated as 17.8%, 15.8% and 14.9% respectively, demonstrating no significant change¹⁹. All nurses (100%) in the study practiced hand washing before feeding their own children. Similar results were found in a study in Pakistan that showed 96% of the mothers maintained good hygienic habits²⁰. In this study, among 95 respondents, 43.2% had poor level, 41% had fair level and only 15.8% had good to excellent level of CF practice (Fig 3).

Conclusion:

In conclusion, we can say that most of the female nurses have adequate knowledge and attitude towards complementary feeding (CF) but deviation is noted among two-third of the nurses in relation to timely introduction of complementary food and 71.6% regarding the use of feeding bottle. A clear disparity is explored between knowledge and practice of the female nurses through this study.

Limitations:

The possible recall bias involved in collecting information in retrospect as information was based on the interview from female nurses. Secondly, this was a single center study with small sample size carried out in a major tertiary medical college hospital in the capital.

Recommendations:

Multicenter study can be done in this respect to focus the knowledge, attitude and practice of whole nursing community of the country on complementary feeding.

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Conflict of interest: Nothing to declare

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