

RESEARCH PAPER

Status of Infant and Young Child Feeding (IYCF) in the Secondary and Tertiary Level Hospitals in Bangladesh

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Abstract

Background: Child malnutrition is one of the most serious public health challenges. Infant and young child feeding (IYCF) practices are crucial for early childhood growth and development.

Objective: The current study was conducted to see the practice status of the elements of IYCF in the secondary and tertiary level hospitals in Bangladesh.

Methods: A descriptive type of cross-sectional study was conducted among 416 service receivers and 142 healthcare service providers in 32 randomly selected secondary and tertiary level hospitals in Bangladesh from 1st February to 31st May 2023 to assess the status of the four elements of IYCF in the secondary and tertiary level hospitals in Bangladesh. A purposive sampling technique was adopted and a pre-tested semi-structured questionnaire was used to collect data. Data were collected through face-to-face interviews.

Result: The mean age of the service receivers was 26.29±5.12 years and the majority of the respondents (98.1%) were female. Regarding the practices of IYCF, 86.3% of respondents initiated early breastfeeding, 72.1% exclusively breastfed their baby, 92.3% continued breastfeeding up to 24 months and 91.8% of respondents started complementary feeding after 6 months. About 86.3% of caregivers gave homemade complementary food to their babies. Around two-thirds of service providers were female and 36.6% of them had post-graduation degrees. The majority (85.2%) of the service providers didn't get any IYCF-related training but 81.7% of them had work experience in the IYCF program. The majority of the respondents mentioned that they practiced IYCF activities like providing support for position and attachment (98.6%), counseling the mother (99.3%), and explaining to the caregiver how to feed a sick child (94.4%). Among service providers, 91.6% had good IYCF practice and 7.7% had average IYCF practice IYCF activities.

Conclusion: Majority of the service receivers initiated early breastfeeding, continued breastfeeding up to 24 months, started complementary feeding after 6 months and more than two-thirds exclusively breastfed their babies. The majority of the service providers had good IYCF practice level but most of them didn't get any IYCF-related training.

Keywords: Status, IYCF, Secondary Hospitals, Tertiary Hospitals

Introduction

Undernutrition in children is one of the most significant public health issues on a global scale. It is estimated that 35% of fatalities in children under the age of five in the world can be attributed to malnutrition.¹ The first two years of life are the crucial “window of opportunity” for a child’s growth; current investigations have discovered that the impact of growth halting during this time is more severe than previously believed.²

The most significant factor in a child’s survival is breastfeeding. It is both inexpensive and conveniently accessible to the baby. There is an elevated risk of mortality in the first two years of life due to inadequate breastfeeding. It is estimated that undernutrition is the accumulation of fetal growth restriction, stunting, wasting, vitamin A and zinc deficits, and poor nursing. Both nutritional intake and health care are important factors of child undernutrition, according to UNICEF conceptual framework for child nutrition.³

Complementary feeding has the potential role to improve the nutritional status of children. When breast milk is no longer sufficient to support the infant’s rising nutritional and energy needs, complementary foods

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are introduced. Therefore, the purpose of introducing complementary foods is to supplement breast milk in order to suit the needs of the infant⁴. The energy intake from breast milk declines with infant age, therefore the 200 kcal/day, 300 kcal/day, and 550 kcal/day energy deficits at ages 6 to 8, 9 to 11, and 12 to 23 months, respectively, must be made up by supplemental meals.^{4,5}

WHO and UNICEF suggest that complementary feeding begins at 6 months and that breastfeeding be continued for up to 2 years.⁴ Given that good complementary feeding depends on not only what is fed to a kid, but also how, when, where, and by whom they are fed, the complementary feeding stage is the most difficult for infants to navigate. Early breastfeeding initiation, exclusive breastfeeding for the first six months of life, adequate, timely, and appropriate complementary feeding from six to 24 months of age, continued breastfeeding up to 24 months are all aspects of infant and young child feeding (IYCF).⁶⁻¹¹

To focus on the most important IYCF practices and to develop universally accepted indicators for capturing the variety and quality of these IYCF practices, a substantial body of research was done over a decade. This process led to the development of the WHO-recommended indicators of IYCF practices, which comprise both mandatory and optional indicators.¹⁰

To achieve the targets of SDG by 2030, we have to focus especially on the reduction of stunting (<12%), wasting (<5%), underweight (<10%), neonatal mortality rate (12/1000 live birth) and child mortality rate under 5 years (25/1000 live birth).¹³ All these indicators are closely related to Infant and Young Child Feeding (IYCF) practices. Studies have shown that breastfeeding is the most beneficial and comprehensive mode of baby feeding, supplying nearly all of the nutrients, growth factors, and immune components needed for an infant's normal development. WHO and UNICEF suggest that complementary feeding begins at 6 months and that breastfeeding be continued for up to 2 years. Given that good complementary feeding depends on not only what is fed to a kid, but also how, when, where, and by whom they are fed, the complementary feeding stage is the most difficult for infants to navigate.⁴ Assessment of IYCF practices needed to be done at regular intervals to follow the trends of it which will lead to appropriate planning of interventions where needed. This study aimed to see the practice status

of the elements of IYCF in the secondary and tertiary level hospitals in Bangladesh.

Material and Methods

A descriptive type of cross-sectional study was done to see the practice status of IYCF among the health service providers as well as service receivers of the secondary and tertiary hospitals in Bangladesh. The study was conducted from 1st February 2023 to 31st May 2023. Study places were selected randomly. Two district Sadar hospitals and two medical college hospitals from each of the eight divisions of Bangladesh were selected randomly as study places.

In the study, the service providers of both sexes working on the ANC corner, IMCI nutrition corner, Breast-feeding corner, and department of pediatrics of selected hospitals were included and service receivers were both male and female residents of those selected districts of Bangladesh and took services from the ANC corner, IMCI nutrition corner, Breast-feeding corner and department of pediatrics in those hospitals. Respondents were taken purposively. A semi-structured questionnaire was used to collect data and face-to-face interview was conducted among the eligible study population. Before going to data collection pretesting was carried out on the respondents of Dhaka Shishu Hospital and necessary modification was done to the questionnaire.

Service providers were asked 15 questions regarding IYCF-related practice which have answers No=0 and Yes=1. Practice levels were categorized into three categories: Poor, Average and Good practice. Less than five IYCF activities are considered as bad practice, six to ten IYCF activities are regarded as average practice, and more than ten IYCF activities are regarded as good practice.

Data analysis was initiated with descriptive analysis using SPSS. The findings of the study were presented by frequency and percentage in tables and graphs. Means and standard deviations for continuous variables and frequency distributions for categorical variables were used to describe the characteristics of the total sample.

Results

The current cross-sectional study was conducted among 416 service receivers and 142 service providers to assess the status of IYCF in the secondary and tertiary level hospitals in Bangladesh. The mean age

of service receivers was 26.29±5.51 years and among them, 98.1% of respondents were female (Table I).

Table I: Distribution of the respondents (service receivers) by socio-demographic characteristics (n:416).

Socio-demographic characteristics of service receivers	Frequency (%)
Age group	
18-27 years	255 (61.4)
28-37 years	149 (35.8)
38-47 years	11 (2.6)
58-67 years	1 (0.2)
Sex	
Female	408 (98.1)
Male	8 (1.9)

About 86.3% of respondents said that they breastfed their baby immediately after birth, 72.1% exclusively breastfed their baby up to 6 months, 92.3% mothers continued breastfed up to 24 months, 91.8% respondents started complementary feeding after 6 months (Table II).

Table II: Distribution of the respondents' (service receivers) practices according to IYCF elements (n:416).

IYCF elements	Frequency (%)
Continued breastfeeding up to 24 months	384 (92.3)
Started complementary feeding after 6 months	382 (91.8)
Breastfed baby immediately after birth (within 1 hour)	359 (86.3)
Exclusively breastfed up to 6 months	300 (72.1)

Among service receivers, 86.3% of respondents gave homemade complementary food, 6.3% gave infant formula, and the rest gave commercial and other foods to their children (Table III). Among 416 service receivers, 75.7% did not give bottle feeding to their baby.

Table III: Distribution of the respondents' regarding type of complementary food (n:416).

Type of complementary food	Frequency (%)
Homemade complementary food	359 (86.3)
Formula	26 (6.3)
Others (cow's milk)	18 (4.3)
Commercial complementary food	13 (3.1)
Total	416 (100.0)

Out of 142 service providers, 66.2% were female and 36.6% had post-graduation level education (Table IV).

Table IV: Distribution of the respondents by Socio-demographic characteristics of service providers (n:142).

Socio-demographic characteristics of service providers	Frequency (%)
Educational status	
Post Graduation	52 (36.6)
Diploma	50 (35.2)
Graduation	39 (27.5)
HSC	1 (0.7)
Sex	
Female	94 (66.2)
Male	48 (33.8)

85.2% of respondents did not get any IYCF training (Figure 1). 81.7% of them worked with IYCF and the rest 18.3% never worked with IYCF. The majority of the service providers provided support for position and attachment, supported mothers to express and breastfeed, counseled caregivers about infant feeding, counseled mothers about complementary feeding, helped mothers about initiation of breastfeeding, and counseled mother about exclusive breastfeeding (Table V).

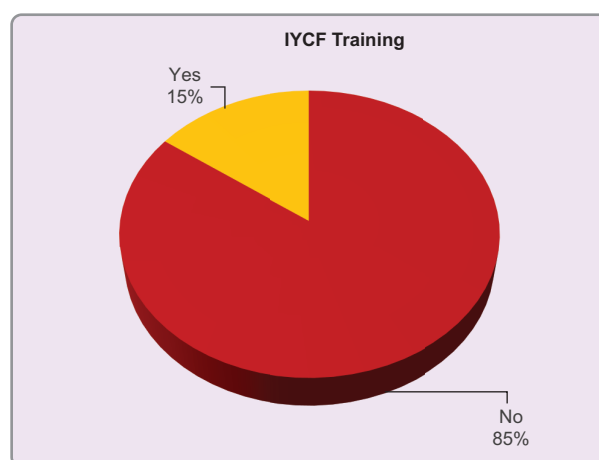
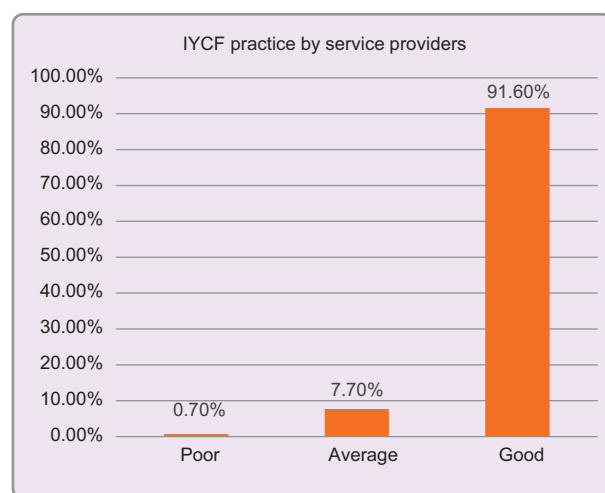


Figure 1: Distribution of the service providers by taking IYCF training (n:142)

Table V: Distribution of the types of services provided related to IYCF activities by the service providers (n:142).

Service providers practice related to IYCF activities	Percentage (%)
Provide support for position and attachment	98.6%
Support mother to express and breastfeed	97.2%
Taking feeding history (0-6 months)	97.9%
Counsel caregivers about infant feeding	99.3%
Taking feeding history (6-24 months)	97.2%
Counsel mother about complementary feeding	97.9%
Counsel pregnant women about maternal nutrition	90.1%
Help mother about initiation of breastfeeding	90.1%
Help mother about crying baby to breastfeed	89.4%
Help mother about engorged breast and cracked nipple	39.4%
Counsel mother about exclusive breastfeeding	96.5%
Demonstrate complementary food preparation	31.7%
Demonstrate caregiver about feeding sick child	94.4%
Explain caregiver about BMS product	62.7%

Among service providers, 91.6% had good IYCF practice and 7.7% had average IYCF practice (Figure 2).

**Figure 2:** Distribution of the service providers according to their practice level of IYCF activity (n:142).

Discussion

Descriptive cross-sectional research was done in 32 health facilities in Bangladesh including two medical college hospitals and two sadar hospitals from each division. This study aimed to see the practice status of the elements of IYCF in the secondary and tertiary level hospitals in Bangladesh.

Two different groups of respondents were included in the research. A total of 416 respondents from service

receivers and 142 service providers were included in the research. In this research among 416 respondents about 61.3% were in the age group of 18-27 years and 98.1% respondents were female.

In a similar study done in Bangladesh 23.1% of mothers were in the 18-20 years of age group, followed by 43.8% in 21 to 25 years, and 23.8% in 26-30 years¹². Another study showed respondents sex ratio male 53.85% and female 46.15%.¹⁵

The similarities are seen because same socio-demographic status.

In the study regarding IYCF elements, about 86.3% of respondents said they breastfed a baby immediately after birth. In another study had been found that 75.8% of the respondents initiated breast milk in less than 1 hour followed by 21.3% in 1-12 hours.¹² On the other hand, only 46.9% of mothers practice early initiation of breastfeeding within 1 hour of delivery.¹⁵ The rate of early initiation of breastfeeding was 43.6%.¹³ A report showed 40% of the respondents practiced early initiation of breastfeeding (Bangladesh Demographic and Health Survey, 2022).

In the study exclusively breastfed babies up to 6 months were 72.1%. A study found that 57.3% of the respondents fed exclusive breastfeeding for 4-6 months.¹²

In another study about 16% of women practiced exclusive breastfeeding during the survey.¹⁴ In a similar study about 65.4% of respondents were practicing

exclusive breastfeeding.¹⁵ The exclusive breastfeeding rate in another study was 41.9%.¹³

In the study, 92.3% of service receivers continued breastfed up to 24 months. In a study around a quarter of people practiced breastfed up to 9 months or more.¹² A study shows that 88.8% of respondents continued breastfeeding for up to 2 years and 11.2% didn't continue.¹⁵

In the study, 91.8% of respondents started complementary feeding after 6 months. In another study, 71.12% of the respondents started complementary feeding in the months of 6-8 months.¹² In a similar study about 83.8% of caregivers started complementary feeding from six months.¹³ In another report, 73.9% of people started solid, semisolid food after 6 months (Bangladesh Demographic and Health Survey, 2022).

The IYCF practices and knowledge were much closer to other studies, this may be due to same sociodemographic context and time frame is similar. But in our study, the rate of exclusive breastfeeding has increased which is very positive news.

In the study, 14.8% of respondents got IYCF training and the rest about 85% didn't get IYCF training. In another study, 90% of health care professionals received any training regarding how to help primi mothers about initiation of breastfeeding.¹⁶

In the study among 142 respondents, 92.3% of service providers' practice level was good, 7.0% had average and 0.7% had poor practice level of IYCF activity.

In the study information was discovered about the caregivers' habits and understanding of breastfeeding and supplemental feeding as well as service receivers' knowledge and practice level of IYCF has been assessed.

Conclusion

The findings presented here to address some important aspects of IYCF in the Bangladeshi context, such as early initiation of breastfeeding, exclusive breastfeeding under 6 months, continued breastfeeding up to 24 months, complementary feeding and dietary diversity of child diets after 6 months, and IYCF practices among service providers. This cross-sectional study found that majority of the service receivers initiated early breastfeeding, continued breastfeeding up to 24 months, started complementary feeding after 6 months and more than two-thirds exclusively breastfed

their babies. The majority of the service providers had good IYCF practice level but most of them didn't get any IYCF-related training.

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Conflicts of interest: There are no conflicts of interest among the authors.

Ethical approval: The study protocol was ethically approved by the Institutional Review Board of Institute of Public Health Nutrition (IPHN), Mohakhali, Dhaka-1212.

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