

**Title: Prevalence of wasting and associated factors among Under 5 children
in Korail slum, Dhaka, Bangladesh: A cross-sectional study**

**“Final Report of Summative Learning Project (SLP) presented to the BRAC James P
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Table of Contents

Abstract	3
Introduction	4
Research question	5
General objective	5
Specific objectives	5
Conceptual framework	6
Methodology	8
Study approach and design	8
Study site	8
Study population	8
Sample size and Sampling technique	9
Study tool	9
Dependent variable	9
Independent variable	10
Data collection procedure & quality control	10
Data analysis	11
Ethical Consideration	11
Findings	12
Discussion	23
Limitation	25
Conclusion	25
Acknowledgement	26
References	27
Annex	30
Annex 1: Questionnaire	30
Annex 2: Do file of stata	54
Annex 3: Consent form	76
Annex 4: Timeline	82

Abstract

Introduction: Among Bangladeshi children under the age of five (U5), malnutrition is a major health concern. Wasting is one of the malnutrition symptoms associated with malnourished children's deaths. Southern Asia has a 14.1% prevalence of wasting, according to the world nutrition survey. According to the Global Nutrition Report, the prevalence of wasting among under-5 children is 9.8% in Bangladesh.

Objective: The goal of this research to assess the prevalence and associated factors of wasting among Under 5 children in Korail slum.

Method: A descriptive cross-sectional study was conducted among 342 children under the age of five living at Korail slum in Dhaka city from October 15, 2022 to January 11, 2023. A standard anthropometric measurement method was used for the measurements. The measurements were height and weight. Software named STATA 17 was used to analyze the data. A multivariate and bivariate logistic regression analysis was conducted.

Findings: In this study, the mean age of under-5 children was 26.7 months. Male was 54.4% and female was 45.6%. 10.23% of the anthropometric assessment was wasted based on the weight for height Z-score. According to the study, females were more likely to suffer from wasting than males.

Conclusion: In Bangladesh, under nutrition among children under the age of five is a public health problem. We observed that the prevalence of wasting in Korail was slightly higher than the national prevalence. To reduce the wasting status of children under 5 years old, the government, nongovernmental organizations, and the community must work together.

Introduction

Malnutrition is a pathological condition caused by a relative, absolute, or overabundance of one or more important nutrients. In underdeveloped nations, malnutrition continues to be a serious public health issue (Mengistu et al., 2013). Multiple interrelated factors contributed to malnutrition, which has significant short- and long-term consequences on health (Bomela, 2009). Under-nutrition and being overweight are two distinct conditions that fall under the umbrella of malnutrition. Stunting, wasting, and being underweight are all indications of under nutrition, whereas being overweight or obese is linked to a range of non-communicable diseases (Rahman et al., 2021). Anthropometric measurements are used to evaluate the nutritional condition of individuals and population groups. Anthropometric measurements such as weight, height, and Mid Upper Arm Circumference (MUAC) are well-known. Weight for age (WFA), height for age (HFA), weight for height (WFH), MUAC for age, and body mass index (BMI) for age are a few examples of measurements that are stated as indices (Dires & Mareg, 2021). Wasting is defined by a Weight-to-height ratio less than 2 standard deviations (SDs). Wasting is the most harmful short term consequence for under 5 children. For children below the age of five, it is a major cause of death (Paré et al., 2019). In 2020, it was estimated that globally 45 million children under the age of five were wasted (Islam & Biswas, 2020). According to the global nutrition report the prevalence of wasting in Southern Asia is 14.1%. But not a single nation in the sub-region is on track to achieve the goals for wasting in children under the age of five. Wasting prevalence is 14.1% inside this Southern Asia sub region that is greater than the global average of 6.7% (Global Nutrition Report, 2021). In Bangladesh, some progress has been made towards the target for wasting but still 9.8% (Global Nutrition Report, 2021) of children under 5 are affected. This is higher than the average for the Asia region (8.9%) (Global Nutrition Report, 2021). Bangladesh and other developing nations are still debating the risks associated with wasting. Wasted children suffer secondary immunodeficiency, which makes them more vulnerable to infections that can be fatal (Scrimshaw, 2003). Additionally, wasting frequently repeats in children who survive, possibly causing stunting and other types of longer-term developmental damage (Harding et al., 2018). There is an urgent need to address the high burden of child wasting. The global Sustainable Development Goals (SDGs) contain a target for 2025 to reduce child wasting to 5% or less and then sustain that level (Harding et al., 2018). Increased implementation of evidence-based policies and programs will be necessary to reach this

objective. According to the World Bank, treating the 91 million severely wasted children would cost \$9 billion over ten years, or an average of \$90 per child. While substantial in terms of low-income countries' health budgets, every dollar spent on severe wasting therapy would generate around \$4 in economic gains (World Health Organization [WHO], 2014).

A study was conducted in 2015 in Korail slum regarding malnutrition only based on weight for age Z score indicator (Fakir & Khan, 2015), which does not represent the current scenario of under-nutrition whether wasting represents the acute condition of malnutrition. Another study has been conducted on malnutrition (Underweight, stunting and wasting) among Under 5 children in Agargaon and Beribadh slums (Hoque et al., 2021). The prevalence of wasting in Bangladesh is relatively well documented, but not specific to the localities and residences so far. It also varies among localities and residences. A study conducted in other slums does not represent the main associated factors of wasting in Korail slum. The slum residents are in low socioeconomic conditions and work as cleaners, domestic helpers, rickshaw pullers, and in the ready-made garment industry. Most of the households are made of tin and are overcrowded, lacking in basic services like water and sanitation, and sharing a single cooking space as well as a cemented pit or hanging toilet that is frequently unhygienic. These slum dwellers are more prone to get infections which lead to malnutrition (Fakir & Khan, 2015). At Korail slum in Dhaka city, no study has yet been conducted on wasting among 0-59 month-old children. This study design will assess the prevalence of wasting and factors affecting children between the ages of 0-59 months. As a result, this study will help policymakers to make evidence-based policies and interventions regarding wasting in Korail slum.

Research question

What is the prevalence and associated factors of wasting among Under 5 children in Korail slum?

General objective:

1. To assess the prevalence and associated factors of wasting among Under 5 children in Korail slum.

Specific objectives:

1. To determine the prevalence of Wasting among Under 5 children in Korail slum.
2. To identify the associated factors of wasting among Under 5 children in Korail slum.

Conceptual framework

A conceptual framework that emphasizes the multiple causes of child undernutrition has been adopted from UNICEF, 1998. It is intended to direct the assessment and analysis of the factors that affect children's nutritional status and to determine the most efficient cross-sectoral interventions (UNICEF, 1998). The framework divides the factors causing undernutrition in children into three stages.

- Immediate causes, that affects each individual;
- Underlying causes, that have an impact on households and communities;
- Basic causes, fundamental factors that affect the processes and structures of entire societies

The direct causes of undernutrition are illnesses, a lack of nutritional intake, or a combination of the two. The interrelated underlying elements of food, care, and health are represented by factors at the household and community levels that have an impact on them (Sassi, 2018). The resources available as well as social, economic, and political constraints that disregard human rights and maintain poverty can limit households' and communities' efforts to achieve food security. These occurrences may have both short- and long-term effects on undernutrition in children. As seen in Figure 1, the long-term effects of child malnutrition have a negative impact on the fundamental causes, producing a vicious cycle (Cesani et al. 2014). Under the dimension of immediate causes we considered inadequate dietary intake (Early initiation of breast feeding, Exclusive breast feeding, complementary feeding); Diseases (Fever, measles, diarrhea and ARI) as proxy indicators. We used food security (food availability, food distribution, minimum meal); inadequate care (ANC and PNC visit of mother), and inadequate disease prevention and control (health care seeking behavior hygiene and immunization of children) as proxy indicators for the dimension of underlying causes for our analysis. The control and management of resources (decision-making authority, financial access, educational attainment, and economic standing) were taken into consideration under the dimension of basic causes for our study.

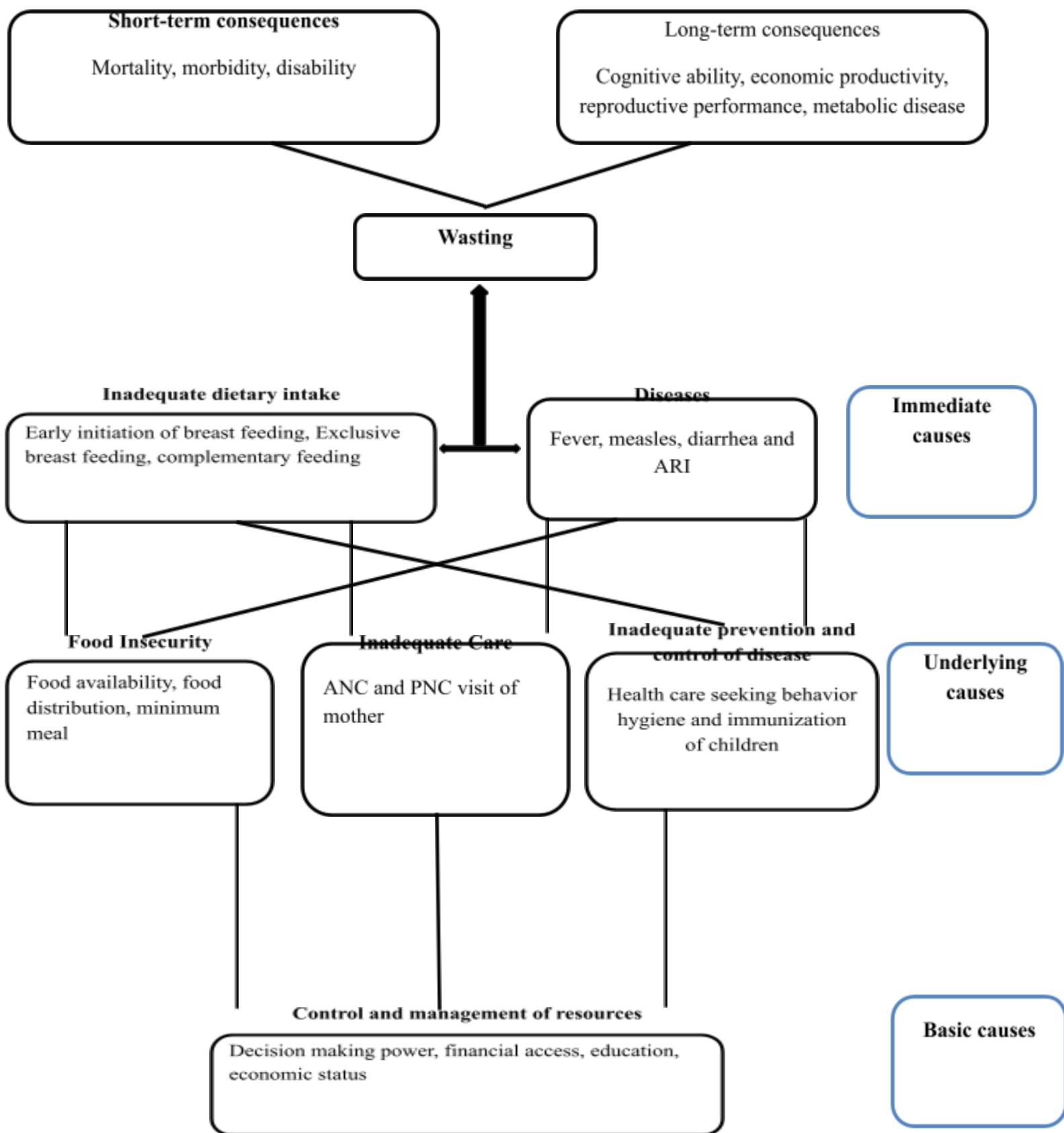


Figure1: Conceptual framework adopted from UNICEF (1998).

(Vogt et al., 2016).

Methodology

Study approach and design:

We followed a quantitative approach and community-based descriptive cross-sectional study to answer our research questions.

Study site:

In the two city corporations of Dhaka, there are over 5000 slums where over 4 million people live (UNICEF, 2022). The total population in Dhaka City Corporation is 10,278,882. Among them the number of male is 5,595,395; females are 4,681,930 and there is 1557 third gender (Bangladesh Bureau of Statistics [BBS], (2022). We purposively selected the Korail slum for our study as it is the largest slum in Dhaka city. The reasons for choosing this particular slum were the fact that it is representative of other slums in the city of Dhaka in terms of household structure, the general environment, religion, and cultural belief, and that it was sufficient to get enough study participants for the study (Uzma et al., 1999). According to the study, the total population of Korail slum is about 50,000 and the area is approximately 100 acres which is located close to the Gulshan-Banani area (Bashar et al., 2020).

Study population:

Our study population was mothers and their children who were less than 5 years of age and lived in the Korail slum of Dhaka city.

Inclusion criteria:

Mothers and having children under 5 who resided in Korail slum for at least 6 months were inclusion criteria for the participation of this study.

Exclusion criteria:

Mothers and children under 5 who were seriously sick were not included in the study, nor were mothers who were not willing to participate in the study.

Sample size and Sampling technique:

To calculate the sample size for our study, we utilized the "epi info" software from Centers for Disease Control and Prevention (CDC). The total population in the Korail slum is about 50,000. 9.8% of children under 5 the age of five were determined as wasted (Global Nutrition Report, 2021). For our research, we took into account a 5% margin of error, and a 95% confidence interval, with 2 of design effect. After that, we anticipated our non-response rate to be 20%. To avoid the fraction the sample size was 338. To choose our participants, we used a systematic random sampling procedure. After arriving at the slum, we chose Ershad School field as landmark and searched there for five mothers from five different houses who met our inclusion criteria. After that, we chose one household randomly and we interviewed every third household. If we didn't find any children under the age of five in the third household based on our inclusion criteria, we moved on to the next household. One child was chosen randomly by lottery from HHs where there was more than one child aged 0-59 months. As a group, we collected data from the Korail slum in the number of 345. However, three respondents withdrew in the middle of the data collection; therefore we didn't analyze those three. For the final analysis, we included 342 participants.

Study tool:

We created a questionnaire guideline following a thorough review of the literature to collect our data (Mengistu et al., 2013 and Coates et al., 2017).. We submitted our questionnaire to the faculty and peers for approval. The questionnaire was then updated and translated into Bangla in order to collect data. Prior to collecting data, we pretested our research tool in the Sat-tola slum.

Study variables:

Dependent variable

Wasting was a dependent variable for our study.

Operational definition of wasting:

Recent onset of nutritional deficiency caused by abrupt food restriction or improper nutrient absorption that causes weight loss and a weight-to-height ratio below -2SD of NCHS/WHO

median value. The variable of interest generated WHO's weight for height Z score: 0 = No if $WHZ \geq -2$ (Normal) and 1 = Yes if $WHZ < -2$ (Wasting).

Independent variable:

Socio-economic and demographic variables: Total HHs member, total number of children, marital status, religion, HH income, parent's education, decision making power, financial access and occupation.

Maternal characteristics: Age, ANC visits, PNC visit, health status during pregnancy

Child characteristics: Age, Sex, birth order, place of delivery, gestational age, place of birth, and morbidly status last two weeks before study conducted (fever, measles, diarrhea and ARI).

Child caring practices: Early initiation of breast feeding, Exclusive breast feeding, child received pre-lacteal food/fluids, health care seeking, immunization and Vitamin supplement

Environmental Health condition: Water supply, sanitation, hygiene and housing condition

Food Insecurity: Food availability, food distribution, minimum meal

Data collection procedure & quality control:

We performed face-to-face interviews with the mothers as part of our data collection. After that, we created a Google form with the questionnaire that had been translated into Bengali. When measuring a child's weight, we initially took their weight with their mother's for children below and above 2 years old who couldn't stand. Then we only gauged their mother's weight. After that, we subtracted the values to obtain the child's weight. Also, we used our scale to determine the weight of children over 2 years old who could stand. We utilized TANITA UM-070 as our weighing scale for both measures. The children's length and height were measured using a portable height and length measuring instrument. Every morning before the data collection process, we calibrated our devices to ensure an accurate measurement of weight and height/length. We requested our participants to remove their children's shoes and bulky clothing before measuring. The weight and height data was recorded to the nearest decimal point. We extensively trained our data collectors for conducting interviews and taking measurements. We asked our participants to wear a mask during the interview as a precaution due to Covid-19.

Before and after the process, we disinfected our hands and measuring tools. We also kept a safe distance from our participants. Following data collection each day, a team meeting was convened; all responses and measurements were double-checked by teammates.

Data analysis:

We entered our data into a Microsoft Excel file after collecting it on Google Forms. From the Excel file, we eliminated the Bengali text. Our variables were coded in the excel document. The Excel file was then imported into STATA 17 for analysis. We checked the variable names and labels. Following that, we searched for any missing data but could not find any. Labeling the variables, recoding the values, and categorizing the variables were done to help with thorough analysis. Our study participants underwent a descriptive analysis, and the results were reported as frequency and percentage. To measure the prevalence of wasting and different independent variables we performed a Chi-square test. In order to determine the relationship between the dependent and independent variables, we lastly performed a logistic regression both unadjusted and adjusted. All variables with a p value of > 0.2 were removed from the adjusted analysis.

Ethical Consideration:

The Institutional Review Board of BRAC James P Grant School of Public Health gave us ethical permission for our research. After being told of the study's goals, the voluntary nature of their participation, and their freedom to leave at any time during the interview, each participant gave informed written consent before the interview. We maintained confidentiality of the participant's identity throughout the process. Each completed questionnaire was given a unique ID to preserve the respondents' anonymity. Participants received no money or reward of any kind for taking part in the study.

Findings

A total of 342 under 5 children and their mothers were finally included in our study for final analysis. Table 01 shows the socio-demographic characteristics and prevalence of wasting of our study participants. Most of the participants (74.9%) belonged to five or less household members. Among them the prevalence of wasting was 10.9%. Maximum mothers had two or less children (77.5%). The prevalence of wasting was higher (13%) who had more than two children. A higher proportion of respondents (59.4%) have been living in the slum for 0-10 years. We found that the wasting prevalence is higher (12.8%) in that group. The majority of the mothers live with their husband (96.8%). Children of mothers who lived with their husbands had slightly higher rates of wasting (10.3%) comparatively mothers who didn't live with their husbands. Almost all the mothers were Muslim (97.4%) by religious belief. All the wasting was among Muslims religion. We did not find any wasting among other religions, although the proportion of other religions was very low (2.6%). Most of the mothers completed their primary level of education (46.5). We observed that the prevalence of wasting was maximum (13.2%) among children whose mothers had no education or completed primary education. The majority of the husbands completed their primary level of education (46.5%). We found that the prevalence of wasting was higher (13.2%) among children whose fathers had no education or completed primary education. Prevalence of wasting was less (8.1% & 7.3%) among children whose mothers and fathers completed secondary education and above. In our study, we found that most husbands' occupation was service (34.5%). The prevalence of wasting was high (14.1%) where husbands were unskilled labor and low (6.8%) where husband's occupation was service. The household monthly average income of our study participants was 17777.78 BDT¹. Moreover, half of the mothers (56.7%) said their husbands made the household's financial decisions. Whereas mothers took financial decision only 5.9%, which was the lowest. Wasting was more (13.3%) among households whose financial decision was taken by father-in-law. On the other hand wasting prevalence was low (5.0%) in those households where only mothers took financial decision.

¹ BDT= Bangladeshi Taka

Table 01: Prevalence of wasting across all socio-demographic characteristics of under 5 children and their mother

Characteristics	Wasted (%)	Normal (%)	n=342 (%)	P-value
Total household member				
≤5	10.9	89.1	256 (74.9)	0.459
>5	8.1	91.9	86 (25.1)	
Total number of child				
≤2	9.4	90.6	265 (77.5)	0.365
>2	13	87	77 (22.5)	
Years of living in slum				
0-10	12.8	87.2	203 (59.4)	0.165
11-20	6.4	93.6	94 (27.5)	
> 20	6.7	93.3	45 (13.1)	
Marital status²				
Married	10.3	89.7	331 (96.8)	0.899
Others	9.1	90.9	11 (3.2)	
Religion				
Muslim	10.5	89.4	333 (97.4)	0.305
Hindu	0	100	9 (2.6)	
Mother's education level³				
Pre-primary or none	13.2	86.8	106 (31.0)	0.463
Primary completed	9.2	90.8	174 (50.9)	
Secondary completed and above	8.1	91.9	62 (18.1)	
Husbands education level				
Pre-primary or none	13.2	86.8	114(33.3)	0.487
Primary completed	9.4	90.6	159 (46.5)	
Secondary completed and above	7.3	92.7	69 (20.2)	
Husband's occupation⁴				
Skilled labor	12.1	87.9	91 (26.6)	0.359
Unskilled labor	14.1	85.9	78 (22.8)	
Service	6.8	93.2	118 (34.5)	

² Divorced, Separated and Widowed-others

³ Pre-primary or none=Don't know, never went to school and up to class 4; Primary completed= Class 5 and up to class 10, Secondary completed and above= SSC/Dakhil, BA/ BSc/BCom/Fazil/graduate/ BA (honours), Diploma/ vocational, Hafezi/Qawmi/Kharizi; MA/Phd/Kamil

⁴ Petty business, Employee, Garment's worker, NGO worker, Teacher, House-maid, Skilled (Sewing, Embroidery, Cook), Unskilled – Day laborer
Service (Garments, Security), Skilled (Plumber, Mechanic, Electrician, Hair Dresser, Blacksmith, Goldsmith, Cook, Driver), Unskilled (Rickshaw/Van/Wheelbarrow/Baby taxi puller, Unskilled day laborer, Hawker), Small trade (Petty business man, Sales man), Others (Don't know, no work, living abroad)

Characteristics (table 1 continued)	Wasted (%)	Normal (%)	n=342 (%)	P-value
Small trade	9.1	90.9	55 (16.1)	
Monthly household income				
Less than 10000	12.2	87.8	41 (12.0)	0.427
10000 to <15000	8.8	91.2	91 (26.6)	
15000 to <20000	13.4	86.6	97 (28.4)	
20000 to <25000	3.8	96.2	52 (15.2)	
25000 or more	11.5	88.5	61 (17.8)	
Financial decision maker⁵				
Herself	5	95	20 (5.9)	0.647
Husband	10.3	89.7	194 (56.7)	
Both husband and wife	13.2	86.8	83 (24.3)	
Father-in-law	13.3	86.7	15 (4.4)	
Mother-in-law	5.3	94.7	19 (5.6)	
Others	0	100	11 (3.2)	

⁵ Others=Father, mother, sister and brother

Table 02 represents the maternal and child characteristics; and feeding practices with the prevalence of wasting (under 5 children) of our study participants. A higher proportion (62.6%) of mothers belonged to the 20-29 years of age group and the lower proportion (2.9%) was the 40 years and above age group. The prevalence of wasting was more in the 20-29 years age group, though the number of our participants was maximum in this age group. A maximum number of mothers received their ANC care (86.0%). Mothers who didn't receive ANC care had more (20.8%) wasted children, which is significant. Proportionately more mothers had less than four visits (53.2%). Almost one-third (32.2%) of the mothers experienced any pregnancy-related complication during their pregnancy. Pregnant women with complications due to pregnancy had more wasted (12.7%) children. One-third (33.9%) of respondents received medical care within 42 days of giving birth. In the 42 days following birth, most mothers sought medical care from private hospitals. It was found that mothers who took medical care within 42 days of delivery from public hospitals, their children were more wasted (18.8%) than those who received medical care from private hospitals (9.5%).

In our study, most of the under 5 children were male (54.4%) rest were female (45.6%). Female children were more wasted (14.7%) than male children (6.5%), which is significant. A large number of under 5 children belonged to 12-23 months of age group and less children belonged to 48-59 months of age group. We observed that more age group (48-59 months) were more wasted (22.0%) compared to other aged groups. About two-thirds (66.4%) of children's weight was more than 2.5 kgs during their birth. Wasting was more in children weighing less than 2.5 kg at birth. A large number of children (95.6%) were born after 9 months of gestational age. In this study, we observed that wasting was more in children who were born before 9 months of gestational age. About two-thirds (66.1%) of our study children's mode of delivery was normal vaginal. Compared to caesarean-delivery children, those with normal vaginal deliveries had more wasting (10.6%). Nearly half (42.7%) of the children were born at their homes. The birth rate of children in public hospitals was low (11.4%). We noticed that the prevalence of wasting among children born in NGO hospital was high (13.0%) which was similar to public hospital (12.8%). Majority of the under 5 children were immunized (73.4%). It was more common for children who were not fully vaccinated to be wasted (12.1%). Half (52.1%) of the children suffered from illness in the past two weeks before the data collection and the wasting prevalence was higher in that group. In the past two weeks before the data collection maximum (58.4%) children

were suffering from Respiratory tract infections and diarrhoea was less (5.1%) in children. We found that children with fever were more wasted (12.7%) that is almost similar to respiratory tract infections (12.5%).

A majority (62.4%) of the mother went to the pharmacy and fewer (3.4%) mothers went to NGO hospitals for treatment of their children. Wasting prevalence was higher among mothers who went to NGO hospitals for treatment of their children.

A maximum number (68.4%) of children didn't initiate immediate breastfeeding. More than two-thirds (69.9%) of children didn't receive pre-lacteal food rest of them (30.1%) received pre-lacteal food. Children receiving pre-lacteal food were more (12.6%) wasted. Most (43.7%) of the children were fed honey as pre-lacteal food and wasting prevalence was higher (15.6%) in honey-fed children. In the majority of cases, the children were exclusively breastfed (67.3%), and in the remaining cases, they were not exclusively breastfed (32.7%). Most children (73.4%) received vitamin A supplements; we found more wasting (11.2%) among them.

Table 02: Prevalence of wasting among Maternal and child characteristics; and feeding practice of under 5 children

Characteristics	Wasted (%)	Normal (%)	n=342 (%)	P-value
Age of mother (years)				
15-19	7.7	92.3	39 (11.4)	0.714
20-29	11.7	88.3	214 (62.6)	
30-39	7.6	92.4	79 (23.1)	
≥40	10	90	10 (2.9)	
ANC visit				
Yes	8.5	91.5	294 (86.0)	0.009
No	20.8	79.2	48 (14.0)	
Number of ANC visit				
No visit	20.8	79.2	48 (14.0)	0.007
< 4	6	94	182 (53.2)	
≥4	12.5	87.5	112 (32.8)	
Complication during pregnancy				
Yes	12.7	87.3	110 (32.2)	0.295
No	9	91	232 (67.8)	
PNC visit				

Characteristics (table 2 continued)	Wasted (%)	Normal (%)	n=342 (%)	P-value
Yes	12.1	87.9	116 (33.9)	0.422
No	9.3	90.7	226 (66.1)	
Place of PNC visit				
Private hospital	9.5	90.5	84 (24.4)	0.173
Public hospital	18.8	81.2	32 (27.6)	
Child sex				
Male	6.5	93.5	186 (54.4)	0.012
Female	14.7	85.3	156 (45.6)	
Age of child (months)				
0-11	10	90	60 (17.5)	0.058
12-23	7.5	92.5	94 (27.5)	
24-35	8.2	91.8	85 (24.9)	
36-47	7.5	92.5	53 (15.5)	
48-59	22	78	50 (14.6)	
Child weight during birth				
<2.5 kgs	8.4	91.6	227 (66.4)	0.110
>2.5 kgs	13.9	86.1	115 (33.6)	
Gestational age at birth				
After 9 months	9.8	90.2	327 (95.6)	0.202
Before 9 months	20.0	80.0	15 (4.4)	
Mode of delivery				
Normal vaginal	10.6	89.8	226 (66.1)	0.743
Caesarian	9.5	90.5	116 (33.9)	
Place of birth				
Home	9.59	90.41	146 (42.7)	0.819
Private hospital	9	91	111 (32.5)	
NGO hospital	13	87	46 (13.4)	
Public hospital	12.8	87.2	39 (11.4)	
Immunization				
Yes	9.6	90.4	251 (73.4)	0.496
No	12.1	87.9	91 (26.6)	
Child sickness within the last two weeks				
Yes	11.8	88.2	178 (52.1)	0.320
No	8.5	91.5	164 (47.9)	
Disease within last two weeks⁶				
Respiratory tract infections	12.5	87.5	104 (58.4)	0.722
Fever	12.7	87.3	55 (30.9)	
Characteristics ((table 2 continued))	Wasted (%)	Normal (%)	n=342 (%)	P-value

⁶ Others= Measles, malaria and dengue

Diarrhoea	0	100	9 (5.1)	
Others	10	90	10 (5.6)	
Place of treatment for child sickness				
Private hospital	9.6 (3)	90.6 (29)	32 (18.0)	
Public hospital	0 (0)	100 (21)	21 (11.8)	
NGO hospital	33.3 (2)	66.7 (4)	6 (3.4)	0.113
Pharmacy	14.4 (16)	85.6 (95)	111 (62.4)	
Not anywhere	0 (0)	100 (8)	8 (4.4)	
Initiation of breastfeeding				
Immediately (Within half an hour)	15.7	84.3	108 (31.6)	0.022
Not immediately (After half an hour)	7.7	92.3	234 (68.4)	
Pre-lacteal food⁷				
Yes	12.6	87.4	103 (30.1)	0.339
No	9.2	90.8	239 (69.9)	
Type of pre-lacteal food				
Honey	15.6	84.4	45 (43.7)	
Processed milk	11.1	88.9	36 (35.0)	0.695
Water with sugar	13.3	86.7	15 (14.5)	
Cow milk	0	100	7 (6.8)	
Exclusive breastfeeding⁸				
Exclusively breast feed	12.6	87.4	230 (67.3)	0.038
Not-exclusively breast feed	5.3	94.7	112 (32.7)	
Vitamin A supplementation				
Yes	11.2 (28)	88.8 (223)	251 (73.4)	0.350
No	7.7 (7)	92.3 (84)	91 (26.6)	

⁷ Pre-lacteal food= Administering any substances to newborns during the first three days after delivery other than breast milk

⁸ Exclusive breast feeding= exclusively breast feed= only breast milk not a drop of water up to six month of age.

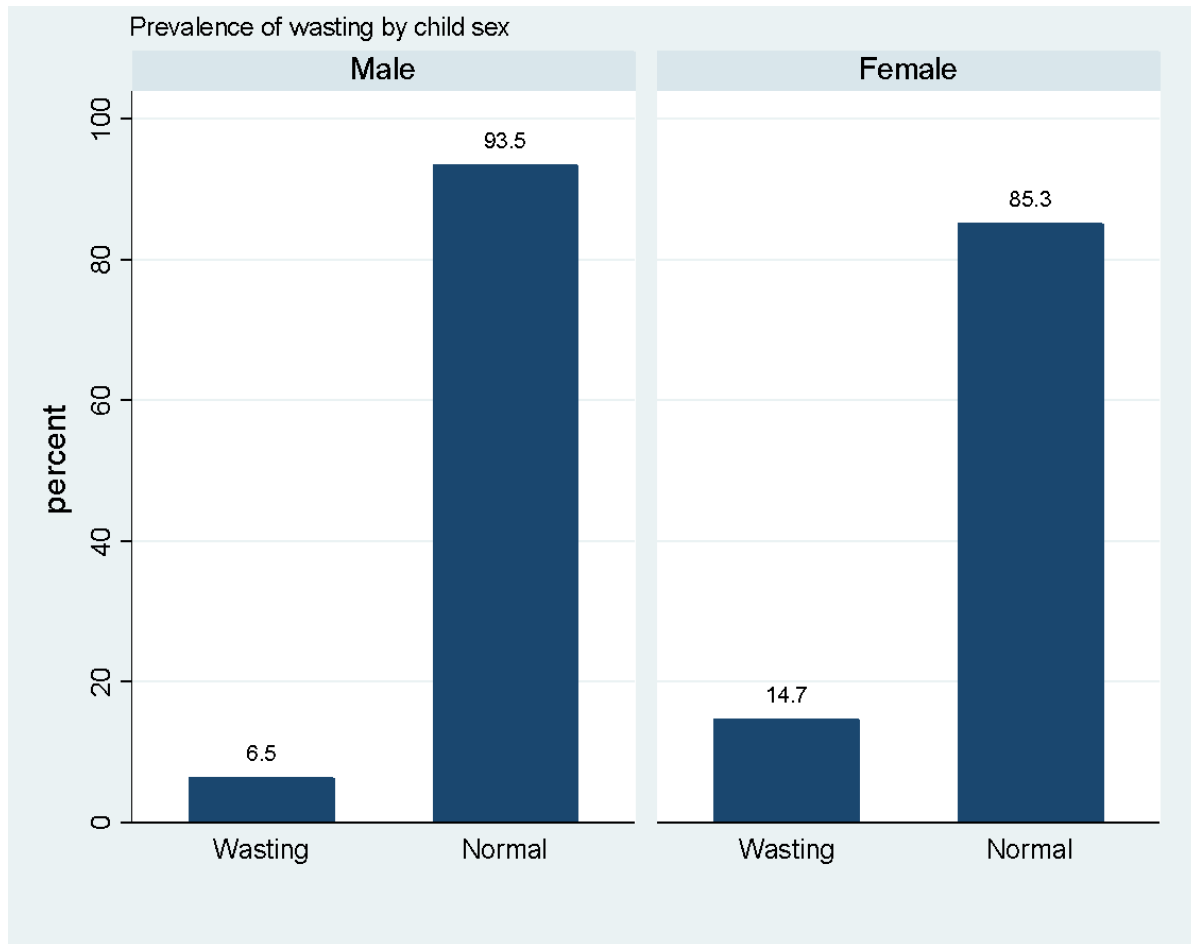


Figure 2: Prevalence of wasting by child sex

Table 03 shows the Water, sanitation and hygiene; and food security characteristics with the prevalence of wasting of our study participants. Maximum household members (89.5%) used supply water for drinking. Households that used supply water for drinking had higher wasting (11.1%) among their children. More than half of (53.2%) households didn't purify their water before drinking. Among them, the prevalence of wasting (11.0%) was more. The city corporation collects waste from almost all households (97.4%). Only a few households (1.2%) dump waste in the lake and wasting prevalence were high among them. Most of the households (42.1%) were food secure. We noticed that severe food insecure households had more wasted (12.0%) children.

Table 03: Prevalence of wasting in Water, sanitation and hygiene and food security characteristics

Characteristics	Wasted (%)	Normal (%)	n=342 (%)	P-value
Main sources of drinking water				
Supply water (tube well, tap)	11.1	88.9	306 (89.5)	0.119
Deep tube well	2.8	97.2	36 (10.5)	
Method to purify water				
Do not use	11	89	182 (53.2)	0.764
Boiling	9.9	90.1	151 (44.2)	
Water filter	0	100	8 (2.3)	
Fitkari	0	100	1 (0.3)	
Method of disposal of households waste				
Collected by city corporation	9.9	90.1	333 (97.4)	0.471
Common pit	20	80	5 (1.4)	
Dump in the lake	25	75	4 (1.2)	
Household food security				
Food secure	9.8	90.2	144 (42.1)	0.899
Mild food insecure	8.6	91.4	70 (20.5)	
Moderate food insecure	11.1	88.9	45 (13.1)	
Severe food insecure	12.0	88.0	83 (24.3)	

Table 04 describes the factors associated with wasting along with COR and AOR.

Respondents who lived in slum for 11-20 years (AOR=2.04; 95% CI: 0.37 to 11.33) had higher odds or lived in slum >20 years (AOR=0.64; 95% CI: 0.05 to 8.11) had lower odds of wasting of their children compared with who lived in slum 0-10 years.

This research showed that compared to those whose husbands were skilled labourers, those whose husbands were unskilled labourers (AOR=0.95; 95% CI: 0.10 to 9.22) had lower odds or service (AOR=0.61; 95% CI: 0.11 to 3.30) had lower odds or small trade (AOR=1.14; 95% CI: 0.15 to 8.32) had higher odds of wasting of their children.

This study showed that mothers who received less than four visits (AOR=0.18; 95% CI: 0.01 to 2.21) or four or more than four visits (AOR=0.31; 95% CI: 0.02 to 3.93) lower risk of having wasted children than who didn't receive any antenatal care services.

This study revealed that mothers who received care within 42 days of delivery from public hospitals (AOR=1.64; 95% CI: 0.40, 6.78) had higher risk of having wasted children compared to those who received care from private hospitals.

In our study, we observed that female children (AOR=2.79; 95% CI: 0.74 to 10.50) had higher odds of wasting compared to male children.

This study revealed that compared to children aged group 12-23 months, children those aged group 0-11 months (AOR=0.52; 95% CI: 0.07 to 3.54) or aged group 24-35 months (AOR=0.82; 95% CI: 0.14 to 4.53) had lower risk of developing wasting.

In this study, we noticed that children whose birth weight was less than 2.5 kgs (AOR=2.20; 95% CI: 0.50 to 9.58) had higher risk of being wasted compared to those whose birth weight was more than 2.5 kgs.

We also observed that not immediately breastfed children (AOR=0.38; 95% CI: 0.10 to 1.60) had not significantly lower odds of being wasted than immediately breastfed children.

We didn't find any significant association between breastfeeding status and wasting.

Table 04: Associated risk factors of wasting with crude OR (COR) and adjusted OR (AOR)

	COR [95% CI]	AOR [95% CI]
Years of living in slum		
0-10	Reference	
11-20	0.46 (0.18, 1.17)	2.04 (.37, 11.33)
> 20	0.48 (0.14, 1.68)	0.64 (0.05, 8.11)
Husband's occupation		
Skilled labor	Reference	
Unskilled labor	1.19 (0.49, 2.93)	0.95 (0.10, 9.22)
Service	0.52 (0.20, 1.37)	0.61 (0.11, 3.30)
Small trade	0.72 (0.24, 2.22)	1.14 (0.15, 8.32)
Number of ANC visit		
No visit	Reference	
<4	0.24 (0.10, 0.62)	0.18 (0.01, 2.21)
≥4	0.54 (0.22, 1.33)	0.31 (0.02, 3.93)
Place of PNC visit		
Private hospital	Reference	
Public hospital	2.19 (0.70, 6.91)	1.64 (0.40, 6.78)
Child sex		
Male	Reference	
Female	2.51 (1.20, 5.22)	2.79 (0.74, 10.50)
Age of child		
12-23	Reference	
0-11	1.38 (0.44, 4.33)	0.52 (0.07, 3.54)
24-35	1.11 (0.37, 3.32)	0.82 (0.14, 4.53)
36 or more	2.11 (0.82, 5.44)	N/A ⁹
Child weight during birth		
>2.5 kgs		
<2.5 kgs	1.77 (0.87, 3.59)	2.20 (0.50, 9.58)
Initiation of breastfeeding¹⁰		
Immediately	Reference	
Not immediately	0.44 (0.22, 0.90)	0.38 (0.10, 1.60)
Exclusive breastfeeding		
Exclusively breast fed	Reference	
Not-exclusively breast fed	0.40 (0.16, 0.98)	0.87 (0.17, 4.40)

⁹ N/A= Not applicable due fewer number of respondents¹⁰ Immediately=Within half an hour, Not immediately=after half an hour

Discussion

In our study the overall prevalence of wasting among under 5 years children in Korail slum, Dhaka, Bangladesh was 10.23% that is almost similar to the prevalence of wasting (9.8%) in Bangladesh reported 2021 by Global Nutrition Report (Global Nutrition Report, 2021).

Most of the study in Bangladesh showed that the prevalence of wasting was high in male children compared to female under 5 aged children (Hossain et al., 2022; Rahman et al., 2021; Das & Gulshan, 2017). However this study reported that the prevalence of wasting is higher in female children (14.7%) than male children (6.5%) of under 5 years which was not found in other previous studies of Bangladesh.

This study also found that, in comparison to children whose mothers had given birth to less than two children, those born to mothers who had more than two children were more wasted. This result is consistent with research done in Vietnam and Bangladesh (Jamro et al., 2012; Islam et al., 2013). This may be because households with more children are more likely to struggle financially to buy food, which increases their risk of having a poor nutritional status. In other words, the low nutritional status may be caused by an inefficient distribution of household resources among a large number of children. Particularly, low-income households struggle to provide for the children's nutritional needs. Families with more children typically spend less time caring for their children (Fentaw et al., 2013).

In our study, we discovered that among children whose parents had completed secondary education and studied more than that, the prevalence of wasting was low (8.1%) among them. This low prevalence among this group is supported by a study in Bangladesh (Hossain et al., 2022). Additionally, education provides a chance to develop safe parenting skills, including completion of children's vaccinations and adopting proper feeding practices and developing hygiene habits (Sharaf et al., 2019). Moreover, the father with a higher education contributes significantly to the family's income and makes good food choices for his family (Talukder, 2017).

This study also traced out mothers who didn't visit any health facility for ANC their children were more wasted. This finding coincides with a study that conducted in Bangladesh among children Under 5 years of age by using data from Bangladesh Demographic and Health Survey

(BDHS)-2007 (Siddiqi et al., 2011). By identifying at-risk mothers and providing interventions and nutritional counseling, the ANC may be able to help in the prevention of child under nutrition (WHO, 2009). The findings also revealed that the children whose mother's delivered their children at home were more wasted. A study using data from the Bangladesh Demographic and Health Survey (BDHS)-2007 corroborates this finding that was conducted among Bangladeshi children under 5 years of age. (Siddiqi et al., 2011).

Fever is a sign of infection, which is a major factor in the development of under nutrition because it causes increased requirements, high energy expenditure, decreased appetite, nutritional losses through vomiting, poor digestion, improper nutrient absorption and utilization, and an imbalance in the metabolism (Morris et al., 2008). In our study, we also noticed that children having fever in the past two weeks prior to the data collection were more wasted (13.0%). Our finding was higher than that of the study (9.4%) conducted in Bangladesh using data from the Bangladesh Demographic and Health Survey (BDHS) (2017-2018) (Hossain et al., 2022).

The findings indicate that women who fed their child, honey, as a pre-lacteal food wasting was more (12.6%) prevalent among them. This finding was in agreement with another study conducted in South Ethiopia (Asfaw., 2015). However, pre-lacteal feeding practices deprive infants of colostrum, which is full of nutrients and immunoglobulins, which reduces the digestive tract's ability to prime itself and raises the risk of wasting (Bekele et al., 2014; Teshome et al., 2009).

In this study, we discovered that children whose mothers received four or more than four ante-natal visits their children were 0.31 times (AOR = 0.31, 95% CI: 0.02 to 3.93) less likely to have wasted than children whose mothers didn't receive any ante-natal visit. This finding was in agreement with another study conducted in Pakistan (Khan et al., 2019). ANC care ensures mothers are not facing any complications during pregnancy and the baby is having proper growth in the womb (Khan et al., 2019). Therefore mothers who complete the 4 ANC visits, their children are supposed to be more healthy after birth and later.

Risk of wasting among children whose birth weight was less than 2.5 kgs was 2.20 times (AOR= 2.20; 95% CI: 0.50 to 9.58) more likely than children whose birth weight was more than 2.5 kgs.

A study conducted in Bangladesh among under 5 years old children that showed the similar result (Rahman et al., 2016). Children born with underweight are usually susceptible to malnutrition in their growing years (Rahman et al., 2016).

Through multivariate analysis, we didn't find any significant result among our outcome and explanatory variables. Several studies conducted in Bangladesh found statistical significance that conducted outside of Dhaka. This variation in statistical value may be due to sample size, and study location, or we might not follow their considered factors (understanding of dietary concepts, information on interactions between parents and children, including responsive feeding). Since Korail is situated in the central part of Dhaka, enormous pilot projects and interventions were done here among under-5-year-old regarding nutrition. This might be another cause.

Limitation

We collected data from mothers about the weight of their children during birth. That might lead to recall bias. The study did not include certain important variables, such as family planning method and birth interval.

Conclusion

In our study, we analyzed the prevalence and associated factors of wasting among under-5 children in Korail slum, Dhaka, Bangladesh. In this study, we examine wasting among under-5 children in the Korail slum to gain insight into broader health conditions among children there. In this study, we observed that the prevalence of wasting in Korail was slightly higher than the national prevalence. Among those, female children were more wasted. The Korail slum needs long-term (nutritional education) and short-term (micronutrient supplements) efforts to reduce wasting among female children. The government should also work with other national or international non-profit organizations to implement nutritional intervention programs. Since we didn't find any statistical significance through multivariate analysis, in the future, qualitative research can be conducted to Understand the context in-depth to get insights on what's happening and how that are affecting children's growth.

In addition, larger scale quantitative data could be collected focusing on all relevant factors that we overlooked in this study.

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Annex

Annex 1: Questionnaire

Part-1: General information

অংশ-১: সাধারণ তথ্য

Serial no. ক্রমিক নং	Questions প্রশ্নাবলী	Option অপশন	Answer code উত্তর কোড
1	Interviewer's name: সাক্ষাৎকার গ্রহনকারীর নাম		
2	Interviewer's Id: সাক্ষাৎকার গ্রহনকারীর আইডি		
3	Date of the interview সাক্ষাৎকার গ্রহনের তারিখ	____/____/____/2022 DD(দিন) MM (মাস) YR(বছর)	

4	<p>Interview start time (in 24-hours format)</p> <p>সাফাংকার শুরুর সময় (২৪ ঘন্টা ফরম্যাটে)</p>	<p>____ ____ : ____ ____ </p> <p>Hour(ঘন্টা) Minute(মিনিট)</p>	
5	<p>Who is the head of your household?</p> <p>আপনার থানার প্রধান কে?</p>	<p>1=Herself (নিজেই) 2=Husband (স্বামী) 3=Both husband and wife (স্বামী ও স্ত্রী উভয়েই) 4=Father in law (শ্বশুর) 5=Mother in law (শ্বশুরি) 99=Others (Please specify) অন্যান্য (দয়া করে নির্দিষ্ট করুন)</p>	
6	<p>What is the name of the head of the household?</p> <p>আপনার থানা প্রধানের নাম কি?</p>		
7	<p>What is your (mother's) name?</p> <p>আপনার নাম (মা) কি?</p>		
8	<p>Mother's Id</p> <p>মায়ের আইডি</p>		
9	<p>What is your (mother's) date of birth?</p> <p>আপনার জন্মসাল কি?</p>	<p>____ ____ / ____ ____ / ____ ____ </p> <p>DD(দিন) MM (মাস) YR(বছর)</p>	

16	<p>For how many years have you been living in this slum?</p> <p>কত বছর যাবৎ আপনি এই বস্তিতে বাস করছেন?</p>	<p>----- year (বছর)</p> <p>----- month (মাস)</p>	
17	<p>Address and contact number of the participant:</p> <p>অংশগ্রহনকারীর যোগাযোগের ঠিকানা ও ফোন নম্বর</p>		

Part-2: Socio-demographic and economic

অংশ-২: সামাজিক-জনসংখ্যাগত এবং অর্থনৈতিক

Serial no. ক্রমিক নং.	Questions প্রশ্নাবলী	Option অপশন	Answer Answer code উত্তর কোড
1	<p>How many members live in your household?</p> <p>আপনার খানার সদস্য সংখ্যা কত?</p>	<p>1=\leq5 (৫ জন বা তার কম)</p> <p>2=$>$5 (৫ জনের বেশি)</p>	
2	<p>What is your marital status?</p> <p>আপনার বৈবাহিক অবস্থা কী?</p>	<p>1=Married (বিবাহিত)</p>	

		<p>2=Widowed (বিধবা)</p> <p>3=Separated (পৃথক)</p> <p>4= Divorced (তালাকপ্রাপ্ত)</p> <p>5=Refused to answer (উত্তর দিতে অসম্মতি)</p>	
3	<p>What is your religion?</p> <p>আপনার ধর্ম কি?</p>	<p>1=Muslim (মুসলিম)</p> <p>2=Hindu (হিন্দু)</p> <p>3=Christian (খৃস্টান)</p> <p>4=Buddhist (বৌদ্ধ)</p> <p>99=Others (specify) অন্যান্য (দয়া করে নির্দিষ্ট করুন)</p>	
4	<p>What is your completed level of education?</p> <p>আপনি সর্বোচ্চ কতদূর পর্যন্ত লেখাপড়া করেছেন?</p>	<p>1 = Class 1 (প্রথম শ্রেণী)</p> <p>2 = Class 2 (দ্বিতীয় শ্রেণী)</p> <p>3 = Class 3 (তৃতীয় শ্রেণী)</p> <p>4 = Class 4 (চতুর্থ শ্রেণী)</p> <p>5 = Class 5 (পঞ্চম শ্রেণী)</p> <p>6 = Class 6 (ষষ্ঠ শ্রেণী)</p> <p>7 = Class 7 (সপ্তম শ্রেণী)</p> <p>8 = Class 8 (অষ্টম শ্রেণী)</p> <p>9 = Class 9 (নবম শ্রেণী)</p> <p>10 = Class 10 (দশম শ্রেণী)</p> <p>11 = SSC/Dakhil (এস.এস.সি/দাখিল)</p>	

		<p>12 = HSC/Alim (এইচ.এস.সি/আলিম)</p> <p>13 = Diploma/ vocational (ডিপ্লোমা/ভোকেশনাল)</p> <p>14 = BA/ BSc/BCom/Fazil/graduate/ BA (honours)</p> <p>(বি.এ/বি.এসসি/বি.কম/স্নাতক/ বি.এ স্নাতক)</p> <p>15 = MA/Phd/Kamil (এম.এ/পিএইচডি/কামিল)</p> <p>16 = Hafezi/Qawmi/Kharizi 1. (হাফেজি/কওমি/খারিজি)</p> <p>77 = N/A, because never went to school (প্রযোজ্য নয়, কারণ কখনও স্কুলে যাওয়া হয়নি)</p> <p>97 = Don't know জানিনা)</p>	
5	<p>What is your husband's completed level of education?</p> <p>আপনার স্বামী সর্বোচ্চ কতদূর পর্যন্ত লেখাপড়া করেছেন?</p>	<p>1 = Class 1 (প্রথম শ্রেণী)</p> <p>2 = Class 2 (দ্বিতীয় শ্রেণী)</p> <p>3 = Class 3 (তৃতীয় শ্রেণী)</p> <p>4 = Class 4 (চতুর্থ শ্রেণী)</p> <p>5 = Class 5 (পঞ্চম শ্রেণী)</p> <p>6 = Class 6 (ষষ্ঠ শ্রেণী)</p> <p>7 = Class 7 (সপ্তম শ্রেণী)</p> <p>8 = Class 8 (অষ্টম শ্রেণী)</p> <p>9 = Class 9 (নবম শ্রেণী)</p> <p>10 = Class 10 (দশম শ্রেণী)</p> <p>11 = SSC/Dakhil (এস.এস.সি/দাখিল)</p>	

		<p>12 = HSC/Alim (এইচ.এস.সি/আলিম)</p> <p>13 = Diploma/ vocational (ডিপ্লোমা/ভোকেশনাল)</p> <p>14 = BA/ BSc/BCom/Fazil/graduate/ BA (honours)</p> <p>(বি.এ/বি.এসসি/বি.কম/স্নাতক/ বি.এ স্নাতক)</p> <p>15 = MA/Phd/Kamil (এম.এ/পিএইচডি/কামিল)</p> <p>16 = Hafezi/Qawmi/Kharizi 1. (হাফেজি/কওমি/খারিজি)</p> <p>77 = N/A, because never went to school (প্রযোজ্য নয়, কারণ কখনও স্কুলে যাওয়া হয়নি)</p> <p>97 = Don't know জানিনা)</p>	
6	<p>What is your main occupation for the last six months?</p> <p>বিগত ছয় মাস যাবত আপনার প্রধান পেশা কি ছিল?</p> <p>(If the respondent involved more than one profession since last 6 months, then consider the main occupation which he spent most of the time and write down the answer code.)</p> <p>নির্দেশনা: যদি তথ্য প্রদানকারী গত ৬ মাসে একাধিক পেশায় নিযুক্ত থাকেন তাহলে তিনি যে পেশাটিতে বেশী সময় ব্যয় করেছেন সেটিকে প্রধান পেশা হিসাবে বিবেচনা করুন এবং তা লিপিবদ্ধ করুন।</p>	<p>1=Unskilled (Day laborer) অদক্ষ কর্মী (দিনমজুর)</p> <p>2=Skilled (Sewing, embroidery, cook) দক্ষ কর্মী (সেলাই, নকশার কাজ, বাবুর্চি)</p> <p>3=Garments worker (গার্মেন্টস কর্মী)</p> <p>4=Employee (চাকুরীজীবী)</p> <p>5= Professionals (পেশাজীবী) (Doctor, Engineer, Nurse, Advocate) (ডাক্তার, ইঞ্জিনিয়ার, নার্স, উকিল)</p> <p>6=Businessman (ব্যবসায়ী)</p> <p>7=Petty businessman (ক্ষুদ্র ব্যবসায়ী)</p> <p>8=Housemaid (গৃহকর্মী)</p>	

		<p>9=Beggar (ভিক্ষুক)</p> <p>10= Housewife (গৃহিণী)</p> <p>11=Student (ছাত্র)</p> <p>99=Others (specify below) অন্যান্য (দয়া করে নির্দিষ্ট করুন)_____</p>	
7	<p>What is your husband's main occupation for the last six months?</p> <p>বিগত ছয় মাস যাবত আপনার স্বামীর প্রধান পেশা কি ছিল?</p>	<p>1=Unskilled (day laborer) অদক্ষ কর্মী (দিনমজুর)</p> <p>2=Skilled (Plumber, mechanic, electrician, hairdresser, blacksmith, goldsmith, cook) দক্ষ কর্মী (প্লাম্বার, মেকানিক, ইলেক্ট্রিসিয়ান, নাপিত, কামার, স্বর্ণকর্মী, বাবুর্চি)</p> <p>3=Rickshaw puller/ van/Wheelbarrow/Baby taxi/ Boatman (রিক্সা, ভ্যান, বেবীটেক্সী, ঠেলাগাড়ী চালক, মাঝি)</p> <p>4= Driver (গাড়ি চালক)</p> <p>5=Security guard (নিরাপত্তা কর্মী)</p> <p>6=Garments worker (গার্মেন্টস কর্মী)</p> <p>7= Employee (চাকুরীজীবী)</p> <p>8=Professionals (Doctor, Engineer, Nurse, Advocate) পেশাজীবী (ডাক্তার, ইঞ্জিনিয়ার, নার্স, উকিল)</p> <p>9=Businessman (ব্যবসায়ী)</p> <p>10=Petty businessman (ক্ষুদ্র ব্যবসায়ী)</p> <p>11=Housemaid (গৃহকর্মী)</p> <p>12=Beggar (ভিক্ষুক)</p> <p>13=Hawker (ফেরিওয়াল)</p> <p>14=Student (ছাত্র)</p> <p>99=Others (specify below) অন্যান্য (দয়া করে নির্দিষ্ট করুন)_____</p>	
8	<p>What is the average monthly income of your household?</p> <p>আপনার পরিবারের মাসিক গড় আয় কত?</p>	<p>----- Taka (টাকা)</p>	

9	<p>What is your monthly income?</p> <p>আপনার মাসিক আয় কত?</p>	----- Taka (টাকা)	
10	<p>Who makes financial decisions in your family?</p> <p>আপনার পরিবারে টাকা পয়সার ব্যপারে সিদ্ধান্ত কে নেয়?</p>	<p>1=Herself (নিজেই)</p> <p>2=Husband (স্বামী)</p> <p>3=Both husband and wife (স্বামী এবং স্ত্রী উভয়ই)</p> <p>4=Mother in law (শশুড়ি)</p> <p>5=Father in law স্বশুর</p> <p>99=Others (Please specify) অন্যান্য (দয়া করে নির্দিষ্ট করুন)</p>	
11	<p>Who makes decisions for seeking healthcare?</p> <p>কে স্বাস্থ্যসেবা খোঁজার জন্য সিদ্ধান্ত নেয়?</p>	<p>1=Husband</p> <p>2=Wife</p> <p>3=Both husband and wife</p> <p>4=Mother-in-law</p> <p>5=Father-in-law</p> <p>6=Father</p> <p>7=Mother</p> <p>8=Uncle</p> <p>9=Aunt</p> <p>10=Brother</p> <p>11=Sister</p> <p>99= Others (Please specify)</p> <p>১=স্বামী</p> <p>২=স্ত্রী</p> <p>৩=উভয়ই</p> <p>৪=শশুড়ি</p> <p>৫=স্বশুর</p> <p>৬=বাবা</p> <p>৭=মা</p>	

		৮=চাচা/মামা ৯=ফুফু/ থালা ১০=ভাই ১১=বোন ১২=অন্যান্য (অন্যান্য (দয়া করে নির্দিষ্ট করুন))	
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Part-3: Maternal characteristics

অংশ=৩: মায়ের বৈশিষ্ট্য

Serial no. ক্রমিক নং.	Questions প্রশ্নাবলী	Option অপশন	Answer code উত্তর কোড
1	How many times did you become pregnant in your life? (Including abortion, MR, stillbirth and live birth)? আপনি কতবার গর্ভবতী হয়েছেন? (গর্ভপাত, এমআর, মৃত ও জীবিত জন্ম দেওয়া বাচ্চাসহ)		
2	How many times have you delivered live birth in your life? আপনি কতবার জীবিত সন্তান প্রসব করেছেন?		
Following maternal events will cover regarding selected child			
3	Did you suffer from any complications during your pregnancy?	1=Yes 2=No ১= হ্যাঁ	

	<p>(Anemia, burning sensation during urination, nausea/vomiting in the morning, leg swelling, high blood pressure, diabetes, anxiety, depression)</p> <p>আপনি কি আপনার গর্ভাবস্থায় কোন জটিলতায় ভুগছিলেন?</p> <p>(রক্তস্বল্পতা, প্রস্রাবের সময় জ্বালাপোড়া, সকালে বমি বমি ভাব/বমি হওয়া, পা ফুলে যাওয়া, উচ্চ রক্তচাপ, ডায়াবেটিস, উদ্বিগ্নতা, বিষণ্ণতা)</p>	২= না	
4	<p>Did you visit the health facility for Antenatal Care (ANC)?</p> <p>আপনি কি গর্ভকালীন স্বাস্থ্য সেবার (এ এন সি) জন্য স্বাস্থ্য কেন্দ্রে গিয়েছিলেন?</p>	<p>1=Yes</p> <p>2=No (If "NO" go to the question no. 6)</p> <p>১= হ্যাঁ</p> <p>২= না (না হলে ৬ নং প্রশ্নে যান)</p>	
5	<p>How many times you took ANC care?</p> <p>আপনি কতবার গর্ভকালীন স্বাস্থ্য সেবা নিয়েছেন?</p>		
6	<p>In which month of pregnancy did you give birth?</p> <p>গর্ভাবস্থার কততম মাসে আপনি সন্তান প্রসব করেছিলেন?</p>		
7	<p>What was the mode of delivery when you gave your childbirth?</p> <p>আপনার সন্তান প্রসবের পদ্ধতি কি ছিল?</p>	<p>1=Caesarian (সিজারিয়ান)</p> <p>2=Normal vaginal (যৌনিপথে)</p>	

8	<p>Where did you give birth to your child?</p> <p>আপনার সন্তান প্রসবের স্থান কোথায় ছিল?</p>	<p>1=Public hospital (সরকারী হাসপাতাল)</p> <p>2=Private hospital (বেসরকারী হাসপাতাল)</p> <p>3=NGO hospital (এন জি ও হাসপাতাল)</p> <p>4=Home (বাড়িতে)</p> <p>99= Others (Please specify)</p> <p>অন্যান্য (দয়া করে নির্দিষ্ট করুন)</p>	
9	<p>Did you visit the health facility for health care within 42 days after the delivery (PNC)</p> <p>আপনি কি প্রসব পরবর্তী ৪২ দিনের মধ্যে স্বাস্থ্য সেবার নেওয়ার জন্য স্বাস্থ্যকেন্দ্রে গিয়েছিলেন?</p>	<p>1=Yes</p> <p>2=No</p> <p>১= হ্যাঁ</p> <p>২= না</p>	
10	<p>Where did you go for treatment?</p> <p>চিকিৎসার জন্য কোথায় গিয়েছিলেন?</p>	<p>1=Public hospital</p> <p>2=Private hospital</p> <p>3=NGO hospital</p> <p>4=Pharmacy</p> <p>99= Others (Please specify)</p> <p>১= সরকারি হাসপাতাল</p> <p>২= বেসরকারি হাসপাতাল</p> <p>৩= এনজিও হাসপাতাল</p> <p>৪=ওষুধের দোকান</p> <p>৯৯=অন্যান্য (দয়া করে নির্দিষ্ট করুন)</p>	

Part-4: Child characteristics

অংশ-৪: শিশুর বৈশিষ্ট্য

Serial no. ক্রমিক নং.	Questions প্রশ্নাবলী	Option অপশন	Answer code উত্তর কোড
1	What is the sex of your child? আপনার সন্তানের লিঙ্গ কি?	1=Male 2=Female 99=Others (Please specify) ১= ছেলে ২=মেয়ে ৯৯=অন্যান্য (দয়া করে নির্দিষ্ট করুন)	
2	What is the birth order of the child? এইটা আপনার কত নম্বর বাচ্চা?		
3	What was the weight of your child after birth? (Kgs) জন্মের পর আপনার সন্তানের ওজন কত ছিল? (কেজি)	1=> 2.5 kgs (২.৫ কেজির বেশি) 2=< 2.5 kgs (২.৫ কেজির কম)	
4	Has your child been sick within the last two weeks? আপনার সন্তান কি গত দুই সপ্তাহের মধ্যে অসুস্থ হয়েছে?	1=Yes 2=No (If "NO" go to the question no. 7) ১= হ্যাঁ ২= না (না হলে ৭ নং প্রশ্নে যান)	

5	<p>What was the problem?</p> <p>কি সমস্যা হয়েছিল?</p>	<p>1= Diarrhoea</p> <p>2= Respiratory Tract Infections (Running nose, cough, pneumonia)</p> <p>3=Malaria</p> <p>4=Fever</p> <p>5=Measles</p> <p>5= Other (Please specify)</p> <p>১=ডায়ারিয়া</p> <p>২=শ্বাসতন্ত্রের অসুখ (সর্দি, কাশি, নিউমোনিয়া)</p> <p>৩=ম্যালেরিয়া</p> <p>৪=জ্বর</p> <p>৫=হাম</p> <p>৯৯= অন্যান্য (দয়া করে নির্দিষ্ট করুন)</p>	
6	<p>Where did you go for the treatment?</p> <p>চিকিৎসার জন্য আপনি কোথায় গিয়েছিলেন?</p>	<p>1=Public hospital</p> <p>2=Private hospital</p> <p>3=NGO hospital</p> <p>4=Pharmacy</p> <p>99= Others (Please specify)</p> <p>১= সরকারি চিকিৎসা কেন্দ্রে</p> <p>২= বেসরকারি চিকিৎসা কেন্দ্রে</p>	

		৩= এনজিও হাসপাতাল ৪=ওষুধের দোকান ৯৯= অন্যান্য (দয়া করে নির্দিষ্ট করুন)	
7	Is your child fully immunised? আপনার সন্তানের কি সম্পূর্ণ টিকা দেওয়া সম্পন্ন হয়েছে?	1=Yes 2=No ১= হ্যাঁ ২=না	

Part-5: Child feeding practices

অংশ-৫: শিশুকে খাওয়ানোর অভ্যাস

Serial no. ক্রমিক নং.	Questions প্রশ্নাবলী	Option অপশন	Answer code উত্তর কোড
1	When was the time of initiation of breastfeeding? জন্মের পর আপনার শিশুকে কখন বুকের দুধ খাইয়েছিলেন?	1= Immediately (Within half an hour) 2=Within 1 to 24 hours 3=After 24 hours ১= সাথে সাথে (আধা ঘন্টার মধ্যে) ২= ১ থেকে ২৪ ঘন্টা মধ্যে ৩= ১ দিন পর	
2	Did you feed your child anything other than breast milk for the first three days after birth?	1=Yes 2=No (If "NO" go to the question no. 4) ১= হ্যাঁ	

	জন্মের পর প্রথম তিন দিন আপনার শিশুকে বুকের দুধ ব্যতীত অন্য কোনো খাবার খাইয়েছিলেন কি?	২= না (না হলে ৪ নং প্রশ্নে যান)	
3	Which type of food? (কোন ধরনের খাবার)	1=Honey (মধু) 2=Water with sugar(চিনি-পানি) 3= Processed milk (কৌটার দুধ) 4= Cow milk (গরুর দুধ) 99= Others (Please specify) অন্যান্য (দয়া করে নির্দিষ্ট করুন)	
4	How long the child was exclusively breastfed? আপনার শিশুকে কতদিন পর্যন্ত শুধু বুকের দুধ খাইয়েছেন? Month (মাস)	
5	Does your child still breastfeed? আপনার শিশু কি এখনও বুকের দুধ পান করে?	1=Yes 2=No ১= হ্যাঁ ২=না	
6	From which age your child was introduced to complementary feeding? কোন বয়স থেকে আপনার শিশুর পরিপূরক খাবার শুরু করেছিলেন?		

7	What is the frequency of feeding/day? প্রতি দিন কতবার খাওয়ান?		
8	Did your child receive Vitamin A supplement? আপনার শিশু কি ভিটামিন এ সাপ্লিমেন্ট খেয়েছে?	1=Yes 2=No ১= হ্যাঁ ২=না	

Part-6: Water, Sanitation and Hygiene

অংশ-৬: খাবার পানি, পয়ঃনিষ্কাশন ও পরিষ্কার-পরিচ্ছন্নতা

Serial no. ক্রমিক নং.	Questions প্রশ্নাবলী	Option অপশন	Answer code উত্তর কোড
1	What is the main source of drinking water in your household? আপনার পরিবারের খাবার পানির প্রধান উৎস কি?	1=Deep tube well 2=Supply water (tube well, tap) 3= Dug Well 4=Pond 5=River 6=Lake ১=গভীর নলকূপ ২= সাপ্লাই পানি (নলকূপ/টেপ) ৩=কূপ	

		৪=পুকুর ৫= নদী ৬=হ্রদ	
2	What method do you use to purify water? পানি বিশুদ্ধ করার জন্য আপনারা কোন পদ্ধতি ব্যবহার করেন?	1=Boiling (ফুটিয়ে) 2=Water filter (পানির ফিল্টার) 3= Chlorine tablet (ক্লোরিন ট্যাবলেট) 4=Fitkari (ফিটকিরি) 5= Do not use (ব্যবহার করে না) 99=Others (Please specify) অন্যান্য (দয়া করে নির্দিষ্ট করুন)	
3	What is the method of household waste disposal? গৃহস্থালির বর্জ্য নিষ্কাশনের পদ্ধতি কী?	1=Open field disposal 2=In a pit 3=Common pit 4=Burning 5= Collected by city corporation ১=খোলা মাঠ ২=একটি গর্তে ৩=সাধারণ গর্ত ৪=পুড়িয়ে ফেলা ৫=সিটি কর্পোরেশন থেকে সংগ্রহ করে	

Part-: Household Food security

অংশ-৭: খানার খাদ্য নিরাপত্তা

Serial no. ক্রমিক নং.	Questions প্রশ্নাবলী	Option অপশন	Answer code উত্তর কোড
1	<p>In the past four weeks, did you ever worry that your family would not have enough food due to lack of resources or money to buy food?</p> <p>গত ৪ সপ্তাহে আপনি আপনার খানায় পর্যাপ্ত খাদ্য নাই অথবা কিভাবে যোগাড় করবেন, এই দুঃচিন্তায় ছিলেন কি?</p>	<p>0= Never</p> <p>1= Rarely (Once or twice)</p> <p>2= Sometimes (Three or ten times)</p> <p>3= Often (More than ten times)</p> <p>০= কখনই না</p> <p>১=খুবই কম (একবার বা দুবার)</p> <p>২=কখনও কখনও (তিন থেকে দশ বার)</p> <p>৩=প্রায়ই (দশবারের বেশি)</p>	
2	<p>In the past four weeks, were you or any family members ever not</p>	<p>0= Never</p>	

	<p>able to eat the kinds of foods you preferred because of a lack of resources or money to buy food?</p> <p>(গত চার সপ্তাহে, খাদ্য কেনার জন্য সম্পদ বা অর্থের অভাবের কারণে আপনি বা পরিবারের কোনো সদস্য কি আপনার পছন্দের খাবার খেতে পারেননি?)</p>	<p>1= Rarely (Once or twice)</p> <p>2= Sometimes (Three or ten times)</p> <p>3= Often (More than ten times)</p> <p>০= কখনই না</p> <p>১=খুবই কম (একবার বা দুবার)</p> <p>২=কখনও কখনও (তিন থেকে দশ বার)</p> <p>৩=প্রায়ই (দশবারের বেশি)</p>	
3	<p>In the past four weeks, did you or any household member ever have to eat a limited variety of foods due to lack of resources? (e.g: onion, garlic)</p> <p>গত ৪ সপ্তাহে আপনি বা খানার কোনো সদস্যকে অভাবের কারণে শুধুমাত্র ভাত খেয়ে থাকতে হয়েছিল কি (লবণ, মরিচ ও পিঁয়াজ ইত্যাদি দিয়ে)?</p>	<p>0= Never</p> <p>1= Rarely (Once or twice)</p> <p>2= Sometimes (Three or ten times)</p> <p>3= Often (More than ten times)</p> <p>০= কখনই না</p> <p>১=খুবই কম (একবার বা দুবার)</p> <p>২=কখনও কখনও (তিন থেকে দশ বার)</p> <p>৩=প্রায়ই (দশবারের বেশি)</p>	
4	<p>In the last 4 weeks did you or any member of your family Had to eat any food that usually did not eat (such as wild/nonfood/ instead of rice any other food that usually does not eat) ?</p>	<p>0= Never</p> <p>1= Rarely (Once or twice)</p> <p>2= Sometimes (Three or ten times)</p>	

	<p>গত ৪ সপ্তাহে আপনি বা খানার কোনো সদস্যকে অভাবের কারণে এমন কোন খাবার খেতে হয়েছিল যা সাধারণত খান না (যেমন: বন্য/অনাবাদী খাবার/ ভাতের পরিবর্তে অন্য কোন খাবার, যা সাধারণত খান না।)?</p>	<p>3= Often (More than ten times)</p> <p>০= কখনই না</p> <p>১=খুবই কম (একবার বা দুবার)</p> <p>২=কখনও কখনও (তিন থেকে দশ বার)</p> <p>৩=প্রায়ই (দশবারের বেশি)</p>	
5	<p>In the past four weeks, did you or any household member ever have to eat a smaller meal at breakfast, lunch, or dinner than you felt you needed because there was not enough food for your family?</p> <p>খানায় পর্যাপ্ত খাবার অথবা খাবার কেনার জন্য টাকা না থাকার কারণে গত ৪ সপ্তাহে আপনি বা আপনার খানার কোনো সদস্যকে কি কোন বেলা (যেমন: সকাল, দুপুর অথবা রাতের খাবার) প্রয়োজনের তুলনায় কম খেতে হয়েছিল?</p>	<p>0= Never</p> <p>1= Rarely (Once or twice)</p> <p>2= Sometimes (Three or ten times)</p> <p>3= Often (More than ten times)</p> <p>০= কখনই না</p> <p>১=খুবই কম (একবার বা দুবার)</p> <p>২=কখনও কখনও (তিন থেকে দশ বার)</p> <p>৩=প্রায়ই (দশবারের বেশি)</p>	
6	<p>In the past four weeks, did you or any other household member ever have to eat fewer than three meals in a day because there were not enough resources or money to purchase food?</p> <p>গত ৪ সপ্তাহে আপনি বা আপনার খানার কোনো সদস্যকে খাবারের অভাব অথবা খাবার কেনার টাকা না</p>	<p>0= Never</p> <p>1= Rarely (Once or twice)</p> <p>2= Sometimes (Three or ten times)</p> <p>3= Often (More than ten times)</p> <p>০= কখনই না</p> <p>১=খুবই কম (একবার বা দুবার)</p>	

	<p>থাকার কারণে কি কোন বেলা না খেয়ে থাকতে হয়েছিল?</p>	<p>২=কখনও কখনও (তিন থেকে দশ বার)</p> <p>৩=প্রায়ই (দশবারের বেশি)</p>	
7	<p>Did you or any household member ever run out of food in the last 4 weeks and didn't have any money to buy food that day?</p> <p>গত ৪ সপ্তাহে কখনও কি আপনার ঘরের খাবার শেষ হয়ে গিয়েছিল এবং ঐ দিন খাবার কেনার জন্য কোনো টাকাও ছিল না?</p>	<p>0= Never</p> <p>1= Rarely (Once or twice)</p> <p>2= Sometimes (Three or ten times)</p> <p>3= Often (More than ten times)</p> <p>০= কখনই না</p> <p>১=খুবই কম (একবার বা দুবার)</p> <p>২=কখনও কখনও (তিন থেকে দশ বার)</p> <p>৩=প্রায়ই (দশবারের বেশি)</p>	
8	<p>In the past four weeks, did you or any household member ever go to sleep at night hungry because there was not enough money to purchase food?</p> <p>গত ৪ সপ্তাহে কি কখনও এমন হয়েছিল যে, আপনাকে অথবা খানার কোনো সদস্যকে অভাবের কারণে ক্ষুধার্ত/অভুক্ত অবস্থায় রাতে ঘুমাতে যেতে হয়েছিল?</p>	<p>0= Never</p> <p>1= Rarely (Once or twice)</p> <p>2= Sometimes (Three or ten times)</p> <p>3= Often (More than ten times)</p> <p>০= কখনই না</p> <p>১=খুবই কম (একবার বা দুবার)</p> <p>২=কখনও কখনও (তিন থেকে দশ বার)</p> <p>৩=প্রায়ই (দশবারের বেশি)</p>	

9	<p>In the past four weeks, did you or any household member ever go a whole day and night without eating anything because there was not enough money to purchase food?</p> <p>গত ৪ সপ্তাহে কখনও এমন হয়েছিল যে আপনি বা খানার কোনো সদস্যকে খাবারের অভাবের কারণে না খেয়ে সারা দিন-রাত কাটাতে হয়েছিল?</p>	<p>0= Never</p> <p>1= Rarely (Once or twice)</p> <p>2= Sometimes (Three or ten times)</p> <p>3= Often (More than ten times)</p> <p>০= কখনই না</p> <p>১=খুবই কম (একবার বা দুবার)</p> <p>২=কখনও কখনও (তিন থেকে দশ বার)</p> <p>৩=প্রায়ই (দশবারের বেশি)</p>	

Measurements:

SI no.	Indicators	Measurement value
1	Weight	
2	Height/length	

Annex 2: Do file of stata

```
import excel "C:\Users\USER\Desktop\SLP\Data\Final.xlsx", sheet("Sheet1") firstrow
```

```
*****labeling*****
```

```
*****General labeling*****
```

```
label var Intv_name "Interviewer name"
```

```
label var hh_head "Household head"
```

label var mage "Mothers age in years"
label var hmem "Total household member"
label var tchild "Total number of children"
label var tchild_5 "Total number of under-five children"
label var cage "Age of child in months"
label var yofliving "Years of living in slum"

***** socio demographic labeling*****

label var mstat "Marital status"
label var rel "Religion"
label var m_edu "Mother's education level"
label var hus_edu "Husbands education level"
label var m_occ "Mothers occupation"
label var hus_occ "Husband's occupation"
label var hh_income "Monthly household income"
label var m_income "Monthly mothers income"
label var fn_demak "Financial decision maker"
label var hl_demak "Healthcare decision maker"

*****Maternal characteristics labeling*****

label var tpregnancy "Total number of pregnancy"
label var tlbirth "Total live birth"
label var cdpregnancy "Complication during pregnancy"
label var ancv "ANC visit"
label var nancv "Number of ANC visit"
label var gab "Gestational age at birth"
label var mdelivery "Mode of delivery"

label var pbirth "Place of birth"
label var pncv "PNC visit"
label var ppncv "Place of PNC visit"

*****Child characteristics labeling*****

label var csex "Child sex"
label var border "Birth order"
label var cwdbirth "Child weight during birth"
label var immu "Immunization"
label var cslw "Child sickness within the last two weeks"
label var dlw "Disease within last two weeks"
label var ptcs "Place of treatment for child sickness"

*****Child feeding practices labeling*****

label var ibf "Initiation of breastfeeding"
label var plf "Pre-lacteal food"
label var tplf "Type of pre-lacteal food"
label var ebf "Exclusive breastfeeding"
label var stcf "Starting time of complementary food"
label var fcf "Frequency of complementary food"
label var vas "Vitamin A supplementation"

*****WASH labeling*****

label var msdw "Main sources of drinking water"
label var mpw "Method to purify water"
label var tt "Type of toilet"
label var hwp "Hand washing practice"

label var muwh "Materials used to wash hands after toilet"

label var hhwd "Method of disposal of households waste"

*****Household food insecurity labeling*****

label var wfood_4w "Not enough food to buy due to lack of resources or money"

label var nopfood_4w "Not able to eat the kinds of foods you preferred"

label var limitedfood_4w "Have to eat a limited variety of foods"

label var unusualfood_4w "Had to eat any food that usually did not"

label var smallmeal_4w "Have to eat a smaller meal"

label var fewermeal_4w "Have to eat fewer than three meals"

label var outoffood_4w "Run out of food"

label var sleepwhungry_4w "Went to sleep at night hungry"

label var wdfasting_4w "Go a whole day and night without eating anything"

*****Measurement labeling*****

label var cw "Child weight"

label var ch "Child height"

*****Destring, label and catagory*****

*****General*****

recode mage (16/19=1 "15-19 years") (20/29=2 "20-29 years") (30/39=3 "30-39 years")
(40/47=4 "40 years and above"), gen(mage1)

recode hmem (2/5=1 "Five or less") (6/11=2 "More than five"), gen(hhmem1)

```
recode tchild (1/2=1 "Two or less") (3/5=2 "More than two"), gen(tchild1)
```

```
recode tchild_5 (1=1 "One") (2=2 "Two"), gen(tchild_5_1)
```

```
recode cage (1/11=1 "0-11 months") (12/23=2 "12-23 months") (24/35=3 "24-35 months")  
(36/47=4 "36-47 months") (48/59=5 "48-59 months"), gen(cage1)
```

```
recode yofliving (1/10=1 "0-10 years") (11/20=2 "11-20 years") (21/36=3 "> 20 years"),  
gen(yofliving1)
```

```
*****Socio-demographic*****
```

```
encode mstat, gen(mstat1)
```

```
recode mstat1 (2 =1 "Married") (1 3 4 =2 "Others"), gen(mstat2)
```

```
encode rel, gen(rel1)
```

```
recode rel1 (2 =1 "Muslim") (1 =2 "Hindu"), gen(rel2)
```

```
encode m_edu, gen(m_edu1)
```

```
recode m_edu1 (13 16=1 "Never went to school") (2 4 5 6=2 "Pre-primary") (7 8 9 10 11 3=3  
"Primary completed") (17 =4 "Secondary completed") (1 14 15 12=5 "Higher secondary and  
above"), gen(m_edu2)
```

```
recode m_edu2 (1 2 =1 "Pre-primary or none") (3 =2 "Primary completed") (4 5=3 "Secondary  
completed and above"), gen(m_edu3)
```

```
encode hus_edu, gen(hus_edu1)
```



```
recode hus_edu1 (13 17=1 "Never went to school") (2 4 5 6=2 "Pre-primary") (7 8 9 10 11 3=3 "Primary completed") (18 =4 "Secondary completed") (1 12 14 15 16=5 "Higher secondary and above"), gen(hus_edu2)
```

```
recode hus_edu2 (1 2 =1 "Pre-primary 0r none") (3 =2 "Primary completed") (4 5 =3 "Secondary completed and above"), gen(hus_edu3)
```

```
encode m_occ, gen(m_occ1)
```

```
recode m_occ1 (4 =1 "Homemaker") (1 2 3 5 6 7 8 9 10 =2 "Working"), gen(m_occ2)
```

```
encode hus_occ, gen(hus_occ1)
```

```
recode hus_occ1 (3 10 11=1 "Skilled labor") (6 9 12=2 "Unskilled labor") (1 4 5 8=3 "Service") (2 7=4 "Small trade"), gen(hus_occ2)
```

```
recode hh_income (0/9999=1 "Less than 10000") (10000/14999=2 "10000 to <15000") (15000/19999=3 "15000 to <20000") (20000/24999=4 "20000 to <25000") (25000/150000=5 "25000 or more"), gen(hh_income1)
```

```
recode m_income (0/4999=1 "Less than 5000") (5000/9999=2 "5000 to <10000") (10000/20000=3 ">10000"), gen(m_income1)
```

```
encode fn_demak, gen(fn_demak1)
```

```
recode fn_demak1 (5 =1 "Herself") (6 =2 "Husband") (1 =3 "Both husband and wife") (4 =4 "Father-in-law") (8 =5 "Mother-in-law") (2 3 7 =6 "Others"), gen(fn_demak2)
```

```
encode hl_demak, gen(hl_demak1)
```

```
recode hl_demak1 (4 =1 "Husband") (7 =2 "Wife") (1 =3 "Both husband and wife") (2 3 5 6 =4 "Others"), gen(hl_demak2)
```

```
*****Maternal characteristics*****
```

```
recode tpregnancy (1/2 =1 "Less than 3 times") (3/7 =2 "Three or more than three times"),  
gen(tpregnancy1)
```

```
recode tlbirth (1/2 =1 "Less than 3") (3/5 =2 "Three or more than three"), gen(tlbirth1)
```

```
encode cdpregnancy, gen(cdpregnancy1)
```

```
recode cdpregnancy1 (2 =1 "Yes") (1 =2 "No"), gen(cdpregnancy2)
```

```
encode ancv, gen(ancv1)
```

```
recode ancv1 (2 =1 "Yes") (1 =2 "No"), gen(ancv2)
```

```
recode nancv (0 =1 "No visit") (1/3 =2 "Less than 4 visits") (4/15 =3 "Four or more than 4  
visits") , gen(nancv1)
```

```
encode gab, gen(gab1)
```

```
recode gab1 (1 =1 "After 9 months") (2 =2 "Before 9 months"), gen(gab2)
```

```
encode mdelivery, gen(mdelivery1)
```

```
recode mdelivery1 (2 =1 "Normal vaginal") (1 =2 "Caesarian"), gen(mdelivery2)
```

```
encode pbirth, gen(pbirth1)
```

```
recode pbirth1 (1 =1 "Home") (3 =2 "Private hospital") (2 =3 "NGO hospital") (4 =4 "Public  
hospital"), gen(pbirth2)
```

```
encode pncv, gen(pncv1)
```

```
recode pncv1 (2 =1 "Yes") (1 =2 "No"), gen(pncv2)
```

```
encode ppncv, gen(ppncv1)
```

```
recode ppncv1 (3 =1 "Private hospital") (4 =2 "Public hospital") (1 =3 "NGO hospital") (2 =4 "Pharmacy"), gen(ppncv2)
```

```
*****Child characteristics*****
```

```
encode csex, gen(csex1)
```

```
recode csex1 (2 =1 "Male") (1 =2 "Female"), gen(csex2)
```

```
recode border (1 =1 "1st") (2 =2 "2nd") (3 =3 "3rd") (4 5 6 =4 "4th and above"), gen(border1)
```

```
encode cwdbirth, gen(cwdbirth1)
```

```
recode cwdbirth1 (2 =1 "More than 2.5 kgs") (1 =2 "Less than 2.5 kgs"), gen(cwdbirth2)
```

```
encode immu, gen(immu1)
```

```
recode immu1 (2 =1 "Yes") (1 =2 "No"), gen(immu2)
```

```
encode cslw, gen(cslw1)
```

```
recode cslw1 (2 =1 "Yes") (1 =2 "No"), gen(cslw2)
```

```
encode dlw, gen(dlw1)
```

```
recode dlw1 (6 =1 "Respiratory tract infections") (2 =2 "Fever") (1 =3 "Diarrhoea") (3 4 5 =4 "Others"), gen(dlw2)
```

```
encode ptcs, gen(ptcs1)
```

```
recode ptcs1 (4 =1 "Private hospital") (5 =2 "Public hospital") (1 =3 "NGO hospital") (3 =4 "Pharmacy") (2 =5 "Not any where") , gen(ptcs2)
```

*****Child feeding practices*****

encode ibf, gen(ibf1)

recode ibf1 (2 =1 "Immediately (Within half an hour)") (3 =2 "Within 1 to 24 hours") (1 =3 "After 24 hours"), gen(ibf2)

recode ibf2 (1 =1 "Immediately (Within half an hour)") (2 3 =2 "Not immediately"), gen(ibf3)

encode plf, gen(plf1)

recode plf1 (2 =1 "Yes") (1 =2 "No"), gen(plf2)

encode tplf, gen(tplf1)

recode tplf1 (2 =1 "Honey") (3 =2 "Processed milk") (4 =3 "Water with sugar") (1 =4 "Cow milk"), gen(tplf2)

encode ebf, gen(ebf1)

recode ebf1 (17 15 14 13 12 8 6 5 4 3 2 =1 "Exclusively breast feed") (1 7 9 10 11 16 =2 "Not-exclusively breast feed"), gen(ebf2)

encode stcf, gen(stcf1)

recode stcf1 (9 =1 "Timely initiation") (1 4 6 7 8 2 3 5 10 11 12 =2 "Not timely initiation"), gen(stcf2)

recode fcf (1 3 =1 "Less than 3 times") (4 =2 "Three times") (2 5 6 7 8 9 =3 "More than 3 times"), gen(fcf1)

encode vas, gen(vas1)

recode vas1 (2 =1 "Yes") (1 =2 "No"), gen(vas2)

*****WASH*****

encode msdw, gen(msdw1)

recode msdw1(2 =1 "Supply water (tube well, tap)") (1 =2 "Deep tube well "), gen(msdw2)

encode mpw, gen(mpw1)

recode mpw1 (2 =1 "Do not use") (1 =2 "Boiling") (4 =3 "Water filter") (3 =4 " Fitkari") ,
gen(mpw2)

encode tt, gen(tt1)

recode tt1 (2 =1 "Piped sewer system") (5 =2 "Septic tank") (3 =3 "Ring slab with water seal") (4
=4 "Ring slab without water seal") (1 =5 "No facility (Bush/open field/river pond side)") ,
gen(tt2)

encode hwp, gen(hwp1)

recode hwp1 (2 =1 "Yes") (1 =2 "No"), gen(hwp2)

encode muwh, gen(muwh1)

encode hhwd, gen(hhwd1)

*****Measurement*****

zscore06, a(cage) s(csex1) h(ch) w(cw)

```

gen wasting= whz06<=-2 if whz06<.
la de wasting 0"No" 1"Yes", replace
la val wasting wasting
recode wasting (1 =1 "Yes") (0 =2 "No"), gen(wasting1)
recode wasting1 (1 =1 "Wasted") (0 =2 "Normal"), gen(wasting2)

```

```

*****Food security*****

```

```

tab wfood_4w,nolabel

```

```

replace wfood_4w="0" if wfood_4w=="Never"
replace wfood_4w="1" if wfood_4w=="Rarely (Once or twice)"
replace wfood_4w="2" if wfood_4w=="Sometimes (Three or ten times)"
replace wfood_4w="3" if wfood_4w=="Often (More than ten times)"

```

```

destring wfood_4w,replace

```

```

lab define wfood_4w 0"Never" 1"Rarely (Once or twice)" 2"Sometimes (Three or ten times)"
3"Often (More than ten times)"

```

```

lab values wfood_4w wfood_4w

```

```

tab wfood_4w

```

```

tab wfood_4w,nolabel

```

```

*****

```

```

tab nopfood_4w

```

```

replace nopfood_4w="0" if nopfood_4w=="Never"
replace nopfood_4w="1" if nopfood_4w=="Rarely (Once or twice)"
replace nopfood_4w="2" if nopfood_4w=="Sometimes (Three or ten times)"
replace nopfood_4w="3" if nopfood_4w=="Often (More than ten times)"

```

```
destring nopfood_4w,replace
lab define nopfood_4w 0"Never" 1"Rarely (Once or twice)" 2"Sometimes (Three or ten times)"
3"Often (More than ten times)"
lab values nopfood_4w nopfood_4w
tab nopfood_4w
tab nopfood_4w,nolabel
```

```
*****
```

```
tab limitedfood_4w
replace limitedfood_4w="0" if limitedfood_4w=="Never"
replace limitedfood_4w="1" if limitedfood_4w=="Rarely (Once or twice)"
replace limitedfood_4w="2" if limitedfood_4w=="Sometimes (Three or ten times)"
replace limitedfood_4w="3" if limitedfood_4w=="Often (More than ten times)"
```

```
destring limitedfood_4w,replace
lab define limitedfood_4w 0"Never" 1"Rarely (Once or twice)" 2"Sometimes (Three or ten
times)" 3"Often (More than ten times)"
lab values limitedfood_4w limitedfood_4w
tab limitedfood_4w
tab limitedfood_4w,nolabel
```

```
*****
```

```
tab unusualfood_4w
replace unusualfood_4w="0" if unusualfood_4w=="Never"
replace unusualfood_4w="1" if unusualfood_4w=="Rarely (Once or twice)"
replace unusualfood_4w="2" if unusualfood_4w=="Sometimes (Three or ten times)"
```

```
replace unusualfood_4w="3" if unusualfood_4w=="Often (More than ten times)"
```

```
destring unusualfood_4w,replace
```

```
lab define unusualfood_4w 0"Never" 1"Rarely (Once or twice)" 2"Sometimes (Three or ten times)" 3"Often (More than ten times)"
```

```
lab values unusualfood_4w unusualfood_4w
```

```
tab unusualfood_4w
```

```
tab unusualfood_4w,nolabel
```

```
*****
```

```
tab smallmeal_4w
```

```
replace smallmeal_4w="0" if smallmeal_4w=="Never"
```

```
replace smallmeal_4w="1" if smallmeal_4w=="Rarely (Once or twice)"
```

```
replace smallmeal_4w="2" if smallmeal_4w=="Sometimes (Three or ten times)"
```

```
replace smallmeal_4w="3" if smallmeal_4w=="Often (More than ten times)"
```

```
destring smallmeal_4w,replace
```

```
lab define smallmeal_4w 0"Never" 1"Rarely (Once or twice)" 2"Sometimes (Three or ten times)" 3"Often (More than ten times)"
```

```
lab values smallmeal_4w smallmeal_4w
```

```
tab smallmeal_4w
```

```
tab smallmeal_4w,nolabel
```

```
*****
```

```
tab fewermeal_4w
```

```
replace fewermeal_4w="0" if fewermeal_4w=="Never"
```



```
replace fewermeal_4w="1" if fewermeal_4w=="Rarely (Once or twice)"
replace fewermeal_4w="2" if fewermeal_4w=="Sometimes (Three or ten times)"
replace fewermeal_4w="3" if fewermeal_4w=="Often (More than ten times)"
```

```
destring fewermeal_4w,replace
```

```
lab define fewermeal_4w 0"Never" 1"Rarely (Once or twice)" 2"Sometimes (Three or ten
times)" 3"Often (More than ten times)"
```

```
lab values fewermeal_4w fewermeal_4w
```

```
tab fewermeal_4w
```

```
tab fewermeal_4w,nolabel
```

```
*****
```

```
tab outoffood_4w
```

```
replace outoffood_4w="0" if outoffood_4w=="Never"
```

```
replace outoffood_4w="1" if outoffood_4w=="Rarely (Once or twice)"
```

```
replace outoffood_4w="2" if outoffood_4w=="Sometimes (Three or ten times)"
```

```
replace outoffood_4w="3" if outoffood_4w=="Often (More than ten times)"
```

```
destring outoffood_4w,replace
```

```
lab define outoffood_4w 0"Never" 1"Rarely (Once or twice)" 2"Sometimes (Three or ten times)"
3"Often (More than ten times)"
```

```
lab values outoffood_4w outoffood_4w
```

```
tab outoffood_4w
```

```
tab outoffood_4w,nolabel
```

```
*****
```

```
tab sleepwhungry_4w
```

```
replace sleepwhungry_4w="0" if sleepwhungry_4w=="Never"
```

```
replace sleepwhungry_4w="1" if sleepwhungry_4w=="Rarely (Once or twice)"
replace sleepwhungry_4w="2" if sleepwhungry_4w=="Sometimes (Three or ten times)"
replace sleepwhungry_4w="3" if sleepwhungry_4w=="Often (More than ten times)"
```

```
destring sleepwhungry_4w,replace
```

```
lab define sleepwhungry_4w 0"Never" 1"Rarely (Once or twice)" 2"Sometimes (Three or ten
times)" 3"Often (More than ten times)"
```

```
lab values sleepwhungry_4w sleepwhungry_4w
```

```
tab sleepwhungry_4w
```

```
tab sleepwhungry_4w,nolabel
```

```
*****
```

```
tab wdfasting_4w
```

```
replace wdfasting_4w="0" if wdfasting_4w=="Never"
```

```
replace wdfasting_4w="1" if wdfasting_4w=="Rarely (Once or twice)"
```

```
replace wdfasting_4w="2" if wdfasting_4w=="Sometimes (Three or ten times)"
```

```
replace wdfasting_4w="3" if wdfasting_4w=="Often (More than ten times)"
```

```
destring wdfasting_4w,replace
```

```
lab define wdfasting_4w 0"Never" 1"Rarely (Once or twice)" 2"Sometimes (Three or ten times)"
3"Often (More than ten times)"
```

```
lab values wdfasting_4w wdfasting_4w
```

```
tab wdfasting_4w
```

```
tab wdfasting_4w,nolabel
```

```
*****
```

```
gen uhfias = 1 if (wfood_4w==0 | wfood_4w==1) & (nopfood_4w==0 | nopfood_4w==.) &
limitedfood_4w==0 & limitedfood_4w==0 & unusualfood_4w==0 & smallmeal_4w==0 &
fewermeal_4w==0 & outoffood_4w==0 & sleepwhungry_4w==0 & wdfasting_4w==0
```

```
replace uhfias = 2 if (wfood_4w==2 | wfood_4w==3 | nopfood_4w==1 | nopfood_4w==2 |
nopfood_4w==3 | limitedfood_4w==1 | unusualfood_4w==1) & smallmeal_4w==0 &
fewermeal_4w==0 & outoffood_4w==0 & sleepwhungry_4w==0 & wdfasting_4w==0
```

```
replace uhfias = 3 if (limitedfood_4w==2 | limitedfood_4w==3 | unusualfood_4w==2 |
unusualfood_4w==3 | smallmeal_4w==1 | smallmeal_4w==2 | fewermeal_4w==1 |
fewermeal_4w==2) & outoffood_4w==0 & sleepwhungry_4w==0 & wdfasting_4w==0
```

```
replace uhfias = 4 if smallmeal_4w==3 | fewermeal_4w==3 | outoffood_4w>0 |
sleepwhungry_4w>0 | wdfasting_4w>0
```

```
replace uhfias = . if wfood_4w==. | limitedfood_4w==. | unusualfood_4w==. | smallmeal_4w==.
| fewermeal_4w==. | outoffood_4w==. | sleepwhungry_4w==. | wdfasting_4w==.
```

```
la def uhfias 1 "Food secure" 2 "Mild food insecure" 3 "Moderate food insecure" 4 "Severe food
insecure"
```

```
la val uhfias uhfias
```

```
tab uhfias
```

```
*****Table*****
```

```
*****Socio-demographic*****
```

```
tab hmem1
```

```
tab tchild1
```

```
tab tchild_5_1
```

```
tab yofliving1
```

```
tab mstat2
```

```
tab rel2
```

```
tab m_edu3
```

```
tab hus_edu3
```

```
tab m_occ2
```

```
tab hus_occ2
```

tab hh_income1

tab m_income1

tab fn_demak2

tab hl_demak2

*****Maternal characteristics*****

tab mage1

tab tpregnancy1

tab tlbirth1

tab ancv2

tab nancv1

tab cdpregnancy2

tab pncv2

tab ppncv2

*****Child characteristics and feeding practice*****

tab csex2

tab cage1

tab border

tab cwdbirth2

tab gab2

tab mdelivery2

tab pbirth2

tab immu2

tab cslw2

tab dlw2
tab ptes2
tab ibf2
tab plf2
tab tplf2
tab ebf2
tab stcf2
tab fcf1
tab vas2

*****WASH*****

tab msdw2
tab mpw2
tab tt2
tab hwp2
tab muwh1
tab hhwd1

*****Household food security*****

tab uhfias

*****chi2 test*****

*****Socio-demographic*****

tab hmem1 wasting1, row chi2
tab tchild1 wasting1, row chi2
tab tchild_5_1 wasting1, row chi2
tab yofliving1 wasting1, row chi2

tab mstat2 wasting1, row chi2
tab rel2 wasting1, row chi2
tab m_edu3 wasting1, row chi2
tab hus_edu3 wasting1, row chi2
tab m_occ2 wasting1, row chi2
tab hus_occ2 wasting1, row chi2
tab hh_income1 wasting1, row chi2
tab m_income1 wasting1, row chi2
tab fn_demak2 wasting1, row chi2
tab hl_demak2 wasting1, row chi2

*****Maternal characteristics*****

tab mage1 wasting1, row chi2
tab tpregnancy1 wasting1, row chi2
tab tlbirth1 wasting1, row chi2
tab ancv2 wasting1, row chi2
tab nancv1 wasting1, row chi2
tab cdpregnancy2 wasting1, row chi2
tab pncv2 wasting1, row chi2
tab ppncv2 wasting1, row chi2

*****Child characteristics and feeding practice*****

tab csex2 wasting1, row chi2
tab cage1 wasting1, row chi2
tab border1 wasting1, row chi2
tab cwdbirth2 wasting1, row chi2
tab gab2 wasting1, row chi2

tab mdelivery2 wasting1, row chi2
tab pbirth2 wasting1, row chi2
tab immu2 wasting1, row chi2
tab cslw2 wasting1, row chi2
tab dlw2 wasting1, row chi2
tab ptes2 wasting1, row chi2
tab ibf3 wasting1, row chi2
tab plf2 wasting1, row chi2
tab tplf2 wasting1, row chi2
tab ebf2 wasting1, row chi2
tab stcf2 wasting1, row chi2
tab fcf1 wasting1, row chi2
tab vas2 wasting1, row chi2

*****WASH*****

tab msdw2 wasting1, row chi2
tab mpw2 wasting1, row chi2
tab tt2 wasting1, row chi2
tab hwp2 wasting1, row chi2
tab muwh1 wasting1, row chi2
tab hhwd1 wasting1, row chi2

*****Household food security*****

tab uhfias wasting1, row chi2

*****significant chi2*****

tab ancv2 wasting1, row chi2
tab nancv1 wasting1, row chi2
tab csex2 wasting1, row chi2
tab ibf2 wasting1, row chi2
tab ebf2 wasting1, row chi2

*****Regression*****

*****Unadjusted*****

*****Socio-demographic*****

logistic wasting i.hhmem1
logistic wasting i.tchild1
logistic wasting i.tchild_5_1
logistic wasting i.yofliving1
logistic wasting i.mstat2
logistic wasting i.rel2
logistic wasting i.m_edu2
logistic wasting i.hus_edu2
logistic wasting i.m_occ2
logistic wasting i.hus_occ2
logistic wasting i.hh_income1
logistic wasting i.m_income1
logistic wasting i.fn_demak2
logistic wasting i.hl_demak2

*****Maternal characteristics*****

logistic wasting i.mage1

logistic wasting i.tpregnancy1

logistic wasting i.tlbirth1

logistic wasting i.ancv2

logistic wasting i.nancv1

logistic wasting i.cdpregnancy2

logistic wasting i.pncv2

recode ppncv2 (1 3 4=1 "Private hospital") (2 =2 "Public hospital"), gen(ppncv3)

logistic wasting i.ppncv3

*****Child characteristics and feeding practice*****

logistic wasting i.csex2

recode cage1 (1 =1 "0-11 months") (2 =2 "12-23 months") (3 =3 "24-35 months") (4 5 =4 "36 or more month"), gen(cage2)

logistic wasting ib2.cage2

logistic wasting i.border1

logistic wasting i.cwdbirth2

logistic wasting i.gab2

logistic wasting i.mdelivery2

logistic wasting i.pbirth2

logistic wasting i.immu2

logistic wasting i.cslw2

logistic wasting i.dlw2

logistic wasting i.ptcs2

logistic wasting i.ibf3

logistic wasting i.plf2

logistic wasting i.tplf2

logistic wasting i.ebf2

logistic wasting i.stcf2

logistic wasting i.fcf1

logistic wasting i.vas2

*****WASH*****

logistic wasting i.msdc2

logistic wasting i.mpw2

logistic wasting i.tt2

logistic wasting i.hwp2

logistic wasting i.muwh1

logistic wasting i.hhwd1

*****Household food*****

logistic wasting i.uhfias

*****Adjusted regression*****

logistic wasting i.yofliving1 i.hus_occ2 i.nancv1 i.ppnvc3 i.csex2 ib2.cage2 i.cwdbirth2 i.ibf3
i.ebf2

Annex 3: Consent form

Informed Consent Form

Title of the study:

Prevalence of wasting and associated factors among Under 5 children in Korail slum, Dhaka, Bangladesh: A cross-sectional study

Investigator's Name:

Md. Rabbi Tarikujjaman

Organization:

BRAC James P Grant School of Public Health.

Purpose of the Research:

We are students of Batch 18 of the MPH program at James P. Grant School of Public Health, BRAC University. As a part of our MPH academic curriculum, we are conducting group research known as a “Summative Learning Project” and our group is working on the nutrition aspect.

The purpose of this study is to determine your perception of your child's nutritional status and the reason behind the retardation of growth and development of your child. We will assess feeding and healthcare-seeking practices for your child. We will also explore diseases like hypertension in mothers and dental caries in children and their reasons.

Why are you asked to participate?

We are requesting all the mothers who have children under five years old living in the Korail slum to participate in our study.

What we will ask to do our participants for this study?

If you agree we would like to take your permission before proceeding. We will ask you some questions and take measurements of you and your under-five child (e.g: height, weight, blood pressure and a visual inspection of your child's oral cavity). The interview will take approximately 30 minutes.

Risk:

As this is an exploratory study, there will be no potential risks to the study participants. We will strictly maintain all the Covid 19 related protective measures. We will wear masks and will also provide masks to our participants. We will sanitize our hands and measuring devices with hexisol

before and after the procedure is conducted and also will maintain a safe distance from our participants.

Benefits:

From this study, your valuable information will be extremely important for us to get an overview of the current nutritional status in this slum. We will keep it as evidence and use it in the future if needed for the further benefit of the people of this area.

Compensation:

There is no financial binding for your participation in the study.

Privacy, anonymity, and confidentiality:

Your responses will remain confidential and anonymous and will be used for the purpose of the study only. The information collected from the study will be kept covert by the research group. All documents will be stored carefully and will not be shared with people beyond those, who are closely involved with this research. The information gained from this research will be used in summarized form without your name and identity

Right not to participate and withdraw:

Your participation will be completely voluntary. You can withdraw from the interview/discussion at any moment if you want to, even after signing the consent or beginning the interview. Moreover, you are not obliged to answer any question that makes you feel uncomfortable. There are no restrictions and risks to answering our questions. We will abide by your decision and appreciate your concern.

For general queries about this study:

To know about your further safety and rights you can contact on the following address

Institutional review board, BRAC James P Grant School of Public Health, BRAC University, 7th - floor, Medona Tower, 28 Mohakhali Industrial Area, Bir Uttam A K Khandokar Road, Dhaka1213, Bangladesh, Mobile: +8801993379512

For your further queries and necessary clarifications about our study you can reach us anytime at the following designated contact numbers:

Md. Rabbi Tarikujjaman, BRAC James P Grant School of Public Health, BRAC University, 7 th -floor, Medona Tower, 28 Mohakhali Industrial Area, Bir Uttam A K Khandokar Road, Dhaka-1213, Bangladesh, Mobile: +8801737999284.

If you choose to participate in our study and agree to all the points above, please put your signature or your left thumbprint in the specified space below:

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions. I have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Participant	Interviewer
Name: Signature/Thumbprint: Date:	Name: Signature: Date:

সম্মতি পত্র

গবেষণার শিরোনাম:

ঢাকা, বাংলাদেশের কোরাইল বস্তিতে ৫ বছরের কম বয়সী শিশুদের মধ্যে কৃশকায় ও সংশ্লিষ্ট কারণের প্রাদুর্ভাব: একটি ক্রস সেকশনাল গবেষণা।

গবেষকদের নাম:

মো. রাব্বী তারিকুজ্জামান

সংগঠন:

ব্র্যাক জেমস পি গ্রান্ট স্কুল অফ পাবলিক হেলথ।

গবেষণার উদ্দেশ্য:

আমরা জেমস পি গ্রান্ট স্কুল অফ পাবলিক হেলথ, ব্র্যাক ইউনিভার্সিটির এম.পি.এইচ প্রোগ্রামের ১৮ তম ব্যাচ এর ছাত্র। এমপিএইচ একাডেমিক পার্থক্রমের একটি অংশ হিসাবে, আমরা একটি দলগত গবেষণা পরিচালনা করছি যা “সমষ্টিগত শিক্ষা প্রকল্প” নামে পরিচিত এবং আমরা পুষ্টিগত বিষয় নিয়ে গবেষণা করব।

এই গবেষণার উদ্দেশ্য হল আপনার সন্তানের পুষ্টির অবস্থা সম্পর্কে আপনার ধারণা এবং আপনার শিশুর বৃদ্ধি এবং বিকাশে বাধার পিছনের কারণ অনুসন্ধান। আমরা আপনার শিশুকে খাওয়ানোর ও স্বাস্থ্যসেবা গ্রহণের অভ্যাস সম্পর্কে নিরূপন করতে চাই। এছাড়াও আমরা মায়েদের উচ্চ রক্তচাপ ও বাচ্চাদের দাঁতক্ষয় এবং এদের কারণ সম্বন্ধেও জানতে চাই।

কেন আপনাকে অংশগ্রহণ করতে বলা হয়েছে?

আমরা কড়াইল বস্তিতে বসবাসরত সকল শূন্য থেকে পাঁচ বছর বয়সি বাচ্চার মায়েদের এই গবেষণায় অংশগ্রহণের জন্য অনুরোধ করছি।

এই গবেষণায় আপনাকে কি করতে বলা হবে?

আপনি সম্মত হলে আমরা এগিয়ে যাওয়ার আগে আপনার অনুমতি নিতে চাই। আমরা আপনাকে কিছু প্রশ্ন জিজ্ঞাসা করব এবং আপনার এবং আপনার পাঁচ বছরের কম বয়সী শিশুর শারীরিক পরিমাপ নিব (যেমন : উচ্চতা, ওজন, রক্তচাপ এবং আপনার সন্তানের মুখ গহবর পরিদর্শন)। সাক্ষাত্কারটি প্রায় 30 মিনিট সময় নেবে।

ঝুঁকি:

যেহেতু এটি একটি অনুসন্ধানমূলক গবেষণা, তাই এই গবেষণায় অংশগ্রহণকারীদের জন্য কোন সম্ভাব্য ঝুঁকি থাকবে না। আমরা কোভিড-১৯ সম্পর্কিত সমস্ত সুরক্ষামূলক ব্যবস্থা কঠোরভাবে বজায় রাখব। আমরা নিজেরা মাস্ক পরব এবং

আমাদের গবেষণায় অংশগ্রহনকারীদের কেও পরিধানের জন্য মাস্ক দিব। প্রতিটি পরিমাপ নেয়ার আগে ও পরে আমরা আমাদের হাত ও পরিমাপের যন্ত্রগুলোকে হেক্সিসল দিয়ে ভালভাবে জীবানুমুক্ত করে নিব এবং নিরাপদ দূরত্ব বজায় রাখব।

সুবিধা:

এই গবেষণা থেকে প্রাপ্ত আপনার মূল্যবান তথ্য এই বস্তুতে বর্তমান পুষ্টির অবস্থা সম্পর্কে একটি সংক্ষিপ্ত বিবরণ পেতে আমাদের জন্য অত্যন্ত গুরুত্বপূর্ণ হবে। আমরা এটি প্রমাণ হিসাবে রাখব এবং ভবিষ্যতে এই এলাকার মানুষের আরও সুবিধার জন্য প্রয়োজন হলে এটি ব্যবহার করব।

ক্ষতিপূরণ:

এই গবেষণায় আপনার অংশগ্রহণের জন্য কোন আর্থিক বাধ্যবাধকতা নেই।

গোপনীয়তা, নাম প্রকাশ না করা এবং গোপনীয়তা:

আপনার প্রতিক্রিয়াগুলি গোপনীয় এবং বেনামী থাকবে এবং শুধুমাত্র গবেষণার উদ্দেশ্যে ব্যবহার করা হবে। গবেষণা থেকে সংগৃহীত তথ্য গবেষক দল সম্পূর্ণ গোপন রাখবে। সমস্ত নথি সাবধানে সংরক্ষণ করা হবে এবং যারা এই গবেষণার সাথে ঘনিষ্ঠভাবে জড়িত তাদের বাইরের লোকেদের সাথে ভাগ করা হবে না। এই গবেষণা থেকে প্রাপ্ত তথ্য আপনার নাম এবং পরিচয় ছাড়াই সংক্ষিপ্ত আকারে ব্যবহার করা হতে পারে।

অংশগ্রহণ ও প্রত্যাহার না করার অধিকার:

আপনার অংশগ্রহণ সম্পূর্ণ স্বেচ্ছায় হবে। আপনি চাইলে যেকোন মুহুর্তে ইন্টারভিউ/আলোচনা থেকে নিজেকে প্রত্যাহার করতে পারেন, এমনকি সম্মতিতে স্বাক্ষর করার পরেও বা ইন্টারভিউ শুরু করার পরেও। তাছাড়া, আপনি এমন কোনো প্রশ্নের উত্তর দিতে বাধ্য নন যা আপনাকে অস্বস্তি বোধ করাবে। আমাদের প্রশ্নের উত্তর দেওয়ার কোন সীমাবদ্ধতা এবং ঝুঁকি নেই। আমরা আপনার সিদ্ধান্ত মেনে চলব এবং আপনার উদ্বেগের প্রশংসা করব।

এই গবেষণা সম্পর্কে সাধারণ প্রশ্নের জন্য:

আপনার অধিকার ও সুরক্ষার জন্য আরও তথ্য পেতে নিম্নোক্ত ঠিকানায় যোগাযোগ করুন:

ইন্সটিটিউশনাল রিভিউ বোর্ড, ব্র্যাক জেমস পি গ্র্যান্ট স্কুল অফ পাবলিক হেলথ, ব্র্যাক বিশ্ববিদ্যালয়, ৭ম তলা, মেডোনা টাওয়ার, ২৮ মহাখালি বানিজ্যিক এলাকা, বীর উত্তম এ কে খন্দকার রোড, ঢাকা-১২১৩, বাংলাদেশ, মোবাইল: +৮৮০১৯৯৩৩৭৯৫১২

আমাদের অধ্যয়ন সম্পর্কে আপনার আরও প্রশ্ন এবং প্রয়োজনীয় ব্যাখ্যার জন্য আপনি নিম্নলিখিত মনোনীত যোগাযোগ নম্বরে আমাদের সাথে যোগাযোগ করতে পারেন:

মোঃ রাক্বী তরিকুজ্জামান, ব্র্যাক জেমস পি গ্র্যান্ট স্কুল অফ পাবলিক হেলথ, ব্র্যাক বিশ্ববিদ্যালয়, ৭ম তলা, মেডোনা টাওয়ার, ২৮ মহাখালি বানিজ্যিক এলাকা, বীর উত্তম এ কে খন্দকার রোড, ঢাকা-১২১৩, বাংলাদেশ, মোবাইল: +৮৮০১৭৩৭৯৯৯২৮৪।

আপনি যদি আমাদের গবেষণায় অংশগ্রহণ করতে চান এবং উপরের সমস্ত পয়েন্টে সম্মত হন, তাহলে অনুগ্রহ করে নীচের নির্দিষ্ট জায়গায় আপনার স্বাক্ষর বা আপনার বাম খাম্বপ্রিন্ট রাখুন:

আমি পূর্বেক্ত তথ্য পড়েছি, বা এটি আমাকে পড়ে শোনানো হয়েছে। আমাকে গবেষণার বিষয়বস্তু সম্পর্কে প্রশ্ন করার সুযোগ দেয়া হয়েছিল এবং প্রশ্নের জবাবে আমি সন্তুষ্ট। আমি এই গবেষণায় অংশগ্রহণকারী হতে স্বেচ্ছায় সম্মতি দিচ্ছি।

অংশগ্রহণকারী	ইন্টারভিউয়ার
নাম:	নাম:
স্বাক্ষর/খানাপ্রিন্ট:	স্বাক্ষর:
তারিখ:	তারিখ:

Annex 4: Timeline

Activity	Timeline
SLP Students Orientation	October 15, 2022
Systematic Review Workshop	October 30 & 31, 2022
Refresher-I (Research Question Formulation, Literature Review, Conceptual Framework, Methodology, concept note)	November 2, 2022
Tutorial-1 (Introduction & Theme Specification, Research Question Formulation, Literature Review, Concept Note)	November 3, 2022
Draft Individual Concept notes submission	November 6, 2022
Tutorial- 2 (Concept note feedback)	November 10, 2022
Final Submission of Concept note	November 12, 2022
Refresher-II (Tools Development & Ethical Compliance)	November 13, 2022
Draft Tools and Consent form Submission	November 14, 2022
Tutorial-3 (Tool Feedback)	November 15, 2022
Tools and Consent form submission of Final Tools and Consent forms	November 16, 2022

Review of Ethical Compliance by ERC	November 17, 2022
Tutorial-4 (Addressing Ethical Compliance Feedback)	November 20, 2022
Tools Pretest and Finalization	November 21-22, 2022
Submission of Final Tools and Consent forms	November 23, 2022
Meeting with Research RA - Disbursement of SLP Grant	November 24, 2022
Pre-testing	November 25, 2022
Data collection	November 24- December 10, 2022
Refresher-III (Data Analysis)	December 08, 2022 December 11, 2022
Scientific Writing Workshop	December 12, 2022
Data analysis	December 10-17, 2022
Tutorial- 5: Data analysis (Progress and Initial Feedback)	December 18, 2022
Tutorial- 6: Data Analysis (Final Feedback)	December 22, 2022
Tutorial –7: SLP Final Report	December 27, 2022
Final Draft SLP Final Submission	January 4, 2023
Tutorial- 8: (Feedback on Final Draft Report)	January 8, 2023
Individual resubmission	January 11, 2023