

Report on Demographic Profiling and Needs Assessment of Maternal and Child Health (MCH) Care for the Rohingya Refugee Population in Cox's Bazar, Bangladesh



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Table of Contents

Acknowledgment.....	iv
Acronyms	viii
Executive Summary	ix
Operational definitions.....	xii
Introduction	1
Rationale of the study.....	2
Objective of the study.....	2
Materials and methods	3
Study design	3
Study site	3
Data collection methods, tools and participants	3
Module 1: Family member listing.....	3
Module 2: Information of women in reproductive age (13-49 years)	3
Module 3: Information of child under-5	4
Module 4: Information related to food support and sanitation facility.....	4
Recruitment of Data collectors	4
Data collectors' training	5
Sample size.....	5
Sampling technique and data collection strategy	5
Quality assurance of data.....	6
Data analysis.....	7
Ethical clearance & approvals	7
Results	8
Key Indicator status among the Study population	8
Socio-demographic characteristics of the population	9
Information from women of reproductive age group	12
Socio-Demographic characteristics	12
Pregnancy status	13
Antenatal Care (ANC)	15
Delivery within the last 12 months and lactating status	16
Family planning	17
Current illnesses	20
Satisfaction regarding support / Relief.....	21
Sanitation and hygiene.....	23
Current Illness of the under-5 children	25
Discussion.....	27

Limitations and Strengths.....	28
Conclusion	28
References.....	29

List of Tables

Table 1: Socio-demographic characteristics of women of reproductive age [N=3,664]	12
Table 2: Problems / Complications during last delivery [N=568].....	16
Table 3: Knowledge regarding service delivery points for Family planning methods [N=1,090].....	18
Table 4: Reasons for not using Family Planning method in future [N=744]	19
Table 5: Current illnesses reported by women of reproductive age [N=3,664].....	20
Table 6: Hand washing practice of the women of reproductive age, [N=3664]	23
Table 7: Illness complaints of the under-5 children [N = 2,937]	25

List of Figures

Figure 1: Study team.....	4
Figure 2: Distribution of study population	9
Figure 3: Reasons for not coming to Bangladesh.....	9
Figure 4: Age-sex distribution of study population.....	10
Figure 5: Age Sex Pyramid of study Population (A) and Old refugees only (B)	11
Figure 6: Educational characteristics of the study population.....	11
Figure 7: Number of children of women ever pregnant.....	13
Figure 8: Age distribution of the pregnant women	14
Figure 9: Intended place for delivery	14
Figure 10: Number of ANC visits by currently pregnant women	15

Figure 11: Preferences for seeking ANC in subsequent visits.....	15
Figure 12: Places of delivery of babies by the recently delivered women	16
Figure 13: Different Family planning methods cited by study participants.....	17
Figure 14: Satisfaction regarding shelter among women of reproductive age	21
Figure 15: Satisfaction regarding clothing among women of reproductive age	21
Figure 16: Satisfaction regarding health care service among women.....	22
Figure 17: Excreta disposal practice of the children.....	24
Figure 18: Mostly received food items by the households, N = 3050.....	26

Acronyms

ANC	Antenatal Care
DC	Deputy Commissioner
GoB	Government of Bangladesh
IOM	International Organization of Migration
IRB	Institutional Review Board
ISCG	Inter Sector Coordination Group
IUD	Intra Uterine Device
LMICs	Low and Middle Income Countries
LMP	Last Menstrual Period
MCH	Maternal and Child Health
NGO	Non-Government Organization
NPM	Need and Population Monitoring
OCP	Oral Contraceptive Pill
PPS	Probability Proportional to Size
RRRC	Refugee Relief and Repatriation Commissioner
UK	United Kingdom
UN	United Nations
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner of Refugees
WASH	Water, Sanitation and Hygiene
UNICEF	United Nations Children's Fund

Executive Summary

Introduction:

The number of forcibly displaced people labelled as refugees across the world have grown rapidly since the last few decades. The most recent inclusion being the Rohingya diasporas of Myanmar who have been fleeing en masse from their homes since August 25, 2017. To date, more than 1.2 million Rohingya refugees have settled in designated Rohingya camps (expansion sites) located in Cox's Bazar district of Bangladesh. This recent sudden massive influx of Rohingya refugees have overwhelmed scarce resources and posed a substantial strain to the ad hoc health systems set up at these camps. The exploration of the health needs including ascertainment of prevalence of pregnant women, lactating mothers and age-sex distribution of the population is a timely and judicious necessity to help the Government of Bangladesh working in collaboration with national and international organizations to deliver key services in a more organized and efficient way. In this circumstances, icddr,b, with active supervision and assistance of UNFPA, conducted a brief needs assessment of maternal and child health with special attention to pregnancy, lactation and family planning status of the women, and current health status of the under-5 children.

Methods:

The study employed a cross-sectional quantitative study design in 11 Rohingya camps located in Ukhia and Teknaf upazilas of Cox's Bazar, Bangladesh. Four modules of data collection tools were administered in the field that included household listing form for household heads, structured questionnaire for women of reproductive age (13-49 years), caregivers of under-5 children, and for the household heads regarding their food support. Given the linguistic similarities between the Rohingya people and locals in Cox's Bazar, the data collectors were recruited locally from Cox's Bazar. They were extensively trained on the data collection methods with data collection tools that were pre-tested before final phase of training. We collected information from 3,050 households that accounted for 16,588 Rohingya population of which 16,243 Rohingya refugees are currently living in Bangladesh. Among the 16,243 Rohingyas, 14,220 entered Bangladesh after the recent influx since 25 August, 2017. About 3,701 women of reproductive age were approached for interview of whom 3,664 (99%) could complete the questionnaire. After quality assurance, the data were analysed for descriptive statistics of basic demographics, pregnancy rates, reported illness and the services received. The frequency distributions are reported using tables and graphs in this report. The study protocol was approved by the Institutional Review Board (IRB) of icddr,b. Analyses were carried out using Stata version 13.0 SE.

Results:

We reached 16,588 populations from 3,050 household with a mean household size of 5.3 ± 2.3 . Among the study population, 45.8% were of 13-49 years of age. It is noteworthy to mention that the age-sex distribution in the cumulative Rohingya population residing in Cox's Bazar (Old camps) and the newly arrived Rohingyas were almost similar. About 70% of the Rohingya women of reproductive age (13-49 years) were below 30 years. The proportion of ever married women was 72.2% and mean age at first marriage was 16.8 ± 2.2 years. The mean age at first pregnancy was 18.0 ± 2.4 years.

We identified 370 pregnant women (14.0% of ever married women) among the study population. If we consider women of reproductive age, the pregnancy prevalence has been 10.1%. However, among the total population, the pregnant women constitute about 2.3%. When the pregnant women were asked for their plan for future delivery, 54.1% reported that they did not decide on their plan yet. However, only 10% of them were willing to deliver at facility level and the rest (35.9%) wanted to deliver at home. Among the ever married women (N=2,643), 568 (21.5%) delivered their babies within the last 12 months. About 53% of these recently delivered women delivered their babies in Myanmar and the rest delivered after entering Bangladesh. Lactating women constitute almost 6.0% of the total study population of 16,243. However, if we consider, this proportion rises to 26.4% among the women of reproductive age and to 36.6% among the ever married women.

Family planning (FP) related questionnaire was administered to currently married women (N=2,227). About 86.3% of them heard at least one method of family planning and injection Depot-Provera and Oral Contraceptive Pill (OCP) have been the two most cited Family planning methods. About 48.9% of the currently married women reported that they knew the service delivery place for Family planning method and most of them mentioned about NGO hospitals/clinics (93.1%) and NGO workers (22.4%) respectively. The contraceptive prevalence rate (CPR) has been measured as 33.7%. Injection Depot-Provera (70.5%) and OCP (28.9%) were the two most common methods they were currently using. Regarding illnesses, frequently mentioned complaints were general weakness (23.7%), sore throat (18.4%), joint pain (18.3%), pain during menstruation (11.1%) and malnourishment (16%). Regarding the satisfaction level for shelter, clothing and health care services, the respondents clearly marked the services as satisfying except for a few indicators like safe water, hand washing material, waiting time during health care services, and the travel time to go to the health services centre.

Regarding hand washing practices, 93.1% women of reproductive age claimed to have always washed their hands. About 96.7% reported to use soap as hand washing material,

although 33.7% admitted that sometimes they washed their hands with water only. Some others reported to use ash (17.4%) and earth (11.6%). During the data collection period, about 2,937 children had illness complaints of which cough (69.5%), fever (41.1%), difficulty in breathing (12.4%), and passage of loose stools (9.8%) were the most common symptoms.

Conclusion:

Firstly, our report highlights the need for special attention and care required for the pregnant and lactating women. Second, we find that the Rohingya population in Bangladesh should be informed of the different family planning methods available and delivery points where they can procure family planning and other healthcare services. Finally, we have assessed the level of satisfaction and explored the need for shelter, food, clothing and health care services in this vulnerable population group. We expect our findings would help the Government of Bangladesh and other stakeholders to take effective steps to ensure the welfare and well-being of the Rohingya Diaspora.

Operational definitions

Refugee: According to UNHCR, a refugee is a person who has been forcibly fled his or her country as a result of persecution, war, or violence and in most cases is unable to return home. The major reasons for fleeing are related to war and ethnic, tribal and religious violence (1).

Demographic profile: This is a package of information that characterizes a certain population in a given locale. The information assist in the provision of services to specific segments of the population such as under 5 children, adolescents, elderly, pregnant and lactating women. In this study, the demographic information collected were age, education, gender, marital status, birth rate, death rate, average household size etc.

Reproductive age group: In this study the reproductive age group has been considered to be between 13 and 49 years as a standard estimation from menarche to menopause (2, 3)

Pregnant women: The study considers a woman to be pregnant if the female respondent confirms her status of pregnancy by herself. The information is further validated with the date of her last menstrual period. Additional examination or tests to confirm the pregnancy such as rapid test or ultrasonography was not performed.

Sexual and reproductive health: UNFPA quotes, “Good sexual and reproductive health is a state of complete physical, mental and social well-being in all matters relating to the reproductive system.” (Source: <https://www.unfpa.org/sexual-reproductive-health>). To reflect on the sexual and reproductive health of the study population, information of age of menarche, age at first marriage and child bearing, current and ever use of contraceptives, intention to use, reasons for not using are collected.

Health status of the under-5 children: The study used a comprehensive list of symptoms and signs related to common childhood diseases as per the WHO guidelines to explore the health status of under 5 children in study population. The symptoms were assessed on the day of data collection as reported by the child’s mother or the caregiver in case the mother was absent.

Support or relief: The terms usually indicate any government or non-government support that is provided for humanitarian relief purposes in emergencies in both developing and developed countries, as opposed to the developmental aid that aims to improve the normal state of affairs. The study considers that the form of support could be relief food aid such as supplies of prepared or unprepared food, or infrastructural support to improve water and sanitation and shelter, or provision of health services such as medical care to children, pregnant women, elderly etc.

Water, Sanitation and Hygiene (WASH) practices: According to the WHO/UNICEF, the term WASH conceptualizes i) access to safe drinking water and quality of water, ii) access to and use of basic toilets and interventions to improve the management of excreta (faeces and urine), and iii) good hygiene practices, especially hand washing with soap. The study explored all three components of WASH in the study population using self-reported information of the respondents (household heads or women of reproductive age) (4).

Introduction

The number of people labelled as refugees across the world have grown rapidly since the last few decades (5, 6). The global population of forcibly displaced people, in particular, have increased substantially in the past two decades, rising from 37.3 million in 1996 to 65.3 million in 2015 (6) and, to date, now even larger than the entire population of the United Kingdom (UK) (6). However, the last couple of years have seen the refugee crises situations worsen around the world, from the Syrian refugee crisis in the Middle East to the recent Rohingya forcibly displaced migrant crisis in South East Asia (7).

Myanmar, a country in South East Asia, have been infamous for their iniquitous acts against the Rohingya community since August 25, 2017 (8). Although the country officially recognizes 135 ethnic groups, the Rohingya ethnic group are a different story. Since 1982, the Rohingyas have been rendered stateless and stripped off their citizenship making them the largest stateless community in the world (9). Prior to this official declaration, military action against the Rohingya population were rampant since 1977, causing the start of the massive influx of Rohingyas in Bangladesh since 1978. Since then the ethnic Rohingyas have faced persecution and discrimination by the military government and religious extremists; they continue to get into Bangladesh in bouts whenever the condition gets worse, with a large arrival in 1991-92 and the largest influx late in 2017 (10, 11). To contain the 1991-92 displacement, the Government of Bangladesh (GoB) with the aid of UNHCR constructed 2 camps at Nayapara and Kutupalong (12). Estimated number of unregistered refugees in Bangladesh was around 220,000 before the recent influx (8). From 25th August 2017 and onwards, the latest onslaught of atrocities against this population, which the UN described as 'ethnic cleansing', has caused the migration of 702,000 Rohingyas who have perilously crossed the border into Bangladesh (13). The GoB opened its gates with the local communities and authorities for the Rohingya into Ukhiya and Teknaf Upazila at Cox's bazaar and established a number of camps in different sites to accommodate this displaced population (14). Due to the recent overwhelming influx of Rohingya refugees, the meagre resources present at these camps are gravely strained. The exploration of the health needs and estimation of prevalence of pregnant women, lactating mothers and age-sex distribution of the population is a timely and judicious necessity which would help the GoB and the national and international aid organizations to allocate resources in a more organized and efficient way. The icddr, with active supervision and assistance of UNFPA, conducted a brief needs assessment of maternal and child health with special attention to pregnancy, lactation and family planning status of the women, and current health status of the under-5 children.

Rationale of the study

Bangladesh being a densely populated and one of the low and middle-income country (LMICs) would find it a sturdy task to mitigate the challenges to meet the demand of almost 1 million additional population. Furthermore, it has been reported that there have been almost 50,000 women who are pregnant among the migrant population, which will constrain the scarce resources for this vulnerable population. There is a general lack of reliable data regarding the number of pregnant women and children. Hence, we chose to undertake this study to outline the demographic profile and perform a needs assessment of the migrant Rohingya population focusing on the pregnant, lactating women and assist the relevant stakeholders to foresee the challenges and plan accordingly.

Objective of the study

1. To profile the socio-demographic characteristics of the migrant Rohingya population
2. To estimate the prevalence of pregnant and lactating women among migrant Rohingya population
3. To assess the sexual and reproductive health needs of the migrant Rohingya population
4. To assess the current health status of under-5 children

Materials and methods

Study design

Since the main objective of the study was to demographically profile the Rohingya refugees who recently have entered in Bangladesh, the cross sectional survey was the method of choice and a quantitative approach was undertaken to address the study objectives. Although a qualitative exploration could add value to this study, the urgent need of the information for planning purposes and the current situation of the study population have not allowed the researchers to consider this option.

Study site

The study was conducted in the Rohingya camps situated in and around the Cox's Bazar district, about 393 km away from the capital of the country.

Data collection methods, tools and participants

There have been four different modules of data collection tools administered in this study and the details of the tools with respondents are as follows –

Module 1: Family member listing

The 1st module of the data collection tools was a listing form that collated the basic information of the households. Unlike conventional definition of households, the specially arranged settlements for the Rohingya refugees in the selected camps were considered as 'household' for this listing. The respondent of this module was the current 'household head'. The information sought were number of current and past (while at Myanmar) family members, their name, date of birth, age, sex, educational status, marital status, date of arrival, and death status with possible reasons for death. To distinguish between the current family members who used to reside with the household head in Myanmar before August 25, 2017 and those who were recently added to the household after their migration to Bangladesh, two sets of forms were used for better exploration of the aforementioned demographic characteristics.

Module 2: Information of women in reproductive age (13-49 years)

The 2nd module was the most significant data collection tool of this study. This tool collected information from women of reproductive age (13-49 years) regarding reproductive and birth history, family planning status, antenatal care received (ANC), the most recent delivery,

lactation history, any current illness, support/relief received, and sanitation and hygiene practices.

Module 3: Information of child under-5 years of age

The 3rd module asked about the current health status of the children under-5 years of age. Mother of the child or any other elder person of the family, in case of mother’s absence during data collection, was the respondent for this module.

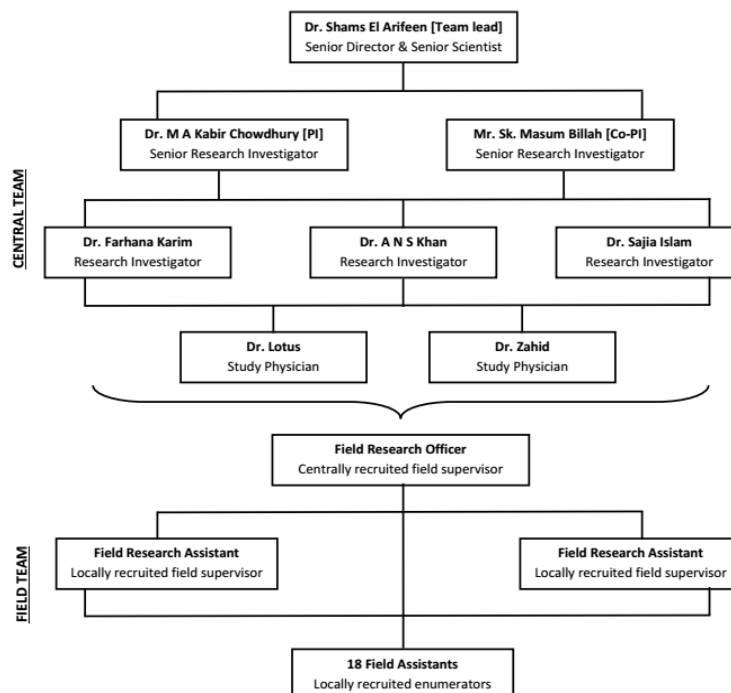
Module 4: Information related to food support and sanitation facility

This module was utilized to collect information from the household head regarding the received food support and sanitation facility. In addition, their perceived need for each of the support items they received and expected to receive were explored.

Recruitment of Data collectors

The recruitment of data collectors posed as a challenge because the interviews were to be conducted in language of the Rohingya population and to overcome this barrier, local data collectors who were fluent in similar dialect were recruited for this study. The recruitment process was accomplished by early December, 2017 under the direct supervision of the central study team in Cox’s Bazar in mid-November. Initially, we recruited 24 data collectors of whom 12 were male and 12 were female. However, after 1st phase of training, we had a final 18 data collectors (M:F = 2:1). Although we intended to recruit more females, the local scenario at that moment did not permit us to do so. The composition of central and field team is given below:

Figure 1: Study team



Data collectors' training

The data collectors were extensively trained on the aforementioned tools in two phases. During the 1st phase of training on 12-15 December, 2017, the data collectors were oriented on general norms of data collection and the contents of each module in detail. The training sessions were followed by role-playing by the training participants which was observed by the researchers and the feedback was instantly provided. The data collection tools were revised as necessary based on the feedback from these training sessions. After completion of the 1st phase of training, the data collectors visited the field site for pre-testing under close supervision of the field supervisors. The data collection tools were further revised according to the feedback from pre-testing and were considered as final to be implemented for the survey. The 2nd phase was conducted as a refresher's training on 09 January, 2018 with the final set of modules in presence of the representatives from UNFPA with their valuable support.

Sample size

We collected information from 3,050 households. Our primary sample size was 12,383 people considering 4.9% pregnancy prevalence (15), 95% confidence interval, population of 915,000 (13), 0.40% level of precision, and 10% refusal rate. The average household (HH) size of Rohingya population could not be explored, and hence, the average household size of Bangladesh (4.06) has been utilized to calculate approximate households to reach (16). Thus, the total household size was calculated to be 3,050. However, from the 3050 households, we could reach 16,588 Rohingya population's information out of which 16,243 were residing in Bangladesh during the data collection period.

Sampling technique and data collection strategy

We followed a multistage sampling process for selections of the sample households. In the first stage, probability proportional to size (PPS) sampling approach was used to determine the blocks from where sampling clusters were selected. This sampling approach ensured different sample size for each of the camps based on their population i.e. the larger camps contributed more than the smaller camps in the total sample size. The latest database of population distribution from 'Need and Population Monitoring (NPM)- Round Six' at different refugee camps was used as the sampling frame for selection of blocks (15) as this database (UN/IOM) considered 'blocks' as the lowest unit of household and population estimates at each of the enumerated camps. The database had a total of 1,479 blocks and 800,576 populations inclusive of all camps/location and we selected 339 sampling clusters (each of a size of 10 households) from 337 blocks spread across the camps using a mathematical

calculation/program in MS Excel. In the second stage, we identified the households for interview. We approached and consulted with the block lead, locally known as the 'Majhi', of each selected block to demarcate its physical boundary. If there were multiple sub-blocks within a block, only one was chosen by random selection using the sub-block number. Then the middle point of the selected block/sub-block was identified by a walk with the Majhi. To start the sampling of households a random direction from the mid-point was determined by 'spinning a pen' method (17, 18), widely used in immunization coverage survey sampling and in hard-to-reach areas (19, 20). This was followed by choosing a random number between 1 and 10 to identify the first household for survey at the identified direction and a systematic sampling was applied to complete all ten households per cluster at a fixed interval between the households. In case a data collector reached a dead-end in the specified area, he or she was advised to turn right to finish the specific cluster and this method ensured the uniformity of data collection technique.

The data collectors were divided into 3 groups, each led by a field supervisor. After determination of sampling strategy and allocation of blocks among the groups, each data collector was assigned to complete a specific block and the task calendar for each of the groups was specified. On the day before the specified date of data collection, the field supervisor contacted the Majhi of the selected blocks and explained to him about the details of the procedure. On the following day, the data collector contacted the Majhi to reach the approximated centre point of the block and followed the sampling technique described to complete the survey.

Quality assurance of data

The quality of the data has been assessed in different stages. The 1st quality check was performed before leaving the study site on the same day. After achieving the day's target of interviews, the field supervisors met with the data collectors, reviewed the data forms, looked for any gross discrepancies and enquired of any relevant challenges. If there was incompleteness in the forms or gross discrepancy, the data collectors were sent back to the household to collect the correct information. The 2nd stage quality check was performed at evening of the same day when the field supervisors went through all the forms to find inconsistencies. If any were detected, the data collectors were provided with feedback and asked to have them corrected accordingly. A central supervisor visited the field every week to sort out any residual problems as a 3rd stage check and carried the data forms by himself/herself to Dhaka. The final quality assurance was performed during the data entry process.

Data analysis

After quality assurance, the data were analysed for descriptive statistics of basic demographics, pregnancy rates, reported illness and the services received. The frequency distributions are reported using tables and graphs in this report. Analyses used the statistical software Stata version 13.0 SE.

Ethical clearance & approvals

The study protocol was approved by the Institutional Review Board (IRB) of icddr,b. Verbal informed consent was taken from study participants prior to interviewing them. The written informed consent was exempted by the IRB given the language and cultural difference of the Rohingya population.

Results

A snapshot of key characteristics of the study population

- Mean household size ----- 5.3 ± 2.25
- Mean age at 1st marriage ----- 16.8 ± 2.2 years
- Mean age at 1st pregnancy ----- 18 ± 2.4 years
- Proportionate distribution of women of reproductive age - 24.5%
- Crude Birth Rate ----- 35.6/1000 population
- Pregnant women among total population ----- 2.3%
- Pregnant women among women of reproductive age ----- 10.1%
- Adolescent pregnancy of total pregnancies ----- 18.4%
- Pregnant among adolescent girls ----- 5.4%
- Lactating women of total population ----- 6.0%
- Lactating women among women of reproductive age ----- 26.4%
- Contraceptive prevalence rate ----- 33.7%
- Prevalence of at least 1 ANC ----- 53.5%
- Prevalence of stillbirth ----- 18 per 1000 birth

Socio-demographic characteristics of the population

We collected information from 16,588 Rohingya (3,050 households) populations of whom 345 did not arrive in Bangladesh. Hence, our study population included 16,243 Rohingyas who are currently living in Bangladesh. Out of these 16,243 people, 14,220 entered Bangladesh after 25th August, 2017.

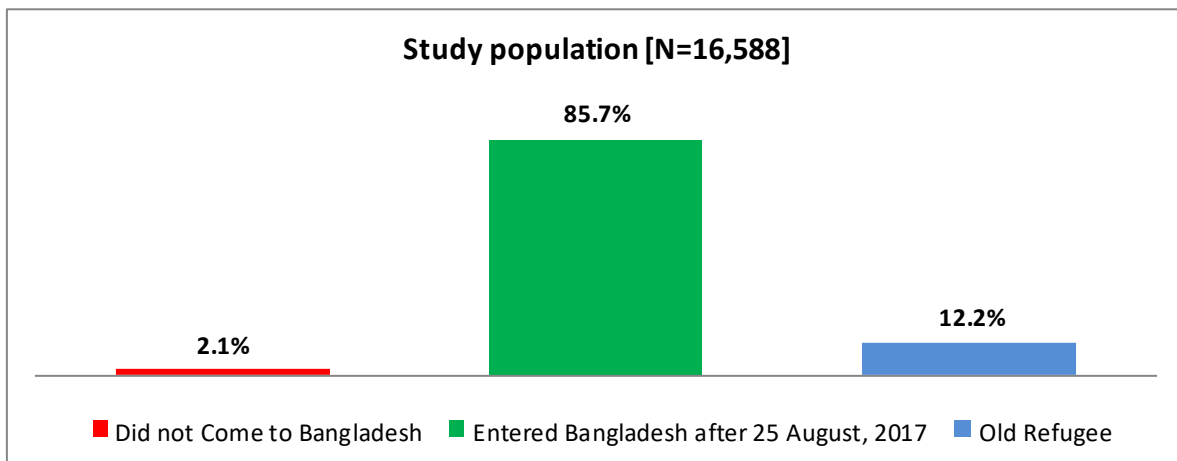


Figure 2: Distribution of study population

2.1% of the family members in the study population could not arrive at Bangladesh following the latest outbreak of havoc and among them, more than half had died and one-fourth were missing. Figure 3 highlights the reasons of not coming to Bangladesh by 345 Myanmar citizen.

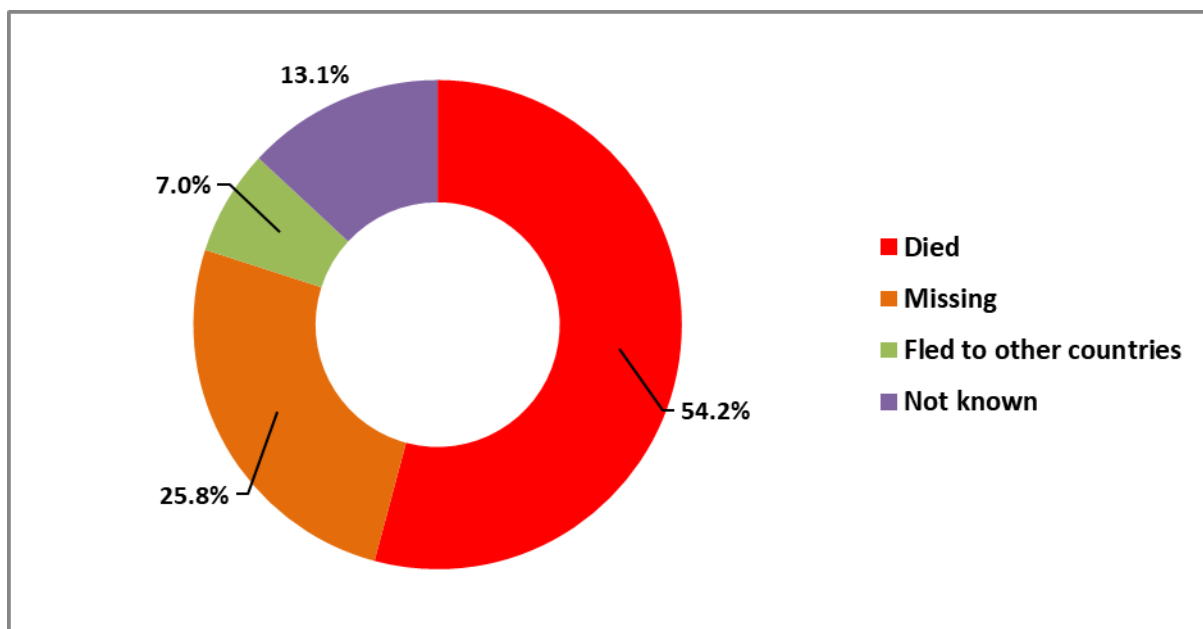


Figure 3: Reasons for not coming to Bangladesh

The mean household size of the study population was found to be 5.3. Among the study population 48.4% were male and 51.6% were female. Overall, 40.2% were aged 18 years or more, while the rest (59.8%) were under-18 years. The age-sex distribution of the study population is shown in figure 4.

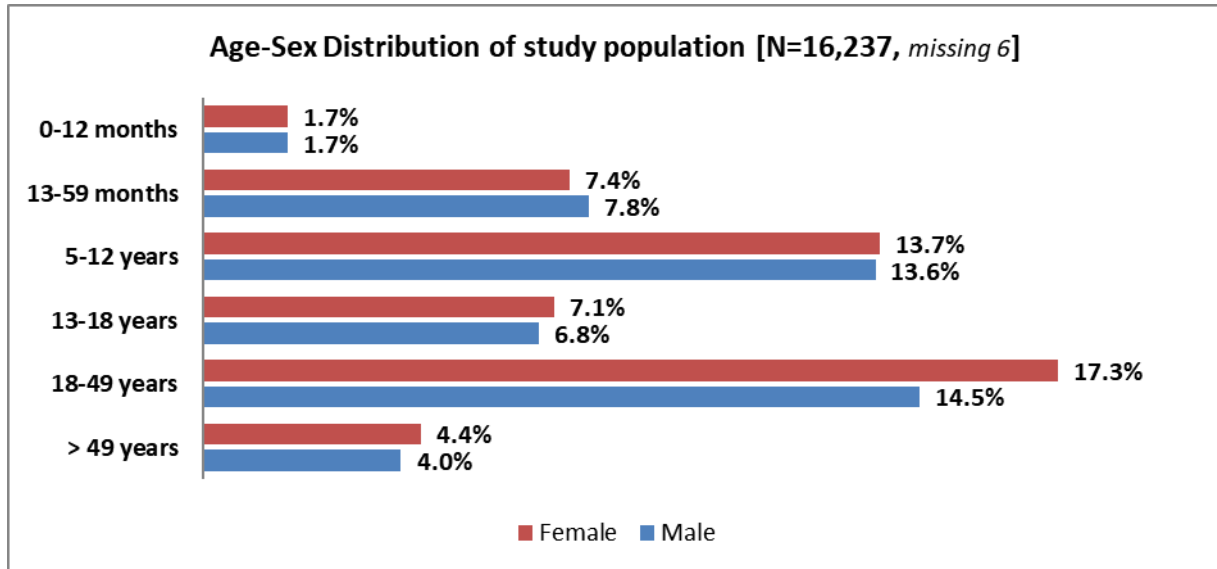
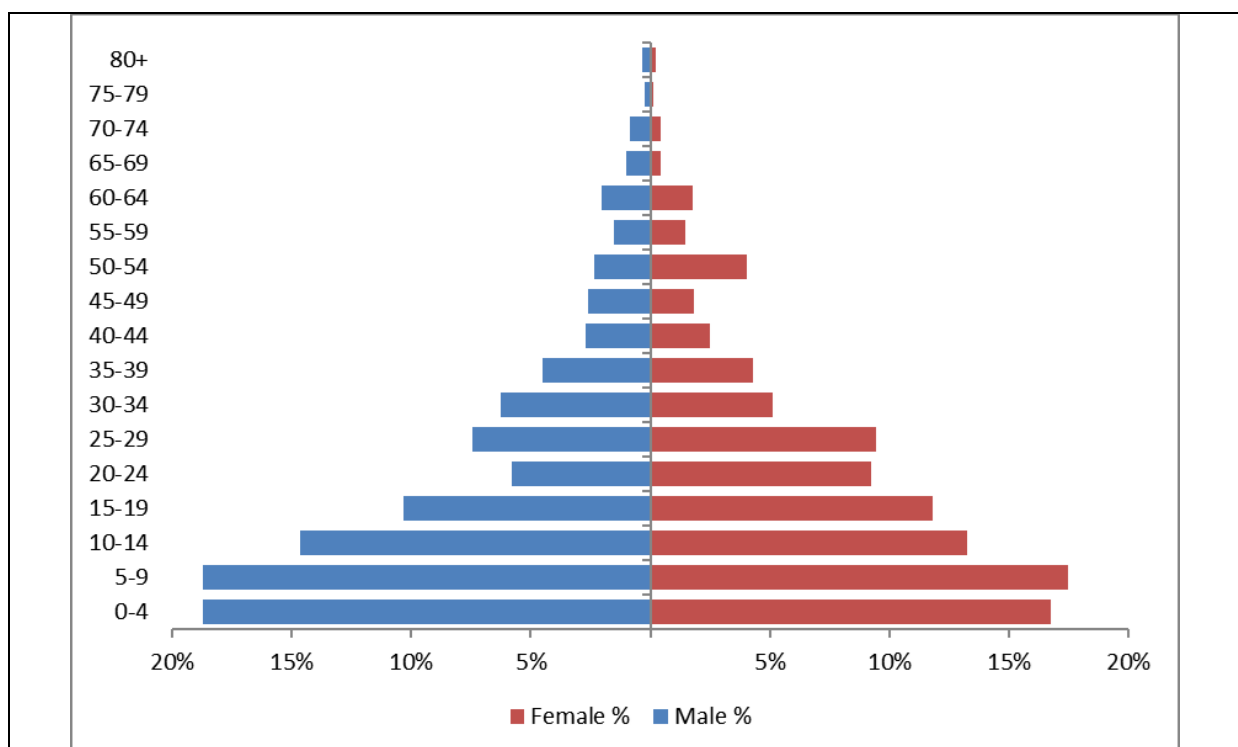


Figure 4: Age-sex distribution of study population

The following figure shows the age-sex pyramid of the study population currently residing in Bangladesh, including the population (N=16237) who have been displaced here from the earlier period of recent crisis (N=2023).



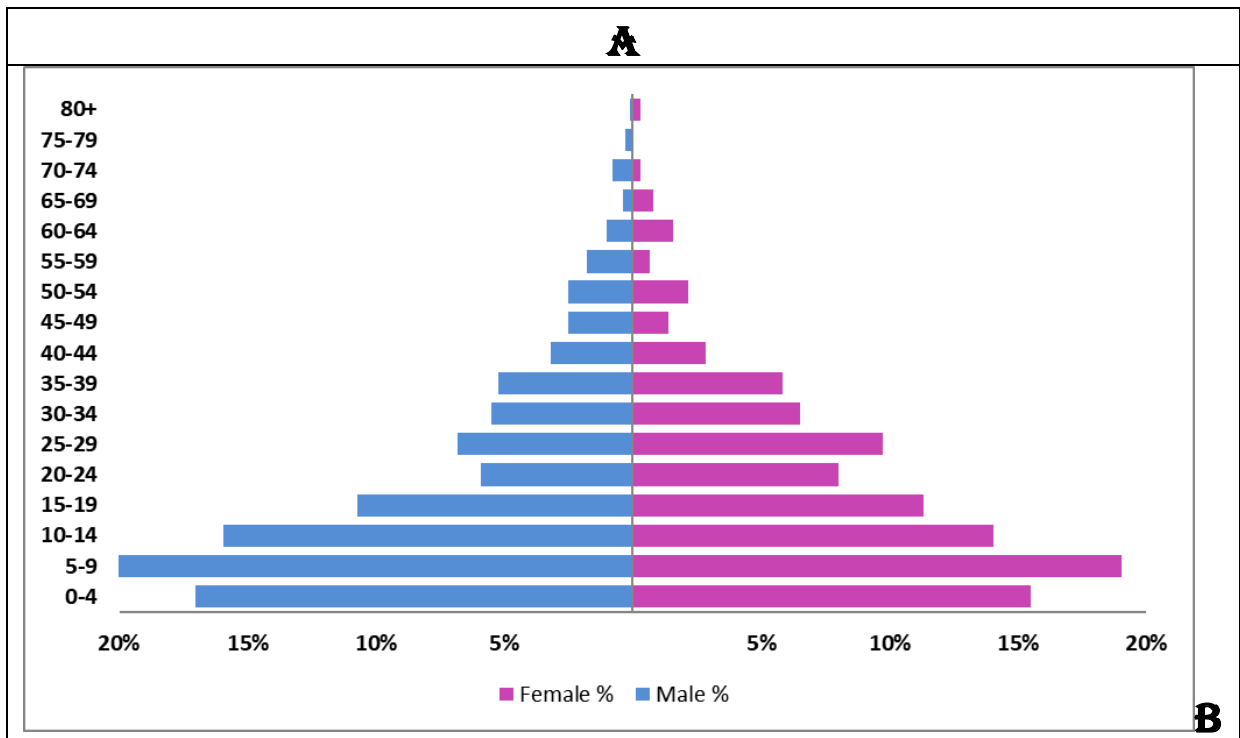


Figure 5: Age Sex Pyramid of study Population (A) and Old refugees only (B)

Regarding educational characteristics, only 7.6% of the current Rohingya refugee population was found to have completed at least primary level of formal education. However, about 37.7% had received vocational education and 23.6% had not even completed primary education.

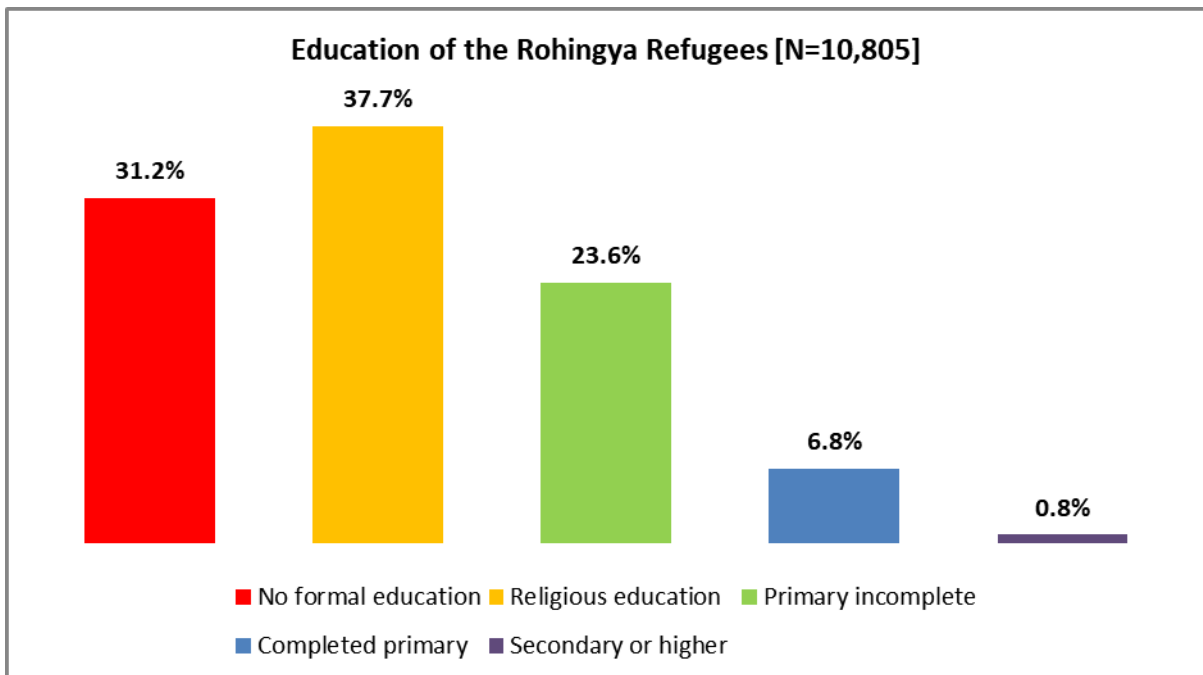


Figure 6: Educational characteristics of the study population

Information from women of reproductive age group

Socio-Demographic characteristics

Among the 3,664 women of reproductive age group, more than one-fourth (27.4%) were between 13 and 18 years of age. The pattern of educational characteristics in these women is similar to that of the total population; about 45% received vocational education and 31% were not formally educated. About three-fifths (60.8%) of these women are currently married. However, 72.1% of the women of reproductive age are ever married. The mean age at marriage was 16.8 (\pm 2.2) years and the mean age at 1st pregnancy was 18.0 (\pm 2.4) years. Table 1 provides the details of the socio-demographic characteristics of the women of reproductive age.

Table 1: Socio-demographic characteristics of women of reproductive age [N=3,664]

Characteristics	Frequency [n]	Percentage [%]
AGE		
13-18 years	1,011	27.6
19 years or more	2,653	82.4
*32 data were missing for age		
EDUCATION		
No formal education	1,135	31.0
Religious education	1,654	45.1
Primary incomplete	758	19.6
Primary complete	146	4.0
Secondary or higher	11	0.3
MARITAL STATUS		
Never married	1,021	27.9
Currently married	2,227	60.8
Divorced / Widowed	416	11.4
EVER MARRIED WOMEN CHARACTERISTICS [n = 2,643]		
Mean age at marriage		16.8 \pm 2.2 years
Registered marriage	1,996	75.5
Ever been pregnant	2,548	96.4
Mean age at 1st pregnancy		18.0 \pm 2.4 years

Among the women ever pregnant, 42.4% had 4 or more children and 60.4% had 3 or more kids. The figure below entails the number of children had by women ever pregnant.

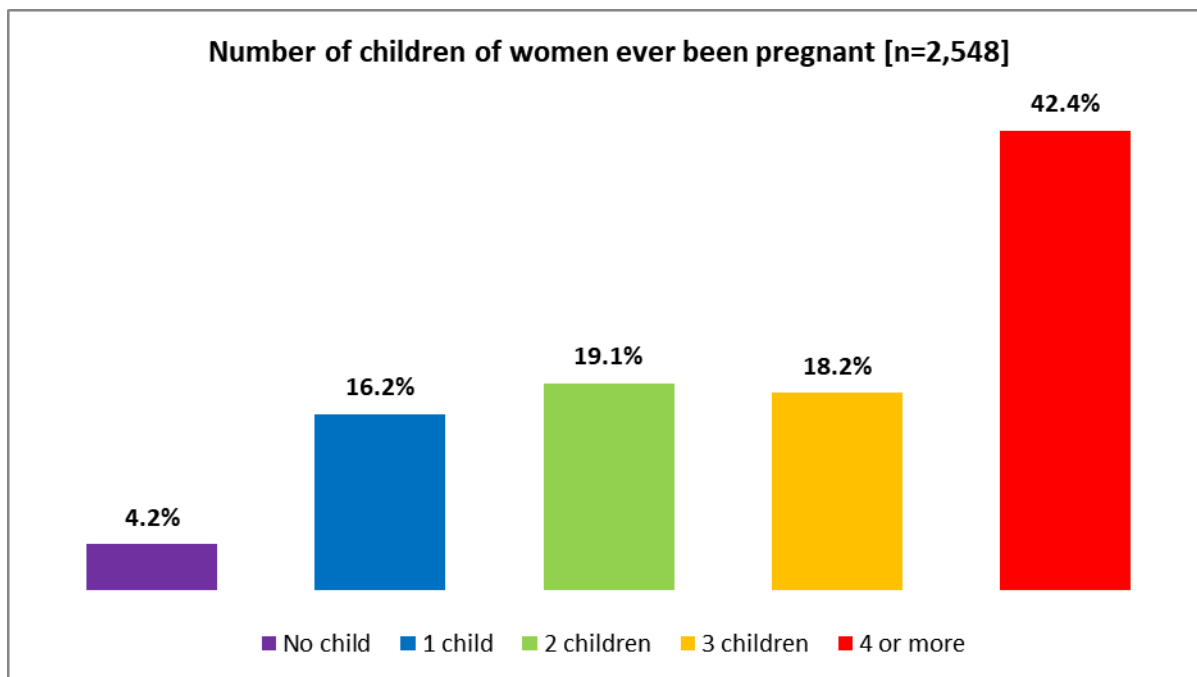


Figure 7: Number of children of women ever pregnant

Pregnancy status

One of the major objectives of the current study was to measure the prevalence of pregnancy. Due to the cultural barrier, the questionnaire regarding pregnancy was limited to the ever married women only. Moreover, the data has been captured from the reporting of the respondents. No clinical or diagnostic pregnancy test was performed. However, date of last menstrual period (LMP) was recorded by the data collectors.

During the household survey we identified 370 pregnant women, constituting about 14.0% of the ever married women in the study population. In the women of reproductive age, the pregnancy rate was found to be 10.1% and 2.3% of the total population constituted of pregnant women.

Strikingly, about 13.2% of these pregnant women are aged 18 years or less and more than 80% are below 30 years of age. The following figure demonstrates the age distribution of the pregnant women.

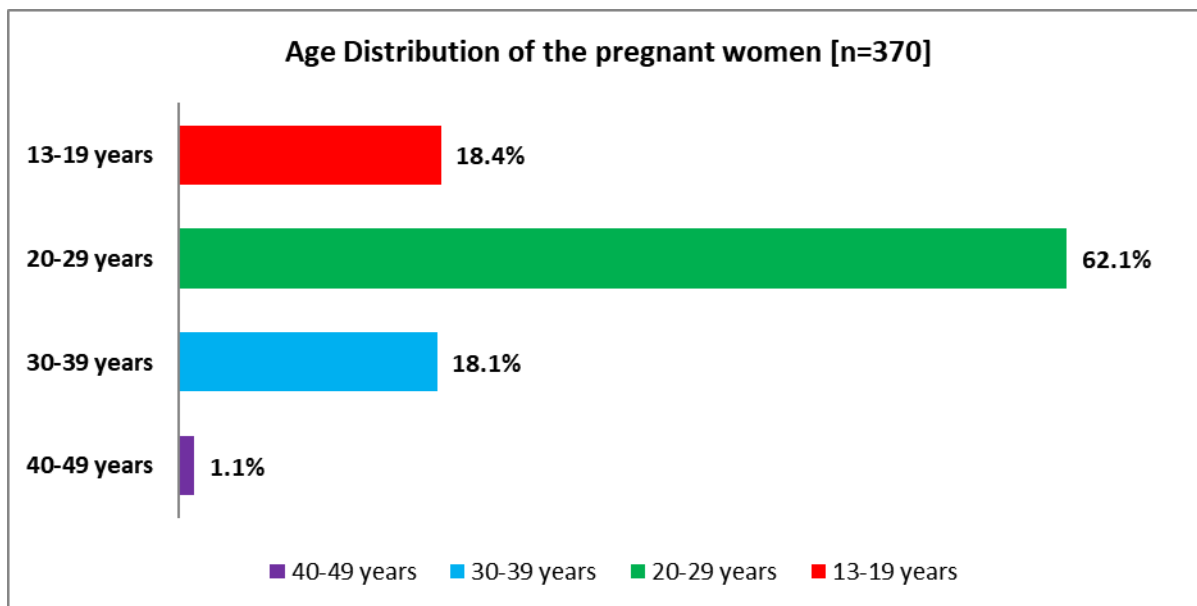


Figure 8: Age distribution of the pregnant women

Among the currently pregnant women, 61.4% (227) were reported to be suffering from various health problems. The common health problems mentioned by the respondents were severe headache (57.7%), weakness (57.3%), fever (45.4%), upper abdominal pain (26.9%), blurred vision (18.9%), swelling of legs (8.4%), yellow colouration of skin (6.6%), convulsion (4.0%) etc. When the pregnant women were asked about their plan for delivery, 54.1% reported that they had not decided on their plans yet. Only 10% of them were willing to deliver at facility level and the rest (35.9%) wanted to deliver at home.

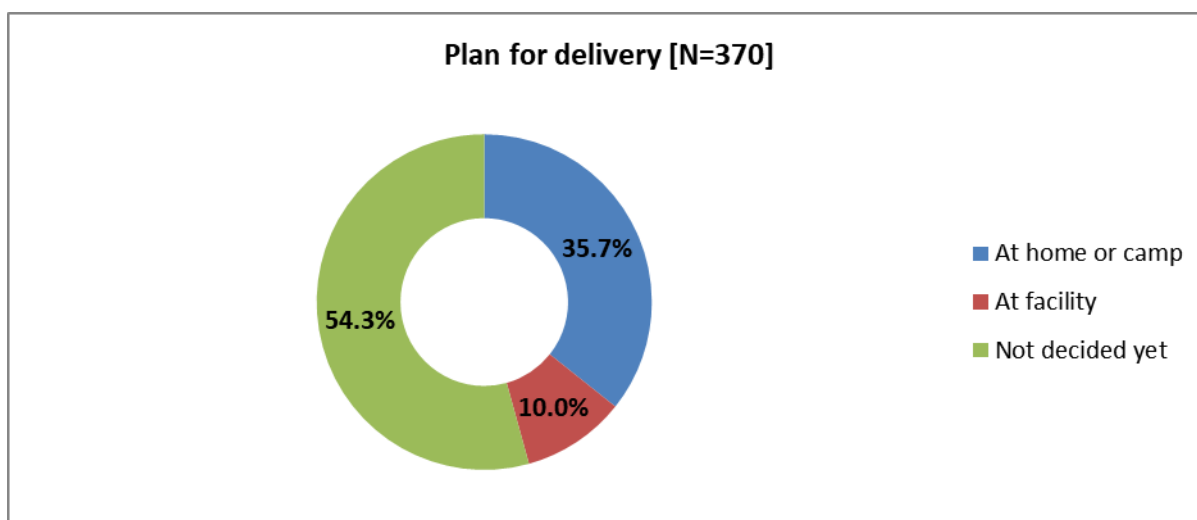


Figure 9: Intended place for delivery

Antenatal Care (ANC)

Among the currently pregnant women (=370), 53.5% had at least 1 ANC during their current pregnancy. The number of ANC visits paid by the currently pregnant women is portrayed below.

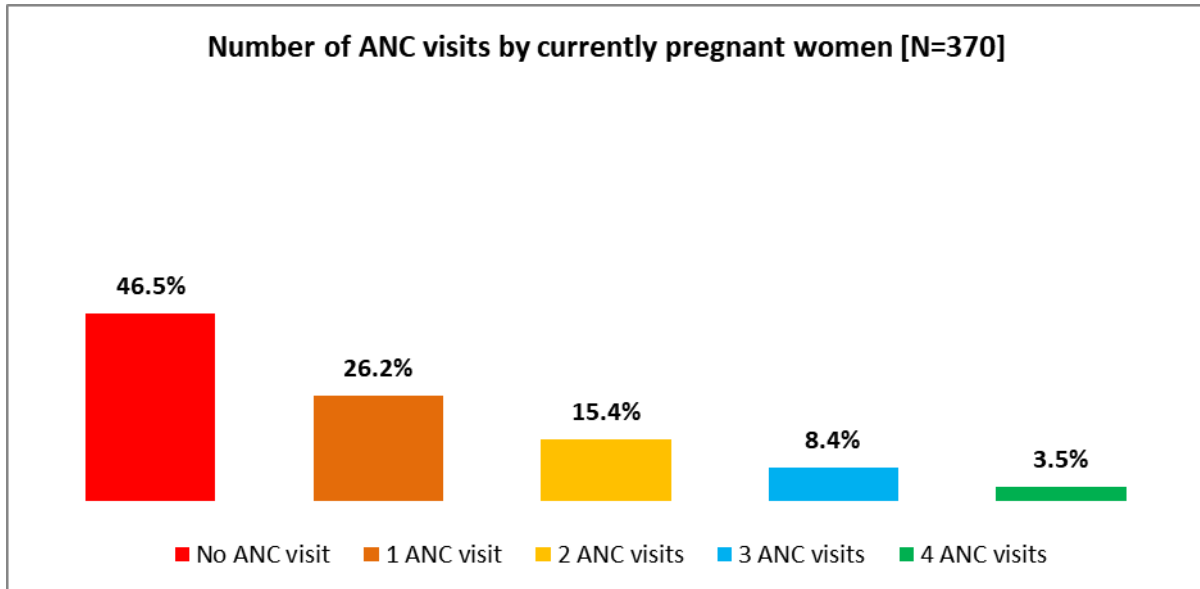


Figure 10: Number of ANC visits by currently pregnant women

Out of 198 women who had accepted at least 1 ANC during their current pregnancy, 180 (90.9%) showed their intention to seek ANC again. The following chart depicts their preferences for seeking care.

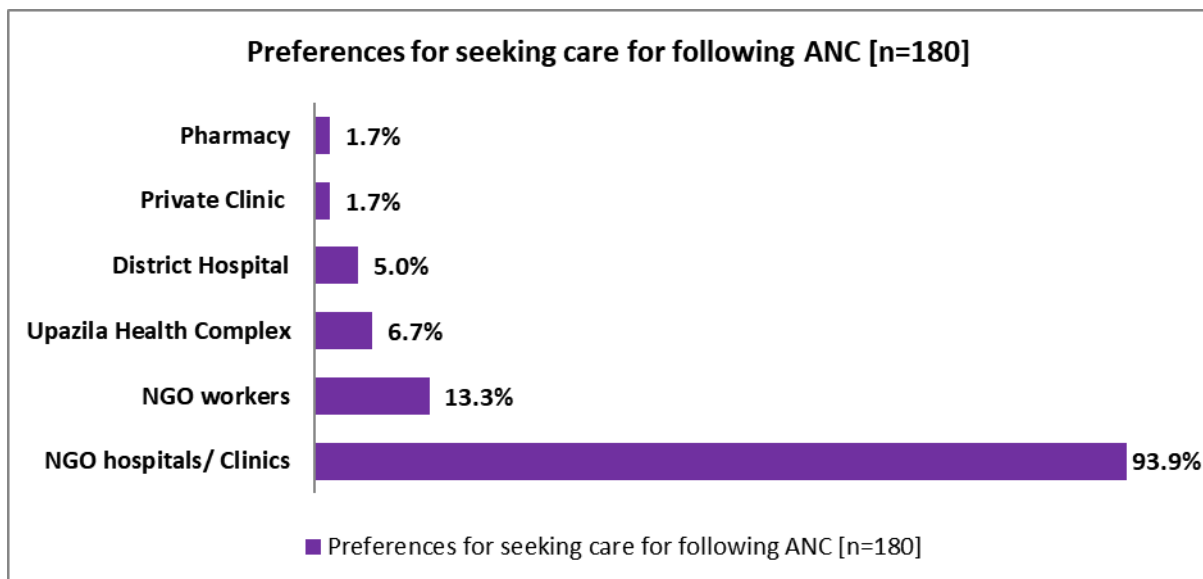


Figure 11: Preferences for seeking ANC in subsequent visits

Delivery within the last 12 months and lactating status

Among the ever married women (N=2,643), 568 (21.5%) delivered within the last 12 months. About 53% of these recently delivered women had delivered their babies in Myanmar and the rest delivered after entering Bangladesh.

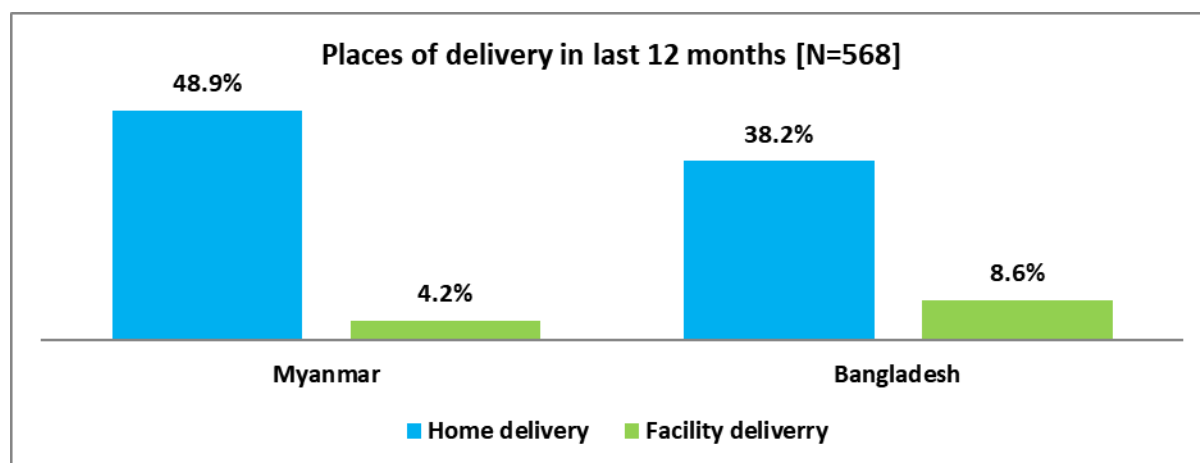


Figure 12: Places of delivery of babies by the recently delivered women

Out of these 568 recent deliveries, 1.8% was stillbirths and we thus came up with the still birth rate of 18 per 1000 births. The recently delivered women could mention some of the problems or complications that they had encountered during their last delivery, which are listed in the table below:

Table 2: Problems / Complications during last delivery [N=568]

Problems / Complications	Frequency [n]	Percentage [%]
Excessive Vaginal Bleeding	116	20.4
Foul-Smelling Discharge	73	12.9
High Fever	170	29.9
Baby's Hand or Feet Coming out First	16	2.8
Retained Placenta	13	2.3
Cord Prolapse	36	6.3
Convulsion	86	15.1
Severe headache	179	31.5
Greenish vaginal discharge	29	5.1
Swelling of feet or face	152	26.8

Lactating women constituted almost 6.0% of the total study population of 16,243. However, when we estimated the proportion of lactating women amongst the women of reproductive age and the ever married women, the number rose to 26.4% and 36.6% respectively. The median duration of breastfeeding was found to be 13 months.

Family planning

Family planning (FP) related questionnaire was administered to currently married women [N=2,227] to overcome the cultural barrier. About 86.3% of them had heard of at least one method of family planning. Injection Depot-Provera and Oral Contraceptive Pill (OCP) had been the two most cited Family planning methods. The following figure shows the methods that the study population mentioned during interview.

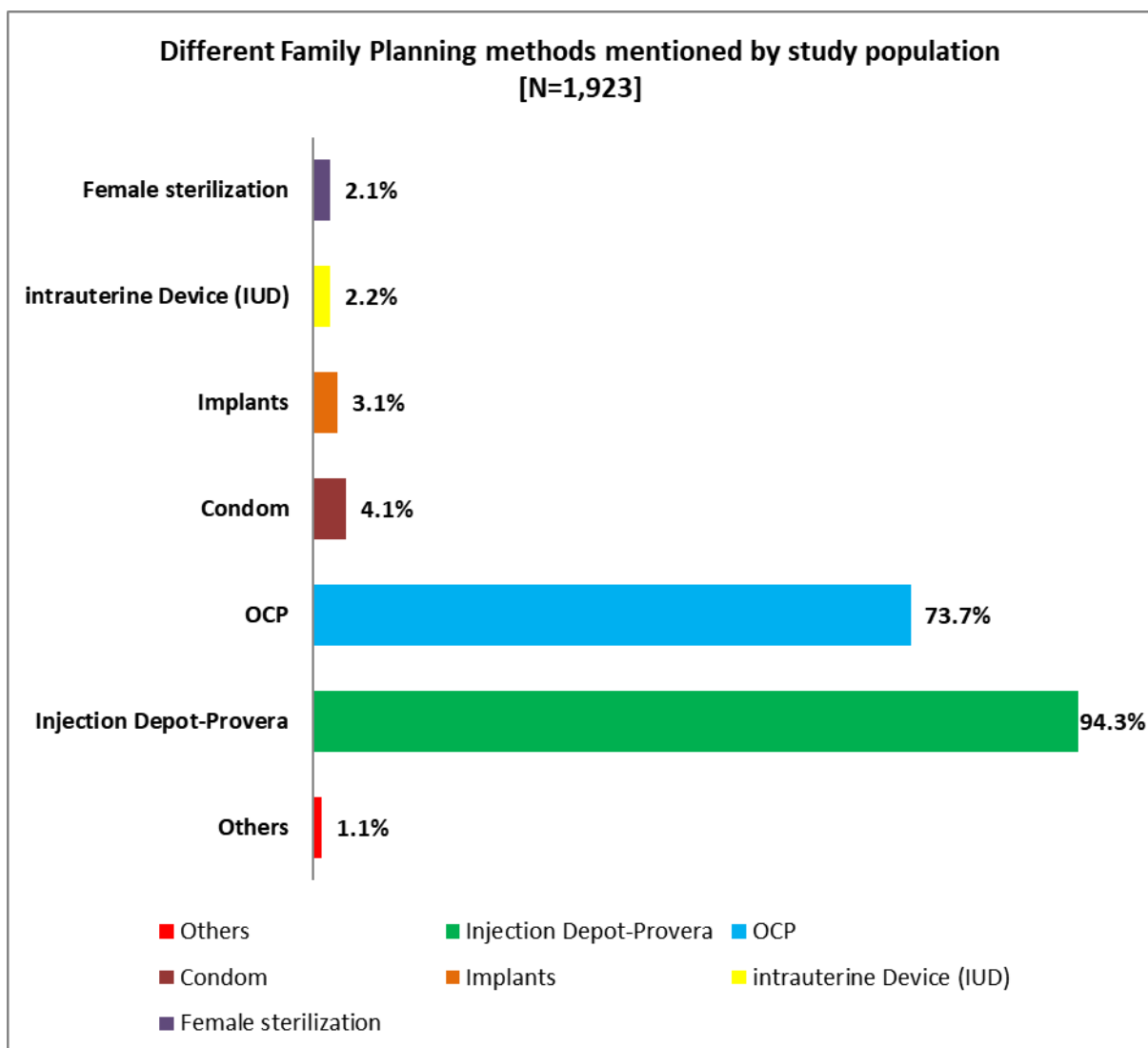


Figure 13: Different Family planning methods cited by study participants

About 48.9% of the currently married women reported that they knew of the service delivery place for Family planning methods. The most cited delivery points were the NGO hospitals/clinics (93.1%) and NGO workers (22.4%). However, the other service delivery sites that were mentioned are also listed in the table below.

Table 3: Knowledge regarding service delivery points for Family planning methods
[N=1,090]

Service delivery points	Frequency [n]	Percentage [%]
District Hospital / Medical College	31	2.8
Upazila Health Complex	64	5.9
UHFWCs and other Govt. facilities	33	3.0
Government Field Worker	13	1.2
Private clinic	14	1.3
NGO hospital/clinic	1,015	93.1
NGO Workers	244	22.4
Pharmacy	94	8.6

The contraceptive prevalence rate (CPR) has been measured as 33.7%. The findings from currently used methods represent their knowledge regarding Family planning methods, i.e. Injection Depot-Provera (70.5%) and OCP (28.9%). None of the other methods were used among more than 2% of the respondents.

The currently married women (2,227) were asked about their inclination towards using Family planning methods. Almost 50% of these women expressed their desire to use any Family planning method in future. However, 33.4% denied having any inclination for Family planning methods whereas the rest (17.1%) were unsure regarding the said issue. Again, the two most preferred Family planning methods were Injection Depot-Provera (80.7%) and OCP (35.2%). Only 2.8% mentioned implants, 0.7% of female sterilization, and 0.5% of condoms.

A number of reasons were presented for not using Family planning methods in the future. The table below outlines all the reasons.

Table 4: Reasons for not using Family Planning method in future [N=744]

Reasons	Frequency [n]	Percentage [%]
Infrequent / No sex	29	3.9
Menopause / History of Hysterectomy	49	6.6
Wants more children	62	15.6
Does not like any Family planning method	203	27.3
Disagreement with the partner	387	52.0
Social pressure	46	6.2
Religious prohibition	320	43.0
Knows no method	6	0.8
Knows no source of receiving Family planning materials	4	0.5
Fear of side effects	59	7.9
Communication issues (too far)	3	0.4
Financial barrier	2	0.3
Inconvenient to use	4	0.5
Interferes with physiological process	47	6.4
No specific reason	15	2.0

Current illnesses

We also collected information regarding the current complaints or illness episodes from the women of reproductive age, which could help us recognize and understand their health demands. The most commonly cited complaints were weakness, sore throat, joint-pain, pain during menstruation, abdominal pain and fever.

Table 5: Current illnesses reported by women of reproductive age [N=3,664]

Reasons	Frequency [n]	Percentage [%]
Cough / Common cold	118	3.2
Joint pain	669	18.3
Pain in the throat	674	18.4
Yellow colouration of skin	166	4.5
Weakness	868	23.7
Pain during menstruation	406	11.1
Excessive bleeding during menstruation	294	8.0
Fever	394	10.7
Passage of loose stool	105	2.9
Abdominal pain	448	12.0
Headache	183	5.0
White discharge	37	1.0
Skin problem	35	1.0
Throat swelling	11	0.3
Eye problem	13	0.4
Chest pain	16	0.4
Allergy	10	0.3

Satisfaction regarding support / relief

We enquired among the women of reproductive age- their satisfaction levels regarding the support or relief they were receiving from the government of Bangladesh or any other resources. We utilized a 3-rating Likert scale naming 'unsatisfied', 'neither satisfied, nor unsatisfied', and 'satisfied'. The rating was done in 3 domains: shelter, clothing and health services. In most cases, the respondents clearly marked the services as satisfying except for a few indicators like safe water, hand washing material, waiting time during health care services, and the travel time to go to the health services centres.

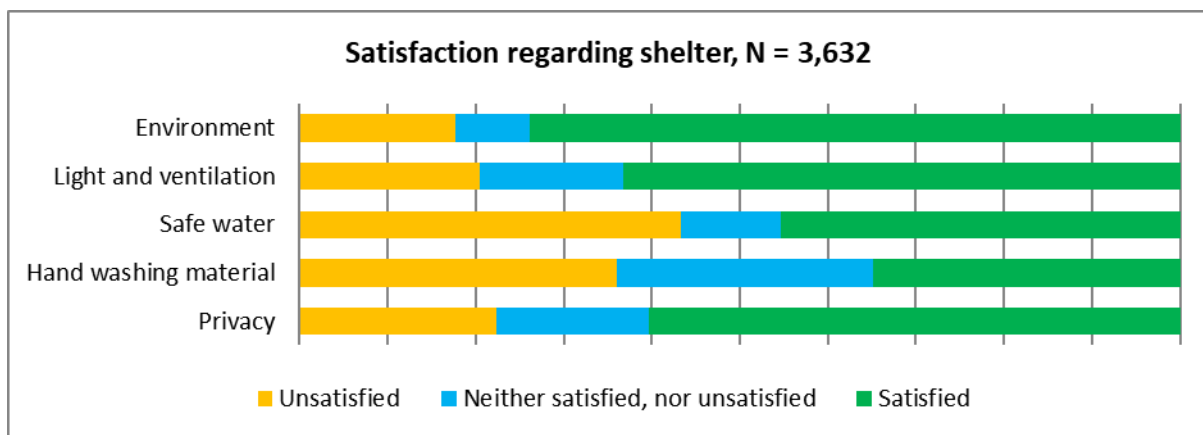


Figure 14: Satisfaction regarding shelter among women of reproductive age

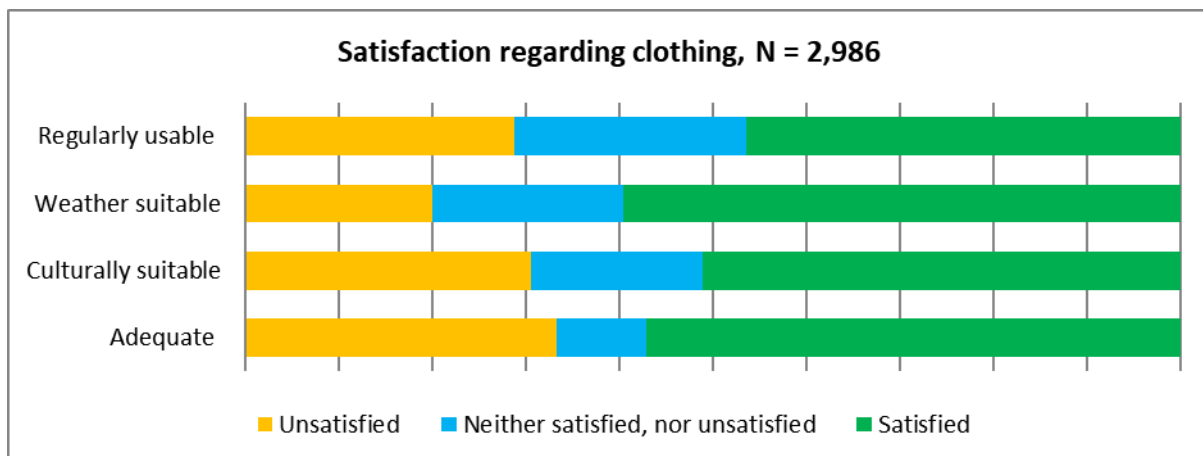


Figure 15: Satisfaction regarding clothing among women of reproductive age

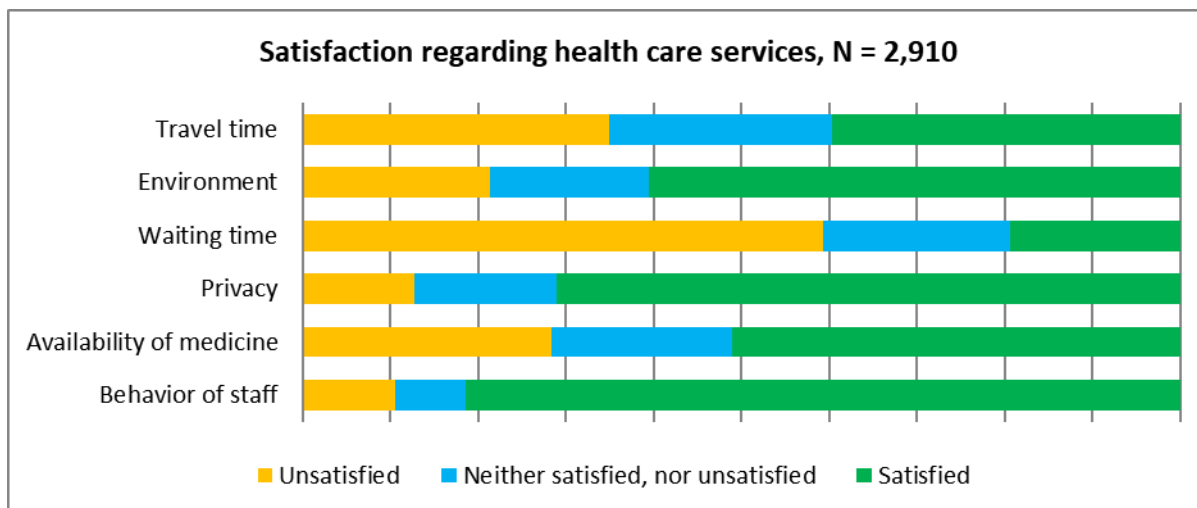


Figure 16: Satisfaction regarding health care service among women

Sanitation and hygiene

Regarding hand washing practices, 93.1% women of reproductive age claimed to wash their hands always. About 96.7% reported their use of soap as hand washing material, although 33.7% admitted that sometimes they washed their hands with water only. Some others reported the use of ash (17.4%) and earth (11.6%).

Table 6: Hand washing practice of the women of reproductive age, [N=3664]

Indicators	Frequency [n]	Percentage [%]
HAND WASHING PRACTICES		
Always	3,411	93.1
Sometimes	250	6.8
Very few times	3	0.1
HAND WASHING MATERIAL		
Only water	1,234	33.7
Ash	637	17.4
Soap	3,543	96.7
Earth	426	11.6
HAND WASHING SCHEDULE		
Before preparing food	3,199	87.3
Before eating	3,429	93.6
After eating	2,744	74.9
Before feeding child	855	23.3
After washing child's anus	1,266	34.6
After defecating	3,329	90.9

We also asked the mothers or caregivers about their practices regarding disposal of the child's last passed stool. In only 13.2% cases, the child used a toilet / latrine. However, 36.5% reported that the excreta was discarded in the designated toilets but in the rest (almost 50%) of the cases, the excreta was not disposed hygienically.

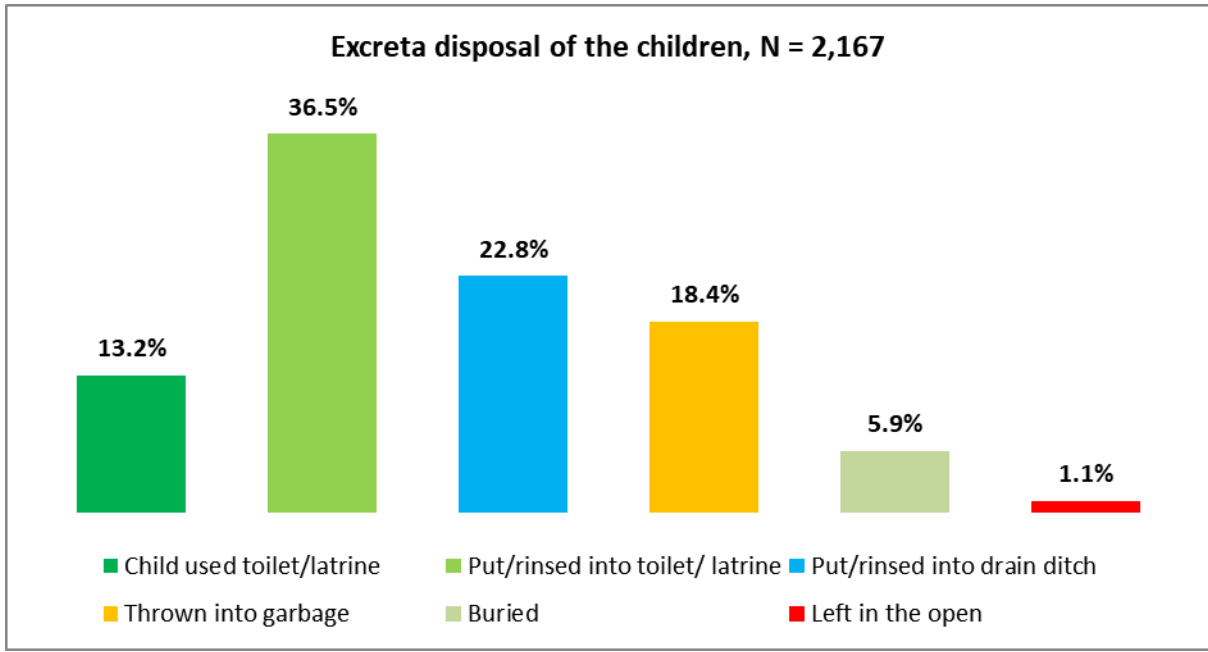


Figure 17: Excreta disposal practice of the children

Current Illness of the under-5 children

During the data collection period about 2,937 children were ill, with complaints of cough (69.5%), fever (41.1%), difficulty in breathing (12.4%), and passage of loose stools (9.8%) constituting the most common symptoms. The table below outlines all the symptoms cited by the caregivers during the data collection period. Among all these children, 1,904 (64.8%) sought care for treatment, mostly at the NGO facilities (93.4%).

Table 7: Illness complaints of the under-5 children [N = 2,937]

Illness / Symptoms	Frequency [n]	Percentage [%]
Difficulty in breathing	364	12.4
Cough	2039	69.5
Yellow colouration of skin	69	2.4
Poor feeding	176	6.0
Skin infections	136	4.6
Convulsions	54	1.8
Red / swollen eyes	124	4.2
Fever	1206	41.1
Constipation	147	5.0
Vomiting	167	5.7
Skin rash	75	2.6
Passage of loose stool	287	9.8

Need assessment of the households

Since August 25, 2017, marking the onset of the most recent Rohingya influx into Bangladesh, the GoB and other national and international organizations pledged their support for the Rohingya migrants. The relief has been provided mainly in the form of food items. We surveyed 3,050 households and asked the household heads regarding their relief items. A number of food items were mentioned by the heads- including rice, lentils, salt, sugar, oil, semolina, milk, wheat, flour, chira (flattened rice), meat, potato, egg, puffed rice, biscuits, fish, green leafy vegetables, fruits, vitamin supplements etc. But the most household heads reported to receive rice, oil, lentil, salt, sugar and semolina, but many of them want the items in higher quantity. Even, some household heads mentioned some food items as underutilized, such as lentils (30.4%), semolina (22.8%), chira (13.2%), and vitamin supplements (39.8%).

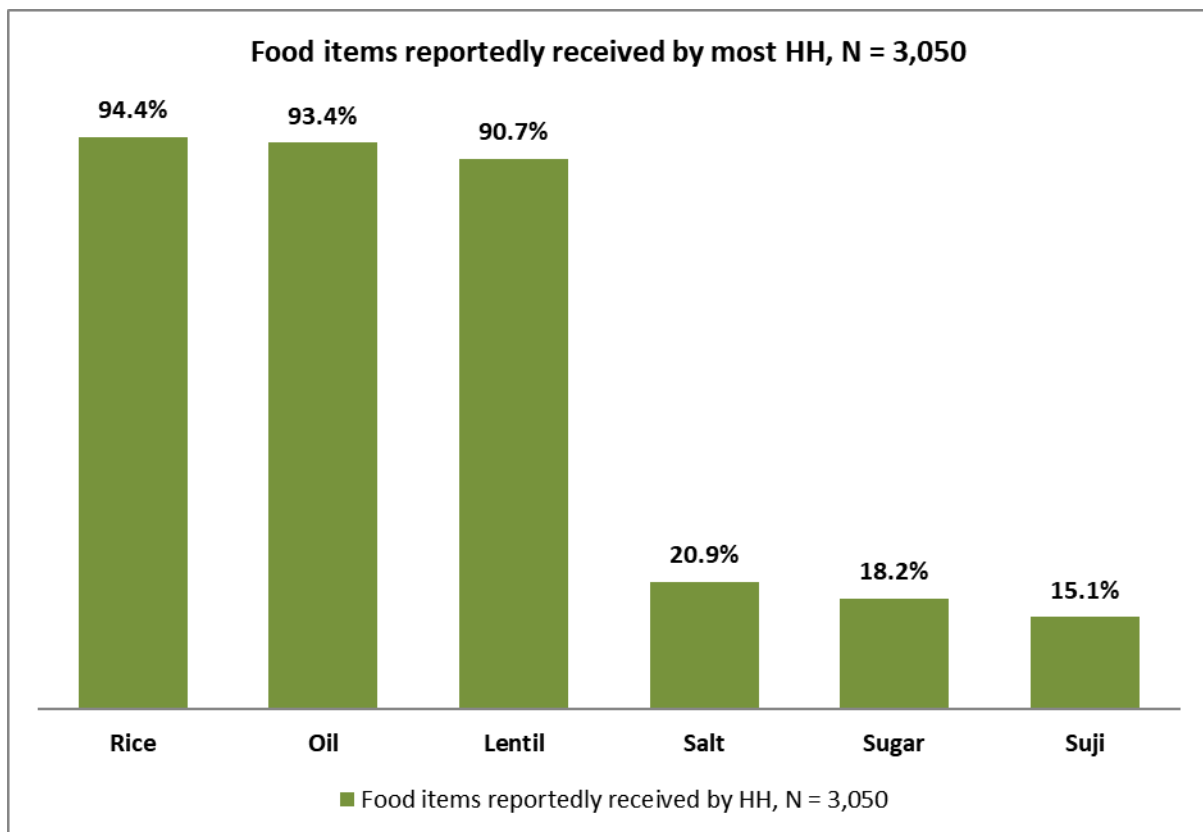


Figure 18: Mostly received food items by the households, N = 3050

Discussion

Our report found substantial differences of demographic characteristic of the study population with the population of Bangladesh and Myanmar. For instance, we found a higher mean household size among the study population - 5.3 compared to 4.06 in Bangladesh (16) and 4.4 in Myanmar 4.4 (21). However, the increased household size is expected among the Rohingya population since they have been isolated from the civil rights for decades in Myanmar (22), and hence, they lag behind in availability and utilization of family planning services. Among all women, the women of reproductive age constitute about 56.8% in Myanmar (23), however, this proportion is 43.7% in the study population. It can be explained by higher proportion of children among the Rohingya population.

In this study, the mean age at marriage was 16.8 years which is comparatively lower than 22.8 years in Myanmar (23). Subsequently, the mean age of 1st pregnancy is also lower among the study population in comparison to the overall Myanmar population (18 years vs. 25 years). This trend could be explained by lack of education, lack of government facilities, and ignorance of government policies by the Rohingya population (24). For similar reasons, the crude birth rate has been significantly higher among the study population than the Myanmar populace (35.6 vs. 17 per 1000 population) (23).

The pregnancy rate found in the study was 2.3% which is less than 4.9% reported in Needs and Population Monitoring of Rohingya population (Round 6) in Bangladesh (15). To avoid religious and cultural repercussions, we limited the pregnancy related questions to ever married women only, and thus the unmarried pregnancies have not been counted during the survey. Moreover, the survey was conducted in January-February 2018 and during this immediate post-disaster period, many of the 1st and 2nd trimester pregnancies might remain undetected. And finally, the pregnancy cases were self-reported, and not based on biochemical or ultrasonographic diagnoses. All these factors might contribute to underestimation of pregnancy rate in this study.

The contraceptive prevalence rate has been 33.7% compared to 46% according to the recent data of Myanmar (23). Knowledge and acceptance of Inj. Depot Provera and oral contraceptive pill as Family planning methods were predominant among the population. However, the unmet need could not be measured with the available data from this study. The illnesses complained by the women of reproductive age or the children have not been different from general complaints as reported by any random population.

Limitations and Strengths

The study was conducted under a strict timeline, which along with a late inception of the study because of the IRB approval process, led to delayed start of data collector recruitment. However, this pitfall was addressed by prompt completion of recruitment process followed by time-efficient training of the data collectors. The data collection tools were prepared by icddr, b incorporating feedback from UNFPA and considering the cultural context of Rohingya population.

A key limitation of conducting study among Rohingya population was the language barrier. To overcome this challenge, we recruited data collectors locally who can fluently understand and communicate with the Rohingya people. During the training session, the data collectors played and practiced the interviewing session in Rohingya language.

Quality assurance has always been a challenge for any study. In this specific case, the hindrances were even bigger because of location of the camps and distance between different blocks where data collection was on-going simultaneously. However, we addressed this issue by a systematic quality checking process at 3 different levels.

The major strength of this study is the novelty of the study. Reliable data regarding the current state of the Rohingya population especially with regards to the number and state of pregnant women and children are scarce. We have, thus, attempted to fill the evidence gap on what is needed and how best the GoB and humanitarian organization can allocate their resources efficiently and effectively.

Conclusion

Firstly, our report highlights the need for special attention and care required for the pregnant and lactating women. Second, we find that the Rohingya population in Bangladesh should be informed of the different family planning methods available and delivery points where they can procure family planning and other healthcare services. Finally, we have assessed the level of satisfaction and explored the need for shelter, food, clothing and health care services in this vulnerable population group. We expect our findings would help the Government of Bangladesh and other stakeholders to take effective steps to ensure the welfare and well-being of the Rohingya diaspora.

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