

Assessment of GOBI-FFF in a Rural Area of Mymensingh District, Bangladesh

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Abstract

GOBI-FFF stands for growth monitoring, oral rehydration, breast feeding, immunization, female education, family spacing and food supplementation. GOBI-FFF is a UNICEF strategy for package for maternal and child health. A cross-sectional, descriptive study was conducted to assess GOBI-FFF in a rural area of Mymensingh district, Bangladesh. We adopted a purposive type of non-probability sampling technique. A total of 180 under-five children were studied by interviewing 142 mothers based on a pre-designed questionnaire in November 2022 in Churkhai village, Bhavokhali union of Mymensingh Sadar upazila under Mymensingh district. Our sample size was 180 (under-five children) in respect to 5 components and it was 142 (mothers of those children) in respect to 2 components of GOBI-FFF. Age distribution of 180 under-five children ranged from 2 months to 59 months; their mean age was 27.89 ± 16.622 months. Females were predominant (male 45%, and female 55%); male-female ratio was 1:1.22. The prevalence of growth monitoring was 19.44% only. The prevalence of oral rehydration, breast feeding, immunization and food supplementation were 91.11%, 87.78%, 91.67% and 82.82% respectively. Growth monitoring was not satisfactory. The other components of GOBI-F) were excellent. Age distribution of 142 respondent mothers ranged from 16 years to 40 years. The mean age was 25.67 ± 5.646 years. The majority of the mothers (86.62%) were literate. Female education improved across generations from 21.83% to 86.62% to 97.89%. The majority of respondents (65.49%) adopted birth spacing and family planning.

CBMJ 2026 July: Vol. 15 No. 02 P:98-101

Keywords: GOBI-FFF, UNICEF, child health, maternal factors, rural area, Bangladesh

Introduction

GOBI-FFF stands for growth monitoring, oral rehydration, breast feeding, immunization, female education, family spacing and food supplementation. GOBI-FFF is World Health Organization (WHO) package for maternal and child health. This is a well-known primary health care strategy recommended by UNICEF. The target population is under-five children and mothers of under-five children. It is a child survival strategy which improves child nutrition, immunity against common childhood diseases and reduces under-five morbidity and mortality due to childhood diseases notably ARI and diarrhea.^{1,2} All the components of GOBI-FFF are well known to the rural population of Bangladesh. Growth monitoring by the use of growth chart is not yet in practice in rural areas but the other components are well practiced in rural areas of Bangladesh. Growth monitoring was a part of pilot project of child health of BRAC in 1987–1991, but it was later on not continued.³ Bangladesh wanted to implement growth monitoring by community clinics which was not translated into action. Diarrhoeal

diseases are still common in Bangladesh. By giving prompt oral rehydration we can reduce morbidity and mortality due to diarrhoea. Diarrhoea is a cause of malnutrition. Thus, we can break the vicious cycle of malnutrition-infection. Breast feeding provides nutrition and also provides immunity. Thus, it fights against both malnutrition-infection. Immunization fights against EPI preventable diseases which are tuberculosis, poliomyelitis, diphtheria, pertussis,

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tetanus, hepatitis-B, hemophilus influenzae type B, pneumococcal pneumonia, measles and german measles. Thus it assures child survival. An educated female can better take care of a child. Family spacing also contributes to child survival. Food supplementation i.e., appropriate weaning foods prevent malnutrition.^{1,2} Assessment is the systematic collection, review and use of information about public health activities, programs and services undertaken for the purpose of quality improvement, planning and decision making.³ We did a survey for assessment of GOBI-FFF in a rural area of Mymensingh district, Bangladesh.

Methods

This cross-sectional, descriptive study was conducted in Churkhali village under Bhabkhali Union of Mymensingh Sadar Upazila, Mymensingh district, Bangladesh. Our study population was under-five children and mothers of under-five children. Our sample size was 180 under-five children in respect to 5 components and it was 142 mothers in respect to 2 components of GOBI-FFF. Those 180 under-five children were assessed by interviewing 142 mothers based on a pre-designed questionnaire. Moreover, data was collected on mothers' education, birth spacing and family planning. The correct choice was marked as 1, the wrong choice as 0. Score below 60 was considered as bad, 60 to 79 as good and 80 to 100 as excellent.

A computerized master sheet was prepared and data was entered. Data analysis was done by using Statistical Package for Social Sciences (SPSS) version 20.0 for Windows. Data was expressed as frequency and percentage. Data was presented in tabulated form.

This study was approved by the Ethical Review Committee of Community Based Medical College, Bangladesh (CBMC,B), Mymensingh, Bangladesh.

Results

As we have mentioned earlier that our sample size was 180 (under-five children) in respect to 5 components and it was 142 (mothers of those children) in respect to 2 components of GOBI-FFF. Age distribution of 180 under-five children ranged from 2 months to 59 months; their mean age was 27.89 ± 16.622 months. Females were predominant (male 45%, and female 55%); male-female ratio was 1:1.22 (Table-I). The prevalence of growth monitoring was 19.44% only. The prevalence of oral rehydration, breast feeding, immunization and food supplementation were 91.11%, 87.78%, 91.67% and 82.82% respectively. Growth monitoring was not satisfactory. The other components of GOBI-F) were excellent (Table-II). Age distribution of 142 respondent mothers ranged from 16 years to 40 years. The mean age was 25.67 ± 5.646 years (Table-III). The majority of the mothers (86.62%) were literate. Female education improved across generations from 21.83% to 86.62% to 97.89%. The majority of respondents (65.49%) adopted birth spacing and family planning (Table-.IV).

Table-I: Age and gender distribution of under-five children (N=180)

Vriables	Frequency	Percentage
Age group (in months)		
0-11	37	20.56
12-23	37	20.56
24-35	33	18.33
36-47	37	20.56
48-59	36	20.00
Gender		
Male	81	45.00
Female	99	55.00

Table-II: Assessment of growth monitoring, oral rehydration, breast feeding, immunization and food supplementation of under-five children (N=180)

GOBI-F assessment	Yes		No	
	Frequency	Percentage	Frequency	Percentage
Growth monitoring	35	19.44	145	80.56
Oral rehydration	164	91.11	16	8.89
Breast feeding	158	87.78	22	12.22
Immunization	165	91.67	15	8.33
Food supplementation	135	82.82	28	17.18

Table-III: Age distribution of the mothers of the children (N=142)

Age group (in years)	Frequency	Percentage
15–24	62	43.66
25–34	60	42.25
35–44	20	14.08

Table-IV: Assessment of female education and birth spacing and family planning of the mothers of the children (N=142)

FF assessment	Yes		No	
	Frequency	Percentage	Frequency	Percentage
Female education 1st generation	31	21.83	111	78.17
2nd generation	123	86.62	19	13.38
3rd generation	139	97.89	3	2.11
Birth spacing and family planning	93	65.49	49	34.51

Discussion

In this study, our sample size was 180 under-five children. Age distribution of under-five children

ranged from 2 months to 59 months. Their mean age was 27.89 ± 16.622 months. Numbers of children in all age groups were nearly equal. Among gender, females were predominant; male-female ratio was 1:1.22. In a BRAC (an NGO working in Bangladesh) primary healthcare programme related study done in Bangladesh, the sample size was 198; age distribution ranged from birth to 2 years. The age group 6–23 months was predominant. However, male and female were equal.⁴

In this study, among 180 under-five children, 43 possessed growth chart and among them 35 had correct frequency of growth monitoring. The prevalence of growth monitoring was 19.44% only. This was because growth monitoring was not a government program. Those who had growth chart, was provided by BRAC and the growth monitoring was also activity of BRAC. The result of this study about growth monitoring was inferior to a BRAC's study during 1987–91, where the prevalence of growth monitoring was 42.9%.⁴

In this study, the prevalence of oral rehydration, breast feeding, immunization and food supplementation were 91.11%, 87.78%, 91.67% and 82.82% respectively. Growth monitoring was found bad (as scored less than 60%). The other components of GOBI-F) were scored as excellent (between 80% and 100%). According to the BDHS report, 85% of children with diarrhoea received oral rehydration therapy and 44% received both ORT and zinc; 69% of mothers initiated breast feeding within 1 hour of birth, 65% of infants under age 6 months were exclusively breastfed and 34% of children age 6–23 months were breastfed as well as received age appropriate supplementary foods; 89% of children age 12–23 months are fully vaccinated. The level of coverage of having received the BCG vaccine, three

doses of pentavalent vaccine and three doses of polio vaccine is 95% or higher. Coverage of measles vaccination among children under age 12 months was 88%.⁵

In this study, age distribution of respondent mothers ranged from 16 years to 40 years; their mean age was 25.67 ± 5.646 years. Age group 15–24 years was dominant (43.66%). The majority of respondents (86.62%) were literate. Female education improved across generations from 21.83% in the 1st generation to 86.62% in the 2nd generation and 98.41% in the 3rd generation. The majority of respondents (65.49%) adopted family planning (1 to 2 children norm) and spaced between successive births more than 24 months. According to the BDHS report, the background characteristics of age groups were 15–19, 20–24, 25–29, 30–34, 35–39, 40–44, 45–49 having 10.2%, 17.7%, 17.8%, 14.3%, 11.4% and 11.4% respectively.⁴ In educational status, no education, primary incomplete, primary complete, secondary incomplete, secondary complete or higher were estimated 16.6%, 21.1%, 10.1%, 35.5% and 16.7% respectively i.e., female literacy in the present generation was around 83%, which is in congruence with our findings.⁴ Moreover, 62% of currently married women of reproductive age group are using a contraceptive method.⁵ This is way less than that of our findings in the rural area. The principles of GOBI-FFF were already familiar to and have since been increasingly practised by the community and healthcare providers.^{3,6} However, our study showed that not all domains of GOBI-FFF are equally familiar and practiced among rural community people. We recommend that growth monitoring and assessment based on GOBI-FFF need to be assigned to community health care provider in community clinic and should be integrated with EPI programme for better implementation.⁷

Conclusion

In this study, the prevalence of growth monitoring was 19.44% only which was bad. The prevalence of oral rehydration, breast feeding, immunization and food supplementation were 91.11%, 87.78%, 91.67% and 82.82% respectively, which were excellent. Female education improved over generations from 21.83% in the 1st generation to 86.62% in the 2nd generation and 97.89% in the 3rd generation. The majority of the mothers (65.49%) adopted family planning (1 to 2 children norm) and spaced between successive births more than 24 months, which was at satisfactory level. Not all domains of GOBI-FFF are equally familiar and practiced among rural community people.

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