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Report- Health Seeking Behavior: Maternal, Neonatal, and Child
Health, Adolescent Reproductive Health, Child Health, Nutrition,
Family Planning With Specific Emphasis on Violence-Against-
Women and Gender Aspects of Primary Health Care.

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Executive summary

Urbanisation is occurring at a rapid pace which has significant implications for maternal and child health, family planning, women empowerment and violence against women. This fast-paced growth is associated with the establishment of urban slums where crowded living conditions, poor sanitation, and widespread poverty are prevalent. Health services are readily available in most urban areas; health indicators are generally worse in slum areas compared with urban non-slum areas. Inadequate access and underutilisation of modern healthcare services are major reasons for poor health in slum dwellers. This report highlights the major findings of a cross-sectional study that was designed to collect information on maternal and child health, healthcare seeking behaviour, immunisation and its coverage, family planning, knowledge on HIV/AIDS/STDs, women empowerment and violence against women. This report also presents the knowledge, attitude, and perception of adolescent on ASRH. To carry out the survey, a total of 1200 women having a child younger than two years and 1000 adolescents aged 10-19 years were randomly selected from 30,000 households under the urban DSS area of Dhaka city. Two cross-sectional surveys were carried out during October – December 2016. Urban Health and Demographic Surveillance Systems (UHDSS) conducted the study with the financial support from the Urban Primary Health Care Services Delivery Project (UPHCSDP), Government of Bangladesh. Some highlights of the findings are presented below:

Maternal and child health

- Eighty-five percent of the women with a birth in two years preceding the survey received antenatal care (ANC) at least once from a provider.
- Only 47.2% women received four or more antenatal care (ANC).
- Women from richest quintile (67.4%) were two-folds more likely to receive four or more ANC as compared to their counterparts (32.5%).
- Women of highest socioeconomic position have 2.3-times higher prevalence of receiving ANC from qualified doctor compared to women from the lowest socioeconomic position.
- The NGO sector was the leading source for ANC (50.5%), followed by private sector (22.4%) and public sector (4.8%).

- Results showed that public sector facilities were more deliverable to provide ANC to the lowest women, and private sector facilities were more deliverable to provide ANC to the highest.
- Desire for another child was highly significant with mother's age at birth, higher education, and mother's livebirth order.
- A higher portion of women (69.1%) from the highest socioeconomic position gave birth at a facility, followed by fourth (61.7%), middle (47.4%), second (49.0) and the lowest quintile (37.2%).
- Women with 12+ years of schooling and the highest socioeconomic position were 3-4 times more likely to be assisted by a medically trained provider compared to their counterparts.
- C-section delivered 25% livebirths in two years preceding the survey.

Children health seeking behaviour and childhood immunisation

- Ninety-eight percent of the children aged younger than 24 months were ever vaccinated as reported by a mother. However, 69.3% reported by vaccine card.
- The level of coverage for BCG, three doses of pentavalent vaccine, and three doses of polio vaccine was 61% or higher.
- Fifty-three per cent of the children had experienced an illness in two weeks before the survey.
- Fourteen per cent of the children had experienced diarrhoea, followed by 44.2% had experienced fever, 38.3% had experienced cough and 12.0% had experienced faster, rapid or difficult breathing.

Family planning

- Eighty-four per cent of the married women use any method of contraception and 81.4% use modern methods.
- Private sector, especially pharmacy (65.9%) was the most mentioned sources of contraceptive method, followed by NGO sector (26.5%) and public sector (4.4%).

HIV/AIDS and sexually transmitted diseases (STDs)

- Seventy-four per cent of the ever-married women aged between 15 and 49 have heard about HIV/AIDS.
- Only 57.9% of illiterate women had knowledge on HIV/AIDS.
- Overall, 7.1% and 9.2% of the ever-married women aged between 15 and 49 responded that they had either Syphilis or Gonorrhoea respectively.

Women empowerment and violence against women

- Only 26.1% of women who earn cash reported that they themselves mainly decide how their cash earnings would be used.
- Fifty-four per cent of women reported that they had experienced on any form of violence and 36.7% reported that happened during the last year.
- The most widely accepted reason for wife beating among women in Bangladesh was neglecting the children (35.8%).

Adolescent Sexual and Reproductive Health

- The most important source of information about the physical and psychological changes at puberty (51.4%) and about sexual reproductive health (SRH) (41.5%) was parents.
- Nearly 68% of the adolescents heard about HIV/AIDS.
- Twenty-four per cent believed that it is possible to cure HIV/AIDS
- Knowledge on HIV/AIDS was significantly higher among the adolescents from the wealthiest quintile (89.2%) compared to adolescent from the poorest quintile (55.3%).

In summary, findings revealed significant sociodemographic differentials in maternity care, child immunisation coverage, family planning, and knowledge on HIV/AIDS/STDs among poor of marginalized urban subgroups. Reducing poor-rich inequalities in professional delivery care and facility based delivery are essentials to achieving SDG target for maternal health. Equity-oriented policy and programs are needed to facilitate integrated reproductive, maternal, newborn and child health services for pro-poor and lactating women for sustainable

improvement of maternal health outcome in urban slums. Existing programs could be improved and linked to functional primary care and secondary care facilities; and need to improved the quality of care in the health systems.

The results of the adolescent study revealed low level of knowledge of SRH issues with gender and socioeconomic differences. Therefore, there should be more opportunities for collaboration between the formal and informal sectors providing SRH information and services among the slum-population. Mass media campaign, school based sex education, social media can be played a vital role to improve the knowledge and changes the attitude and use of SRS components among this marginalised group of population.

Introduction:

Urbanisation is occurring at a rapid pace which has significant implications for maternal and child health, family planning, women empowerment and violence against women. By the middle of this century, Bangladesh will be more urban population than rural population[1]. By 2050, urban population will be over 100 million; and more than one-third these will dwell in slum settlements[1]. Health services are readily available in most urban areas, health indicators are generally worse in slum areas compared with urban non-slum areas[2]. The rapid rate of urbanization coupled with the growth of urban slums will have a significant effect on the achievement of the Millennium Development Goals, despite remarkable progress has been achieved.

A health care system striving to reduce morbidity and mortality related to pregnancy must focus on maternal and child health. The health care that a woman receives during pregnancy, at the time of delivery, and soon after delivery is important for the survival and well-being of both the mother and the child. However, women dwell in slums areas in the country have limited access to receive adequate care during and after pregnancy[3]. The inequality in the health and wellbeing of women and their child is a growing concern.

Family planning is important for the health of a mother and her children, as well as for the family's economic situation. Family planning and access to contraception reduce maternal and child deaths. In Bangladesh, Use of any method of contraception has increase from 20% in 1980 to 60% in 2014; and 60% of ever-married women used any modern method[4]. Government sector is the major provider of contraception, catering to 49% of users. Information on family planning can improve understanding of future fertility patterns and demand for contraception. Therefore, we collected inform on current use of contraceptives, sources of contraceptive method and other issues associated with family planning.

In Bangladesh, a reported number of HIV positive people in Bangladesh increased from 1,207 in 2007 to 3,674 in 2014, a more than three-fold increase in seven years[4]. Although, Bangladesh is still considered a low-prevalence country for HIV/AIDS, it remains vulnerable to an HIV epidemic because of a large number of populations dwelled in slum settings[5].

The issue of women's empowerment has a long history, but many say that gender equity is not yet established throughout the world. Achieving gender equity is not a straightforward goal that can be attained readily. Women's empowerment has been defined to encompass women having a sense of self-worth, access to opportunities and resources, choices and the ability to exercise them, control over their own lives, and influence over the direction of social change. However, women of disadvantaged section in Bangladesh are still far behind from this achievement. It is noted that 30% of women in Bangladesh is suffer from any kind of violence from their husband or other family members of relatives[4]. Only 10% of women can control over their own earning.

Adolescent healthcare is challenging compared to that of children and adults, due to their rapidly evolving physical, intellectual, and emotional development. The risky sexual behaviors and reproductive health problems in adolescence can have long-lasting consequences into adulthood and into the subsequent generation. Bangladesh is now focusing more attention on adolescent sexual and reproductive health (ASRH); however, progress has been uneven across the different components of ASRH among the different sup-populations.

This report highlights the main findings of a cross-sectional study, which was designed to collect information on maternal and child health, healthcare seeking behavior, immunisation of its coverage family planning, knowledge on HIV/AIDS and sexually transmitted diseases (STDs) and women empowerment and violence against women, and adolescent sexual and reproductive health. Urban Health and Demographic Surveillance Systems (UHDSS) conducted the study with the financial support from the Government of Bangladesh.

Study Objectives

- To provide data on maternal and child health, including antenatal care, assistance at delivery, newborn care, immunisations, and prevalence and treatment of diarrhea and other diseases and hospitalization among children younger than 24 months
- To measure the level of contraceptive use of currently married women
- To provide data on knowledge and attitudes of women about sexually transmitted infections (STI) and HIV/AIDS

- To provide data on women empowerment and violence against women
- To measure the knowledge, attitudes, and perception on SRH among adolescent in slum areas of Dhaka, Bangladesh.

Materials and Methods

Study area and data collection

The study was conducted in five different slums of Dhaka South, Dhaka North and Gazipur City Corporation between October and December, 2016 where ICDDR,B operates a Health and Demographic Surveillance Systems (HDSS) since 2015. Data for this study came from a cross-sectional as part of a study on health seeking behavior: maternal, neonatal, and child health, family planning and specific emphasis on violence-against-women and gender aspects of primary health care. A total of 1200 women aged between 15 and 49 having a child younger than 24 months were randomly chosen from HDSS database. For adolescent survey, 1000 adolescent aged 10-19 years randomly selected from the same area were interviewed during November-December, 2016. Knowledge of HIV/AIDS and STDs, contraception, menstruation/wet-dream and puberty were used as outcome variables. Fifteen female interviewers had at least 12 years of schooling formed the data collection team with three experienced supervisors. Data were collected using Tablet phone (Samsung Galaxy Tab 4 SM-T231). To ensure quality of data, a supervisor revisited 5% of the respondents chosen randomly, within 2 days of data collection by the field worker. Later, the data collector and supervisor together sorted out any inconsistency found in the collected data. Finally, 1063 women of childbearing age having a child younger than 2 years were successfully interviewed.

Data analysis

Bivariate statistical analysis was performed to explore the outcome variables and socio-demographic characteristics. Chi-square test was conducted to ascertain the relationship between the independent and dependent variables. Household socioeconomic status was determined by the wealth index computed from ownership of a standard set of household items observed by the interviewers using principal components analysis (PCA). The wealth index was then used to categorize the individuals into five equal groups (or quintiles) where the first

quintile is the poorest 20% of households and the fifth quintile is the wealthiest 20% of households.

Results

Table 1 shows the selected background characteristics of 1063 ever-married women aged between 15 and 49 and having a child younger than 24 months. More than one-third of the women (34.4%) were aged between 20 and 24 years. Among the respondents, 28.8% were the aged between 25 and 29 and 16.8% were aged below 20 years. About one-fourth (23.8%) of them were illiterate, less than half (45.2%) of them completing primary (31.0%) education and rest of them have had more than primary education. The majority of the women (83.2%) were responsible for managing household affairs. Only 5.9% were engaged with either private/public service or doing their business, followed by 5.6% were day-laborer, 1.2% were self-employed and 4.1 were unemployed. Two-fourths of the respondents' household belongs to NGO membership.

Table 1: Background characteristics of the ever-married women aged 15-49 years and gave birth in the two years

Characteristics	n	Percent
Age (in years)		
15-19	178	16.8
20-24	365	34.4
25-29	306	28.8
30-34	127	12.0
35-49	86	8.0
Education		
No schooling	252	23.8
1-5 years of schooling	480	45.2
6-9 years of schooling	257	24.2
10-11 years of schooling	43	4.1
12+ years of schooling	29	2.7

Characteristics	n	Percent
<i>Marital status</i>		
Currently married	1,033	97.2
Divorced/separated/widowed	30	2.8
<i>Occupation</i>		
Housewife	879	83.2
Service/Businessman	62	5.9
Day-laborer	59	5.6
Self-employed	13	1.2
Unemployed	43	4.1
<i>NGO membership</i>		
Yes	429	40.4
No	634	59.6
<i>Wealth index</i>		
Lowest	234	22.3
Second	209	19.9
Middle	199	19.0
Fourth	201	19.1
Highest	207	19.7
<i>All</i>	1,063	100

Maternal and child health (pregnancy outcome and antenatal care (ANC) coverage

Table 2 shows the percentage of women with a livebirth in the two years preceding the survey who received ANC for the most recent birth. Eighty-five percent of women with a birth in the two years preceding the survey received antenatal care (ANC) at least once from a provider (table 2). Result showed that mothers from different socio-demographic background received least ANC with an equitable manner except the women who had the birth order of more than five. However, the women received at least four ANC the results were different. Only 47.2% of the women received four or more antenatal care. The likelihood of receiving 4+ ANC was

increases with women's education and their socioeconomic position. For example, coverage of 4+ ANC was ranged from 36.9% among illiterate to 58.7% among women had six or more years of schooling. Four more ANC visits was decrease with birth order of women. Data presented in table 2 showed that women from richest quintile (67.6%) were two-fold more likely to receive four of more ANC as compared to their counterparts (32.0%).

Table 2: Antenatal care coverage by selected background characteristics

Characteristics	n	One or more ANC (%)	Four or more ANC (%)
<i>Mother's age at birth (in years)</i>			
<20	289	85.5	44.3
20-24	371	88.4	50.1
25-29	244	84.0	48.8
30-34	109	83.5	47.7
35+	49	75.5	32.7
<i>Education</i>			
No schooling	252	83.3	36.9
1-5 years of schooling	480	82.5	44.8
6-9 years of schooling	257	92.2	55.3
10-11 years of schooling	43	90.7	69.8
12+ years of schooling	29	89.7	72.4
<i>Marital status</i>			
Currently married	1033	85.48	47.5
Divorced/separated/widowed	30	86.67	36.7
<i>Birth order</i>			
1	454	87.89	50.9
2-3	505	84.55	45.4
4-5	89	83.15	42.7
6+	15	60.00	26.7
<i>NGO membership</i>			
Yes	429	85.08	54.1
No	634	85.80	42.6
<i>Wealth index</i>			
Lowest	234	79.1	32.5
Second	209	81.3	35.9
Middle	199	88.9	49.3
Fourth	201	90.6	54.7
Highest	207	89.4	67.6
<i>All</i>	1,063	85.6	47.2

The provider who provided the service and the place where a woman receives ANC are presented in table 3. Women who had received any ANC during their last pregnancy, about half of them (46.6%) received form skilled birth attended (SBA) of NGO sector. 53.4% of the women received ANC form medically trained provider, that is, a qualified doctor (29.5%), nurse/midwife/paramedic (22.1) and FWA/HA/BDS /SBA (Govt.) (1.8).Women of highest socioeconomic position have 2.3 time higher prevalence of receiving ANC from qualified doctor compared to women from lowest socioeconomic position. During the sample pregnancy a woman visited more than one facility so that the category are not mutually exclusive and do not sum to 100 percent. The NGO sector was the leading source for ANC (50.5%), followed by private sector (22.4%) and public sector (4.8%).Results showed that public sector facilities were more deliverable to provide ANC to the lowest women and private sector facilities were more deliverable to provide ANC to the highest. About twenty-two percent of women received ANC at home.

Table 3: Provider and place of antenatal care by women’s household socioeconomic position

Variables	Lowest	Second	Middle	Fourth	Highest	All
<i>Provider of antenatal care</i>						
Qualified doctor	17.8	28.2	32.1	28.6	40.5	29.5
Nurse/midwife/paramedic	19.5	22.4	26.2	23.1	19.5	22.1
SBA (NGO)	59.5	47.7	39.0	47.3	40.0	46.6
FWA/HA/BDS /SBA (Govt.)	3.2	1.8	2.7	1.1	0.0	1.8
<i>Place of antenatal care</i>						
Home	21.6	23.5	23.5	17.6	24.8	22.3
Public sector	8.1	8.8	4.8	1.7	1.1	4.8
Private sector	15.7	17.7	24.1	23.0	31.4	22.4
NGO sector	54.6	50.0	47.6	57.7	42.7	50.5
n	185	170	187	182	185	909

Table 4 shows the percentage distribution currently married women by desire for another child. About eighty per cent of the women had desire for another child eventually. Only 10.6% of the study participants do not want any more children.

Table 4: Desire for more children

<i>Desire for children</i>	Number of birth	Percent (yes)
Have another soon	758	71.5
Have another later	190	17.9
Want no more child	113	10.6

Table 5 presents the delivery-related services are based on last live births in the two years preceding the survey by women selected background characteristics. Slightly higher proportion (52.4%) of the births were delivered in a health facility, such as, public sector (7.0%), private sector (19.4%) and NGO sector (26.0%) as compared to the births were delivered at home (47.4%). Data revealed that facility based delivery was significantly associated with mother's education and their household socioeconomic position. Women with 12+ years of schooling was 1.5 times more likely to give birth as facility as compare to women with no school attendance. A higher portion of women (69.1%) from highest socioeconomic position were gave birth at facility, followed by fourth (61.7%), middle (47.4%), second (49.0) and lowest quintile (37.2%).

Table 5: Place of delivery during last livebirth of women by selected background characteristics

	No. of birth	Home	Facility	Private facility	Public facility	NGO facility
<i>Mother's age at birth (in years)</i>						
<20	289	47.4	51.9	8.0	18.8	25.4
20-24	371	49.3	50.7	6.2	17.8	26.7
25-29	244	43.4	56.6	7.8	22.1	26.6
30-34	109	52.3	47.7	5.5	22.9	19.3
35+	49	42.9	57.1	6.1	14.3	36.7
<i>Mother's Education</i>						
No schooling	252	53.57	46.4	6.8	12.7	27.0
1-5 years of schooling	480	48.54	51.5	8.0	17.2	26.4
6-9 years of schooling	257	44.75	55.3	5.8	24.5	24.9
10-11 years of schooling	43	34.88	65.1	0.0	44.2	20.9
12+ years of schooling	29	24.14	75.9	13.8	34.5	27.6
<i>Birth order</i>						
1	454	45.1	54.9	7.7	21.5	25.7
2-3	503	49.3	50.7	6.3	18.4	25.9
4+	104	50.0	50.0	6.7	15.4	27.9
<i>Wealth index</i>						
Lowest	234	62.8	37.2	7.7	7.3	22.2
Second	209	51.0	49.0	7.7	14.9	26.4
Middle	199	52.6	47.4	6.2	16.6	24.6
Fourth	201	38.3	61.7	9.0	29.9	22.9
Highest	207	30.9	69.1	4.4	30.4	34.3
<i>All</i>	1063	47.5	52.3	7.0	19.4	26.0

Table 6 shows the percent distribution of all live births in the three years preceding the survey by type of assistance during delivery, according to selected background characteristics. About thirty-one percent of the deliveries were assisted by a qualified doctor, followed by nurse/midwife/paramedic (16.4%), TTBA (21.5%), TBA (25.5%) and family member/relative/other (6.0%). Women with 12+ years of schooling and highest socioeconomic position were 3 times and 4 times more likely to be assisted by a medically trained provider compared to their counterparts.

Table 6: Assistance during last pregnancy of women by selected background characteristics

Characteristics	No. of birth	Qualified doctor	Nurse/ midwife/ paramedic	Trained TBA	TBA	Family members/ relatives/ others
<i>Mother's age at birth (in years)</i>						
<20	289	32.5	15.9	18.0	27.3	6.2
20-24	371	30.7	15.4	20.2	27.8	5.9
25-29	244	32.0	18.9	24.6	20.1	4.5
30-34	109	27.5	14.7	23.9	27.5	6.4
35+	49	18.4	18.4	32.7	20.4	20.4
<i>Mother's Education</i>						
No schooling	252	21.4	19.1	23.0	29.4	7.1
1-5 years of schooling	480	28.1	15.6	21.9	27.3	7.1
6-9 years of schooling	257	37.4	16.3	20.6	22.6	3.1
10-11 years of schooling	43	53.5	9.3	18.6	14.0	4.7
12+ years of schooling	29	58.6	13.8	17.2	6.9	3.5
<i>Birth order</i>						
1	454	35.7	15.6	19.4	23.8	5.5
2-3	503	27.9	16.6	22.8	26.7	5.9
4+	104	21.2	18.3	25.0	27.9	7.7
<i>Wealth index</i>						
Lowest	234	12.8	17.1	23.9	36.3	9.8
Second	209	25.4	14.4	22.0	32.1	6.2
Middle	199	24.1	19.8	25.0	25.0	6.1
Fourth	201	42.8	17.4	15.9	20.4	3.5
Highest	207	50.7	13.0	20.3	12.6	2.4
All	1063	30.6	16.4	21.6	25.5	5.9

Table 7 presents the mode of delivery during last livebirth by women selected background characteristics. The percentage of C-section births is sometimes considered to be a proxy indicator of women's access to skilled care of complicated delivery. Results showed that, 25.6 % of live births in the two years preceding the survey were delivered by C-section, which implies that 4 in every 10 births are delivered by C-section. C-section delivery was higher among lowest birth order, higher educated and highest socioeconomic position women.

Table 7: Mode of delivery during last livebirth of women by selected background characteristics

Characteristics	No. of births	Normal	C-section
<i>Mother's age at birth (in years)</i>			
<20	289	72.7	27.3
20-24	371	74.9	25.1
25-29	244	72.1	27.9
30-34	109	78.0	22.0
35+	49	83.7	16.3
<i>Mother's Education</i>			
No schooling	252	81.8	18.3
1-5 years of schooling	480	76.3	23.8
6-9 years of schooling	257	69.7	30.4
10-11 years of schooling	43	51.2	48.8
12+ years of schooling	29	55.2	44.8
<i>Birth order</i>			
1	454	69.2	30.8
2-3	503	77.0	23.0
4+	104	84.6	15.4
<i>Wealth index</i>			
Lowest	234	87.6	12.4
Second	209	80.4	19.6
Middle	199	80.7	19.3
Fourth	201	65.2	34.8
Highest	207	56.0	44.0
All	1063	74.4	25.6

Children health seeking behavior and childhood immunisation

Table 8 presents information on vaccination coverage by vaccine card and mother's report. Nearly ninety-eight percent of the children age younger than 24 months were ever vaccinated as reported by a mother. Although the ever-received vaccination were 70.9% reported by

vaccine card. This might be due to mother had lost their card or other reasons. The level of coverage for BCG, three doses of pentavalent vaccine, and three doses of polio vaccine was 61 percent or higher. The coverage of MR-2 was lower (26.5%). Only 2% of children have not received any vaccinations.

Table 8: Vaccination coverage of children younger than two years

Vaccine	Percent (n)	Percentage with a vaccination card seen (n)
Ever received vaccinations	97.8 (1040)	69.3 (737)
No vaccinations	2.2 (23)	30.7 (326)
All basic vaccinations		
BCG	67.2 (714)	61.2 (651)
Pentavalent-1	67.8 (721)	59.8 (636)
Pentavalent-2	66.0 (701)	58.4 (621)
Pentavalent-3	61.4 (653)	53.7 (571)
Polio-1	67.5 (717)	59.5 (632)
Polio-2	65.5 (696)	57.5 (611)
Polio-3	61.2 (651)	53.7 (571)
Measles and Rubella-1	48.5 (516)	43.3 (460)
Measles and Rubella-2	26.5 (282)	23.8 (253)
PVC-1	44.4 (472)	39.7 (422)
PVC-2	42.4 (451)	37.8 (402)
PVC-3	35.8 (380)	32.2 (342)

Table 9 shows information on vaccination coverage of children aged between 12 and 23 months by vaccine card and mother's report. About ninety-eight per cent of children aged 12-23 months were received at least one vaccine. A child is required to take all necessary vaccines at their age of one year. Although results from our study showed that prevalence of all basic vaccines are very low among the children of socioeconomically disadvantaged group of population.

Table 9: Vaccination coverage of children aged between 12-23 months

Vaccine	Percent (n)	Percentage with a vaccination card seen (n)
Ever received vaccinations	98.24 (836)	66.0 (563)
No vaccinations	1.76 (15)	34.0 (289)
All basic vaccinations		
BCG	63.9 (544)	57.9 (493)
Pentavalent-1	64.8 (552)	56.9 (485)
Pentavalent-2	63.5 (540)	55.6 (473)
Pentavalent-3	59.8 (509)	51.8 (441)
Polio-1	64.4 (548)	56.4 (480)
Polio-2	63.0 (536)	54.9 (467)
Polio-3	59.5 (506)	51.6 (439)
Measles and Rubella-1	54.6(465)	48.5 (413)
Measles and Rubella-2	32.6 (272)	29.1 (248)
PVC-1	36.8 (313)	33.0 (281)
PVC-2	35.6 (303)	31.5(268)
PVC-3	31.4 (267)	28.2 (240)

Table 10 represents the illness and health seeking behavior of the children. More than half of the children had experienced an illness in the two weeks before the survey. The percentage is slightly higher for girls than for boys. Among the sick children, 86.3% were seeking healthcare. However, the percentage was slightly higher for boys than for girls. Fourteen percent of the children had experienced on diarrhea, followed by 44.2% had experienced on fever, 38.3% had experienced on cough and 12.0% had experienced on breathe faster, rapid or difficult breathing. Among the total children, 3.9% were required to hospitalize in the past 6 months before the survey. The boys were more hospitalized than girls were.

Table 10: Child illness and hospitalization

Indicators	All % (n)	Boy % (n)	Girl %(n)
Sickness during last 14 days	53.3 (567)	51.6 (281)	55.1 (286)
Seeking healthcare for sickness in last 14 days	86.3 (485)	89.6 (251)	83.0 (234)
Has the child had diarrhea last 2 weeks	14.3 (152)	14.2 (77)	14.5 (75)
Has the child been ill with a fever in last 2 weeks	44.2 (470)	42.1 (229)	46.4 (241)
Has the child been ill with a cough in last 2 weeks	38.3 (407)	36.4 (198)	40.3 (209)
Had breathe faster, rapid or difficult breathing	12.0 (127)	12.7 (69)	11.2 (58)
Hospitalization during last 6 months	3.9 (41)	5.0 (27)	2.7 (2.70)

Table 11 shows the healthcare provided contacted for last 14 days sickness of the child. Thirty-six percent of children were taken to a health facility or a medically trained provider. Boys are slightly more likely than girls to be taken to a health facility or medically trained provider. Informal and/or unqualified doctor (56.3%) treated the majority of the children.

Table 11: Healthcare provider contacted for seeking healthcare for 14 days sickness

Provider	All	Boys	Girls
Qualified doctor	35.9	36.5	35.3
Informal/unqualified doctor	56.3	55.3	57.3
Traditional doctor	2.5	3.3	1.7
Others	5.3	4.9	5.6
n	476	244	232

Family planning

Table 12 shows the current use of contraception. About eighty-four percent of women use any method of contraception and 81.4% use modern method. The pill was by far the most widely used method (37.4%), followed by Injectables (26.2%), condoms (7.4%), female sterilization (2.5%), implants (7.6%), and other (1.8%). Only 2.8% used any traditional method of which periodic abstinence and withdrawal were the most used. Nearly 16% of women did not use any method.

Table 12: Current use of contraceptive

Method	n	Percent
Any method	895	84.2
Not currently using	168	15.8
Any modern method	865	81.4
Pill	398	37.4
Injectables	278	26.2
Condoms	79	7.4
Female sterilization	27	2.5
Male sterilization	2	0.2
IUD	17	1.7
Implants	64	6.0
Any traditional method	30	2.8
Periodic abstinence	19	1.4
Withdrawal	11	1.0
Other	4	0.4

Table 13 represents the sources of mother contraceptive method used by a married woman. Private sector, especially pharmacy (65.9%) was the most mentioned sources of contraceptive method, followed by NGO sector (26.5%) and public sector (4.4%). Among the NGO sector, NGO static clinic (13.4%) was the major source.

Table 13: Sources of modern contraceptive method

Sources	n	Percent
Public sector	38	4.4
Medical college hospital/district hospital	14	1.6
Upazila Health Complex	1	0.1
Union Health & Family Welfare Centre	1	0.1
Satellite clinic/EPI outreach	9	1.0
Community Clinic	13	1.6
Private sector	598	69.1
Private hospital/clinic	17	2.0
MBBS Doctors Chamber	3	0.2
Informal/unqualified doctor chamber	4	0.3
Pharmacy	569	65.9
Other	6	0.7
NGO sector	229	26.5
NGO facility supported by UPHCSD	48	5.6
NGO satellite clinic	63	7.3
NGO static clinic	116	13.4
Maternal child and welfare centre	2	0.2

HIV/AIDS and sexually transmitted diseases (STDs)

Table 14 shows that about 75% of ever-married women aged between 15 and 49 have heard about HIV/AIDS. Knowledge of HIV/AIDS did not much vary with age of the women. Awareness of HIV/AIDS was higher among richest (89.9%), self-employed (84.6%), and household having NGO membership (82.3%) as compared to their counterparts. Results showed that knowledge of HIV/AIDS was increases with education. Only 57.9% of illiterate women had knowledge on HIV/AIDS followed by, women have 1-5 years of schooling (73.8%), women have 6-9 years of schooling (86.0%), women have 10-11 years of schooling (100.0%), and women have 12+ years of schooling (96.5%).

Table 14: Knowledge on HIV/AIDS of women by selected background characteristics

Characteristics	n	Percent
<i>Age (in years)</i>		
15-19	178	68.0
20-24	365	76.4
25-29	306	78.8
30-34	127	73.2
35+	86	68.6
<i>Education</i>		
No schooling	252	57.9
1-5 years of schooling	480	73.8
6-9 years of schooling	257	86.0
10-11 years of schooling	43	100.0
12+ years of schooling	29	96.5
<i>Marital status</i>		
Currently married	1,033	74.7
Divorced/separated/widowed	30	73.3
<i>Occupation</i>		
Housewife	879	76.1
Service/Businessman	62	75.8
Day-laborer	59	62.7
Self-employed	13	84.6
Unemployed	43	60.0
<i>NGO membership</i>		
Yes	429	82.3
No	634	69.6
<i>Wealth index</i>		
Poorest	234	56.8
Poor	209	72.3
Middle	199	73.9
Rich	201	83.1
Richest	207	89.9
<i>All</i>	1,063	74.7

Table 15 presents knowledge of ever-married women on HIV/AIDS prevention method. Among the women who were previously known about HIV/AIDS, 34.8% said that HIV infection could be reduced by avoids sex with sex worker. Nearly 35% of women said that use of condom as a method of preventing HIV/AIDS, followed by limit sex within marriage (21.7%), avoid sex with persons who inject drugs (13.0%), avoid unsafe blood transfusions (24.6%), and avoid sex with HIV infected person (25.4%) and other (2.1).

Table 15: Knowledge on HIV/AIDS prevention method

Methods	Percent*
Use condoms	34.8
Limit sex within marriage	21.7
Avoid sex with sex worker	35.3
Avoid sex with persons who inject drugs	13.0
Avoid unsafe blood transfusions	33.3
Avid sharing razors/blades	24.6
Avoid sex with HIV infected person	25.4
Other	2.1
All	785

*Multiple response were recorded

The respondents who ever had sex were asked if they had gotten a disease through sexual contact in the previous 12 months or if they had experienced either of two symptoms associated with sexually transmitted diseases (STDs), that is, a bad-smelling or abnormal genital discharge, or a genital sore or ulcer. Self-reported prevalence of sexually transmitted diseases (STDs) and STD symptoms is presented in table 16. Overall, 7.1% and 9.2% of ever-married women aged between 15 and 49 responded that they had either Syphilis or Gonorrhoea respectively. The rates were much higher as compared to BDHS. The plausibility of that on the one hand, the study was conducted in the slums of DCC and on the other hand underreporting in BDHS data. Women who report STD symptoms are somewhat more likely to say they have

had itching or irritation in vaginal area with discharge (24.7%) than a genital sore and/or ulcer (3.5%).

Table 16: Self-reported prevalence of sexually transmitted disease (STDs) and STD symptoms

Sexually Transmitted Disease (STD) and STD symptoms	percent
STD	
Syphilis	7.1
Gonorrhoea	9.2
STD symptoms	
Any itching or irritation in vaginal area with discharge	24.7
A bad odor along with a discharge	5.9
A severe abdominal pain with discharge not related to menstruation	9.5
A fever along with a discharge	5.1
A genital sore and/or ulcer	3.5
Problem with pain and/or burning while urinating or difficult urination	11.5
Any other problem with a urethral discharge	1.6
All	1063

Women empowerment and violence against women

A woman's attitude toward wife beating is considered a proxy for her perception of women's status. A lower score on the "number of reasons wife beating is justified" indicates a woman's greater sense of entitlement, self-esteem, and status and reflects positively on her sense of empowerment. Table 17 represents who agree that a husband is justified in hitting or beating his wife for specific reasons. The most widely accepted reason for wife beating among women in Bangladesh was neglecting the children (35.8%), followed by visit her family/friend without her permission (31.9%). Twenty-three percent of women agree that fails to provide food on time was a justifiable reason for a husband to beat his wife. 13.8% and 9.9% of women agree that argues with her husband and refusing to have sexual intercourse were acceptable reasons for a husband to beat his wife respectively.

Table 17: Women's attitude toward wife beating

Circumstances	Percent*
Neglects the children	35.8
Argues with her husband	23.1
Fails to provide food on time	13.8
Visit her family/friend without her permission	31.9
Refuses to have sexual intercourse with him	9.9
Percentage who agree with at least one specified reason	46.2
Number of women	1063

*Multiple response were recorded

Table 18 shows the percent distribution of currently married women who received cash earnings in the past 12 months, according to the person who mainly decides about the use of their earnings. Twenty-two percent of currently married women who earn cash reported that they themselves mainly decide how their cash earnings are used; 59.9% reported that they decide jointly with their husbands, and 132.1% reported that their husbands alone decide how their earnings are used. A very low percentage of women reported that other people participate in the decision on how their earnings are used.

Table 18: Control over women cash earnings

Who makes the decision	Percent
Mainly wife	26.1
Wife and husband jointly	59.9
Mainly husband	12.1
Someone else	1.9
Number of women	207

Table 19 shows the prevalence of women suffer from violence at their lifetime and in the past year. About fifty-three percent of women reported that they had experienced on any form of violence and 36.7% reported that was happened during the last year. About half of women

reported to have experienced on slapping or twisting arm, followed by pushing/shaking/throw (35.8%), punching with his fist (27.0%), kicking or dragging (18.5) and trying to strangle or killing or burning (6.2%).

Table 19: Prevalence of women suffered from violence

Act of violence	At any time*	In the last year*
Pushing/shaking you or throw	35.8	23.1
Slapping you or twisting your arm	50.5	33.8
Punching with his fist or with something that could hurt	27.0	17.8
Kicking you or dragging you	18.5	12.5
Trying to strangle you or killing you or burning you	6.2	4.3
Percentage who suffer with at least one specified reason	54.3	36.7
Number of women	1063	

*Multiple response were recorded

Adolescent Sexual and Reproductive Health

This section yielded a randomly chosen sample of 1000 with an equal portion of males and females aged 10-19 years. Finally, 826 respondents were interviewed. Rest of the respondents was unable to interview with three reaped visits due to their unavailability and migrated out form the surveillance areas. Of the respondents, 52.8% were females and 47.2 were males. Ninety four percent of adolescents reported that they were attending school; thus, the levels of education ultimately attained are likely to be somewhat higher that the level reported in the survey. About 16% of adolescent were married, 31.2% currently working. A significant portion of study participants had had access to watch television, and a moderate portion of them used internet, however, reading newspaper is slightly lower (Table 20).

Table 20: Background characteristics of the adolescent of aged 10-19 years by selected social and demographic characteristics

Characteristics	n	percent
Sex		
Male	390	47.2
Female	436	52.8
Age in years		
10-13	297	35.7
14-16	237	28.6
16-19	297	35.7
Education		
Illiterate	49	5.9
1-5 years of schooling	417	50.5
6+ years of schooling	360	43.6
Marital status		
Ever married	131	15.9
Never married	694	84.1
Currently working		
Yes	258	31.2
No	568	68.8
NGO membership		
Yes	338	40.9
No	488	59.1
Ever smoked		
Yes	70	8.5
No	756	91.5
Ever chewed smokeless tobacco		
Yes	20	2.4
No	806	97.6
Ever used drug		
Yes	19	2.3
No	807	97.7
Reading newspaper		
Yes	315	38.1
No	511	61.9
Has access to satellite television		
Yes	769	93.1
No	57	6.9
Has access to internet		
Yes	394	47.7
No	432	52.3
All	826	100.0

Most important source of information about the physical and psychological changes at puberty (51.4%) and about SRH (41.5%) was parents, followed by friends (16.2% and 21.2%), other family members (15.3% and 16.7%), school teacher (11.6% and 8.3%), book/magazine/film (2.2% and 3.6%), and doctor (1.6% and 4.8%)

Table 21: Percentage distribution of adolescent, by important and preferred sources of information on puberty, and sexual and reproductive system

Source	Puberty			Sexual and reproductive system		
	Most important	Second most important	Preferred	Most important	Second most important	Preferred
School teacher	11.6	6.9	6.5	8.3	4.4	5.8
Parents	51.4	29.5	14.3	41.5	27.6	11.2
Other family members	15.3	34.9	41.0	16.7	37.3	39.7
Friends	16.2	19.7	25.7	21.2	19.1	25.9
Book/magazine/film	2.2	6.5	8.6	3.6	6.5	9.5
Doctor	1.6	0.8	2.2	4.8	3.0	5.3
Other	1.7	1.7	1.8	3.9	2.1	2.6
Number of respondents	810	780	742	805	758	723

Reproductive Health Knowledge

Reproductive physiology

Participants' knowledge of reproductive health issues varied widely, but misperceptions were common (Table 22). About 27% of respondents knew that a woman can get pregnant at first intercourse, and 19% were aware that pregnancy is most likely to occur in mid-cycle. Surprisingly, more than 60% of adolescent were unknown about these two components.

Condom

About forty-four percent of knew condoms are effective for preventing pregnancy and 29.3% knew it cannot be used more than once. More than two-thirds of them knew that condoms are

an effective way of protecting against HIV/AIDS and STIs. Nearly half knew believed that unmarried couple should use condoms if they want to have sexual intercourse.

STDs and AIDS

Nearly 68% of adolescent heard about HIV/AIDS. Among them, 24% were believed that it is possible to cure. Apart from this, only 18% of them had knowledge on other sexually transmitted diseases (STDs).Familiarity with the signs and symptoms of STDs was poor; relatively small proportions of respondents knew that likely symptoms of STIs in men include discharge from the penis (7.7%), pain during urination (11.5%), and ulcers/sores in the genital area (10.8%). Respondents’ knowledge of signs and symptoms in females was even lower.

Table 22: Percentage distribution of adolescent aged 10–19, by responses to statements about aspects of reproductive health

Aspect	Yes	No	Don't know
Reproductive physiology			
A woman can get pregnant at first intercourse	26.9	12.5	60.8
Pregnancy is most likely to occur in mid-cycle	18.6	10.2	71.2
Condoms			
Condoms are an effective method of preventing pregnancy	44.2	2.1	53.7
Condoms can be used more than once	10.2	29.3	60.5
Condoms are an effective way of protecting against STIs	44.4	1.3	54.2
Condoms are an effective way of protecting against HIV/AIDS	41.7	1.3	57.0
Condoms should use if unmarried couple want to have sexual intercourse	48.7	2.2	49.2
STDs and AIDS			
It possible to cure AIDS	23.9	53.9	22.2
A person with HIV always looks emaciated or unhealthy in some way	50.2	16.1	33.7
People can take a simple test to find out whether they have HIV	50.5	25.8	23.8
Discharge and blood from the genitals are a sign of an STI in a man	7.7	59.6	32.7
Pain during urination is a sign of an STI in a man	11.5	6.8	81.7
Ulcers/sores in the genital area are a sign of an STI in a man	10.8	7.5	81.7
Discharge and blood from the genitals are a sign of an STI in a woman	16.6	6.3	77.1
Pain during urination is a sign of an STI in a woman	12.9	10.0	77.1
Ulcers/sores in the genital area are a sign of an STI in a woman	13.2	9.7	77.1

References:

1. Affairs, D.o.E.a.S., *World Urbanization Prospects The 2014 Revision*. 2014, UN: New York.
2. Moran, A.C., et al., *Newborn care practices among slum dwellers in Dhaka, Bangladesh: a quantitative and qualitative exploratory study*. BMC Pregnancy and Childbirth, 2009. **9**(1): p. 54.
3. NA Jahan, S.H., N Sultana, F Ishaq, MZH Sikder, T Rahman, *Health Care Seeking Behavior of Slum-Dwellers in Dhaka City*. 2015, Institute of Health Economics, University of Dhaka.
4. Associates, M.a., *Bangladesh Health and Demographic Survey BDHS*. 2014, NIPORT: Dhaka.
5. Affairs, D.o.E.a.S., *Population, Development and HIV/AIDS with Particular Emphasis on Poverty*. 2005, United Nations New York