

Title: Prevalence of varied perception of mothers about their under-five child's nutritional status with the measured status and the factors associated with the varied perception of mothers. A Cross-sectional study in slums of Dhaka city, Bangladesh

“Final Report of Summative Learning Project (SLP) presented to the BRAC James P Grant School of Public Health, BRAC University.”

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Abstract

Objective: Childhood malnutrition is a serious public health concern as it hampers a child's physical and cognitive development. Maternal misperception about their child's nutritional status can increase the burden of malnutrition. There was very limited literature on maternal perception of their under-five child's nutritional status in Bangladesh. The purpose of this study was to assess the burden of mother's varied perception about their under-five child's nutritional status and associated factors of it in urban slum context.

Design: Cross-sectional study

Setting: Two largest urban slums one from the Dhaka south city corporation (Dholpur) and another from Dhaka north city corporation (Korail).

Participants: A total of 437 mothers were included in the final analysis, of whom 215 were from Dholpur and 222 were from Korail slum.

Primary outcome: Mothers' varied perception about their under-five child's nutritional status was the primary outcome of interest. The varied perception is defined as the discrepancy between the mother's opinion of their child's nutritional state and the measured nutritional status.

Results: The prevalence of mother's varied perception was 45.8%. The prevalence was higher for Dholpur slum compared to Korail slum (Dholpur 52.5% vs Korail 47.5%). 37.1% of mothers underestimated their child's nutritional status, while 8.7% overestimated it. "Child doesn't want to eat" (AOR=3.77; 95% CI: 2.35 to 6.05; $p<0.001$) and "feel light when I carry" (AOR=4.09; 95% CI: 2.01 to 8.34; $p<0.001$) was the significant reason behind the mother's perception. Mother's monthly household income 10000 to less than 15000 BDT (AOR=2.41; 95% CI: 1.17 to 4.99; $p<0.05$) and 20000 to less than 25000 BDT (AOR=2.51; 95% CI: 1.10 to 5.71; $p<0.05$) had significantly higher odds of varied perception.

Conclusion: The prevalence of varied perception about their child's nutritional status was high for the urban slums. Health education on appropriate feeding practices for children and MUAC measurement can help mothers to perceive their child's nutritional status more precisely. Further qualitative research is required to explore maternal perception.

Background & Justification:

Worldwide the number of stunting (165 million to 149 million), wasting (52 million to 45 million) and underweight (103.7 million to 83.4 million) among under-five children decreased markedly, from 2011 to 2020. However, the number of overweight children under five years of age has increased by 5.6 million from 2000-2020 (World Health Organization, 2020, 2022). The Southeast Asia region, also Bangladesh is also following similar trends. Bangladesh has advanced significantly in a number of areas pertaining to health and nutrition (UNICEF, 2020). The prevalence of moderate and severe child stunting has declined from 42% in 2012–13 to 28% in 2019, (Bangladesh Bureau of Statistics (BBS) & UNICEF Bangladesh, 2014, 2019a). Similar to this, the prevalence of moderate and severe underweight has also decreased from 31.9% in 2012–13 to 22.6% in 2019 (Bangladesh Bureau of Statistics (BBS) & UNICEF Bangladesh, 2014, 2019a). The burden of overweight under-five children in Bangladesh is increasing, from 2% in 2017-18 to 2.4 % in 2019 (National Institute of Population Research and Training (NIPORT) & ICF, 2020; BBS & UNICEF, 2019). Still, a long way to go to achieve World Health Assembly's global nutrition target by 2025 and the SDG goal by 2030.

For the prevention and treatment of nutritional disorders, understanding the maternal perception about their children's nutritional status is crucial (Francescato et al.,2014). 'Perception' is defined as the process of identifying and interpreting sensory stimuli, that enables people to transform the sensory data and experiences from their immediate environment into meaningful interactions with it (Williams, 2018). Mothers' impression of an altered nutritional status that raises health concerns drives the initial step in seeking medical help and healthcare. (Francescato et al.,2014). Typically, mothers are more in charge of child rearing, especially their children's diet. Research has shown that mothers' attitudes and practices regarding their children's dietary habits are influenced by their perception of their children's nutritional status (Aparicio et al., 2013; Bikin et al., 2013; Webber et al., 2010). A child's characteristics or how the parents see those characteristics—have an impact on how they feed their children in an effort to improve their health and well-being (Grimmet et al., 2008). In this situation, it is possible to predict that the relationship between feeding practices and children's nutrition will be mediated by the mother's perception of the child's weight (Grimmet et al., 2008). Mothers who perceive their children to be overweight or underweight typically express more concern (Francis

et al., 2001). According to earlier research, mothers are more likely to restrict their children's diets, if they are more concerned about their weight (Francis et al., 2001). In contrast, mothers who worry about their child's being underweight often pressure the child to eat (Francis et al., 2001).

Concerningly, both under- and over-estimations of the nutritional status of children of normal weight can result in mothers' dissatisfaction with the alleged thinness or overweightness of the child and change how mothers act in regards to dietary intake in order to encourage weight gain or loss in healthy children (Aparício et al., 2013; Webber et al., 2010). According to a meta-analysis, more than half of parents misjudge their child's weight status, which is referred to as "parental misperception" (Lundahl et al., 2014). Additionally, a study revealed that 23.5% of mothers of children with normal weight overestimated their children's nutritional status while 46.2% of them underestimated it (Pedroso et al., 2017). A study from Bangladesh stated only 3.1% mothers accurately perceived their children's accurate nutritional status (Hossain et al., 2019). The double burden of malnutrition could be significantly reduced globally if mother-centric health awareness programs were implemented, taking into account the national or regional context (Hossain et al., 2020).

As the majority of mothers in Bangladesh (85%) care for their children primarily at home, they play a crucial part in the planning and preparation of the family's meals (Hossain et al., 2019). So, it is very important to understand how mothers see or assess their children's nutritional status. A number of studies were conducted regarding the maternal perception of children's nutritional status worldwide (Hazhin, 2021; Aparício et al., 2013; Parkinson et al., 2017; Guevara-Cruz et al., 2012; Neli et al., 2021). In the context of Bangladesh, only one study was found on maternal perception of overweight and obesity among preschool children was conducted in the Jamalpur district (Hossain et al., 2019). In their study (Hossain et al., 2019), they explore the perceptions of mothers about the overweight and obesity of their preschool-going children but here in our study, we will look at mothers of under-five children and their perception of the nutritional status of their children in the context of slum areas of Dhaka city. Population demography is different in urban slums from the rural and urban context as the residents come from low socioeconomic status and mostly work as informal sector (daily wage worker) workers (Fakir & Khan, 2015). Urban slums are also underprivileged in nutritional

data for children under five (Integrated SMART Nutrition Survey in Dhaka Urban Slums Bangladesh, 2022). Population demography is different in urban slums from the rural and urban context as the residents come from low socioeconomic status and mostly work as informal sector workers (Fakir & Khan, 2015). Urban slums are also underprivileged in nutritional data for children under five (Integrated SMART Nutrition Survey in Dhaka Urban Slums Bangladesh, 2022). It is expected that this study will provide us with knowledge prior to establishing evidence-based policies and interventions on mothers' nutritional perception of their children.

Research question

To what extent do the perceived nutritional status of the children by the mothers vary from their measured nutritional status? What are the factors associated with the varied perception of mothers?

General objective

To identify the prevalence of varied perception of mothers about their under-five child's nutritional status with the measured status and find out the associated factors related to the varied perception of mothers.

Specific objective

- To assess the prevalence of underweight among the under-five children
- To measure the prevalence of overweight among the under-five children
- To assess the prevalence of varied perception of mothers about their under-five child's nutritional status
- To identify factors associated with the varied perception of mothers

Conceptual Framework

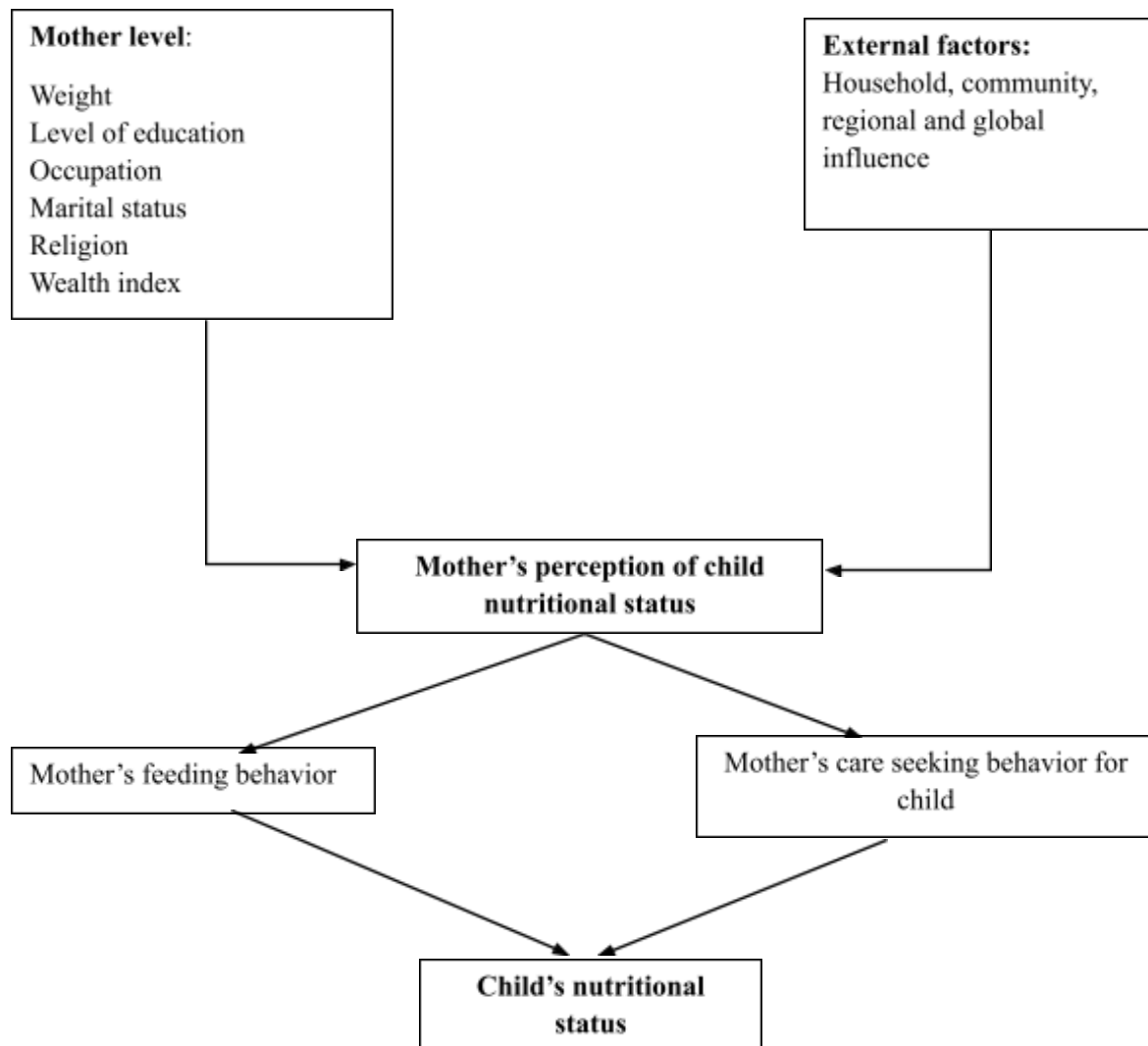


Fig 01: Conceptual framework. Adapted from (Hazhin, 2021)

A conceptual framework has been adapted from Hazhin, 2021 that was developed based on various contributing factors shaping the maternal perception on health and wellbeing. The individual's perception on health and wellbeing may be influenced by a variety of factors, including environmental factors, individual factors, and cultural norms (Mareno, 2014). The most important thing to realize in this situation is that parents must recognize a problem before taking action. The mother take action based on how she perceives her child's nutritional status. A

range of individual factors may build the perception of the mothers about their child's nutritional status. Like mothers' weight status might influence their perception of their child's weight (Gregori et al., 2018; Pasch et al., 2016; Francescotto et al., 2014). Mothers' level of education can mold their perception of their child's nutrition (Remmers et al., 2014; Baughcum et al., 2000). The wealth index or socioeconomic status of the mother also be correlated with the maternal perception of the child's nutrition (Gauthier & Gance-Cleveland, 2016). Occupation, marital status, and religion of the mother have a relation with the mother's perception of their child's nutritional status (Hossain et al., 2020). External factors like social and familial cultural norms can also affect a mother's perception (Gorlic et al., 2021; Lindsay et al., 2011). All these factors impact mother's perception of their child's nutritional status that ultimately affects their feeding pattern and also the care-seeking behavior of their child.

Methodology

Study design

To answer our research question, we conducted a cross-sectional quantitative study.

Study site and population

We collected data from the mothers having children aged 0-5 years residing in the slum areas of Dhaka city. There are about 5000 slums in both city corporations of Dhaka residing over 4 million people (UNICEF, 2022). The Korail slum in Gulshan and the Dholpur slum in Jatrabari are the two largest slums that we purposefully chose from distinct geographically representative sections of Dhaka metropolis. The region's household structure, environmental elements, religious beliefs, and traditions are similar to other slums in Dhaka city. These slums' residents come from a variety of enduring addresses, and the regions were big enough to draw enough research subjects for the study. (Uzma et al., 1999). Lastly, two distinct slums from two separate places were used to counteract the lack of variation that would arise from selecting the slums from just one area.

Inclusion criteria

Mothers having children 0-5 years old and residing in two above-selected slum areas for more than six months. For the mother who has more than one under-five child, we selected one randomly for inclusion of the child.

Exclusion criteria

- Mothers having child older than 5 years
- Mothers not residing in our selected study sites
- Mothers residing in the selected area for less than six months
- Mothers who have speech difficulty or are terminally ill
- Mothers who don't give us consent to participate

Sample size & sampling technique

We used the “epi info” app from CDC (Centers for Disease Control and Prevention (CDC), 2022) to estimate the sample size for our study. For our study, we assumed 50% of mothers have misconceptions about the weight of their children to get the highest number of samples. We considered a 5% margin of error and a 95% confidence interval. Then we gave input all data into “epi info” software, and the total sample size was 384. After considering a 90% response rate, our sample size was 427. We followed systematic random sampling to select the participants. At first after we went to the slums, we selected a landmark (Awamelegue office in Dholpur and The Ershad School field in Korail) and from that landmark, we looked for five mothers from five households according to our inclusion criteria from each slum. Then we randomly selected one household and from there we interviewed every third household and ended up with 440 interviews of mother. However, three respondents opted out during the data collection, thus we did not analyze those three. Finally, for the analysis, we included 215 participants from the Dholpur slum and 222 from the Korail slum a total of 437 participants.

Study tool

After doing an extensive literature review, we developed a questionnaire guideline to conduct our data collection. We shared our questionnaire with the peer and faculties for review. After that, we

revised the questionnaire and translated them into Bangla for data collection. We pretested our study tool in the Sat-tola slum prior to data collection.

Dependent variable

We compared the mothers' perceived nutritional status of under-five children with their measured nutritional status (under-five children). If the two (perceived and actual) didn't match that was the varied perception of mothers. This varied perception of mothers about the nutritional status of their under-five children was our dependent variable. The varied perception can be an "overestimation" or "underestimation" of the under-five child's nutritional status.

The responses of mothers to the question about their child's current weight status were divided into three categories: "Underweight" (very underweight and underweight) "normal weight" and "overweight" (overweight and very overweight) (Parkinson et al., 2017).

For measuring the under-five children's nutritional status measurement, we used WHO's weight-for-age and weight-for-height z-score. If weight for age z-score lied < -2 SD we denoted it as "underweight", if it was ≥ -2 SD "normal weight" and if weight-for-height Z-score lied $> +2$ SD "overweight", if $\leq +2$ SD "normal weight" (WHO, 2022).

Independent variable

Age, number of living children, mother's occupation, mother's level of education, marital status, husband's occupation, husband's level of education, monthly household income, place of delivery and religion were the socio-demographic factors considered as independent variables in our study.

Data collection procedure & quality control

We conducted our data collection through face-to-face interviews with the mothers. For that, we developed a google form with Bengali translated questionnaire. For weight measurement of children, for children under 2 years and above 2 years of age who cannot stand still, we first measured their weight with their mother. Then we measured the weight of their mother solely. And then we subtracted the measurements to get the weight of the child. And for children above 2 years who can stand still, we measured their weight. For both measurements, we used TANITA

UM-070 as our weighing scale. A portable height and length measuring machine was used to measure the length or height of the children. Before measuring weight and height/length, we calibrated our instruments every morning before the data collection procedure to get an accurate measurement. Prior to measurement, we asked our participants to remove shoes and heavy clothes from their children. We recorded our weight & height data to the nearest decimal place. For height and weight, we took two measurement values and average them. If any value exceeds 0.5 cm or 0.5 kg, we took a third measurement and average the two nearest values. All of the above, we trained our data collectors extensively for conducting interviews and taking measurements accurately. For Covid-19 related safety measures, we requested our participants to put on a mask while interviewing. We sanitized our hands and measuring devices before and after the procedure is conducted and also maintained a safe distance from the participants. Each day after data collection a team meeting was held and all responses and measurements were cross-checked by peers.

Data analysis

After collecting data on google Forms, we gave input our data into a Microsoft Excel file. We looked for any missing responses and inconsistencies in the data. We first coded the variables using the excel file and then imported the excel file into STATA 17 software for analysis. The variable names and labels were checked. Then we looked for the missing values and if there were any but we did not get any missing values. To facilitate extensive analysis, labeling the variables, recoding of values and categorization of variables were done. We performed a descriptive analysis of our study participants and presented them as frequency and percentage stratified by Dholpur and Korail slums. We did cross tabulate to measure the prevalence of varied perception of mothers across different independent variables. Finally, we performed a logistic regression both unadjusted and adjusted to establish the association between dependent and independent variables. In the adjusted analysis, every variable with a p-value greater than or equal 0.2 was excluded.

Ethical consideration

For our study, we took ethical approval from the Institutional Review Board of BRAC James P Grant School of Public Health. Each participant was provided informed written consent for the interview after being informed of the study's purpose, the voluntary nature of their participation,

and their right to withdraw at any moment during the interview. Confidentiality was maintained by keeping the participants' identities secret from outside parties. To safeguard the participants' privacy, a unique ID was provided for each completed questionnaire. The study's participants were free to quit at any time without repercussion. A financial incentive or remuneration was not given to individuals for participating in the study, either.

Results

For the final analysis, 437 mothers were included in the study, including 215 (49.2%) from Dholpur and 222 (50.8%) from Korail slum.

Table 01 depicts the socio-demographic characteristics of the study participants' separately for Dholpur and Korail slums. Most of the mothers from both slums belonged to the 20-29 years of age group (Dholpur 67.4% & Korail 68.0%). Almost all the mothers were Muslim by religious belief (95.0%) and married (97.0%). Maximum mothers completed their primary level of education (Dholpur 52.6% & Korail 45.9%). Whereas a few of them completed secondary and above level of education (15.8%), comparatively more in Korail (20.7%) than in Dholpur (10.7%). A higher proportion of mothers were homemakers (81.0%) and the rest worked outside home for income generating activities (14.9%). Most mothers had no monthly income (Dholpur 77.7% & Korail 84.7%) but some earned 5000 BDT or more (Dholpur 12.6% & Korail 10.8%). A higher proportion of study participants' husbands completed primary education (48.1%).

Service was the primary occupation of the spouses of study participants in both slums (Dholpur 38.6% & Korail 33.3%), but husbands from the Korail slum engaged in more skilled work (27.9%) than those from the Dholpur slum (19.1%). Maximum children of the participants belonged to the 12-23 (25.2%) and 24-35 (24.7%) months age group and slightly more male (51.3%) than female (48.7%) children. Most of the mothers (29.1%) reported their monthly household income was 15000 to less than 20000 BDT with a mean of 16789.0 BDT per month which is less than the national per capita income of 20122.5 BDT (Bangladesh Bureau of Statistics, 2022). A proportionately higher number of mothers (59.3%) mentioned husbands took the financial decision of their household.

Table 01: Sociodemographic characteristics of study respondents stratified by Dholpur and Korail slums

Characteristics	Dholpur N=215 %	Korail N=222 %	Total N=437 %
Demographic			
Mother's age (years)			
15-19	19 (8.8%)	18 (8.1%)	37 (8.5%)
20-29	145 (67.4%)	151 (68.0%)	296 (67.7%)
30-39	50 (23.3%)	46 (20.7%)	96 (22.0%)
40 & above	1 (0.5%)	7 (3.2%)	8 (1.8%)
Religion			
Muslim	200 (93.0%)	215 (96.8%)	415 (95.0%)
Hindu	10 (4.7%)	7 (3.2%)	17 (3.9%)
Christian	5 (2.3%)	0 (0.0%)	5 (1.1%)
Marital status¹			
Married	209 (97.2%)	215 (96.8%)	424 (97.0%)
Others	6 (2.8%)	7 (3.2%)	13 (3.0%)
Age of children (months)			
0-11	46 (21.4%)	41 (18.5%)	87 (19.9%)
12-23	49 (22.8%)	61 (27.5%)	110 (25.2%)
24-35	52 (24.2%)	56 (25.2%)	108 (24.7%)
36-47	29 (13.5%)	37 (16.7%)	66 (15.1%)
48-59	39 (18.1%)	27 (12.2%)	66 (15.1%)
Sex of child			
Female	113 (52.6%)	100 (45.0%)	213 (48.7%)
Male	102 (47.4%)	122 (55.0%)	224 (51.3%)
Slum living duration (years)			
1-5	52 (24.2%)	64 (28.8%)	116 (26.5%)
6-10	35 (16.3%)	57 (25.7%)	92 (21.1%)
11-15	39 (18.1%)	37 (16.7%)	76 (17.4%)
16 or more	89 (41.4%)	64 (28.8%)	153 (35.0%)
Education & Occupation			

¹ Other = Separated, Divorced & Refused to answer

Mother's occupation²			
Homemaker	168 (78.1%)	186 (83.8%)	354 (81.0%)
Working	47 (21.9%)	36 (16.2%)	83 (19.0%)
Husband's level of education³			
Pre-primary or none	90 (41.9%)	76 (34.2%)	166 (38.0%)
Primary completed	102 (47.4%)	108 (48.6%)	210 (48.1%)
Secondary completed and above	23 (10.7%)	38 (17.1%)	61 (14.0%)
Husband's occupation⁴			
Service	83 (38.6%)	74 (33.3%)	157 (35.9%)
Skilled worker	41 (19.1%)	62 (27.9%)	103 (23.6%)
Unskilled worker	71 (33.0%)	42 (18.9%)	113 (25.9%)
Small trade	11 (5.1%)	34 (15.3%)	45 (10.3%)
Others	9 (4.2%)	10 (4.5%)	19 (4.3%)
Income & Financial Decision Making			
Mother's monthly income			
No income	167 (77.7%)	188 (84.7%)	355 (81.2%)
less than 5000	21 (9.8%)	10 (4.5%)	31 (7.1%)
More than or equal 5000	27 (12.6%)	24 (10.8%)	51 (11.7%)
Household income (monthly in BDT)⁵			
less than 10000	36 (16.7%)	32 (14.4%)	68 (15.6%)
10000 to <15000	60 (27.9%)	55 (24.8%)	115 (26.3%)
15000 to <20000	69 (32.1%)	58 (26.1%)	127 (29.1%)
20000 to <25000	27 (12.6%)	33 (14.9%)	60 (13.7%)
>=25000	23 (10.7%)	44 (19.8%)	67 (15.3%)
Financial decision maker⁶			
Herself	24 (11.2%)	8 (3.6%)	32 (7.3%)
Husband	111 (51.6%)	148 (66.7%)	259 (59.3%)
Both husband & wife	43 (20.0%)	33 (14.9%)	76 (17.4%)

² Working = Petty business, Employee, Garment's worker, NGO worker, Teacher, House-maid, Skilled (Sewing, Embroidery, Cook), Unskilled – Day laborer

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 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 businessman, Salesman), Others (Don't know, no work, living abroad)

⁵ BDT = Bangladeshi taka

⁶ Other = Father, Mother, Brother, Brother-in-law & Husband

Father-in-law	6 (2.8%)	12 (5.4%)	18 (4.1%)
Mother-in-law	26 (12.1%)	15 (6.8%)	41 (9.4%)
Other	5 (2.3%)	6 (2.7%)	11 (2.5%)

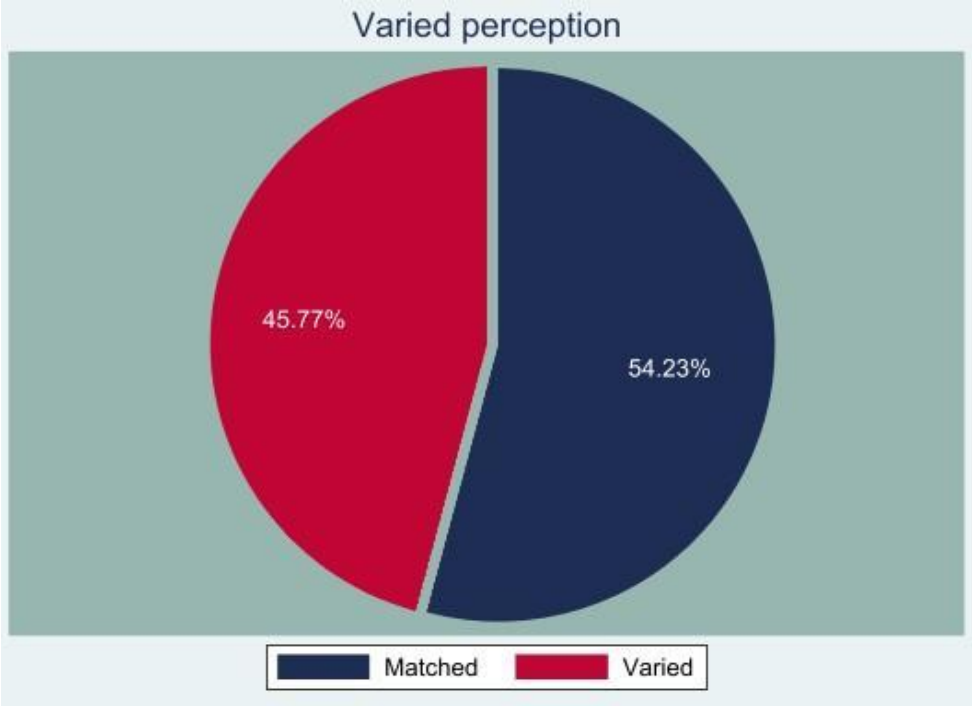


Fig 02: Prevalence of varied perception of mothers

Figure 02 describes the prevalence of varied perception of mothers which is around 46%. Among them (who were having varied perception) 37.1% of mothers underestimated and 8.7% overestimated their child’s nutritional status (Figure 03)

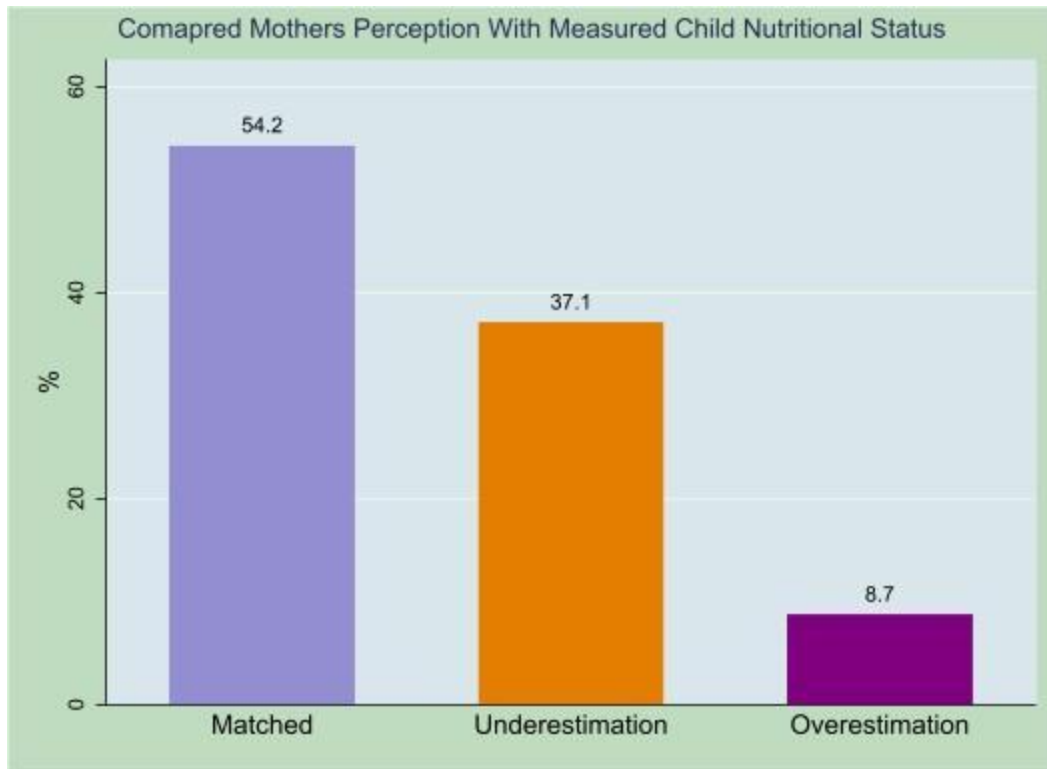


Fig 03: Prevalence of under and overestimation

Table 02: Prevalence of varied perception across sociodemographic, health & reason for perception characteristics stratified by Dholpur & Korail slum

Characteristics	Dholpur n (%)	Korail n (%)	Total n=200 (%)
Religion			
Muslim	98 (51.8%)	91 (48.2%)	189 (100%)
Non-Muslim	7 (63.6%)	4 (36.4%)	9 (100%)
Mother's age			
15-19	8 (61.5%)	5 (38.5%)	13 (100%)
20-29	76 (55.1%)	62 (44.9%)	138 (100%)
30-39	21 (46.7%)	24 (53.3%)	45 (100%)
40 & above	0 (0.0%)	4 (100%)	4 (100%)
Mother's education level			
Pre-primary or none	36 (49.3%)	37 (50.7%)	73 (100%)
Primary completed	58 (57.4%)	43 (42.6%)	101 (100%)

Secondary completed and above	11 (42.3%)	15 (57.7%)	26 (100%)
Marital status			
Married	103 (52.6%)	93 (47.4%)	196 (100%)
Others	2 (50.0%)	2 (50.0%)	4 (100%)
Mother's occupation			
Homemaker	82 (50.9%)	79 (49.1%)	161 (100%)
Working	23 (59.0%)	16 (41.0%)	39 (100%)
Mother's monthly income (BDT)			
No income	81 (50.6%)	79 (49.4%)	160 (100%)
less than 5000	12 (66.7%)	6 (33.3%)	18 (100%)
More than or equal 5000	12 (54.6%)	10 (45.4%)	22 (100%)
Husband's level of education			
Pre-primary or none	46 (54.8%)	38 (45.2%)	84 (100%)
Primary completed	49 (53.8%)	42 (46.2%)	91 (100%)
Secondary completed and above	10 (40.0%)	15 (60.0%)	25 (100%)
Husband's occupation			
Service	44 (61.1%)	28 (38.9%)	72 (100%)
Skilled worker	16 (39.0%)	25 (61.0%)	41 (100%)
Unskilled worker	35 (58.3%)	25 (41.7%)	60 (100%)
Small trade	6 (28.6%)	15 (71.4%)	21 (100%)
Others	4 (66.7%)	2 (33.3%)	6 (100%)
Age of children			
0-11	30 (58.8%)	21 (41.2%)	51 (100%)
12-23	24 (51.1%)	23 (48.9%)	47 (100%)
24-35	24 (53.3%)	21 (46.7%)	45 (100%)
36-47	13 (44.8%)	16 (55.2%)	29 (100%)
48-59	14 (50.0%)	14 (50.0%)	28 (100%)
Sex of child			
Female	53 (58.2%)	38 (41.8%)	91 (100%)
Male	52 (47.7%)	57 (52.3%)	109 (100%)
Financial decision maker			
Herself	12 (75.0%)	4 (25.0%)	16 (100%)
Husband	54 (45.8%)	64 (54.2%)	118 (100%)

Both husband & wife	23 (65.7%)	12 (34.3%)	35 (100%)
Father-in-law	4 (57.1%)	3 (42.9%)	7 (100%)
Mother-in-law	10 (50.0%)	10 (50.0%)	20 (100%)
Other	2 (50.0%)	2 (50.0%)	4 (100%)
Slum living duration (years)			
1-5	25 (49.0%)	26 (51.0%)	51 (100%)
6-10	17 (39.5%)	26 (60.5%)	43 (100%)
11-15	18 (52.9%)	16 (47.1%)	34 (100%)
16 or more	45 (62.5%)	27 (37.5%)	72 (100%)
Reason for perception⁷			
Child doesn't want to eat	49 (51.6%)	46 (48.4%)	95 (100%)
Visual observation	30 (47.6%)	33 (52.4%)	63 (100%)
Feel heavy when I carry	3 (75.0%)	1 (25.0%)	4 (100%)
Feel light when I carry	15 (53.6%)	13 (43.4%)	28 (100%)
Others	8 (80.0%)	2 (20.0%)	10 (100%)
Place of delivery			
Home	24 (37.5%)	40 (62.5%)	64 (100%)
Private hospital	27 (49.1%)	28 (50.9%)	55 (100%)
Public hospital	19 (73.1%)	7 (26.9%)	26 (100%)
NGO hospital	35 (63.6%)	20 (36.4%)	55 (100%)

Table 02 describes the prevalence of varied perception of mothers across all sociodemographic, health & reason for perception characteristics stratified by the Dholpur & Korail slum. Mother's perception varied more in Dholpur (52.5%) than Korail slum (47.5%). Categories where the Dholpur slum has a higher prevalence of altered perception are summarized in Table 03.

Table 03: Categories with a higher prevalence of varied perception in the Dholpur slum

CATEGORIES	
UNDERWEIGHT	Dholpur 28.4% vs Korail 25.7% (Figure 04)
OVERWEIGHT	Dholpur 1.9% vs Korail 1.4% (Figure 04)
RELIGION	Increase in both categories

⁷ Others = Child illness, can't provide food to them

MOTHERS AGE 20-29	Dholpur 55.1% vs Korail 44.9%
MOTHERS' PRIMARY LEVEL OF EDUCATION	Dholpur 57.4% vs Korail 42.6%
WORKING MOTHER (INCOME-GENERATING WORK)	Dholpur 59.0% vs Korail 41.0%
MOTHER'S INCOME LESS THAN 5000 BDT	Dholpur 66.7% vs Korail 33.3%
HUSBAND'S PRIMARY LEVEL OF EDUCATION	Dholpur 53.8% vs Korail 46.2%
HUSBAND'S OCCUPATION	Dholpur 61.1% vs Korail 38.9%
CHILD AGE	Increase all categories except 36-47- and 48-59-years age categories

On the contrary prevalence of varied perception was much higher in Korail for home delivery than in Dholpur slum (Dholpur 37.5% vs Korail 62.5%).

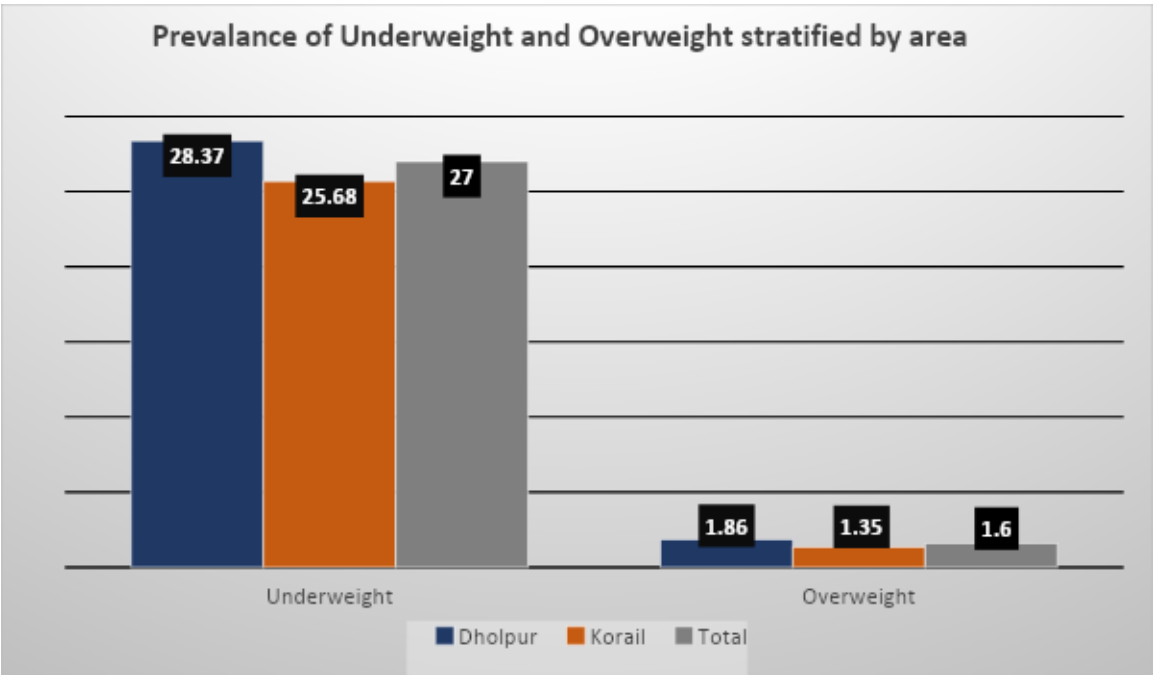


Fig 04: Prevalence of underweight and overweight stratified by area

Table 04 describes the factors associated with varied perception along with COR and AOR. Mothers who said child doesn't want to eat (AOR=3.77; 95% CI: 2.35 to 6.05; p<0.001) or feel light when I carry (AOR=4.09; 95% CI: 2.01 to 8.34; p<0.001) or others (child illness, can't

provide food) (AOR=8.70; 95% CI: 2.14 to 35.42; p=0.003) as reasons for their perception had a significantly higher odds of having varied perception compared to mothers who said visual observation as a reason behind their perception. Mothers who mentioned home as their place of delivery (AOR=0.53; 95% CI: 0.30 to 0.94) had significantly lower odds of varied perception than NGO hospital delivery with a p-value <0.05. This study revealed that compared to mothers whose child's age falls 0-11months age category, mothers whose child's age falls 11-23 (AOR=0.39; 95% CI: 0.20 to 0.75) or 24-35 (AOR=0.39; 95% CI: 0.20 to 0.76) or 48-59 (AOR=0.30; 95% CI: 0.14 to 0.64) had significantly lower odds of varied perception with a p-value <0.05. Our study also revealed mothers who had a monthly household income 10000 to less than 15000 BDT (AOR=2.41; 95% CI: 1.17 to 4.99) or 20000 to less than 25000 BDT (AOR=2.51; 95% CI: 1.10 to 5.71) had significantly higher odds of varied perception compared with mothers who had monthly household income more or equal to 25000 BDT with a p-value <0.05.

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

Characteristics	COR	p-value	AOR	p-value
Reason for perception				
Visual observation	Reference			
Child doesn't want to eat * ⁸	3.48 (2.24-5.43)	0	3.77 (2.35-6.05)	0
Feel heavy when I carry	0.77 (0.24-2.52)	0.67	0.79 (0.22-2.85)	0.721
Feel light when I carry*	3.31 (1.70-6.42)	0	4.09 (2.01-8.34)	0
Others*	7.09 (1.89-26.66)	0.004	8.70 (2.14-35.42)	0.003
Place of delivery				
NGO hospital	Reference			
Home*	0.49 (0.29-0.83)	0.008	0.53 (0.30-0.94)	0.03
Private hospital	0.53 (0.31-0.92)	0.023	0.69 (0.38-1.27)	0.236
Public hospital	0.56 (0.29-1.08)	0.083	0.76 (0.36-1.61)	0.437
Child age (months)				
0-11	Reference			
12-23*	0.53 (0.30-0.93)	0.027	0.39 (0.20-0.75)	0.005
24-35*	0.50 (0.28-0.89)	0.019	0.39 (0.20-0.76)	0.005
36-47	0.55 (0.29-1.06)	0.073	0.58 (0.27-1.21)	0.147

⁸ * = p-value <0.05

48-59*	0.52 (0.27-0.99)	0.048	0.30 (0.14-0.64)	0.002
Mother's age (years)				
15-19				
20-29	1.61 (0.79-3.29)	0.189	1.67 (0.75-3.71)	0.208
30-39	1.63 (0.74-3.57)	0.223	2.17 (0.88-5.36)	0.092
40 & above	1.84 (0.40-8.62)	0.436	2.34 (0.43-12.76)	0.327
Maternal education				
Pre-primary or none	Reference			
Primary completed	0.97 (0.64-1.47)	0.889	1.21 (0.73-2.01)	0.454
Secondary completed & above	0.66 (0.37-1.18)	0.165	0.85 (0.38-1.88)	0.68
Household income (monthly in BDT)				
>= 25000	Reference			
less than 10000	2.17 (1.08-4.36)	0.029	1.92 (0.86-4.29)	0.112
10000 to <15000*	2.08 (1.11-3.90)	0.022	2.41 (1.17-4.99)	0.018
15000 to <20000	1.61 (0.87-2.99)	0.13	1.57 (0.78-3.19)	0.207
20000 to <25000*	1.91 (0.93-3.93)	0.077	2.51 (1.10-5.71)	0.028
Husband's education				
Pre-primary or none	Reference			
Primary completed	0.75 (0.50-1.12)	0.161	0.67 (0.41-1.08)	0.103
Secondary completed & above	0.68 (0.76-1.39)	0.2	0.58 (0.27-1.26)	0.166

Discussion

In our study, we explored how much the perception of mothers varied from the measured nutritional status of their under-five children and associated factors in slum areas. We identified that out of 100 mothers about 46 mothers inappropriately perceived the nutritional status of their under-five children. The prevalence of varied perception was higher among the participants of the Dholpur slum for most of the sociodemographic strata than Korail slum. Odds of varied perception was positively associated with the reason for maternal perception and monthly household income; while increasing child age and home delivery as a place of delivery were protective factors for varied perception.

We found 37.1% of mothers underestimated and 8.7% of mothers overestimated their under-five child's nutritional status. A similar kind of finding was reported for underestimation in previously published studies from USA, Spain and Mexico (Genovesi et al., 2005;

Guevara-Cruz, 2012; Maynard et al., 2003). Underestimation of children's nutritional status is a common phenomenon across the world, especially for overweight children (Hochdorn et al., 2018). Children whose weight statuses were underestimated as children gain the most weight in adulthood (Kroke et al., 2006). Overweight and obese children have a tendency to develop non-communicable diseases in the future (WHO, 2021).

Overestimation of children's nutritional status is also evident from a study conducted in Brazil (Pedroso et al., 2017). Concerningly, both under- and over-estimations of the nutritional status of children can result in mothers' dissatisfaction with the alleged thinness or overweightness of the child (Aparício et al., 2013; Pedroso et al., 2017). Children's feeding control behaviors are influenced by parental perception, which may be moderated by maternal concerns about the child's nutritional state (Arpini et al., 2015). According to previous research, mothers are more likely to restrict their children's diets the more concerned they are about their weight (Arpini et al., 2015). In contrast, mothers who worry about their kid's underweight sometimes pressure the child to eat (Arpini et al., 2015). Which might in turn alter the nutritional status of children and can lead them to malnutrition.

We observed that the prevalence of varied perception was higher among the participants of the Dholpur slum. This can be explained by, a lot of WASH, research on nutrition and nutritional intervention programs held in Korail slum compared to Dholpur slum (Ahmed et al., 2010; M. K. Chowdhury et al., 2021; Md. A. Chowdhury et al., 2022; Fakir & Khan, 2015; Huq et al., 2020; Marcil et al., 2016; Razzaque et al., 2019). Respondents of the Korail slum has better exposure to those nutritional interventions and malnutrition. Thus, participants of the Korail slum have better knowledge about malnutrition which might enhanced their perception. In our study we also found prevalence of underweight and overweight is more in Dholpur slum compared to Korail.

We found a positive association between household income and perception. Highest income family's perception about the children's nutritional status match more with measured status than lower income families. A study from Bangladesh also suggests that (Hossain et al., 2019). As reason behind their perception mothers who stated 'child doesn't want to eat' or 'feel light when I carry' have more varied perception than mothers who stated 'visual observation' as a reason for their perception. This finding implies that mothers who claimed that their under-five child refuses to feed or feel light while carrying have a more varied impression of their child's

nutritional health. It's a common belief of mothers that their children fed poorly or refuse to feed (Kerzner et al., 2015). Study from UK and Bangladesh also suggested about mothers' poor knowledge about feeding practices of their child (Crocker et al., 2009; Hackett et al., 2015). This finding could help us to develop interventions to enhance mother's perception about their child nutritional status.

In our study we also found that increased child age also increases mothers' ability to perceive children's nutritional status. Our study findings is similar to earlier published research in USA (Maynard et al., 2003). Children's body size increases with increased child age. It helps mothers to perceive their child's nutritional status more accurately. The result means that mothers wrongly perceive their child's nutritional status when age of child is less than one year.

Findings imply that we have to boost maternal knowledge about appropriate feeding practices for their child. Their understanding of the nutritional status of their children can be improved through comprehensive health and nutritional education on child feeding practices. Additionally, to get the precise nutritional status of children MUAC measurement can be helpful, as it can be done with a very limited resource.

Strengths & Limitations

We found only one study in Bangladesh assessing the mother's perception about their child's nutritional status. However, the study only explored maternal perception about their child's overnutrition. But in our study, we looked maternal perception for both under and over nutrition of child. We collected data from two largest slum of the Dhaka city, which will make our study findings more generalizable.

This study has also some limitations. As we have budget, resource and time constrain, for sample size calculation we did not stratify sample size by area. After getting the total sample size we divided it equally for two slums. We also could not perform simple random sampling or cluster sampling for our study. The exact population size is unknown for those slums, moreover we did not have enough time and human resource to make sampling frame for those slums. But we did systematic random sampling to overcome this limitation. In our study mother's perception was explored quantitatively, qualitative exploration can give us depth view of the issue. However, this study results might help the future qualitative study.

Conclusion

Higher prevalence of maternal misperception about their under-five child's nutritional status could be hazardous to slum dwellers in terms of nutritional aspect for the under-five years of children. Due to rapid urbanization and demographic changes the population size of these slums is increasing. Above all sociodemographic condition and WASH status of slum makes it more vulnerable for malnutrition. Children's refusal to feed and feel lighter while carrying child were the prime reasons behind mother's misperception about their children's nutritional status. Extensive health education for mothers on appropriate feeding practices of child can help the mothers to improve their perception. Also, half yearly MUAC measurement of under-five children can enlighten mothers about their children's nutritional status, which can be done with limited resource setting. Furthermore, research into developing culturally relevant preventative strategies to control risk factors should be conducted in Bangladesh's urban slums.

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Annex

Annex 1: Questionnaire

Part-A: General information

Sl. no	Question	Option	Code	Instructions
1	Interviewer's name: সাক্ষাৎকার গ্রহনকারীর নাম			
2	Interviewer's Id: সাক্ষাৎকার গ্রহনকারীর আইডি			
3	Household Id: খানার আইডি			
4	Date of the interview সাক্ষাৎকার গ্রহনের তারিখ	____/____/2022 DD(দিন) MM (মাস) YR (বছর)		
5	Interview start time (in 24-hours format) সাক্ষাৎকার শুরুর সময় (২৪ ঘন্টা ফরম্যাটে)	____:____ Hour(ঘন্টা) Minute(মিনিট)		
	Household Id খানার আইডি			
6	Who is the head of your household? আপনার খানার প্রধান কে?			
7	What is the name of the head of the household? আপনার খানা প্রধানের নাম কি?			
8	What is your (mother's) name? আপনার নাম (মা) কি?			
9	Mother's Id মায়ের আইডি			
10	What is your (mother's) date of birth? আপনার জন্মসাল কি?	____/____/____ DD(দিন) MM (মাস) YR (বছর)		
11	Age of mother মায়ের বয়স	____:____ Years(বছর) Months(মাস)		

12	How many members live in your household? আপনার খানার সদস্য সংখ্যা কত?			
13	How many children do you have under five years of age? কতজন বাচ্চার বয়স পাঁচ বছরের নীচে?			
14	Name of the children under five years of age: পাঁচ বছরের নীচের বয়সি বাচ্চার নাম			As we will select one under-five child randomly from each mother (যেহেতু আমরা প্রতি মা এর একজন পাঁচ বছরের নীচের বয়সি বাচ্চা দৈবচয়নের ভিত্তিতে নিব)
15	Id of the children under five years of age: পাঁচ বছরের নীচের বয়সি বাচ্চার আইডি			
16	Date of birth of your children under five years of age: পাঁচ বছরের নীচের বয়সি বাচ্চার জন্মসাল	<input type="text"/> / <input type="text"/> / <input type="text"/> /20 DD (দিন) MM (মাস) Year (বছর)		
17	Age of your under-five children পাঁচ বছরের নীচের বয়সি বাচ্চার বয়স	<input type="text"/> : <input type="text"/> Years (বছর) Months (মাস)		
18	For how many years have you been living in this slum? কত বছর যাবত আপনি এই বস্তিতে বসবাস করছেন?			
19	Address and contact number of the participant: যোগাযোগের ঠিকানা ও ফোন নম্বর:			
20	Slum name: বস্তির নাম	1. Korail 2. Dholpur		

		1. কড়াইল 2. ধলপুর		
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Part-B: Socio-demographic and economic

Serial no.	Questions	Option	Code	Instruction
1	What is your marital status? আপনার বৈবাহিক অবস্থা কি?	1. Married 2. Widowed 3. Separated 4. Divorced 5. Refused to answer 1. বিবাহিত 2. বিধবা 3. পৃথক 4. তালকপ্রাপ্ত 5. উত্তর দিতে অসম্মতি	mstat	
2	What is your religion? আপনার ধর্ম কি?	1. Muslim 2. Hindu 3. Christian 4. Buddhist 5. Others (specify) 1. মুসলিম 2. হিন্দু 3. খ্রিস্টান 4. বৌদ্ধ 5. অন্যান্য (দয়া করে নির্দিষ্ট করুন)	religion	
3	What is your highest completed level of education? আপনি সর্বোচ্চ কতদূর পর্যন্ত লেখাপড়া করেছেন?	1. Class 1 2. Class 2 3. Class 3 4. Class 4 5. Class 5 6. Class 6	medu	

		7. Class 7 8. Class 8 9. Class 9 10. Class 10 11. SSC/Dakhil 12. HSC/Alim 13. Diploma/ vocational 14. BA/ BSc/BCom/Fazil/graduate/ BA (honours) 15. MA/Phd/Kamil 16. Hafezi/Qawmi/Kharizi 17. N/A, because never went to school 18. Don't know 1. প্রথম শ্রেণী 2. দ্বিতীয় শ্রেণী 3. তৃতীয় শ্রেণী 4. চতুর্থ শ্রেণী 5. পঞ্চম শ্রেণী 6. ষষ্ঠ শ্রেণী 7. সপ্তম শ্রেণী 8. অষ্টম শ্রেণী 9. নবম শ্রেণী 10. দশম শ্রেণী 11. এস.এস.সি/দাখিল) 12. এইচ.এস.সি/আলিম 13. ডিপ্লোমা/ভোকেশনাল 14. বি.এ/বি.এসসি/বি.কম/স্নাতক/ বি.এ স্নাতক 15. এম.এ/পিএইচডি/কামিল 16. হাফেজি/কওমি/খারিজি 17. প্রযোজ্য নয়, কারণ কখনও স্কুলে যাওয়া হয়নি 18. জানিনা		
4	What is your husband's completed level of education? আপনি স্বামী সর্বোচ্চ কতদূর পর্যন্ত লেখাপড়া করেছেন?	19. Class 1 20. Class 2 21. Class 3 22. Class 4 23. Class 5 24. Class 6 25. Class 7 26. Class 8 27. Class 9 28. Class 10 29. SSC/Dakhil 30. HSC/Alim 31. Diploma/ vocational 32. BA/ BSc/BCom/Fazil/graduate/	hedu	

		<p>BA (honours)</p> <p>33. MA/Phd/Kamil</p> <p>34. Hafezi/Qawmi/Kharizi</p> <p>35. N/A, because never went to school</p> <p>36. Don't know</p> <p>19. প্রথম শ্রেণী</p> <p>20. দ্বিতীয় শ্রেণী</p> <p>21. তৃতীয় শ্রেণী</p> <p>22. চতুর্থ শ্রেণী</p> <p>23. পঞ্চম শ্রেণী</p> <p>24. ষষ্ঠ শ্রেণী</p> <p>25. সপ্তম শ্রেণী</p> <p>26. অষ্টম শ্রেণী</p> <p>27. নবম শ্রেণী</p> <p>28. দশম শ্রেণী</p> <p>29. এস.এস.সি/দাখিল)</p> <p>30. এইচ.এস.সি/আলিম</p> <p>31. ডিপ্লোমা/ভোকেশনাল</p> <p>32. বি.এ/বি.এসসি/বি.কম/স্নাতক/ বি.এ স্নাতক</p> <p>33. এম.এ/পিএইচডি/কামিল</p> <p>34. হাফেজি/কওমি/খারিজি</p> <p>35. প্রযোজ্য নয়, কারণ কখনও স্কুলে যাওয়া হয়নি</p> <p>36. জানিনা</p>		
5	<p>What is your main occupation for the last six months?</p> <p>Instruction: If he/she was involved in more than one occupation then ask him/ her which occupation he/she gave more time</p> <p>বিগত ছয়মাস যাবত আপনার প্রধান পেশা কি ছিল?</p> <p>নির্দেশনাঃ</p> <p>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)</p> <p>2. Skilled (Sewing, embroidery, cook)</p> <p>3. Garments worker</p> <p>4. Employee</p> <p>5. Professionals (Doctor, Engineer, Nurse, Advocate)</p> <p>6. Businessman</p> <p>7. Petty businessman</p> <p>8. Housemaid</p> <p>9. Beggar</p> <p>10. Homemaker</p> <p>11. Student</p> <p>12. Others (specify below)</p> <p>1. অদক্ষ কর্মী (দিনমজুর)</p> <p>2. দক্ষ কর্মী (সেলাই, নকশার কাজ, বাবুর্চি)</p> <p>3. গার্মেন্টস কর্মী</p> <p>4. চাকুরীজীবী</p> <p>5. পেশাজীবী (ডাক্তার, ইঞ্জিনিয়ার, নার্স, উকিল)</p> <p>6. ব্যবসায়ী</p>	moc	

		<p>7. ক্ষুদ্র ব্যবসায়ী 8. গৃহকর্মী 9. ভিক্ষুক 10. গৃহিণী 11. ছাত্র 12. অন্যান্য (দয়া করে নির্দিষ্ট করুন)_____</p>		
6	<p>What is your husband's main occupation for the last six months?</p> <p>Instruction: <i>If he/she was involved in more than one occupation then ask him/ her which occupation he/she gave more time</i></p> <p>বিগত ছয়মাস যাবত আপনার স্বামীর প্রধান পেশা কি ছিল?</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) 2. Skilled (Plumber, mechanic, electrician, hairdresser, blacksmith, goldsmith, cook) 3. Rickshaw puller/ van/Wheelbarrow/Baby taxi/ Boatman 4. Security guard 5. Garments worker 6. Employee 7. Professionals (Doctor, Engineer, Nurse, Advocate) 8. Businessman 9. Petty businessman 10. Housemaid 11. Beggar 12. Hawker 13. Student 13. Others (specify below) ____</p> <p>1. অদক্ষ কর্মী (দিনমজুর) 2. দক্ষ কর্মী (প্লাম্বার, মেকানিক, ইলেক্ট্রিসিয়ান, নাপিত, কামার, স্বর্ণকর্মী, বাবুর্চি) 3. রিক্সা, ভ্যান, বেবীটেক্সী, ঠেলাগাড়ী চালক, মাঝি 4. নিরাপত্তা কর্মী 5. গার্মেন্টস কর্মী 6. চাকুরীজীবী 7. পেশাজীবী (ডাক্তার, ইঞ্জিনিয়ার, নার্স, উকিল) 8. ব্যবসায়ী 9. ক্ষুদ্র ব্যবসায়ী 10. গৃহকর্মী 11. ভিক্ষুক 12. ফেরিওয়ালা 13. ছাত্র 14. অন্যান্য (দয়া করে নির্দিষ্ট করুন)</p>	hoc	
7	<p>What is your monthly average household income for the last six months?</p>			

	বিগত ছয়মাসে আপনার খানার মাসিক গড় আয় কত ছিল?			
8	What is your monthly average income for the last six months? বিগত ছয়মাসে আপনার মাসিক গড় আয় কত ছিল?			
9	Who take financial decisions in your family? আপনার পরিবারে অর্থনৈতিক সিদ্ধান্ত কে নেয়?	<ol style="list-style-type: none"> 1. Herself 2. Husband 3. Both husband and wife 4. Father-in-law 5. Mother-in-law 6. Others, please specify 		
10	Who take healthcare decisions in your family? আপনার পরিবারে স্বাস্থ্যগত ব্যাপারে সিদ্ধান্ত কে নেয়?	<ol style="list-style-type: none"> 1. Herself 2. Husband 3. Both husband and wife 4. Father-in-law 5. Mother-in-law 6. Others, please specify 		

Part-C: Maternal characteristics

Serial no.	Questions	Option	Code	
1	How many times did you become pregnant in your life? (Including abortion, MR, stillbirth and live birth) আপনি কতবার গর্ভবতী হয়েছেন?			

2	How many times have you delivered live birth in your life? আপনি কতবার জীবিত সন্তান প্রসব করেছেন?		cal	D 7
3	Are you suffering from any health problems? আপনি কি কোন স্বাস্থ্যগত সমস্যায় ভুগছেন?	1. Yes 2. No 1. হ্যাঁ 2. না	Mhealth E 4	(If no go to the no 5 question) (যদি না হয় তবে ৫ নং প্রশ্নে যান)
4	What is your health problem? আপনি কি ধরনের স্বাস্থ্যগত সমস্যায় ভুগছেন?	1. Hypertension 2. Diabetes 3. Hypercholesterolemia 4. Heart disease 5. Asthma/ COPD 6. Tuberculosis 7. Low back pain 8. Chronic liver disease 9. Chronic kidney disease 10. Cancer 11. Others (Please specify) 1. উচ্চ রক্তচাপ 2. ডায়াবেটিস 3. রক্তে অতিরিক্ত কোলেস্টেরল 4. হৃদরোগ 5. হাঁপানি 6. যক্ষ্মা 7. কোমরে ব্যথা 8. দীর্ঘমেয়াদী লিভারের রোগ 9. দীর্ঘমেয়াদী কিডনি রোগ 10. ক্যান্সার 11. অন্যান্য, দয়া করে নির্দিষ্ট করুন	E5	(We will record more than one response) (একাধিক উত্তর নিব)
Child's name and ID (বাস্তার নাম ও আইডি):				
5	What was the mode of delivery when you gave your childbirth? আপনার সন্তান প্রসবের পদ্ধতি কি ছিল?	1. Caesarian 2. Vaginal 1. সিজারিয়ান 2. যোনিপথে	dlvry	Part d 12
6	Where did you give birth to your child? আপনার সন্তান প্রসবের স্থান কি ছিল?	1. Facility delivery 2. Home delivery 1. প্রাতিষ্ঠানিক প্রসব	pdlvry	D 13

		2. বাড়িতে প্রসব		
7	Did you face any complications during delivery? সন্তান জন্মদানের সময় কি কোন প্রসবকালীন জটিলতায় ভুগেছিলেন?	1. Yes 2. No 1. হ্যাঁ 2. না	Mcom D 16	(If no please go to the Part- D) (উত্তর 'না' হলে অংশ- ডি এ যান)
8	What was your complication? কি ধরনের প্রসবকালীন জটিলতায় ভুগেছিলেন?	1. Excessive bleeding 2. High grade fever 3. Blurring of vision 4. Eclampsia 5. Excessive headache 6. Obstructed labor 7. Prolong labor 8. Early water breaking 9. Injury of the birth canal 10. Umbilical cord-related complications 11. Perinatal asphyxia 12. Other (specify) 1. অতিরিক্ত রক্তক্ষরণ 2. মাত্রাতিরিক্ত জ্বর 3. ঝাপসা দেখা 4. খিঁচুনি 5. প্রচল্ড মাথা ব্যথা 6. প্রসবকালীন সন্তান আটকে যাওয়া 7. বিলম্বিত প্রসব 8. সময়ের আগে পানি ভাঙ্গা 9. প্রসবপথে আঘাত 10. নাভিরস্রু সম্পর্কিত জটিলতা 11. প্রসবকালীন বাচ্চার শ্বাসকষ্ট 12. অন্যান্য, দয়া করে নির্দিষ্ট করুন	dcsn	D 17

Part-D: Child characteristics

Serial no.	Questions	Option	Code	Instruction
1	What is the sex of your child? আপনার বাচ্চার লিঙ্গ কি?	1. Male 2. Female 3. Other (Please specify)	csex	P 13 m q1

		<ol style="list-style-type: none"> 1. পুরুষ 2. মহিলা 3. অন্যান্য, দয়া করে নির্দিষ্ট করুন 		
2	<p>What is the birth order of your child? আপনার বাচ্চার জন্মক্রম কি?</p>		cord	P13 4
3	<p>Does your child still breastfeed? আপনার বাচ্চা কি এখনও আপনার বুকের দুধ পান করে?</p>	<ol style="list-style-type: none"> 1. Yes 2. No <ol style="list-style-type: none"> 1. হ্যাঁ 2. না 	cbreast	If 'Yes' go to the no 6 question 'হ্যাঁ' হলে ৬ নং প্রশ্নে যান
4	<p>Why not? কেন পান করেনা?</p>	<ol style="list-style-type: none"> 1. Child refuses to drink 2. Mother do not have time to breastfeed 3. Pregnancy of the mother 4. Lack of breastmilk 5. Mother work outside 6. Age of the child is more than 2 years) 7. Other (specify) <ol style="list-style-type: none"> 1. বাচ্চা খেতে চায় না 2. মা সময়ের অভাবে খাওয়াতে চায় না 3. মায়ের গর্ভধারণ 4. দুধ আসে না 5. মা বাইরে কাজ করে 6. বাচ্চার বয়স ২ বছরের চেয়ে বেশি 7. অন্যান্য, দয়া করে নির্দিষ্ট করুন 		
5	<p>Do you have to take your child to the hospital for the last six months? গত ছয়মাসে আপনার বাচ্চাকে কি কোন কারণে হাসপাতালে নিতে হয়েছে?</p>	<ol style="list-style-type: none"> 1. Yes 2. No <ol style="list-style-type: none"> 1. হ্যাঁ 2. না 	chealth	If 'No' go to the Part-E 'না' হলে অংশ-ইতে যান
6	<p>What is the problem? কি সমস্যার জন্য হাসপাতালে নিয়েছেন?</p>	<ol style="list-style-type: none"> 1. Pneumonia 2. Diarrhea 3. Fever 4. Convulsion 5. Unconsciousness 6. Vomiting 7. Others (specify) 		

		<ol style="list-style-type: none"> 1. নিউমোনিয়া 2. ডায়রিয়া 3. জ্বর 4. খিঁচুনি 5. অজ্ঞান হয়ে যাওয়া 6. বমি 7. অন্যান্য, (দয়া করে নির্দিষ্ট করুন) 		
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Part-E: Maternal perception

Serial no.	Questions	Option	Code	
1	<p>What is your perception about your child's weight?</p> <p>আপনার বাচ্চার ওজন সম্বন্ধে আপনার ধারণা কি?</p>	<ol style="list-style-type: none"> 1. Very underweight 2. Underweight 3. Normal 4. Overweight 5. Very overweight <ol style="list-style-type: none"> 1. খুবই পাতলা 2. পাতলা 3. স্বাভাবিক 4. বেশি ওজন 5. খুবই বেশি ওজন 	mpercept	Part 16 q 1 2
2	<p>The reason you think so?</p> <p>কেন আপনার এমন ধারণা হল?</p>	<ol style="list-style-type: none"> 1. Child doesn't want to eat 2. Visual observation 3. Feel light when I carry 4. Feel heavy when I carry 5. Relatives, neighbors, community people say so 6. Other (specify) <ol style="list-style-type: none"> 1. বাচ্চা খেতে চায়না 2. বাচ্চাকে দেখতে লাগে 3. কোলে নিলে হালকা মনে হয় 4. কোলে নিলে ভারী মনে হয় 5. আত্মীয়-স্বজন, প্রতিবেশী ও মহল্লার মানুষ বলে 6. অন্যান্য (দয়া করে নির্দিষ্ট করুন) 	wmpercept	

Measurements:

Sl no.	Indicators	Measurement	Code
Child			

1	Weight			
2	Height			
		z-score	Interpretation	
3	Height-for-age			
4	Weight-for-height			
5	Weight-for-age			
Mother				
1	Weight			
2	Height			

Perception measurement:

Mothers' perception on child's nutritional status	Measured nutritional status of child	Varied perception (Matched/ Unmatched)

Annex 2: Do file STATA

```
import excel "D:\MPH\SLP\Writings\Stata workshop\Tanmoy data set.xlsx", sheet("Form Responses 1") firstrow
```

****Labeling variables*****

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

```
label var Intv_ID "Interviewer Id"
```

```
label var Intv_date "Interview date"
```

```
label var Intv_time "Interview starting time"
```

```
label var hhid "Household Id"
```

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

```
label var name_hhhead "Name of household head"
```

label var mname "Mother's name"

label var m_Id "Mother's Id"

label var mdob "Mother's date of birth"

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 cname "Child's name"

label var child_id "Child's Id"

label var cdob "Child's date of birth"

label var cage "Age of child in months"

label var yofliving "Slum living duration in years"

label var area_name "Name of living slum"

label var total_hmem "Number of household member"

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 tnp "Total number of pregnancy"

label var lb "Number of live birth"

label var pcom "Complication during pregnancy"

label var mod "Mode of delivery"

label var pod "Place of delivery"

label var cod "Complication during delivery"

label var cd "Chronic diseases"

label var cd1 "Hypertension"

label var cd2 "Heart attack"

label var cd3 "Other heart diseases"

label var cd4 "Stroke"

label var cd5 "Diabetes"

label var cd6 "Chronic liver diseases"

label var cd7 "Chronic kidney diseases"

label var cd8 "Chronic renal diseases"

label var cd9 "Cancer"

label var cd10 "Mental illness"

label var so1 "Stress due to job"

label var so2 "Stress due to household chores"

label var so3 "Stress due to child rearing"

label var so4 "Stress due to child illness"

label var order "Birth order"

label var BW "Birth weight"

label var perc "Perception of mother"

label var cperc "Cause of perception"

label var dsb "Healthcare seeking decision maker"

label var CW " Child weight"

label var CH "Child height"

label var SOC "Sex of child"

label var d_com "Type of complication during delivery"

*****Religion*****

encode rel, gen(rel1)

recode rel1 (3=1 "Muslim") (2=2 "Hindu") (1=3 "Christian"), gen(rel2)

la var rel2 "Religion"

recode rel1 (3=1 "Muslim") (2 1=2 "Non Muslim"), gen(rel3)

```
la var rel3 "Religion"
```

```
****Encoding****
```

```
encode area_name, gen(area)
```

```
encode total_hhmem, gen(t_hhem)
```

```
encode cd, gen(cd_)
```

```
encode so1, gen(so_1)
```

```
encode so2, gen(so_2)
```

```
encode so3, gen(so_3)
```

```
encode so4, gen(so_4)
```

```
****sex of child****
```

```
encode SOC, gen(SOC1)
```

```
label variable SOC1 "Sex of child"
```

```
recast double SOC1
```

```
****perception****
```

```
encode perc, gen(perc1)
```

```
recode perc1 (3 4=1 "Underweight") (1=2 "Normal") (2=3 "Overweight"), gen (perc2)
```

```
la var perc2 "Perception of mother"
```

```
****Zscore****
```

```
/*findit zscore*/
```

```
zscore06, a(cage) s(SOC1) h(CH) w(CW)
```

```
*****underweight*****
```

```
gen underweight= waz06<-2 if waz06<=.
```

```
la de underweight 1"Underweight" 0"Normal", replace
```

```
la val underweight underweight
```

```
*****
```

```
gen overweight= whz06 >2 if whz06 <=.
```

```
la de overweight 1"Overweight" 0"Normal", replace
```

```
la val overweight overweight
```

```
*****wasting*****
```

```
gen wasting= whz06<-2 if whz06<=.
```

```
la de wasting 1"Wasting" 0"Normal", replace
```

```
la val wasting wasting
```

```
****Sunting****
```

```
gen stunting= haz06 <-2 if haz06<=.
```

```
la de stunting 1"Stunting" 0"Normal", replace
```

```
la val stunting stunting
```

```
*****Mothers age category*****
```

```
recode mage (15/19=1) (20/29=2) (30/39=3) (40/54=4), gen(mage1)
```

```
la de mage1 1"15-19" 2"20-29" 3"30-39" 4"40 & above"
```

```
la val mage1 mage1
```

```
la var mage1 "Mothers age"
```

```
*****Household income category*****
```

```
gen hh1_income=1 if hh_income<10000
```

```
replace hh1_income=2 if hh_income>=10000&hh_income<15000
```

```
replace hh1_income=3 if hh_income>=15000&hh_income<20000
```

```
replace hh1_income=4 if hh_income>=20000&hh_income<25000
```

```
replace hh1_income=5 if hh_income>=25000
```

```
la de hh1_income 1"less than 10000" 2"10000 to <15000" 3"15000 to <20000" 4"20000 to <25000" 5">=25000"
```

```
la val hh1_income hh1_income
```

```
la var hh1_income "Hosuehold income"
```

*****Mothers education category*****

```
encode m_edu, gen(medu)
```

```
recode medu (13 16 2 4 5 6=1 "Pre-primary or none") (7 8 9 10 3 11=2 "Primary completed")  
(17 1 14 15 12=3 "Secondary completed & above"), gen(medu1)
```

```
la var medu1 "Mothers education level"
```

*****Husbands education category*****

```
encode hus_edu, gen(hedu)
```

```
recode hedu (13 17 2 4 5 6=1 "Pre-primary or none") (7 8 9 10 3 11=2 "Primary completed") (1  
14 15 16 12 18=3 "Secondary completed & above"), gen(hedu1)
```

```
la var hedu1 "Husband's level of education"
```

*****Child age category*****

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

```
la de cage1 1"0-11" 2"12-23" 3"24-35" 4"36-47" 5"48-59"
```

```
la val cage1 cage1
```

```
la var cage1 "Age of children"
```

*****Financial decision maker*****

```
encode fn_demak, gen(fndc)
```

```
recode fndc (3=1 "Herself") (4=2 "Husband") (1=3 "Both husband & wife") (2=4  
"Father-in-law") (5=5 "Mother-in-law") (6 7 8 9=6 "Other"), gen(fndc1)
```

```
la var fndc1 "Financial decision maker"
```

```
*****Mothers occupation*****
```

```
encode m_occ, gen(m_ocu)
```

```
recode m_ocu (4=1 "Homemaker") (1 2 3 5 6 7 8 9 10 11=2 "Working"), gen(m_ocu1)
```

```
la var m_ocu1 "Mother's occupation"
```

```
*****Husbands occupation*****
```

```
encode hus_occ, gen(h_ocu)
```

```
recode h_ocu (3 4 12=1 "Service") (13 2=2 "Skilled worker") (14 11=3 "Unskilled worker") (1 7  
9=4 "Small trade") (5 6 8 10=5 "Others"), gen(hocu)
```

```
la var hocu "Husband's occupation"
```

```
*****Mothers income*****
```

```
gen m1_income=1 if m_income<1
```

```
replace m1_income=2 if m_income>=1&m_income<5000
```

```
replace m1_income=3 if m_income>=5000
```

```
la de m1_income 1"No income" 2"less than 5000" 3"More than or equal 5000"
```

```
la val m1_income m1_income
```

```
la var m1_income "Mother's monthly income"
```

*****Measurement variables*****

```
gen measure=1 if underweight==1
```

```
replace measure=2 if underweight==0&overweight==0
```

```
replace measure=3 if overweight==1
```

```
la de measure 1"Underweight" 2"Normal" 3"Overweight"
```

```
la val measure measure
```

```
la var measure "Measured nutritional status"
```

*****Household members*****

```
recode hhmemb (2/5=1 "Five or less") (6/13=2 "More than five"), gen(hhmemb1)
```

*****Years of living in the slum*****

```
recode yofliving (1/5=1 "1-5") (6/10=2 "6-10") (11/15=3 "11-15") (16/40=4 "16 or more"),  
gen(yol)
```

*****Marital status*****

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

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

```
la var mstat2 "Marital status"
```


*****varied perception****

compare perc2 measure

gen vari=0 if perc2==measure

replace vari=1 if perc2<measure

replace vari=2 if perc2>measure

la de vari 0"Matched" 1"Underestimation" 2"Overestimation"

la val vari vari

*****varied perception1****

gen difn= perc2- measure

gen varied=0 if difn==0

replace varied=1 if difn!=0

la de varied 0"Matched" 1"Varied"

la val varied varied

*****Cause of perception****

encode cperc, gen(cperc1)

recode cperc1 (1=1 "Child doesn't want to eat") (11=2 "Visual observation") (2=3 "Feel heavy when I carry") (3=4 "Feel light when I carry") (10=5 "Relative, neighbors & community say") (4 5 6 7 8 9=6 "Others"), gen(cperc2)

la var cperc2 "Cause of perception"

****Place of delivery****

encode pod, gen(pod1)

recode pod1 (1=1 "Home") (5=2 "Private hospital") (6 4=3 "Public hospital") (2 3=4 "NGO hospital"), gen (pod2)

*****Table 01 Sociodemo table****

/*tab mstat2 area, col

tab rel2 area, col

tab mage1 area,col

tab medu1 area, col

tab m_ocu1 area, col

tab m1_income area, col

tab hedu1 area, col

tab hocu area, col

tab SOC1 area, col

tab cage1 area, col

tab fndc1 area, col

tab yol area, col

tab t_hhem area, col

```
table1_mc, by(area) vars( rel2 cat %4.1f \ mage1 cat %4.1f \ medu1 cat %4.1f \ mstat2 cat
%4.1f\ m_ocu1 cat %4.1f\ m1_income cat %4.1f\ hedu1 cat %4.1f\ hocu cat %4.1f\ cage1 cat
%4.1f\ SOC1 cat %4.1f\ hh1_income cat %4.1f\ fndc1 cat %4.1f\ yol cat %4.1f) nospace onecol
total(before) saving("table 1.xlsx", replace)
```

****Table 02 Prevalence****

tab rel3 area if varied==1, row

tab mstat2 area if varied==1, row

tab mage1 area if varied==1, row

tab medu1 area if varied==1, row

tab m_ocu1 area if varied==1, row

tab m1_income area if varied==1, row

tab hedu1 area if varied==1, row

tab hocu area if varied==1, row

tab SOC1 area if varied==1, row

tab cage1 area if varied==1, row

tab fndc1 area if varied==1, row

tab yol area if varied==1, row

```
tab cd_area if varied==1, row
```

```
tab cperc2 area if varied==1, row
```

```
tab pod2 area if varied==1, row
```

```
*****Table 04 Logistic regression*****
```

```
logistic varied i.hedu1
```

```
logistic varied ib2.cperc2
```

```
logistic varied ib4.pod2
```

```
logistic varied i.cage1
```

```
logistic varied i.mage1
```

```
logistic varied ib5.hh1_income
```

```
logistic varied i.medu1
```

```
logistic varied i.hedu1 ib2.cperc2 ib4.pod2 i.cage1 i.mage1 ib5.hh1_income i.medu1
```

```
graph pie, over(varied) plabel(_all percent) title("Varied perception")
```

```
graph bar, over(vari) blabel(total)
```

```
*****fusion of response*****
```

```
/**replace rel="Muslim" if rel==" Muslim"
```

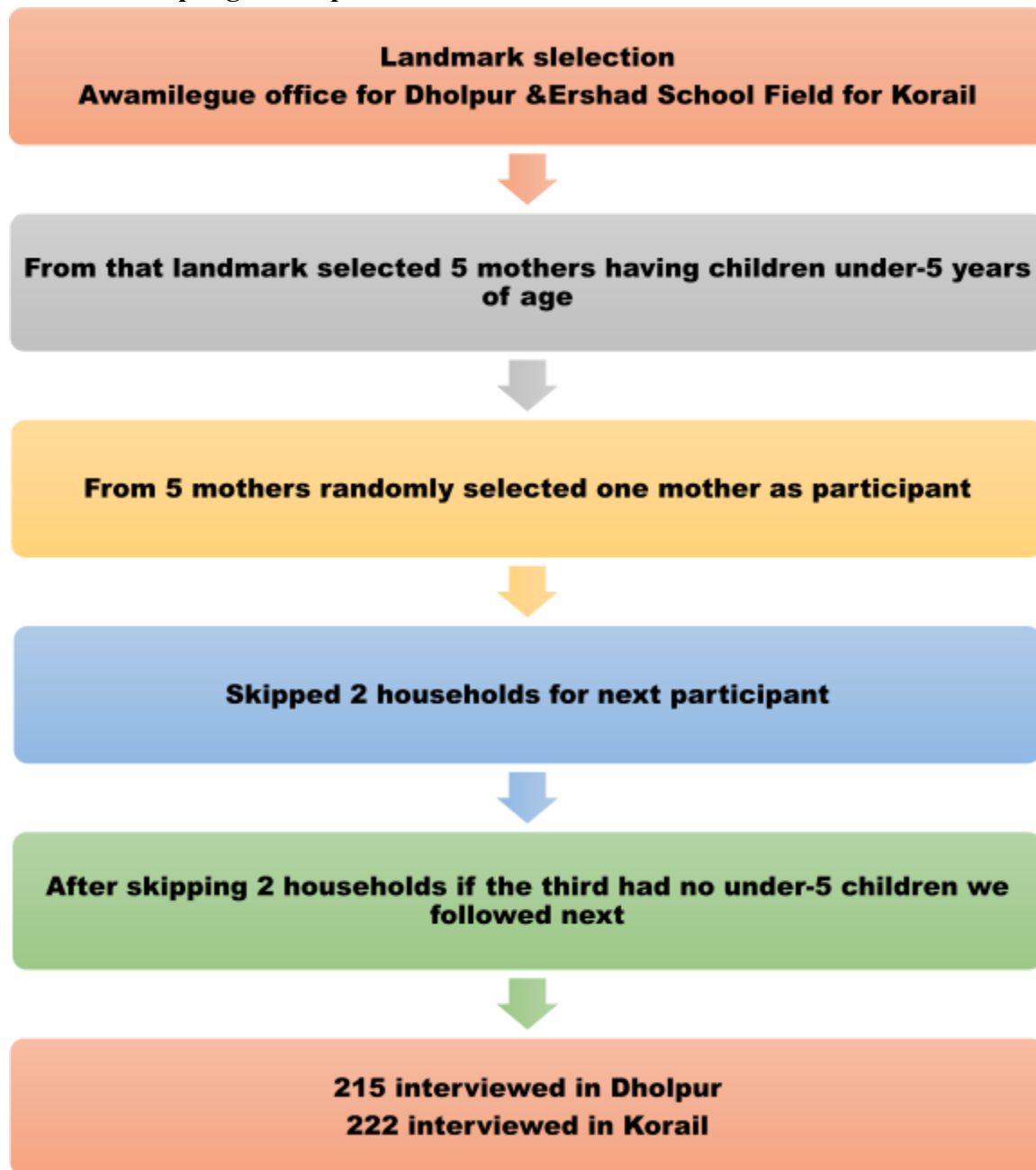
```
replace rel="Hindu" if rel==" Hindu"
```

```
replace mstat="Married" if mstat==" Married"
```

```
replace mstat="Married" if mstat=="married"
```

```
replace mstat="Divorced" if mstat==" Divorced"*/
```

Annex 3: Sampling technique



Annex 4: Consent form

Informed Consent Form

Title of the study:

Prevalence of varied perception of mothers about their under-five child's nutritional status with the measured status and the factors associated with the varied perception of mothers. A Cross-sectional study in slums of Dhaka city, Bangladesh

Investigator's Name:

Dr. Tanmoy Sarker

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 slum (Korail & Dholpur) 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, Dhaka-1213, Bangladesh, Mobile: +8801993379512

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

Dr. Tanmoy Sarker, BRAC James P Grant School of Public Health, BRAC University, 7th-floor, Medona Tower, 28 Mohakhali Industrial Area, Bir Uttam A K Khandokar Road, Dhaka-1213, Bangladesh, Mobile: +8801710466705.

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
<p>Name:</p> <p>Signature/Thumbprint:</p> <p>Date:</p>	<p>Name:</p> <p>Signature:</p> <p>Date:</p>

সম্মতি পত্র

গবেষণার শিরোনাম:

পাঁচ বছরের কম বয়সী শিশুদের পরিমাপকৃত পুষ্টির অবস্থার সাথে তাদের পুষ্টির অবস্থা সম্পর্কে মায়েদের মূল্যায়নের ভিন্নতার প্রকোপ এবং মূল্যায়নের ভিন্নতার সাথে সম্পর্কিত কারণগুলি। বাংলাদেশের ঢাকা শহরের বস্তিতে পরিচালিত একটি ক্রস-সেকশনাল গবেষণা।

গবেষকদের নাম:

ডাঃ তন্ময় সরকার

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 পাঠ্যক্রমের 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 কারন সম্বন্ধেও জানতে চাই।

কেন আপনাকে অংশগ্রহণ করতে বলা হয়েছে?

আমরা বস্তিতে (কড়াইল ও ধলপুর) 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 ৩০ 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 অংশগ্রহণকারীদের 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 বস্তিতে 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 মুহূর্তে 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 গবেষণা সম্পর্কে আপনার আরও প্রশ্ন এবং প্রয়োজনীয় ব্যাখ্যার জন্য আপনি নিম্নলিখিত মনোনীত যোগাযোগ নম্বরে আমাদের সাথে যোগাযোগ করতে পারেন:

ডাঃ তন্ময় সরকার, 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: +৮৮০১৭১০৪৬৬৭০৫।

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 বিষবস্তু সম্পর্কে প্রশ্ন করার সুযোগ দেয়া হয়েছিল এবং প্রশ্নের জবাবে আমি সন্তুষ্ট। আমি এই গবেষণায় অংশগ্রহণকারী হতে স্বেচ্ছায় সম্মতি দিচ্ছি।

অংশগ্রহণকারী	ইন্টারভিউয়ার
নাম:	নাম:
স্বাক্ষর/থাম্বপ্রিন্ট:	স্বাক্ষর:
তারিখ:	তারিখ:

Annex 5: 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