Report on

Bangladesh Sample Vital Statistics 2016

Bangladesh Bureau of Statistics (BBS)
Statistics and Informatics Division (SID)
Ministry of Planning
Government of the People's Republic of Bangladesh

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May 2017

বাংলাদেশ পরিসংখ্যান ব্যুরো

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Minister

Ministry of Planning

Government of the People's Republic of Bangladesh

Message

I am happy to know that Bangladesh Bureau of Statistics (BBS) is going to publish the report on Sample Vital Statistics 2016 generated through Sample Vital Registration System (SVRS). The SVRS is a continuous data collection system by the BBS for generating reliable demographic data to monitor the progress of the indicators of Seven Five Year Plan and Sustainable Development Goals (SDGs), socio-economic development and sectoral plans relating to Population and Health. SVRS collects data on births, deaths, marriages, migration, disability and other key demographic indicators on a regular basis and publish reports annually. The findings of the SVRS-2016 indicate very positive improvement in Demographic and Health condition of the people of the country over the years. The SVRS-2016 findings will be helpful in setting up the bench mark indicators for the Sustainable Development Goals (SDGs) and monitoring the progress of the indicators on a regular basis. Data generated through SVRS will be useful in allocating resources in the health and population sector prioritizing the disadvantaged areas.

I would like to express my thanks to all concerned who rendered valuable support in conducting the survey and preparing this report.

Dhaka, May 2017

AHM Mustafa Kamal, FCA, MP

State Minister

Ministry of Finance

and

Ministry of Planning

Government of the People's Republic of Bangladesh

Message

I am delighted to see that the report on Bangladesh Sample Vital Statistics 2016 prepared by the Bangladesh Bureau of Statistics (BBS) of the Statistics and Informatics Division (SID) of the Govt. of Bangladesh is now being published.

SVRS is a continuous data collection system on demographic parameters like birth, death, marriage, migration, disability and contraceptive prevalence rate of our population. Information collected under SVRS is needed for monitoring the progress of national plans and policies in general and the state of health and population of Bangladesh in particular.

I take this opportunity to thank Secretary, Statistics and Informatics Division and Director General, Bangladesh Bureau of Statistics for their hard work in conducting the field operation, data processing and preparation of this report. Thanks are also due to the members of the Steering Committee and Technical Committee of the project for providing administrative and technical support.

Demographic data is a prerequisite for monitoring the progress of health and population of the country and continuous data collection and timely dissemination serves this function well.

I hope this report will be useful to the planners, policy makers, researchers and other stakeholders for proper population planning of the country.

Dhaka, May 2017

M.A. Mannan MP

Secretary
Statistics and Informatics Division (SID)
Ministry of Planning
Government of the People's Republic of Bangladesh

Message

Sample Vital Registration System (SVRS) is a fundamental element for National Statistics. I am happy to know that the final report of the Sample Vital Registration System 2016 is going to be published at the earliest part of 2017. Sample Vital Registration System (SVRS) is a regular survey system of BBS which is being implemented under the project Monitoring the Situation of Vital Statistics of Bangladesh (MSVSB) to meet the intercensal data needs for demographic indicators and vital statistics such as Annual Natural Growth Rate (NGR), Crude Birth Rate (CBR), Crude Death Rate (CDR), Total Fertility Rate (TFR), Infant Mortality Rate (IMR), Under Five Mortality Rate (U_5MR), Maternal Mortality Ratio (MMR) etc for the wide ranges of users. It may be noted that Civil Registration System is the main source of information for generating vital statistics in any country. In the absence of complete Civil Registration System in Bangladesh, BBS has been generating vital statistics through sample vital registration system since long and the coverage has been increased over the years to provide reliable estimate at the subnational level.

Bangladesh is committed to achieve Sustainable Development Goals (MDGs) by 2030. The survey findings enable us to monitor most of the selected indicators of SDGs for Bangladesh. Moreover, these indicators will guide policy makers and planners in preparing and implementing pertinent socio-demographic development agenda for Sustainable Development Goals (SDGs).

I take the opportunity to express my heartfelt thanks to Director General of BBS Mr. Md. Amir Hossain, Deputy Director General of BBS Mr. Md. Baitul Amin Bhuiyan, Additional Secretary of Statistics and Informatics Division (SID), Mr. A B M Zakir Hossain Bhuiyan, Prof. M. Nurul Islam of Dhaka University and Consultant of MSVSB project for their intellectual and technical input in preparing this report. All members of the Steering Committee and Technical Committee and the project team of MSVSB led by Mr. A K M Ashraful Haque, Project Director deserve special thanks for their relentless efforts in bringing out the report of 2016 in the 1st half of 2017.The substantial reduction of time lag of SVRS report is commendable.

I hope this report will be useful to planners, policy makers, development partners and researchers to prescribe appropriate policy measures for achieving SDGs. Any constructive suggestions and comments from the users for improvement of the report will be most welcome.

K M Mozammel Hoq

Dhaka
May 2017

Director General
Bangladesh Bureau of Statistics (BBS)
Statistics and Informatics Division (SID)
Ministry of Planning
Government of the People's Republic of Bangladesh

Foreword

Monitoring the Situation of Vital Statistics of Bangladesh (MSVSB) Project is a regular surveillance system of Bangladesh Bureau of Statistics (BBS) to determine the annual population change at national and sub-national level. The objective is to collect, compile and publish demographic data to meet the inter censual data (10 years) needs. Over the years, the vital registration system has been improved. Sample coverage has also been increased.

The report on vital statistics 2016 is based on the vital events such as births, deaths, marriages, divorce etc. occurred during 2016. I am grateful to all the Local Registrars, Supervisors, Officers for their field work and supervision to ensure quality data. The working team headed by Mr. A K M Ashraful Haque, Project Director, deserves special appreciation for bringing out this report rapidly and timely. This reduction of time lag of disseminating SVRS report deserves special appreciation.

I would like to express my special thanks and profound gratitude to the Secretary, Statistics and Informatics Division and members of the Technical Committee for their guidance in bringing out this report. Special thanks to UNFPA and UNICEF for their support.

Finally, I hope that this report will be useful to the policy-makers, planners, researchers, development partners and other stakeholders. Suggestions and comments for further improvement will be highly appreciated.

Dhaka, May 2017

Md. Amir Hossain
(Additional Secretary)

Project Director

Monitoring the Situation of Vital Statistics
of Bangladesh (MSVSB) Project

A Note from the Project Director

Sample Vital Registration System

Sample Vital Registration System was introduced by Bangladesh Bureau of Statistics in 1980 to determine the annual population change during inter-censal period. Initially its coverage was 103 primary sampling units (PSUs) each comprising of about 250 contiguous households. Out of 103 PSUs, 62 PSUs were from rural and 41 PSUs were from urban area. To meet the data need of planners and policy makers and other users to have robust estimate, the number of sample PSUs was raised to 210 PSUs in 1983. This could provide estimate at the division level. At the same time its scope was raised with inclusion of marriage and migration Schedules. Considering the importance of the project it was transferred to revenue set up of BBS in 1991. At that time zila became the focal point of development. To meet the users demand for zila estimate number of sample PSUs was again raised to 500 in 1995. The scope of the survey was also enhanced with the addition of a new module on contraceptive use. A household card was introduced for updating of household and population information. With the availability of the sampling frame from the latest Population Census 2011 the sample design was recasted. An Integrated Multi-purpose Sample Design was introduced with effect from 1st July 2002 and the number of PSU's increased to 1000 to provide the estimate of vital events at the district level.

Dual Record System

To obtain data from field with extensive verification and to provide a better coverage of vital events Chandra Sekar and Deming Dual Recording System has been introduced from the beginning. Under system-1 there is a local registrar for each PSU who used to collect data about stipulated vital events as it occurs and record it in the specified schedule and then send the filled-in schedules to the headquarters according to the time table set for each schedule. Under system-2 another set of enumerators (supervisors) from the Upazila Statistical Offices and the officers from the headquarters visit the PSUs on a quarterly basis and collect retrospective data on all the events. The filled-in schedules obtained from both the systems are coded and matched at the headquarters and re-investigation are done where needed. After the cross verification of data estimates are prepared and published using the Chandra Sekar and Deming Technique.

Schedule

To systematize collection of data from the field, a list of the schedules used which isprovided below:

Schedule1: House listing
Schedule2: Household card
Schedule3: Birth
Schedule4: Death
Schedule 5: Marriage
Schedule6: Divorced/Separated
Schedule7: Out-migration
Schedule8: In-migration
Schedule9: Contraceptive use
Schedule 10: Disability
Schedule 11: HIV/AIDS

Objective of the Project

To strengthen the Sample Vital Registration System in Bangladesh a project was undertaken in 2000 by the Demography and Health Wing of BBS. Two new schedules – one on divorce and separation and the other on disability were introduced.

The specific objectives of the project were –

(i) To develop an IMPS on the basis of Population Census 2001 sampling frame considered with 1000 PSUs so that reliable estimates on vital events such as birth, death, marriage, migration, contraceptive use, disability, divorce and separation can be produced at the zila level with urban- rural break- up;

(ii) To review and revise the schedules where necessary;

(iii) To provide extensive training to the local registrars and the upazila supervisors so that reliable data are collected and sent to headquarters in time;

(iv) To identify the causes of migration in the national, zilas, urban and rural level in Bangladesh.

(v) To prepare the report on the basis of IMPS in time.

The project was completed in June 2007. In continuation of this project another phase of the project started from July 2007 for further strengthening the system. Under the new project the whole gamut of activities of the project has further been revitalized. A new project entitled Monitoring the Situation of Vital Statistics of Bangladesh was undertaken with effect from July 2012 in order to provide better and reliable estimates of population changes and vital statistics at district level and number of PSUs was increased from 1000 to 1500 under newly formed IMPS design based on Population Census 2011. Data collection from 1500 PSUs was started from July 2013, till 2014. Both 2015 & 2016 round of data collection have been based on 2012 PSUs.

Statistical Techniques of Data Processing and Analysis

Collection of data from the field was conducted over a period of one month. Local Female Registrars and Supervisors submitted their filled in schedule to the District Statistical Office. The DSOs submitted the schedules to the head office in Dhaka. Then data were edited and coded in the head quarter following a pre-designed editing and coding guidelines. Data processing and tabulation have been done in the computer section of the project.

In presenting and computation various rates and ratios in this report, we have followed standard demographic and statistical procedures. In most instances, up dated versions of UN manuals, standard textbooks, journals and other demographic literatures and in some cases online materials have also been used. The operational definitions of various terms and variables employed in the report have been provided in the appendix.

Dhaka, May 2017 **A K M Ashraful Haque**

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Key Findings of Sample Vital Registration System, 2016

Indicators	2016	2015	2014	2013	2012
1. National Population (Estimated)					
Population(in million) : July 1					
Both Sexes	160.8	158.9	156.8	154.7	152.7
Male	80.5	79.6	78.6	78.3	78.2
Female	80.3	79.3	78.2	76.4	74.5
Intercensal Growth Rate	1.37*	1.37*	1.37*	1.37*	1.37*
2. Number of PSUs					
Total	2012	2012	1500	1500	1000
Rural	1077	1077	801	801	640
Urban	935	935	699	699	360
3. Sample population					
Total	957913	939530	696170	694434	1116845
Male	479597	470488	348901	351690	566663
Female	478316	469042	347269	342744	550182
Population by Broad Age-groups (percent)					
Both Sexes					
00-14	30.8	30.8	31.7	32.3	31.1
15-49	53.6	53.7	52.6	53.2	53.9
50-59	8.1	7.8	7.9	7.3	7.8
60+	7.5	7.7	7.8	7.3	7.2
Total	100.0	100.0	100.0	100.0	100.0
Male					
00-14	30.9	31.3	32.3	32.8	31.2
15-49	52.8	52.5	51.9	51.8	53.9
50-59	8.2	8.0	7.7	7.4	7.8
60+	8.1	8.2	8.1	8.0	7.1
Total	100.0	100.0	100.0	100.0	100.0
Female					
00-14	30.7	30.2	31.1	31.6	31.0
15-49	54.5	55.0	53.3	54.4	53.8
50-59	7.9	7.6	8.1	7.4	7.9
60+	6.9	7.2	7.5	6.4	7.3
Total	100.0	100.0	100.0	100.0	100.0
4. Sample Population Characteristics					
Rate of Natural Increase	1.36	1.37	1.37	1.37	1.36
Sex Ratio (M/F*100)	100.3	100.3	100.5	102.6	104.9
Dependency Ratio (percent)					
Total	54	55	57	58	56
Rural	58	59	60	61	61
Urban	49	49	50	50	48
Child Woman Ratio (per 1000 women aged 15-49)					
Total	320	325	355	356	327
Rural	347	350	367	367	364
Urban	289	290	319	320	267
Population Density (per sq. km)	1090	1077	1063	1049	1035

*Based on the population census of 2001 and 2011

Indicators	2016	2015	2014	2013	2012
5. Fertility					
Crude Birth Rate (per 1000 population)					
Total	18.7	18.8	18.9	19.0	18.9
Rural	20.9	20.3	19.4	19.3	20.0
Urban	16.1	16.5	17.2	18.2	17.1
Age Specific Fertility Rates (per 1000 women in the age group)					
15-19	78	75	83	60	53
20-24	132	137	144	152	143
25-29	107	105	110	113	118
30-34	58	56	48	54	67
35-39	26	25	25	30	31
40-44	7	9	7	8	10
45-49	3	3	4	5	3
Total Fertility Rate (per woman aged 15-49)					
Total	2.10	2.10	2.11	2.11	2.12
Rural	2.38	2.30	2.22	2.19	2.30
Urban	1.68	1.72	1.77	1.84	1.84
General Fertility Rate (per 1000 women aged 15-49)					
Total	69	69	71	71	70
Rural	79	77	75	73	75
Urban	57	57	60	63	61
Gross Reproduction Rate (per woman aged 15-49)					
Total	1.02	1.05	1.05	1.02	1.05
Rural	1.15	1.16	1.09	1.06	1.14
Urban	0.84	0.88	0.91	0.92	0.91
Net Reproduction Rate (per woman aged 15-49)					
Total	1.00	1.00	1.04	1.01	1.04
Rural	1.10	1.10	1.08	1.04	1.13
Urban	0.80	0.84	0.90	0.91	0.90
6. Mortality					
Crude Death Rate (per 1000 population)					
Total	5.1	5.1	5.2	5.3	5.3
Rural	5.7	5.5	5.6	5.6	5.7
Urban	4.2	4.6	4.1	4.6	4.6
Infant Mortality Rate (per 1000 live births)					
Total					
Both sexes	28	29	30	31	33
Male	27	30	31	32	34
Female	28	28	28	31	32
Rural					
Both Sexes	28	29	31	34	34
Male	26	31	32	35	37
Female	28	28	29	33	32
Urban					
Both Sexes	28	28	26	26	31
Male	28	29	29	24	30
Female	28	28	22	28	33

Indicators	2016	2015	2014	2013	2012
Neo-natal Mortality Rate (per 1000 live births)					
Total					
Both Sexes	19	20	21	20	21
Male	18	20	22	22	23
Female	20	20	19	21	20
Rural					
Both Sexes	19	20	21	23	22
Male	17	21	22	24	25
Female	19	19	20	22	19
Urban					
Both Sexes	20	20	19	16	21
Male	20	19	21	15	20
Female	20	22	16	18	22
Post-Neo-natal Mortality Rate (per 1000 live births)					
Total					
Both Sexes	9	9	9	11	12
Male	9	10	9	10	11
Female	8	8	9	10	12
Rural					
Both Sexes	9	9	9	11	12
Male	9	10	9	11	12
Female	9	9	9	11	13
Urban					
Both Sexes	8	8	7	10	10
Male	8	10	8	9	10
Female	8	6	6	10	11
Child Death Rate (per 1000 children aged 1-4 years)					
Both Sexes	1.8	2.0	2.0	2.2	2.3
Male	2.1	2.3	1.8	2.3	2.3
Female	1.6	1.7	2.3	2.1	2.3
Under 5 Mortality Rate (per 1000 live births)					
Total					
Both Sexes	35	36	38	41	42
Male	35	39	38	42	43
Female	34	34	37	40	41
Rural					
Both Sexes	36	39	40	43	44
Male	36	42	40	45	46
Female	35	35	40	41	42
Urban					
Both Sexes	32	32	30	35	37
Male	32	33	34	30	36
Female	33	31	26	39	38
Maternal Mortality Ratio (per 1000 live births)					
Total	1.78	1.81	1.93	1.97	2.03
Rural	1.90	1.91	1.96	2.11	2.10
Urban	1.60	1.62	1.82	1.46	1.90

Indicators	2016	2015	2014	2013	2012
7. Life Expectancy at Birth					
Expectation of Life at birth (Years)					
Both Sexes	71.6	70.9	70.7	70.4	69.4
Male	70.3	69.4	69.1	68.8	68.2
Female	72.9	72.0	71.6	71.2	70.7
8. Nuptiality					
Crude marriage rate (per 1000 population)					
Total	14.3	13.0	12.9	13.0	13.3
Rural	17.7	14.9	14.3	13.0	14.2
Urban	10.1	10.2	8.3	12.8	11.7
Marital Status of Population Aged 10+ (percent)					
Male					
Never Married	39.4	38.6	39.0	39.5	41.1
Currently Married	59.2	59.7	59.9	59.4	57.1
Widowed/ Divorced/ Separated	1.4	1.7	1.1	1.1	1.8
Female					
Never Married	26.9	26.1	25.5	26.5	28.0
Currently Married	63.1	64.1	65.4	65.0	61.5
Widowed/Divorced/Separated	10.0	9.8	9.1	8.5	10.5
Mean Age at First Marriage					
Male					
Total	25.2	25.3	24.9	24.3	NA
Rural	24.7	24.8	24.7	24.1	NA
Urban	26.3	26.4	26.4	24.6	NA
Female					
Total	18.4	18.4	18.3	18.4	NA
Rural	17.9	18.0	18.1	18.2	NA
Urban	19.6	19.4	19.4	18.9	NA
Mean Age at Marriage					
Male					
Total	26.3	26.4	25.9	25.2	24.7
Rural	25.8	25.9	25.7	25.0	24.1
Urban	27.4	27.2	27.1	25.8	26.1
Female					
Total	18.8	18.7	18.5	18.6	19.3
Rural	18.3	18.3	18.3	18.5	19.1
Urban	19.9	19.8	19.7	19.1	19.8
Singulate Mean Age at Marriage					
Male					
Total	25.7	25.8	25.4	25.5	26.0
Rural	25.1	25.3	25.2	25.2	25.6
Urban	26.5	26.5	26.0	26.2	26.6
Female					
Total	20.3	20.3	20.0	20.0	20.3
Rural	19.7	19.8	19.7	20.0	20.1
Urban	21.1	21.0	20.8	20.1	20.8

Indicators	2016	2015	2014	2013	2012
Median Age at Marriage					
Male					
Total	25	25	24	24	25
Rural	25	25	24	24	24
Urban	26	27	26	25	26
Female					
Total	18	18	18	18	19
Rural	18	18	18	18	19
Urban	18	19	19	19	20
9. Internal Migration					
Migration Rate (Per 1000 population)					
In-migration Rate	76.7	54.2	40.2	39.9	40.2
Rural In-migration	39.5	30.7	29.4	31.7	21.6
Rural to Rural	34.5	25.6	24.3	26.6	16.2
Urban to Rural	5.0	5.1	5.1	5.1	5.3
Urban In-migration	123.0	90.0	77.1	68.1	69.7
Rural to Urban	30.3	29.5	28.2	27.2	26.2
Urban to Urban	92.6	60.5	48.9	40.9	43.5
Out-migration Rate	78.5	54.4	43.1	40.4	41.9
Rural out-migration	47.5	35.1	34.0	31.7	23.5
Urban out-migration	117.2	83.8	74.4	70.5	69.0
10. Contraceptive Usage					
Contraceptive Prevalence Rate (percent)					
Total	62.3	62.1	62.2	62.4	62.2
Rural	59.3	60.4	61.6	61.8	59.8
Urban	65.9	64.5	64.5	64.1	66.1
Contraceptive Prevalence Rate by Method					
Any Method	62.3	62.1	62.2	62.4	62.2
Modern Method	58.4	58.4	58.4	60.0	60.2
11. Disability					
Crude Disability Rate (per 1000 population)					
Both Sexes	9.0	8.8	9.0	9.0	10.10
Male	9.8	9.6	9.9	9.7	11.01
Female	8.3	8.0	8.2	8.2	9.05
12. HIV/AIDS					
Percent who know at least one mode of transmission of HIV/AIDS from mother to child	66.9	66.1	61.5	61.6	-
Percent who know all modes of transmission of HIV/ AIDS from mother to child	29.1	25.8	21.0	18.5	-
13. Household Characteristics					
Household Size	4.3	4.4	4.3	4.4	4.5
Headship (Percent)					
Male Headed HH	87.2	87.3	87.8	88.4	85.5
Female Headed HH	12.8	12.7	12.2	11.6	14.5
Access to Water (percent)					
Drinking (Tap & Tube well)	98.0	97.9	97.8	97.5	98.3
Source of Light (percent)					
Electricity	81.2	77.9	67.8	66.9	65.6
Solar	5.6	5.4			
Kerosene	13.0	16.3	31.4	32.3	33.1
Others	0.2	0.4	0.8	0.8	1.3

Indicators	2016	2015	2014	2013	2012
Toilet Facility (percent)					
Sanitary	75.0	73.5	63.5	63.3	63.8
Others	22.3	23.2	34.4	34.5	33.6
Open	2.7	3.3	2.1	2.2	2.6
14. Literacy					
Literacy Rate of Population 7+ yrs (percent)					
Total					
Both Sexes	71.0	63.6	58.6	57.2	56.3
Male	73.0	65.6	60.7	59.3	59.2
Female	68.9	61.6	56.6	55.1	53.3
Rural					
Both Sexes	65.5	57.2	55.2	53.9	49.9
Male	67.7	59.2	57.2	55.1	52.7
Female	63.3	55.1	53.1	51.9	47.0
Urban					
Both Sexes	77.7	73.3	70.5	68.6	67.4
Male	79.6	75.3	72.6	70.9	70.4
Female	75.8	71.2	68.4	66.2	64.3
Adult Literacy Rate of Population 15+ yrs (percent)					
Total					
Both Sexes	72.3	64.6	61.4	61.0	60.7
Male	75.2	67.6	64.7	64.2	64.8
Female	69.5	61.6	58.2	57.8	56.6
Rural					
Both Sexes	65.4	57.6	57.4	57.0	54.0
Male	68.4	60.6	60.7	60.2	58.0
Female	62.4	54.6	54.1	53.9	50.0
Urban					
Both Sexes	80.7	74.7	74.6	74.1	72.0
Male	83.3	77.7	77.7	77.3	76.1
Female	77.9	71.8	71.5	70.9	67.6
15. Religious Composition					
Religious Composition (percent)					
Muslim	88.4	88.2	89.2	89.1	88.8
Others	11.6	11.8	10.8	10.9	11.2

16. National Population (Estimated): 1st January 2017 (in million)	
Both Sexes	161.75
Male	81.00
Female	80.75

এসভিআরএস'২০১৬ এর প্রধান সূচকসমূহ

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Executive Summary

Bangladesh Bureau of Statistics (BBS) introduced Sample Vital Registration System (SVRS) for the first time in 1980 to study the changes in the demographic scenarios of Bangladesh during the intercensal periods. Initially, its coverage was limited to 103 primary sampling units (PSU) each consisting of 250 households. Subsequently, the number of sample PSUs was raised to 210 in 1983 and further to 1000 in 2002. To meet the data requirements of the planners and policy makers, the number of PSUs was increased to 1500 in 2013. An Integrated Multi-Purpose Sample (IMPS) Design, introduced in 2012, is being followed since 2013 SVRS, which is also applicable to the 2014, 2015 and 2016 rounds of SVRS. As many as 11 data recording schedules are currently being used to collect data on household and household population characteristics, birth, death, migration, marriage, disability, HIV/AIDS and contraceptive use.

The recording of vital events in the sample area is made possible through a dual recording system proposed by Chandra Sekaran and Deming. Under this system, vital events are collected as and when they occur by a locally recruited female registrar called Local Registrar (System-1). On the other hand, under a second system (System-2) another group of officials from District/Upazila Statistical Office of BBS also collect the data independently from the same area on quarterly basis. Having gathered the filled in questionnaires from the two systems, data are matched in the headquarters by a pre-designed matching criteria and the demographic rates and ratios are estimated using the adjusted number of events. In order to find denominators for the demographic parameters, a detailed household survey is conducted at the beginning of every year covering basic household and population characteristics. The matching of the vital events suggested that about 2.1 percent of the births and 2.1 of the deaths were missed by both the systems in 2016.

Quality of Age Data

The data collected in SVRS have been evaluated to shed light on the quality of data. Particular attention has been given to assess the quality of age data, which are of primary importance in estimating most of the vital rates and ratios. Three popular indices viz. Myer's index, Whipple's index and UN Age-Sex Accuracy Index, also called UN Joint Score have been computed from reported age distributions by sex for this purpose. These indices have pointed out the fact that the quality of age reporting in SVRS has improved over the last three years. The detailed results have been presented in Chapter II.

Socio-Economic Characteristics of the Households

The enumerated population shows a sex ratio of 100.3 resulting from a total 479597 males and 478316 females. The overall sex ratio has shown a moderate decline over the last five years, from 104.9 in 2012 to 100.3 in 2016. The age structure of the population is still conducive to high fertility with 30.8 percent of its total population being under age 15. Dependency ratio recorded a notable fall from 80 in 2002 to 54 in 2016, over 32 percent decline in 15 years. The rates however remained constant during the last 5 years centering in the neighborhood of 55.

The average household size dropped from 4.5 in 2012 to 4.3 in 2016. Bangladeshi women are still dominated by the males. This has been reflected from a high male household headship rate of 87.2 percent in 2016. This rate was 85.5 in 2012 demonstrating a moderate increase over the last 5 years. Adult literacy rate for population aged 15+ has shown an increase of about 19 percent over the last five years: from 60.7 percent in 2012 to 72.3 percent in 2016. The increase in adult literacy rate was more pronounced (22.8%) among the females than among the males (16.0%) over this period.

The survey findings on adult literacy further reveal that the urban residents are over 23 percent more likely than their rural counterpart to be literate. However, the rural population as opposed to urban population experienced more accelerated increase in the adult literacy since 2012.

Fertility

Crude birth rate, the simplest measure of fertility has been estimated at 18.7 per thousand population in 2016 as compared to 18.8 in 2015. The CBR fell from 18.9 in 2012 to 18.7 in 2016, only an 1 percent decrease over the last half a decade. The rural CBR, as expected, is higher than the urban CBR: 20.9 versus 16.1. The general fertility rate worked out to 69 per thousand women with a much higher rate (79) in rural area as compared to 57 in urban area. The total fertility rate (TFR) remains in the neighborhood of 2.1 over the last five years. The measures of fertility obtained in SVRS confirm that fertility in Bangladesh remained nearly static in recent years.

Mortality

The crude death rate as estimated was 5.1 per 1000 population with a rate of 5.7 in the rural area and 4.2 in the urban area. This rate has declined from 5.3 in 2012 to 5.1 in 2016. A similar decline was noted in infant mortality rate, 33 per thousand live births in 2012 to 28 in 2016. Males experience somewhat more decline in the IMR (20.6%) than their female counterparts (12.5%). The decline in IMR is more pronounced (17.6%) in the rural area than in the urban area (9.7%).

In conformity to with this decline in IMR, the neo-natal mortality rate also fell from 21 deaths per 1000 live births in 2012 to 19 deaths per 1000 live births in 2016 without revealing any significant sex differentials. Area of residence also fails to record any difference in the neo-natal mortality rate.

Post-Neo-natal mortality rate nearly remained static over the last 3 years centering in the neighborhood of 9 deaths per 1000 live births. Child mortality has been estimated to be 1.8 deaths per 1000 children in 2016, which is marginally lower than the previous year's rate. The rate however fell from 2.3 in 2012 to 1.8 in 2016, about 22 percent decline in 5 years. Under-five mortality has also demonstrated a similar decline: from 42 deaths per 1000 live births in 2012 to 35 deaths in 2016.

It is worth to note that in recent years, sex differentials in childhood mortality has reduced considerably.

Maternal mortality ratio has shown a consistent fall over the last five years, from 2.03 maternal deaths per 1000 live births in 2012 to 1.78 in 2016.

Life expectancy at birth has increased by 2.2 years over the last 5 years: from 69.4 years in 2012 to 71.6 in 2016. The gain is somewhat pronounced among the females than among the males resulting from higher survival advantage in favor of females.

Age at marriage

Mean age at marriage irrespective of current marital status for males has increased from 24.7 years in 2012 to 26.3 in 2016, an increase of 1.5 years in five years implying an annual increase of 0.32 years. In contrast this mean for females has remained nearly unchanged over this period. The mean age at first marriage for males estimated from the previous marital status data shows a modest increase of about one year during 2013-2016: without any accompanying change in female age at first marriage. The overall impression from the survey findings is that the age at marriage has not changed over the last five years.

Contraceptive usage rate

The overall contraceptive prevalence rate is 62.3 percent. The rate reported in 2012 was about of the same magnitude 62.2% implying constancy in the rate during the last 5 years. Contraceptive prevalence rate has failed to show any change over the last five years. As expected, the urban women as compared to their rural counter parts are more likely (65.9%) to adopt contraceptives than their rural counterparts (59.3%).

Migration

Both in-migration rate and out-migration rate have exhibited an abrupt increase during 2012–2016. For example, while the in-migration rate was 40.2 percent in 2012, it increased to 76.7 percent in 2016. The same feature is observed in the case of out-migration rate: from 41.9 percent in 2012 to 78.5 percent in 2016. The migratory behavior of the population in the SVRS area thus reflects a balancing scenario. Urban in-migration rate was much higher (123 percent) in 2016 compared to the previous year (90 percent).

Disability

That overall disability rate is estimated to be 9 per thousand populations displaying somewhat a higher risk (9.8) among the males than among the females with a risk of 8.3 per thousand populations. The reported data further showed that males are more at risk than their females counterparts to suffer from disability.

Knowledge on HIV/AIDS

It is for the fourth time that SVRS went on to gather data on the knowledge of the females of reproductive age on the modes of transmission of HIV/AIDS. The investigation showed that only about 18.5 percent women knew about all modes of transmission of HIV/AIDS in 2013, which increased to 29.1 percent in 2016. At least one mode of transmission was known to 61.6 percent women in 2013, which increased to 66.9 percent in 2016.

সংক্ষিপ্তসার

প্রজনন

বিবাহের

CHAPTER I

Sample Design and Survey Implementation

1.1 Background

Bangladesh Bureau of Statistics (BBS) introduced a Sample Vital Registration System (SVRS) for the first time in 1980 to determine the population change during the intercensal periods. Initially, its coverage was 103 primary sampling units (PSU) each consisting of 250 households. Subsequently, the number of sample PSUs was raised to 210 in 1983, 500 PSUs in 1995 and further to 1000 in 2002. To meet the data need of the planners and policy makers, the number of PSUs was further increased to 1500 in 2013. An Integrated Multi-Purpose Sample (IMPS) Design, introduced in 2012 has also been followed since 2013 SVRS. As many as 11 data recording schedules are currently being used to collect data on household and population characteristics, births, death, migration, marriage, disability, HIV/AIDS and contraceptive use.

The vital events in the sample area are collected through a dual recording system proposed by Chandrasekaran and Deming. Under this system, vital events are collected as and when they occur by a locally recruited female registrar termed as Local Registrar (System-1). On the other hand, under a second system (System–2), another group of officials from District/Upazila Statistical Office of BBS also collect the data independently from the same area on quarterly basis employing four schedules bearing numbers 3 (Birth), 4 (Death), 5 (Marriage), and 6 (Divorce/Separation) and half yearly basis employing schedules 7 (Out-Migration) and schedules 8 (In-Migration). Having the filled in questionnaires from the two systems, data are matched in the headquarters by a pre-designed matching criteria and the demographic rates and ratios are estimated following Chandrasekaran and Deming procedure. In order to find denominators for the demographic parameters, a detailed household survey is conducted at the beginning of every year covering basic household and population characteristics. The following and the subsequent sections of the present chapter are designed to provide an overview of such issues as coverage, schedules used, data collection procedure, estimation of missing events, data management and some other issues pertinent to the SVRS.

1.2 Coverage of the Sample

The IMPS frame developed from 2011 census served as the sampling frame for the collection of data in the SVRS survey 2016. The master sample PSUs were used as the PSUs in the SVRS. A single–stage stratified cluster sampling methodology was adopted for the SVRS sample EAs. Prior to the selection, all EAs containing less than 40 households were combined with an adjacent EA. Selection of EAs within the strata was performed with probability proportionate to the estimated number of households from a computerized list ordered alphabetically within the 64 districts. Once an EA was selected, all households within the EAs were brought under the purview of data collection for SVRS area. A total of 935 urban EAs and 1077 rural EAs were selected from the entire country in 2016 SVRS.

Each of the seven geographic divisions of the country was regarded as a domain of the study. These domains were divided in three residential categories, viz. rural, urban and City Corporation. Altogether, 21 domains were thus resulted in the design.

In determining the sample size for each domain, standard formula was adopted resulting in 2012 PSUs. The allocations of the PSUs along with the associated number of households by strata in each domain of study are shown in Table 1.1 below:

Table 1.1: Allocation of SVRS PSUs and households by domains of study, 2016

	Rural		Urban		Total	
Divisions	PSU	Household	PSU	Household	PSU	Household
Barisal	87	3944	122	14532	209	23876
Chittagong	182	20199	134	14203	316	34402
Dhaka	292	32267	184	18308	476	50575
Khulna	131	15975	124	13555	255	29530
Rajshahi	156	17995	127	14164	283	32159
Rangpur	138	16240	122	13864	260	30104
Sylhet	91	8964	122	11262	213	20226
Total	1077	120984	935	99888	2012	220872

1.3 Survey Schedule

Sample Vital Registration System (SVRS) is a continuous surveillance system and has been in operation since 1980. Over time its scope and coverage have substantially increased. As a component of strengthening SVRS, two new modules, one on disability and another on divorce/separation have been added to the data collection system in 2002. In 2013 a new schedule on HIV and AIDS has also been added. Now there are altogether 11 independent schedules on different topics. A brief description of these schedules is provided below.

Schedule 1 (Household Listing): It contains the area identification of each PSU along with holding number and household number of all the households of the PSU. There is a line for each household where some information of head of the household and quarterly updates of population is recorded. It also contains map of the PSU and classification codes of variables.

Schedule 2 (Household Card): This schedule has two modules. In module 1, household related data and in module 2 population related data are collected. In all, there are 21 questions. It is generally canvassed in the month of January of each year.

Schedule 3 (Birth):The birth schedule has 9 questions on live births and 4 questions about the mother of the children. The schedule is filled-in by the local registrar as and when a birth occurs in the PSU. Filled-in schedule is returned back to the headquarters in the first week of the following month.

Schedule 4 (Death): The death schedule contains 8 questions related to the particulars of the deceased persons who died during the index calendar year. It is filled-in as and when a death occurs and is sent to the headquarters in the first week of the following month.

Schedule 5 (Marriage): The marriage schedule contains 9 questions about the occurrence of marriage among the population of the PSU during a quarter of the calendar year and is sent to the headquarters on quarterly basis in the first week of every fourth month.

Schedule 6 (Divorce/Separation): This schedule has 9 questions about divorce and separation. It is also sent to the headquarters on quarterly basis.

Schedule 7 (Out-Migration): This schedule is used to collect 7 different types of data about out-migration. It is sent to the headquarters on half -yearly basis in the first week of July and January of each year.

Schedule 8 (In-Migration): This schedule contains 7 questions related to in-migration. This is also sent to the headquarters on six- monthly basis.

Schedule 9 (Contraceptive use): This schedule is used to collect data about contraceptive use and methods of contraceptives. It is canvassed in January of each year.

Schedule 10 (Disability): This schedule has 6 questions and is used to collect data about the disabled persons by age and sex, type of disability and reasons behind becoming disabled. It is also canvassed in January of each year.

Schedule 11(HIV and AIDS): This schedule is used to collect data on the knowledge of the respondents on HIV and AIDS. This schedule includes four questions and the respondents are asked about their name, age, knowledge on reasons of HIV/AIDS disease and its infection. The old schedules and new draft schedule-11(HIV and AIDS) were recast in the technical committee and were revised where necessary. To economize the survey costing all the schedules were printed in black and white with shed for the schedule names only.

1.4 Data Collection

In the SVR system, data on vital events, such as, births, deaths, marriages, divorce/separation, in-migration and out-migration, contraceptive use and disability are collected through two independent systems. Under System-1, a local female registrar is engaged in each PSU to collect in prescribed schedules the occurrences of vital events as and when those occur. Under System-2 the officers (supervisors) collect retrospective data on birth, death, marriage, divorce and separation on quarterly basis, migration data on half yearly basis and contraceptive use, disability in the yearly basis and submit the filled-in schedules to Deputy Directors of District Statistical Office who in turn send those to the headquarters.

The local registrars collect particulars of events on continuous basis and send those to the headquarters in the first week of the following month for birth and deaths, in the first week of the fourth month for marriage and in the first week of the seventh month for migration. Previously, the headquarters staff used to collect particulars of the events occurring during the preceding three months in the same (PSU) area independently on a quarterly basis. Now the responsibility of collecting data through System-2 has been transferred to the Deputy Directors of District Statistical Office who perform it with the assistance of the staff members of the district statistical offices and upazila offices. Staff members of SVRS Project and Demography and Health Wing of BBS at head office match and evaluate the work of these two systems and re-visit, wherever necessary.

Updating of the sample population and household and matching of the vital events collected under the two systems are done according to predetermined criteria such as household number, mother's name, mother's relationship with head of household, baby's name, date of birth, sex of the baby, age of mother, place of birth, name of the deceased, age of the deceased, date of death and sex of the deceased. The events are ultimately classified into matched, partially matched, non-matched and out of scope events. Partially matched and non-matched events are subject to further verification through field visits to ascertain the actual status of the events. These important tasks are done by the trained and experienced senior officers and staff members of SVRS project and Demography and Health Wing through field visit. This helps to catch the events missed by both the systems. The process of

matching greatly reduces the possibility of erroneous inclusion of out of scope events or exclusion of genuine events. When matching procedure has been completed, events are classified as follows:

	Registrar (System–1)		
Supervisor (System–2)	Recorded by Registrar	Missed by Registrar	Total
Recorded by supervisor	M	n_2	N_2
Missed by Supervisor	n_1	z	V_2
Total	N_1	v_1	N

An estimate of z is then

$$\hat{z} = \frac{n_1 \times n_2}{M}$$

An estimate of the total number of events is then arrived at as follows:

$$\hat{N} = M + n_1 + n_2 + \hat{z}$$

The completeness of enumeration for System–1 is $C_1 = \frac{N_1}{N}$ and for the System–2, it is $C_2 = \frac{N_2}{N}$.

The following formula was used to estimate the standard error of the total events:

$$SE = \hat{N}\left(\frac{q_1 \times q_2}{p_1 \times p_2}\right)$$

where

$$p_1 = \frac{M}{N_1} \text{ and } p_2 = \frac{M}{N_2}$$

where p+q=1.

Hence the 95% confidence interval is

$$\hat{N} - 1.96S \le N \le \hat{N} + 1.96S$$

Table below shows the estimates of births and deaths for 2016 round of data collection in the SVRS area based on the procedure outlined above.

Table 1.2: Completeness of registration of births and deaths (in percent), SVRS 2016

	Events recorded by			Events missed by	% Completeness of recording	
Events	Both Registrar and Supervisor	Registrar but missed by Supervisor	Supervisor but missed by Registrar	Both Registrar and Supervisor	Achieved through Registrar	Achieved through Supervisor
Births	73.40	12.55	12.00	2.05	85.94	85.40
Deaths	73.36	13.04	11.55	2.05	86.40	84.91

In the case of both births and deaths, a little over 2 percent of these events were missed by enumerators. The results presented in Table 1.2 further shows that the performance of the local registrars was better relative to the supervisors so far as the completeness of enumeration is concerned.

The total number of events as estimated by the application of C–D technique and the standard error of the estimates along with the 95% confidence interval appear in Table 1.3.

Table 1.3: Estimates of births and deaths as recorded through dual record system, standard error of the estimates and 95 percent confidence interval, SVRS 2016

Events	Estimated number	Standard error of the estimate	95% confidence interval	
			Lower limit	Upper limit
Births	17965	516	16954	18976
Deaths	4839	139	4567	5111

1.5 Consistency Check

Household and population information along with the events such as births, deaths, marriages, in-migration, out-migration, disability and contraceptive usage collected through different schedules by the dual recording systems, had to undergo systematic and rigorous consistency checks. Documents of the two systems were matched and accepted or rejected as per the tolerance limit specified in advance. The officers from the headquarters visit the field to verify the non-matched cases and also to verify the quality of data collected by the local registrars and also the supervisors. Coding and thorough editing were done before the data were entered into the computer. The entered data were further scrutinized through the process of computer editing.

1.6 Quality Control

Supervision and quality control of SVRS data are done in two stages. At stage-1 supervisors and Deputy Directors of District Statistical Office regularly check the quality of work obtained by the local registrars. At stage-2 data obtained under System-1 and System-2 are matched at the headquarters and then the unmatched cases are verified in the field. At this stage, PSU- wise summary of births, deaths, marriages and migration are made for the current year and also for the previous year. Serious discrepancies (if any) are then verified in the field as internal validation. The coverage of events and quality for collected data are compiled and recorded in the report by division for future improvement. For major events such as birth and death completion rates were computed by division to determine the coverage error. Standard error and confidence limits were calculated to test the quality of the indices produced in SVRS.

1.7 Quality of Age Data

The data collected in SVRS have been evaluated to shed light on the quality of data. Particular attention has been given to assess the quality of age data, which are of primary importance in estimating most of the vital rates and ratios. Three popular indices viz. Myer's index, Whipple's index and UN Age-Sex Accuracy Index, also called UN Joint Score have been computed from reported age distributions by sex for this purpose. These indices have pointed out the fact that the quality of age reporting in SVRS has improved over last three years. The detailed results have been provided in Chapter II.

1.8 Estimates of Missed Events in SVRS 2016

After matching the recorded vital events 'birth' and 'death' by LR (System–1), Supervisor (System–2) it was observed that 2.0 percent of the births and another 2.0 percent of the deaths were missed by both the systems in 2016. The corresponding estimates were 2.3 percent in the case of birth and 2.4 percent in the case of death in 2015 showing a slight improvement in the quality of recording of the vital events in the sample area. As in other years, we adjusted the vital events 'birth' and 'death' considering missed events being missed by the systems (System–1 and System –2) and arrived at the estimates of birth and death rates for the year 2016.

1.9 Confidence Interval

The reliability of the indicators has been assessed by computing the standard error of the estimates and hence the confidence intervals of the population parameters (here the indicators). Table 1.4 below shows these standard errors and the 95 percent confidence intervals of some of the selected indicators.

Table 1.4: Confidence intervals for some major indicators, SVRS 2016

Indicators	Rate	Standard Error	95% Confidence interval	
			Lower limit	Upper limit
Crude Birth Rate (CBR)	18.7	0.20	18.31	19.09
Total Fertility Rate (TFR)	2.10	0.07	1.96	2.24
Crude Date Rate CDR	5.10	0.10	4.90	5.30
Infant Mortality Rate (IMR)	28	0.24	27.53	28.47
Neo-natal Mortality Rate	19	0.20	18.61	19.39
Post- neonatal Mortality Rate	9	0.14	8.73	9.27
Child Death Rate (CDR)	1.8	0.06	1.68	1.92
Under 5 Mortality Rate	35	0.27	34.47	35.53
Maternal Mortality Ratio (MMR)	1.78	0.06	1.66	1.90
Life Expectancy (Both sexes)	71.6	0.38	70.86	72.34
Life Expectancy (Male)	70.3	0.53	69.26	71.34
Life Expectancy (Female)	72.9	0.54	71.84	73.96
Contraceptive Prevalence Rate (CPR)	62.3	0.36	61.59	63.01
Crude Disability Rate	9.0	0.14	8.73	9.27

CHAPTER II

Household Characteristics and Population Composition

This chapter presents an overview of the household characteristics in the SVRS area in relation to some housing characteristics, pertaining to household size, household headship, housing structure, and living space, sources of water in the households, lighting facilities, sources of fuels, and toilet facilities. These data are of immense importance in an understanding of the basic human needs and household facilities that determine the quality of human life. The results have been presented for the overall sample and whenever possible, by several such population compositions as residence, administrative division, education and religion. Characteristics of the household populations in terms of the age-sex composition, quality of age reporting and some age-sex based background characteristics that include, among others, dependency ratio, marital status and child-woman ratio have also been discussed. The chapter also presents an overview of religious composition, and literacy rates.

2.1 Household Composition

Household composition is an important determinant in an understanding of the general health status of the population and overall well-being of the families including empowerment of women in family decision making. Information on household composition also serves as a basis for planning population-based policy and programs (BDHS, 2011). Table 2.1 shows the household size in the sample area by current residence and religion. As the table shows, the modal size of the household is 4 comprising a little over 27 percent of all households irrespective of the background characteristics. There are about 20 percent households consisting of 3 members. The overall mean household size is 4.3. This feature prevails across the residential status and religious composition of the population. Nearly 13 percent of the households consist of 1–2 members and another two-thirds 3–5 members. These proportions are by and large of the same magnitude across the religious groups and geographic divisions. The pattern of household size is consistent with the 2011 sample census results, which also documented a modal size at 4. The 2014 Education Household Survey also reported an average household size of 4 members (EHS, 2014, Preliminary results). The household distribution pattern as obtained in 2016 survey, by and large, appears to be similar to the one depicted in 2015 round of SVRS Survey.

The average household size in the rural area marginally exceeds the average of urban area: 4.4 versus 4.3. Religion virtually makes no difference in the average household size, except that for Buddhists who were reported to have the highest (4.6) household size.

Table 2.1: Percent distribution of sample households by household size, residence and religion, SVRS 2016

Household size	Residence		Religion					
	Rural	Urban	Muslim	Hindu	Buddhist	Christian	Others	Total
1	3.3	2.3	2.9	2.4	2.4	3.4	7.9	2.8
2	10.0	10.3	10.3	9.2	7.7	10.7	6.3	10.1
3	18.8	21.3	19.8	21.1	21.6	18.7	17.5	19.9
4	26.6	28.7	27.3	29.4	30.2	28.0	25.4	27.5
5	19.2	17.3	18.3	18.3	18.6	22.2	25.4	18.3
6	10.7	8.8	9.9	9.1	9.2	9.7	9.5	9.8
7	5.2	4.2	4.9	4.1	5.2	3.6	3.2	4.8
8	3.1	2.7	2.9	2.7	2.4	2.0	1.6	2.9
9	1.3	2.9	2.0	2.0	1.7	1.4	1.6	2.0
10+	1.7	1.6	1.6	1.7	1.1	0.4	1.6	1.6
Total	**100.0**	**100.0**	**100.0**	**100.07.7**	**100.0**	**100.0**	**100.0**	**100.0**
Number of HH	120984	99888	195531	23230	1557	499	55	220872
Population	531328	426585	846973	101523	7135	2049	233	957913
Average	4.4	4.3	4.3	4.4	4.6	4.1	4.2	4.3

Table 2.2 presents the distribution of household size by geographic divisions. Among the seven divisions, Rangpur has the highest proportion (30.3%) of households with 4 members, which considers with the overall average household size, while Sylhet the lowest (21.5%). The average household size is the highest (5.1) in Sylhet division followed by Chittagong division (4.8). Khulna and Rajshahi divisions achieved the lowest household size each with 4 members. This feature is in complete agreement with the 2015 survey findings.

Table 2.2: Percent distribution of sample households by size and division, SVRS 2016

Household size	Geographic division							
	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet	Total
1	2.1	1.8	3.0	2.8	3.7	3.9	1.8	2.8
2	9.1	7.4	12.2	11.6	11.9	9.7	6.7	10.1
3	19.6	16.2	20.3	23.7	23.4	20.6	13.9	19.9
4	28.7	24.4	27.0	29.9	30.0	30.3	21.5	27.5
5	19.4	20.6	18.3	16.9	16.2	18.4	19.0	18.3
6	10.7	12.6	9.5	8.0	7.1	8.5	13.9	9.8
7	4.7	7.0	4.4	3.1	3.0	3.9	8.6	4.8
8	2.7	4.0	2.7	1.6	2.0	2.1	6.3	2.9
9	2.0	3.1	1.3	1.5	1.5	1.7	4.0	2.0
10+	1.1	2.7	1.1	0.9	1.2	1.0	4.3	1.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number	23876	34402	50575	29530	32159	30104	20226	220872
Average	4.3	4.8	4.2	4.0	4.0	4.2	5.1	4.3

2.2 Household Headship

According to the National Association of Home Builders, headship rates are the number of people who are counted as heads of households. Headship rates are important because they help home builders and city planners to determine how many households are forming that will need housing.

It is well-documented that women almost everywhere are disadvantaged relative to men in their access to asset, credit, employment, and education. Consequently, it is often suspected that female-headed households are poorer than male-headed households, and are less able to invest in the health and education of their children (Folbre, 1991; UNDP, 1995; United Nations, 1996; World Bank, 2001). Though numerous case studies confirm these claims, the empirical evidence is far from conclusive. Many studies have concluded that the relationship between female headship and poverty is strong in only two out of ten countries in their sample (Ghana and Bangladesh).

Bangladesh society is primarily a male dominant society and as a consequence of this, most families are headed by males. However, this feature is changing over time. The present study obtained data on the headship status of the families. Table 2.3 below presents an overview of the headship status of the sample households by some background characteristics of the population. As we can see from the table under reference, overall, 87.3 percent of the households are headed by males and the remaining 12.7 percent by their counterpart women, there being virtually no deviation in headship structure from the 2015 survey. The data revealed enormous variations in headship type within sex by almost all the background characteristics. Younger males, who are below 15 years of age are seen to take up the household responsibilities as heads relatively more than their older counterparts. Widowed/divorced females as compared to their counterpart males are significantly more in proportion (84.8% versus 15.2%) to run the families as heads. Household headship is more prevalent among the Hindu males (90.7%) than among the males of other religions. Divisional variations in headship are minimal. Males in Rangpur division are more likely (90.6%) to take the burden of household headship among the seven divisions of the country, while males of Chittagong division are lagging behind (80.1%) in this respect. Education appears to be unrelated to the headship status without any sex discrimination.

Table 2.3: Percent distribution of household headship by sex, administrative division and religion, SVRS 2016

Background Characteristics	Headship type		Total
	Male headed household	Female headed household	
Current age:			
Below 15	82.1	17.9	100.0
15–60	87.7	12.3	100.0
60+	85.1	14.9	100.0
Marital status:			
Single	86.8	13.2	100.0
Married	93.2	06.8	100.0
Widowed/divorced	15.2	84.8	100.0
Residence:			
Urban	87.7	13.1	100.0
Rural	86.9	12.3	100.0
Division:			**100.0**
Barisal	89.3	10.7	100.0
Chittagong	80.1	19.9	100.0
Dhaka	87.0	13.0	100.0
Khulna	90.0	10.0	100.0
Rajshahi	89.9	10.1	100.0
Rangpur	90.6	09.4	100.0
Sylhet	84.6	15.4	100.0

Background Characteristics	Headship type		Total
	Male headed household	Female headed household	
Religion:			**100.0**
Muslim	86.8	13.2	100.0
Hindu	90.7	09.3	100.0
Others	89.6	10.4	100.0
Education:			
None	83.1	16.9	100.0
Primary incomplete	88.7	11.3	100.0
Primary complete	88.5	11.5	100.0
Secondary incomplete	86.4	13.6	100.0
Secondary complete or higher	92.2	07.8	100.0
Total	**87.2**	**12.8**	**100.0**
N	192589	28283	220872

The results on headship status are highly consistent with the recently conducted Household Education Survey of 2014 conducted by BBS. The survey documented that 88.8 percent of the households in the country are headed by males, with 89.1 percent in the rural area and 87.5 percent in the urban area.

2.3 Household Facilities

This section presents an overview of a few physical characteristics of the households in the SVRS area. These characteristics reflect the general well-being and socio-economic status of the members of the households. The information provided in this section includes such facilities as sources of drinking water, sources of fuels, and sources of electricity, toilet facility, economic structure and type of living structure. The findings are presented in Table 2.4.

Table 2.4: Percentage distribution of household characteristics by residence and geographic division, SVRS 2016

Household Characteristics	Residence			Division						
	Total	Rural	Urban	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
Sources of drinking water:										
Tap	14.4	3.9	27.1	7.0	17.5	26.3	6.4	12.1	3.0	20.5
Tube-well	83.6	93.3	72.0	90.7	80.3	73.4	87.7	87.5	96.7	75.0
Well	0.5	0.7	0.3	0.1	1.4	0.1	0.1	0.2	0.3	2.0
Pond/ditch	0.7	1.3	0.0	1.2	0.0	0.0	3.2	0.0	0.0	1.7
River/canal	0.2	0.2	0.1	0.1	0.5	0.0	0.1	0.0	0.0	0.7
Rain water	0.5	0.6	0.5	0.9	0.3	0.1	2.6	0.1	0.0	0.1
Source of light:										
Electricity	81.2	71.4	93.0	76.3	81.9	84.9	84.9	82.7	69.9	85.5
Kerosene	13.0	18.9	5.8	12.7	11.7	9.5	10.5	13.1	25.5	9.2
Solar	5.6	9.5	1.0	10.8	6.3	5.4	4.2	4.1	4.5	5.1
Others	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.1	0.1	0.3

Household Characteristics	Residence			Division						
	Total	Rural	Urban	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
Source of fuel:										
Straw/Leaf	31.1	45.4	12.2	23.1	28.3	28.1	27.1	48.0	39.5	11.5
Husk	3.8	3.8	3.7	8.9	3.8	2.6	4.5	2.7	3.1	2.0
Jute stick/wood/bamboo	42.5	44.8	39.7	52.1	41.2	32.3	54.2	32.7	46.8	51.3
Kerosene	0.4	0.3	0.5	0.3	0.4	0.3	0.4	0.5	0.2	0.4
Electricity	1.0	0.2	2.0	0.5	0.9	0.2	1.0	1.7	2.7	0.3
Gas	20.5	4.8	41.0	14.4	24.8	36.2	10.8	13.0	7.6	33.8
Others	0.8	0.8	0.8	0.8	0.7	0.3	1.9	1.4	0.1	0.7
Toilet facility:										
Sanitary with water seal	42.7	31.0	56.9	44.9	32.6	42.6	53.2	44.7	41.1	41.2
Sanitary without water seal	32.3	34.9	29.2	39.2	42.9	35.5	28.0	24.3	22.2	32.7
Non-sanitary/raw	22.3	30.2	12.8	15.0	22.2	20.3	18.0	27.3	30.0	23.1
Open	2.7	4.0	1.1	0.8	2.3	1.6	0.9	3.8	6.7	3.1
Level of economic solvency:										
Permanent insolvency	9.7	11.5	7.5	7.6	9.1	7.3	9.3	10.2	14.3	11.6
Temporary insolvency	17.2	19.6	14.2	15.5	18.8	13.8	15.6	16.9	23.4	18.4
Balanced income expenditure	34.5	34.3	34.8	42.6	36.2	35.0	32.3	29.8	33.6	32.9
Economic Solvency	38.7	34.7	43.6	34.3	35.9	43.9	42.8	43.1	28.7	37.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

2.3.1 Sources of Drinking Water

Access to safe water is a pre-condition for ensuring better hygiene and health to the household members in any community as it is positively associated with a number of diseases that include, among others, skin disease, ARI and other waterborne diseases. Our study results show that in rural area, use of tube-well as a source of drinking water is almost universal (93.3%) with an overall average use of 83.6 percent. In contrast, 72.6 percent of the urban households have access to this source. Our investigation reveals that overall tube well water use has declined by about 2.0 percent over the last one year.

With an overall use of 14.4 percent, the tap water users account for a little more than 27 percent in the urban area and only 3.9 percent in the rural area. The corresponding use rates in 2015 were 26.2 percent and 3.7 percent. At the divisional level, tube-well use varies from 73.4 percent in Dhaka division to 96.7 percent in Rangpur division. The corresponding use rates in these two divisions were 73.4 percent and 97.2 percent respectively in 2015. Other sources of drinking water are well, pond or ditch, river, canal and rain water which together comprise 1.9 percent of the total use. The Education Household Survey, 2014 reports an overall use of 83 percent with 91.5 percent in rural area and 56.3 percent in urban area. The level of use of tap water in EHS, 2014 agrees quite well with the SVRS 2016 findings.

2.3.2 Sources of Fuel

Straw/leaf/jute sticks or husks are the most frequently used fuels in Bangladesh accounting for about 77 percent of the total fuel use in 2016 as against 78 percent in 2015. Use of these materials was reported by 55.6 percent residents of the urban area and 94 percent of the rural area. Division-wise distribution shows that Dhaka division has the least (63%) use of these fuels, while the highest use (89%) was reported in Rangpur division. The overall use of gas is only 20.5 percent in 2016 showing an increase of 8 percent over the last one year. In urban area, a little more 41 percent of the households have access to gas as against 4.8 percent in rural households. Among the divisions, Dhaka has the highest use rate (36.2%) of gas and Rangpur the lowest (7.6%). The use pattern of gas in 2016 is consistent with the one in 2015 although level of use has shown some minor changes.

2.3.3 Sources of Light

The study documented an overall electricity use by about 81 percent of the households in 2016 as against 78 percent in 2015. The remaining 19 percent of the households in 2016 are solely dependent on the kerosene and other indigenous sources. As expected, urban people are 30 percent more likely to use electricity than their rural counterparts. Among the seven administrative divisions, Sylhet dominates in the use of electricity (85.5%), while Rangpur lags behind in this respect with a use rate of 69.9 percent

2.3.4 Toilet Facility

Three-fourths of the households have sanitary toilet facilities. Rural people are more vulnerable to live without proper sanitary facilities. A little more than 66 percent of the households in rural area and more than 86 percent in urban area have access to sanitary toilet facilities with or without water seal. The national average, as reported in Education Household Survey of 2104 is 47.7 percent with a wide gap in the use of sanitary facilities by residence: 72 percent in urban area and 40.4 in the rural area. About 84 percent of the households in Barisal division enjoy this facility followed by Khulna division (81.2%). Rangpur division is the worst sufferer with only about 63 percent of the houses having this facility. Use of open toilet was also reported: 4 percent in the rural area and 1.1 percent in urban area.

2.3.5 Economic Solvency

About 39 percent of the households were reported to be economically solvent with 34.7 percent in the rural area and 43.6 percent in the urban area. More than one-third (34.5%) of the households have been able to maintain a balanced livelihood. Permanent insolvency is more prevalent (11.5%) among the rural households than among the urban households (7.5%). Rangpur suffers most (14.3%) from permanent insolvency, while Dhaka the least (7.3%).

2.3.6 Structure of Living House and Living Space

The structure of house or housing in Bangladesh was predominantly corrugated iron sheet (CIS) or wood made. Our survey findings suggest that, overall 45 percent of the households are made up of either CIS or wood (see Table 2.5). Urban households are about half as likely (29.3%) as the rural households (57.3%) to make use of CIS or wood there being no structural changes in the use of these materials in the recent past. Nearly 19 percent of the households have pucca building. A little more than one third of the households in the urban area and only 7 percent households in the rural have pucca buildings. Semi-pucca living structures are also found in about a quarter of the households, of which about 18.4 percent were found in the rural area and 31.1 percent in urban area. Use of CIS/wood structures are pronounced in Barisal division with 63 percent living structures being made up of CIS or wood, followed by Dhaka (55.6%), Chittagong (51.4%) and Rangpur (52%). Use of

tin/wood in the living structures is the least (28.1%) in Sylhet division. Semi-pucca structures are more common in Khulna (33.1%) and Rajshahi division (29.1%). Mud, bamboo and other ingredients are also used which account for about 13 percent of the households.

Average floor space per household was measured to be 401 square feet with 372 square feet in rural area and 417 square feet in urban area (Table not shown). Keeping consistency with the floor space, the overall per capita bed room space was 93sqauare feet, 85 square feet in rural area and 101 square feet in urban area

Table 2.5: Distribution of households by type of structure of living house and by locality, SVRS 2016

Structure of living house	Residence			Division						
	Total	Rural	Urban	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
Building (Pucca)	18.7	7.0	33.2	19.8	18.2	19.8	24.2	18.8	8.5	22.6
Semi-Pucca	24.1	18.4	31.1	15.0	16.4	19.4	33.1	29.1	26.1	34.8
CIS/Wooden	44.8	57.3	29.3	63.0	51.4	55.6	26.1	28.1	52.0	28.1
Mud	8.7	12.7	3.7	1.2	7.9	4.0	10.8	19.6	7.4	12.1
Bamboo	3.3	4.0	2.5	0.8	5.5	0.9	5.4	3.5	5.5	2.2
Others	0.5	0.6	0.3	0.2	0.6	0.3	0.5	0.8	0.4	0.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

2.4 Age-sex Composition of the Household Population

The age composition of a population is a very important factor in determining its socio-economic well-being of a country. Table 2.6 below shows the household population of the SVRS area by age and sex in percentages as enumerated in 2016. The SVRS enumerated 479597 males and 478316 females in SVRS, 2016 resulting in a sex ratio 100.3 males per 100 females, a ratio consistent with the one obtained in 2015. This ratio is 100.2 as obtained in 2011 census. The 2011 BDHS reported even a more smaller ratio (93.1%) than both of the above mentioned sources.

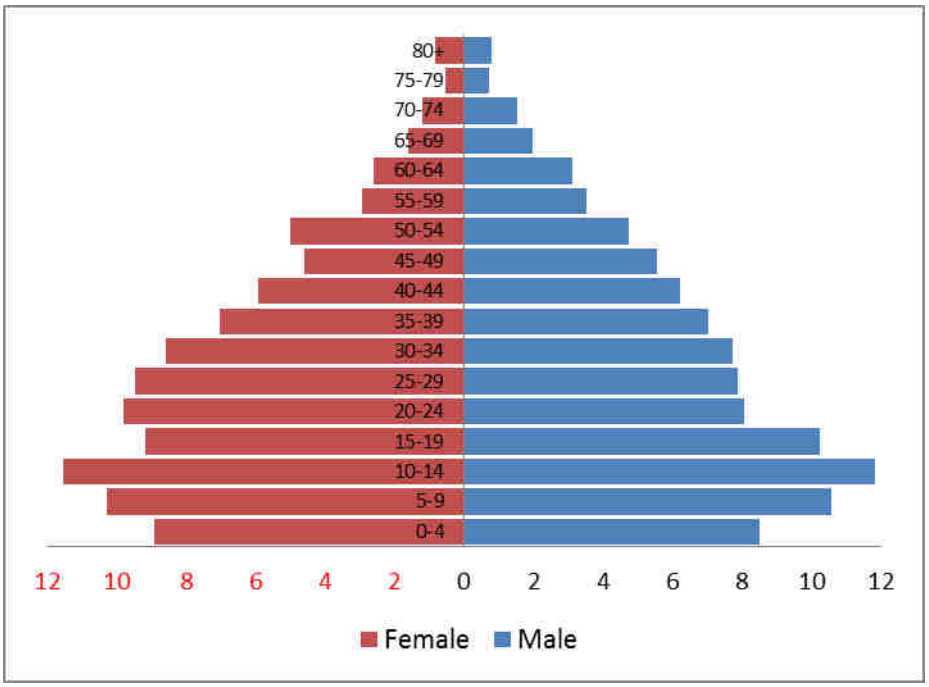
The age distribution presented in Table 2.6 shows that less than one third of the population (30.8%) is under 15 years of age, which exactly agrees with the 2015 age structure. People aged 65 years and over constitute 4.6 percent of the total population. The corresponding proportions are 35.3 percent and 5.5 percent in the 2011 BDHS and 35.5 percent and 5.1 percent in 2011 census.

The age-sex structure of the population by 5 year age groups is displayed by the population pyramid in Figure 2.1.

Table 2.6: Percent distribution of sample population by age and sex, SVRS 2016

Age group	Male	Female	Both sexes
0-4	8.5	8.9	8.7
5-9	10.6	10.3	10.4
10-14	11.8	11.5	11.7
15-19	10.2	9.2	9.7
20-24	8.1	9.8	8.9
25-29	7.9	9.5	8.7
30-34	7.7	8.6	8.1
35-39	7.0	7.0	7.0
40-44	6.2	5.9	6.1
45-49	5.6	4.6	5.1
50-54	4.7	5.0	4.9
55-59	3.5	3.0	3.2
60-64	3.1	2.6	2.9
65+	5.0	4.2	4.6
<15	30.9	30.7	30.8
15–64	64.1	65.1	64.6
65+	5.0	4.2	4.6
Total	**100.0**	**100.0**	**100.0**
N	479597	478316	957913

Figure 2.1: Age –sex pyramid of SVRS population, SVRS 2016



The pyramid shown in Figure 2.1 is a typical one for a developing country (that has recently started to stabilize) with its base wider at the bottom than at the top and goes narrower towards the older age groups.

2.4.1 Quality of Age-Sex Reporting

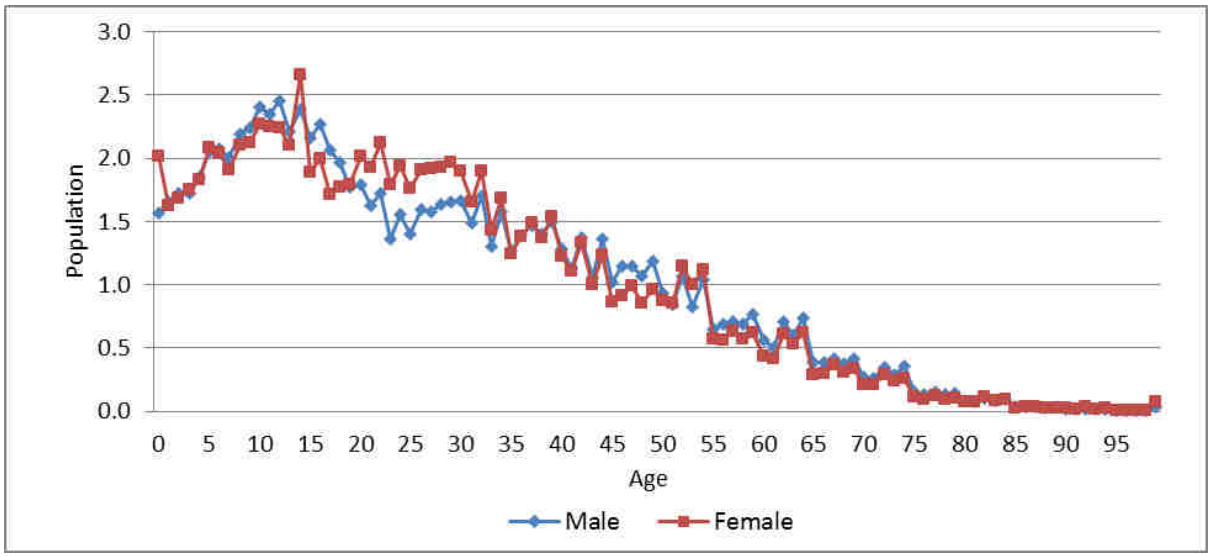
The data collected in SVRS have been evaluated to shed light on the quality of age reporting. Particular attention has been given to assess the quality of age data, which are of primary importance in estimating most of the vital rates and ratios. Three popular indices viz. Myer's index, Whipple's index and UN Age-Sex Accuracy Index, also called UN Joint Score have been computed from reported age distributions by sex for this purpose. Apart from the use of those indices in assessing the quality of age reporting, graphs may also be used to do the same.

Index	2014			2015			2016		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Whipple	91.0	88.4		92.1	90.5		92.7	91.0	
Myers	8.4	10.0		5.6	6.4		3.2	3.7	
UN Joint Score			62.3			56.4			56.3

Figure 2.2 displays the single year age distribution by sex. The figure shows a common feature of conspicuous age heaping with digits ending in 0 and 5 with subsidiary heaping at ages 2 and 8.

The Myers' index and Whipple's index are based on single year age distribution by sex. The five year age distribution was further assessed by what is known as age-sex accuracy index developed by United Nations. This index is computed from the age ratios and sex ratios

Figure 2.2: Graph showing the age-sex distribution of SVRS population in single years, SVRS 2016



Whipple's index is a summary measure of the degree of heaping on the ages ending in digits 0 and 5. It is calculated by summing the population recorded with ages 0 and 5 between an arbitrary age-range 23 to 62 years and dividing the result by one-fifth of the total population between 23 and 62 expressed as percentage. Thus if there is no heaping whatever on the 0's and 5's, Whipple's index would be approximately 100; if the heaping were such that the entire population was reported at these ages, the index would be 500. The Whipple's indices calculated from the age distribution for 2016 SVRS are 92.7 for males and 91.0 for females, showing virtually no sex differentials in age heaping. The 2015 SVRS data recorded these indices to be 92.1 for males and 90.5 for females. The corresponding indices for 2011 census were 256.7 for males and 267.6 for females. Based on the UN evaluation

criteria, the age reporting in the 2011 census was very rough and thus unusable without adjustment. The SVRS age reporting based on the same criteria falls yet under the 'rough' category.

Myers' index reflects the preferences or dislikes for each of ten digits, from 0 to 9. To determine such preferences, the first step in Myers' method consists in the computation of a 'blended' population in which ordinarily almost equal sums are to be expected for each digit. This being the case, the 'blended' totals for each of the ten digits should be very nearly 10 percent of the grand total. The deviations of each sum from 10 percent of the grand total are added together disregarding the sign, and their sum is the Myers' index. The index was calculated for the SVRS 2016 single year data. The indices were 3.2 for males and 3.7 for females, implying somewhat better age reporting of age in 2016 compared to 2015. The indices calculated from the 2011 sample census data were 26.7 for males and 28.0 for females. Based on these indices, SVRS age reporting appears to be better than the census age reporting. The overall impression is that age reporting in SVRS area is demonstrating a trend towards better reporting since 2014.

The use of UN formula led to a value of 56.4 for the index for 2016. This index was of the same magnitude for the 2015 age distribution but a higher score of 62.5 for 2014 age distribution. This reflects that the quality of age reporting has improved over the last three years.

The age composition of the population by urban-rural residence is shown in Table 2.7. While 32.0 percent of the population in rural area remains under 15 years, this in the urban area is 29.6 percent, a difference of 2.4 percentage points. The old age population at age 65+ also shows a difference of 1.2 percentage-points: 5.1 percent in rural area and 3.9 percent in urban area. Three possible factors may be in interplay to result in these variations: fertility, mortality and migration.

The age-sex distributions of the population by administrative divisions are shown in Table 2.8.

Table 2.7: Percent distribution of sample population by age, sex and residence, SVRS 2016

Age group	Rural			Urban		
	Male	Female	Both sexes	Male	Female	Both sexes
0-4	9.1	9.1	9.1	7.7	8.7	8.2
5-9	10.9	10.6	10.7	10.2	9.9	10.0
10-14	12.4	11.9	12.2	11.1	11.0	11.1
15-19	10.6	8.9	9.8	9.8	9.5	9.7
20-24	8.1	9.4	8.7	8.0	10.3	9.2
25-29	7.5	9.0	8.3	8.3	10.1	9.2
30-34	7.3	8.3	7.8	8.3	8.9	8.6
35-39	6.5	6.7	6.6	7.7	7.4	7.6
40-44	5.8	5.9	5.8	6.7	5.9	6.3
45-49	5.3	4.4	4.8	6.0	4.8	5.4
50-54	4.5	5.2	4.8	5.0	4.8	4.9
55-59	3.4	3.1	3.3	3.6	2.8	3.2
60-64	3.1	2.8	3.0	3.1	2.4	2.7
65+	5.5	4.7	5.1	4.3	3.6	3.9
<15	32.4	31.6	32.0	29.0	29.6	29.3
15–64	62.1	63.7	62.9	66.6	66.8	66.7
65+	5.5	4.7	5.1	4.3	3.6	3.9
Total	**100.0**	**100.0**	**100.0**	**100.**	**100.0**	**100.0**
N	266490	264838	531328	213107	213478	426585

As shown by the data in Table 2.8, Chittagong followed by Sylhet divisions appear to be the most conducive to high fertility as they have the most young age structures with 34.3 and 33.9 of their populations falling under 15 years. The implication of these high proportions of population below 15 years is that Sylhet and Chittagong divisions will have high dependency burden with more inactive population. It is also an indication of relatively high fertility in these two divisions compared to other regions.

Table 2.8: Percent distribution of sample population by age, sex and division, SVRS 2016

Age group	Geographic division						
	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
0-4	8.5	9.8	9.0	7.9	7.9	8.4	9.1
5-9	10.1	11.6	10.7	9.3	9.2	10.0	11.7
10-14	11.7	12.9	11.6	10.4	10.4	11.4	13.0
15-19	9.7	10.5	9.4	9.1	9.0	9.7	10.6
20-24	8.7	9.5	8.8	8.5	8.8	8.6	9.7
25-29	8.2	8.5	9.0	8.6	9.0	8.6	8.5
30-34	8.0	7.5	8.2	8.6	8.6	8.5	7.6
35-39	7.1	6.2	7.1	7.6	7.8	7.4	6.2
40-44	6.3	5.3	5.9	6.8	6.8	6.1	5.4
45-49	5.1	4.3	5.0	5.9	5.7	5.4	4.2
50-54	5.0	4.2	4.8	5.4	5.3	5.0	4.6
55-59	3.3	2.8	3.2	3.7	3.6	3.6	2.6
60-64	3.2	2.6	2.8	3.1	3.0	2.9	2.8
65+	5.2	4.2	4.6	5.1	4.7	4.5	4.0
<15	30.2	34.3	31.3	27.5	27.5	29.8	33.9
15–64	64.6	61.5	64.1	67.4.	67.7	65.7	62.1
65.+	5.2	4.2	4.6	5.1	4.7	4.5	4.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
N	103556	165147	212279	119433	128222	125434	103842

2.5 A Few More Population Compositions and Household Characteristics

Table 2.9 summarizes a number of background characteristics of the population that include, among others, the sex composition, sex ratio, dependency ratio, religion, literacy rate, marital status according to the present residence and administrative divisions.

2.5.1 Sex Composition

Sex composition of a population refers to the proportional share of the males and females in the total population. It also shows the excess or deficit of one sex over the other. Table 2.9 shows the sex composition of the population in the SVRS area. Overall, the males outnumbered the females by 0.2 percentage points or 0.4 percent resulting from a male-female ratio of 50.1 to 49.9. This feature is prevalent across regions of residence and the geographic divisions without any exception. Surprisingly, the ratio of males to females exactly agrees with the 2011 sample census results.

2.5.2 Dependency Ratio

The most widely used summary measure of age-sex composition is the dependency ratio. The ratio measures the fraction of dependents in a population. In other words, the dependency ratio measures the number of inactive people whom each economically active person has to support. Dependents refer to people who are not in the workforce, such as those who are either too young or too old to work. This measure is defined in this report as the ratio of population aged 0–14 years and 65 years

and over to the population aged 15–64 years old multiplied by 100, although other variants of this definition are used to compute dependency ratio. The overall dependency ratio is 54 percent, meaning that 54 inactive persons are dependent on 100 economically active persons. More people (58%) in the rural area than in urban area (49%) are dependent on the work force. The dependency ratio varies from as low as 47 percent in Rajshahi division to as high as 62 percent in Chittagong division. The results are summarized in Table 2.9. The dependency ratio as obtained in 2011 sample census was 68.4 percent, while the Education Household Survey of 2014 reported this ratio to be 61.1 percent.

2.5.3 Child-Woman Ratio

The child-woman ratio (CWR) is the number of children of both sexes under five-years of age per 1000 women aged 15-49 at a given moment of time. Because the computation of this ratio only requires census-type data on the population by age and sex, it provides an index of fertility when reliable birth statistics are not available. These ratios by residence and division are presented in Table 2.9. The overall CWR is 320 per 1000 women: 347 in the rural area and 289 in the urban area. The ratio was the highest in Chittagong division (362) and the lowest (281) in Khulna division. These rates were of almost equal magnitude in 2013.The corresponding 2011 census estimate for the nation as a whole is 392 per 1000 women. The overall ratio was 325 in 2015 SVRS showing on 1.5 percent decrease in CWR in a short period of one year.

2.5.4 Religious Composition

As reported in 2016 round of SVRS survey, 88.4 percent of the population in Bangladesh are Muslims and the remaining 11.6 percent are believers of other religions, there being a marginal rural-urban variation in religious composition. Muslims dominate Rajshahi division with about 93 percent of the population of this division being of this religion. Compared to other divisions, the proportion of Muslim population is the lowest in Sylhet division (80.7%).

2.5.5 Literacy Rate

The SVRS collects information on the literacy of both men and women on regular basis. Literacy is an important element in shaping the lifestyle of individuals and the societies at large. Women's education is of particular importance since it is closely associated with their status in the family. Women's education empowers women in the decision-making process, and educates them with better knowledge of health and hygiene for a healthy family.

In the SVRS, a person has been defined as literate if he/she is able to write a simple letter. The crude literacy rates obtained thus are presented in Table 2.9 for the population under study. The overall crude rate comes out to 61.9 percent. Proportionately more males (63.8%) than females (59.9%) are literate. The literacy rate is significantly higher (68.2%) among the urban population than among the rural population (56.8%). Barisal division has the highest rate of literacy (70.2%), followed by Khulna division with a literacy rate of 64.7%. The lowest literacy rate (59.2%) prevails among the people of Dhaka division. At the divisional levels male-female differentials in literacy rate are of little significance. The results on literacy rates have been presented in Table 2.9.

The data on adult literacy were utilized to compute two variants of literacy rate: one for those who are age 7 and over and the other for those who are 15 years and over. In both the cases, ability to write a letter was regarded as the qualification of a person to be reckoned as literate. In computing either of these rates, the total populations in the denominator were populations aged 7 and over or 15 and over. The literacy rate for population aged 7 years and over is 71 percent. The corresponding rate for those who are 15 years and over is 72.3 percent. The reported rates as obtained in the Education Household Survey for 2014 are respectively 59.1 percent and 58.6 percent.

As the results in Table 2.9 shows, in both the cases (7+ or 15+), the urban literacy rates are substantially higher than the rural rates irrespective of sex. In all cases, literacy rates derived for those who are aged 7 years or more are lower than those calculated for those who are 15 years or more. The results are presented in Table 2.9.

Table 2.9: A few more characteristics of the Household population, SVRS 2016

Background Characteristics	Residence			Geographic Division					
	Total	Rural	Urban	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
Sex composition:										
Male	50.1	50.2	50.0	50.2	49.4	50.2	50.2	50.5	50.6	49.5
Female	49.9	49.8	50.0	49.8	50.6	49.8	49.8	49.5	49.4	50.5
Dependency ratio	54	58	49	54	62	55	48	47	52	60
Child woman ratio	320	347	289	315	362	329	281	284	311	342
Religious composition:										
Muslim	88.4	89.3	87.3	88.0	86.9	91.9	87.3	93.0	87.6	80.7
Hindu & others	11.6	10.7	12.7	12.0	13.1	8.1	12.7	7.0	12.4	19.3
Crude literacy rate:										
Both literate	61.9	56.8	68.2	71.2	61.2	59.2	64.7	60.9	59.7	59.7
Male literate	63.8	58.7	70.2	72.5	62.6	60.9	66.8	63.0	62.7	61.8
Female literate	59.9	54.9	66.1	69.8	59.8	57.5	62.7	58.7	56.6	57.6
Literacy rate 7+:										
Both sexes	71.0	65.5	77.7	81.3	71.4	68.2	73.2	68.8	68.1	69.1
Male literate	73.0	67.7	79.6	82.6	73.2	70.1	75.5	70.9	71.1	71.3
Female literate	68.9	63.3	75.8	80.0	69.6	66.2	71.0	66.7	64.9	67.0
Adult Literacy 15+:										
Both sexes literate	72.3	65.4	80.7	83.5	72.9	69.3	74.6	69.7	69.0	71.0
Male literate	75.2	68.4	83.3	85.4	75.7	72.1	77.5	72.5	72.8	74.2
Female literate	69.5	62.4	77.9	81.7	70.3	66.5	71.6	66.9	65.0	67.9

2.6 Sex Ratio

Human sex ratio varies not only from one country to another, but also from one population sub-group to another within the same country. Religion, region of residence, age, race, marital status, ethnicity, nativity are some of the population characteristics that might show considerable variations in sex ratios. Although religious variation in the sex ratio is minimal in most cultures, urban-rural variation is sometimes considerable. The 2016 SVRS recorded an overall sex ratio of 100.3 males per 100 females. The rural area was reported to have a sex of 100.6 as against 99.8 in the urban area. Among the 7 administrative divisions, Rangpur showed the highest sex ratio (102.3%), while Sylhet division the lowest (98.0%). The 2011 census of Bangladesh recorded a sex ratio of 97.9% in the rural area while in the urban area it was as high as 109.3. The sex ratios by urban-rural residence and geographic divisions are shown in Table 2.10.

Table 2.10: Sex ratios (percent) by residence and divisions, SVRS 2016

Background Characteristics	Sex ratios
Residence:	
Rural	100.6
Urban	99.8
Division:	
Barisal	100.7
Chittagong	97.5
Dhaka	100.8
Khulna	100.9
Rajshahi	101.9
Rangpur	102.3
Sylhet	98.0
Total	**100.3**

2.7 Marital Status Composition

Marital status is a demographic characteristics involving biological social, economical, legal and in many cases religious aspects. Marital status and its differentials play vital role in composition and structure of a population. As the age at first marriage and the dissolution of marriage due to widowhood, divorce and separation affect the reproductive life of women, the marital status composition by age, sex and its differentials is vital for fertility analysis. It has direct and indirect impact on the other demographic and socio-economic characteristics, namely migration, headship, family formation etc. It also has impact on social and economic characteristics such as school attendance and labor force participation in the late adolescent and young adult age groups.

The marital status composition of SVRS area by residence and geographic divisions are presented in Table 2.11 for each sex separately. A close view of the results on marital status presented in the table under reference shows that a little over 59 percent of the males and over 63 percent of the females are currently married. This feature of marital status prevails in both urban and rural areas. Single population accounts for about 39.0 in the case of males and closed to 27 percent of females. In Sylhet division, proportions of males and females remaining single are higher (48.3% versus 35.5%) compared to other divisions. The incidence of singleness is the least (34.5% for males and 22.5% for

females) in Rajshahi division. The incidence of widowhood is more prevalent (8.7%) among the women than among the men (1.0%) for the overall sample.

Table 2.11: Marital status by residence and geographic division, SVRS 2016

Background Characteristics	Residence			Division						
	Total	Rural	Urban	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
Male:										
Single	39.4	39.5	39.3	38.8	45.6	38.1	35.3	34.5	36.7	48.3
Currently married	59.2	59.0	59.4	59.7	53.4	60.5	63.3	63.9	61.8	50.4
Widowed	1.0	1.0	0.9	1.2	0.9	0.9	1.0	1.0	1.0	1.0
Divorced/separated	0.4	0.4	0.4	0.4	0.2	0.4	0.4	0.6	0.4	0.2
Female:										
Single	26.9	25.8	28.6	26.5	30.6	25.7	23.3	22.5	25.4	35.5
Currently married	63.1	65.0	61.7	63.9	60.9	64.7	66.4	66.8	63.5	53.7
Widowed	8.7	9.1	8.3	8.4	7.6	8.3	8.8	8.9	9.8	9.7
Divorced/separated	1.3	0.1	1.4	1.1	0.9	1.3	1.6	1.8	1.3	1.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

The marital status distribution is also shown by age and sex in Table 2.12 below. A very common feature of marital status distribution is apparent from the table: the drop in the proportions single is steeper among females than among males as age advances. For example, while 100 percent of the males are single in age group 10–14, this drops to 97.2 percent when they are aged 15–19, and further to 74 percent when they reach 20–24. The corresponding proportions among the females are 97.1, 76.1 and 24.1 percent. The data also show that the child marriage is still prevalent among both males and females in Bangladesh.

Table 2.12: Marital status by age and sex, SVRS 2016

Age group	Male					Female				
	Single	Married	Widowed	Divorced/ separated	Total	Single	Married	Widowed	Divorced/ separated	Total
10-14	100.0	0.0	0.0	0.0	100.0	97.1	2.9	0.0	0.0	100.0
15-19	97.2	2.5	0.1	0.0	100.0	76.1	23.1	0.3	0.6	100.0
20-24	74.0	25.2	0.2	0.4	100.0	24.1	74.1	0.4	1.3	100.0
25-29	35.3	63.6	0.3	0.6	100.0	7.2	90.6	0.7	1.5	100.0
30-34	10.6	88.3	0.3	0.6	100.0	2.4	94.7	1.4	1.4	100.0
35-39	3.2	95.8	0.3	0.5	100.0	1.2	94.1	3.0	1.7	100.0
40-44	1.7	97.1	0.5	0.4	100.0	1.0	90.7	6.4	1.9	100.0
45-49	1.1	97.7	0.7	0.3	100.0	0.9	86.0	10.9	2.2	100.0
50-54	1.0	97.3	1.1	0.4	100.0	0.8	78.3	19.2	1.8	100.0
55-59	0.7	97.3	1.5	0.3	100.0	0.7	69.8	27.7	1.8	100.0
60-64	0.7	95.7	3.0	0.4	100.0	0.8	52.1	45.2	1.9	100.0
65+	0.9	90.4	8.0	0.4	100.0	1.0	31.9	65.3	1.8	100.0
Total	**39.4**	**59.2**	**1.0**	**0.4**	**100.0**	**26.9**	**63.1**	**8.7**	**1.3**	**100.0**

The marital status composition of the sample population by age sex and urban-rural residence are shown in Table 2.13 and Table 2.14. The age patterns of marital status presented in the tables under reference are in close agreement with the overall pattern presented in two previous tables (Table 2.10 and Table 2.11)

Table 2.13: Marital status by age and residence, SVRS 2016: Males

Age group	Rural					Urban				
	Single	Married	Widowed	Divorced/ separated	Total	Single	Married	Widowed	Divorced/ separated	Total
10-14	100.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0
15-19	96.6	3.1	0.1	0.0	100.0	97.9	1.9	0.1	0.0	100.0
20-24	70.2	28.9	0.2	0.5	100.0	78.8	20.5	0.2	0.3	100.0
25-29	30.7	68.1	0.3	0.7	100.0	40.5	58.5	0.3	0.6	100.0
30-34	8.1	90.8	0.3	0.7	100.0	13.5	85.5	0.3	0.6	100.0
35-39	2.4	96.6	0.3	0.5	100.0	4.2	95.0	0.3	0.4	100.0
40-44	1.3	97.5	0.6	0.4	100.0	2.2	96.8	0.5	0.4	100.0
45-49	0.9	98.1	0.6	0.3	100.0	1.3	97.3	0.8	0.4	100.0
50-54	0.9	97.3	1.2	0.4	100.0	1.1	97.3	1.0	0.4	100.0
55-59	0.6	97.5	1.5	0.2	100.0	0.7	97.2	1.5	0.1	100.0
60-64	0.6	95.8	3.0	0.4	100.0	0.8	95.7	3.0	0.3	100.0
65+	0.9	90.7	7.8	0.5	100.0	1.0	90.0	8.3	0.4	100.0
Total	**39.5**	**59.0**	**1.1**	**0.4**	**100.0**	**39.3**	**59.4**	**0.9**	**0.4**	**100.0**

Table 2.14: Marital status by age and residence, SVRS 2016: Females

Age group	Rural					Urban				
	Single	Married	Widowed	Div/sep	Total	Single	Married	Widowed	Div/sep	Total
10-14	96.4	3.6	0.0	0.0	100.0	98.1	1.9	0.0	0.0	100.0
15-19	72.5	26.6	0.2	0.8	100.0	80.3	18.9	0.3	0.5	100.0
20-24	18.2	79.9	0.4	1.4	100.0	30.7	67.6	0.5	1.2	100.0
25-29	4.8	93.1	0.6	1.5	100.0	9.9	87.9	0.7	1.5	100.0
30-34	1.6	95.7	1.3	1.4	100.0	3.4	93.5	1.6	1.5	100.0
35-39	0.9	94.6	3.0	1.5	100.0	1.6	93.4	3.1	1.9	100.0
40-44	0.8	91.5	6.1	1.5	100.0	1.2	89.7	6.8	2.3	100.0
45-49	0.5	87.4	10.1	1.9	100.0	1.2	84.5	11.7	2.5	100.0
50-54	0.5	79.2	18.6	1.7	100.0	1.0	77.0	20.0	2.0	100.0
55-59	0.6	71.6	26.4	1.5	100.0	0.9	67.4	29.5	2.2	100.0
60-64	0.9	53.7	43.8	1.6	100.0	0.7	49.8	47.2	2.3	100.0
65+	1.0	33.3	64.1	1.6	100.0	1.1	29.7	67.2	2.0	100.0
Total	**25.8**	**65.0**	**9.1**	**0.1**	**100.0**	**28.6**	**61.7**	**8.3**	**1.4**	**100.0**

Table 2.15: Literacy rate of population 5+ years by broad age group sex and residence, SVRS 2016

Age group	Total			Rural			Urban		
	Both sex	Male	Female	Both sex	Male	Female	Both sex	Male	Female
5	0.6	0.5	0.8	0.7	0.5	0.9	0.6	0.5	0.7
6	0.6	0.4	0.7	0.6	0.5	0.6	0.6	0.4	0.8
7	29.7	30.2	29.2	26.9	27.3	26.6	33.5	34.2	32.8
8	27.9	27.9	27.8	25.3	25.8	24.7	31.3	30.7	31.9
9	33.0	32.5	33.4	31.1	30.9	31.4	35.6	35.0	36.3
5-9	18.5	18.6	18.3	17.3	17.5	17.0	20.1	20.0	20.1
10-14	84.8	83.6	86.0	86.3	85.1	87.5	82.8	81.5	84.0
15-24	92.0	90.6	93.3	90.9	89.3	92.5	93.4	92.4	94.2
25-59	69.0	72.5	65.6	60.3	63.8	57.0	78.9	82.2	75.6
60+	42.2	54.3	27.7	32.9	44.8	19.1	56.3	68.4	41.1
Total	**69.9**	**71.9**	**67.8**	**64.5**	**66.7**	**62.4**	**76.5**	**78.3**	**74.6**

Table 2.16: Literacy rate of population 7+ years by broad age group sex and residence, SVRS 2016

Age group	Total			Rural			Urban		
	Both sex	Male	Female	Both sex	Male	Female	Both sex	Male	Female
7	29.7	30.2	29.2	26.9	27.3	26.6	33.5	34.2	32.8
8	27.9	27.9	27.8	25.3	25.8	24.7	31.3	30.7	31.9
9	33.0	32.5	33.4	31.1	30.9	31.4	35.6	35.0	36.3
5-9	30.2	30.2	30.2	27.9	28.1	27.6	33.4	33.2	33.7
10-14	84.8	83.6	86.0	86.3	85.1	87.5	82.8	81.8	84.0
15-24	91.0	90.6	93.3	90.9	89.3	92.5	93.4	92.4	94.2
25-59	69.0	72.5	65.6	60.3	63.8	57.0	78.9	82.2	75.6
60+	42.2	54.3	27.7	32.9	44.8	19.1	56.3	68.4	41.1
Total	**71.0**	**73.0**	**68.9**	**65.5**	**67.7**	**63.3**	**77.7**	**79.6**	**75.8**

2.8 Educational Attainment

Among the socio-economic differentials in influencing the demographic parameters of a population, educational attainment of the individuals is the most important one. It influences individual's knowledge, attitudes and codes of ethical behavior that guide moral choices about our relationship with others. Education enhances the ability of an individual to achieve desired demographic and health goals. Table 2.15 and Table 2.16 present a complete scenario of the level of education of the household population by age, sex and some selected background characteristics. As we note, about 29 percent of the males and one third of the females had never gone to school. Nearly an equal proportion of males and females (12%) completed primary level of education. Males are marginally more in proportion (21%) to complete secondary or higher level of education than their female counterpart (16%).

The low level of illiteracy among the rural people remains well pronounced. For example, while about 23 percent of males in the urban area have no education, the extent of this illiteracy remains prevalent in about 33 percent of the cases among the rural males. This difference in illiteracy is even more pronounced among the females: 28 percent in urban area and 37 percent in rural area. People of Barisal division are less likely to remain illiterate (20.3% males and 23.1% females), while males of Dhaka division (31.2%) and females of Rangpur division (36%) are more in proportion to remain illiterate. Religious variations in illiteracy among the males are marked but less so among the females.

Table 2.17: Educational attainment of the household population, SVRS 2016: Males

Background Characteristics	Level of education					
	None	Primary Incomplete	Primary complete	Secondary incomplete	Secondary complete or higher	Total
Age group:						
5-9	39.6	59.0	1.4	0.0	0.0	100.0
10-14	6.0	39.0	20.0	34.1	1.2	100.0
15-19	6.0	11.0	9.4	43.5	30.2	100.0
20-24	8.4	12.0	15.0	20.0	45.0	100.0
25-29	12.2	12.0	18.0	25.0	34.0	100.0
30-34	17.4	12.0	17.1	24.0	30.0	100.0
35-39	23.4	12.0	15.2	19.3	30.0	100.0
40-44	29.1	12.0	14.2	17.0	28.0	100.0
45-49	32.0	12.0	13.2	16.0	27.0	100.0

Background Characteristics	Level of education					
	None	Primary Incomplete	Primary complete	Secondary incomplete	Secondary complete or higher	Total
50-54	35.0	12.0	13.3	15.4	25.0	100.0
55-59	35.0	11.5	13.1	16.0	24.2	100.0
60-64	38.4	11.0	13.4	14.0	24.0	100.0
65+	44.1	12.0	13.0	12.0	19.3	100.0
Residence:						
Rural	33.0	21.0	13.0	19.4	14.0	100.0
Urban	23.3	16.3	11.2	20.0	29.4	100.0
Division:						
Barisal	20.3	20.0	14.0	21.0	26.0	100.0
Chittagong	29.0	21.4	12.0	20.0	18.0	100.0
Dhaka	31.2	18.6	12.1	19.0	20.0	100.0
Khulna	26.0	18.4	11.4	22.0	23.0	100.0
Rajshahi	30.2	17.0	11.3	19.0	23.0	100.0
Rangpur	29.3	18.4	11.3	19.0	22.0	100.0
Sylhet	30.2	19.2	14.1	18.3	18.4	100.0
Religion:						
Muslim	29.4	19.2	12.3	19.0	20.2	100.0
Hindu	21.4	16.7	12.0	23.4	27.0	100.0
Buddhist	31.5	18.2	10.0	20.0	21.2	100.0
Christian	23.0	18.2	8.03	24.0	28.0	100.0
Others	45.0	27.0	10.2	11.1	10.2	100.0
Total	**28.6**	**18.9**	**12.2**	**19.5**	**20.8**	**100.0**

Table 2.18: Educational attainment of the household population, SVRS 2016: Females

Background Characteristics	Level of education					
	None	Primary Incomplete	Primary complete	Secondary incomplete	Secondary complete or higher	Total
Age group:						
5-9	39.4	59.0	1.6	0.0	0.0	100.0
10-14	5.2	33.7	20.4	39.0	2.0	100.0
15-19	3.7	5.9	8.1	50.0	33.0	100.0
20-24	20.5	12.2	16.3	27.5	24.0	100.0
25-29	12.4	10.0	16.4	33.0	29.0	100.0
30-34	20.5	12.2	16.3	27.5	24.0	100.0
35-39	29.0	13.1	16.0	21.3	21.0	100.0
40-44	40.0	14.0	15.0	16.0	16.0	100.0
45-49	44.0	14.0	15.0	14.2	14.0	100.0
50-54	52.5	13.0	14.0	1105	9.5	100.0
55-59	55.5	13.0	13.5	10.2	8.1	100.0
60-64	63.0	12.3	12.0	7.4	6.0	100.0
65+	71.4	11.0	10.0	5.0	3.2	100.0
Residence:						
Rural	37.0	19.0	13.0	22.1	10.0	100.0
Urban	28.0	15.5	11.4	22.0	24.0	100.0
Division:						
Barisal	23.1	19.4	15.0	22.1	21.0	100.0
Chittagong	33.0	19.0	12.0	23.0	14.1	100.0
Dhaka	35.1	17.0	12.0	21.4	15.0	100.0
Khulna	30.3	17.4	11.2	25.0	16.3	100.0
Rajshahi	35.0	15.4	11.4	23.0	16.0	100.0
Rangpur	36.0	16.5	10.0	21.0	17.0	100.0
Sylhet	35.0	17.0	14.0	19.2	15.0	100.0
Religion:						
Muslim	33.2	17.5	12.2	22.0	15.3	100.0
Hindu	29.0	16.0	11.4	23.0	21.0	100.0
Buddhist	44.0	16.0	7.0	17.0	16.5	100.0
Christian	33.0	17.0	9.0	21.4	20.2	100.0
Others	47.2	19.2	12.0	14.0	8.0	100.0
Total	**32.8**	**17.3**	**12.0**	**22.0**	**15.9**	**100.0**

2.9 Population Composition and Household Characteristics: 2004–2016

Table 2.19 presents an overview of the trends in some selected characteristics of the population and households in the SVRS area for the available years. These include, among others, age structure, dependency ratio, child-woman ratio, religious composition, literacy, household size, marital status and the like.

2.9.1 Age Structure

As reported in the SVRS, the population composition has shown a modest change since the initiation of the registration of vital events in the sample area in 2002. For example, while the population size under 15 years of age was reported to be 37.8 percent in 2004, the proportion reduced to 30.8 percent in 2016. By the time, a corresponding increase was noted in the age structure at 65 years and over,

from 4.0 percent in 2004 to 4.6 percent in 2016 without showing any change since 2014. A similar feature of change may also be noted in the census record, from 4.0 in 2001 to 4.7 in 2011.

2.9.2 Sex Ratio

As evidenced in the sample area, the overall sex ratios remained almost static from 2004 to 2012, centering in the neighborhood 105. It is only 2013 when the sex ratio began to fall from 102.6 in 2013 to 100.3 in 2016. This trend in sex ratios is in line with the one reported in the census reports. Over the last four censuses, the sex ratio fell from 106.4 percent in 1981 to 100.3 percent in 2011. The trends in sex ratios as obtained in SVRS are shown in Figure 2.3.

2.9.3 Dependency Ratio

Dependency ratio as recorded in the SVRS, demonstrated a precipitous and continuous fall from 79 percent in 2004 to 54 percent in 2016, a more than 31 percent decline during 2004–2016. The census population however records this fall in the neighborhood of 7 percent, from 73 percent in 2001 to 68.4 percent in 2011.

2.9.4 Child-Woman Ratio

There has been a consistent fall in the child-woman ratios in the sample vital registration area. Since 2004, the ratio has shown a decline of about 33 percent, from 476 in 2004 per 1000 women to 320 per one thousand women in 2016. The comparable decline as recorded in the census enumerations was over 24 percent, from 519 per 1000 women in 2001 to 392 per 1000 women in 2011. A graphical view of the trends in CWR is shown in Figure 2.5

2.9.5 Religious Composition

For many years in the past, the Bangladeshi people are predominantly Muslims. Since the initiation of the SVRS program in 2003, 89.6 percent of the population were Muslims and this proportion remained almost unchanged (88.4%) till the last SVRS in 2016.

2.9.6 Literacy Rate

The literacy rate for population aged 7 years and over increased from 50 percent in 2004 to 71 percent in 2016, amounting to an increase of about 42 percent in 13 years. The increase in female literacy compared to male literacy was more pronounced

The adult literacy rate for population aged 15 years and over increased by 40 percent over the period 2004–2016 from 51.6 percent in 2004 to 72.3 percent in 2016. The increase in female literacy was much higher (52%) than that of the increase among the males (31%) during 2004–2016.

2.9.7 Household Size

In line with the trends in fertility in Bangladesh, the average household size is also depicting a moderate decline over the last 14 years since 2004. As the statistics presented in Table 2.17 show, the average size of the household in 2004 was 4.7 persons, which decreased to 4.3 in 2016.

2.9.8 Headship Status

The household headship rates virtually remained constant over the period 2004–2007 centering around a male-female ratio of 90 percent to 10 percent, which thereafter demonstrated a modest increase in favor of females: from 10.3 percent in 2004 to 12.8 percent in 2016.

2.9.9 Household Structure

The structural changes in the households over the last 14 years have been marginal. While 6.2 percent households in 2004 were pucca buildings which increased to 18.7 percent in 2016. The corresponding increase in the semi-pucca households was from 8.8 percent in 2004 to 24.1 percent in 2016. As a result of this increase in pucca and semi-pucca households, the proportions of CIS/wooden structures decreased from 54.7 percent in 2004 to 44.8 percent in 2018.

2.9.10 Sources of Water

For drinking purposes, the extent of the use of tap or tube-well water has not shown any notable change over the last 14 years, as shown in Table 2.17, while for other purposes, the proportion of households using these sources increased from 52.2 percent in 2004 to 69.3 percent in 2016.

2.9.11 Sources of Light

Use of kerosene has decreased considerably over the period 2004–2016, from 56.5 percent in 2004 to 13.0 in 2016, over 77.0 percent decrease in 13 years. Correspondingly, the use of electricity has shown a more than 87 percent increase during this time interval: from 43.5 percent in 2004 to 81.2 percent in 2016

2.9.12 Use of Fuel

A close examination of the data presented in Table 2.17 shows that there has been virtually no changes in any kind of fuel in the extent of use of fuels during the period under study

2.9.13 Economic Solvency

Economic solvency made a remarkable progress over the last 13 years. For example, while 17 percent of the households were reported to be economically solvent in 2004, the proportion increased to about 39 percent in 2016, about 129 percent increase over the period under reference. .

Table 2.19: Trends in some selected household and population characteristics, SVRS 2004–2016

Background Characteristics	Year												
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Age structure:													
Under15	37.8	37.6	36.6	34.9	37.4	33.3	33.1	31.9	31.1	32.3	31.7	30.8	30.8
15–64	58.3	58.2	59.3	61.0	57.9	62.3	62.4	63.5	64.2	63.2	63.5	64.6	64.6
65 & over	4.0	4.2	4.2	4.1	4.7	4.4	4.5	4.6	4.7	4.5	4.7	4.6	4.6
Sex ratio	105.3	105.0	105.0	105.2	105.0	104.9	105.0	104.9	104.9	102.6	100.5	100.3	100.3
Dependency ratio	79	78	76	70	67	66	65	57	56	58	57	55	54
Child-woman ratio	476	439	424	398	380	375	369	341	327	356	355	325	320
Religion:													
Muslim	89.5	89.3	89.3	89.4	89.4	89.4	89.5	88.8	88.8	89.1	89.2	88.2	88.4
Non-Muslim	10.5	10.7	10.7	10.6	10.6	10.6	10.5	11.2	11.2	10.9	10.8	11.8	11.6
Literacy 7+:													
Both sexes	50.0	52.1	52.5	56.1	55.8	56.7	56.8	55.8	56.3	57.2	58.6	63.6	71.0
Male	53.7	55.4	55.8	59.4	60.8	59.6	59.8	58.4	59.2	59.3	60.7	65.6	73.0
Female	46.2	48.8	49.1	52.7	52.7	53.8	53.9	53.2	53.3	55.1	56.6	61.6	68.9
Literacy15+:													
Both sexes	51.6	53.5	53.7	56.3	56.9	58.4	58.6	58.8	60.7	61.0	61.4	64.6	72.3
Male	57.2	58.3	58.5	63.1	61.3	62.6	62.9	62.5	64.8	64.2	64.7	67.6	75.2
Female	45.8	48.6	48.8	53.5	52.6	54.3	55.4	55.1	56.6	51.8	58.2	61.6	69.5

Background Characteristics	Year												
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Household size	4.7	4.7	4.8	4.7	4.7	4.7	4.6	4.5	4.5	4.4	4.3	4.4	4.3
Headship status:													
Male headed	89.7	89.6	89.6	88.7	89.3	87.1	87.1	86.7	85.5	88.4	87.8	87.3	87.2
Female headed	10.3	10.4	10.4	10.3	10.3	12.9	12.9	13.3	14.5	11.6	12.2	12.7	12.8
Household structure:													
Pucca	6.2	11.0	11.1	8.1	8.9	8.7	8.7	9.6	10.2	13.2	9.3	18.3	18.7
Semi-pucca	8.8	11.1	11.2	13.7	13.1	16.6	16.6	19.3	18.5	19.5	22.3	22.7	24.1
CIS/Wooden	54.7	53.3	53.3	55.1	57.1	57.0	57.0	53.9	53.9	50.7	51.1	45.0	44.8
Mud	18.0	15.5	15.4	15.4	14.3	13.1	13.1	12.2	11.7	12.4	13.5	9.7	8.7
Bamboo	11.3	8.2	8.1	7.2	6.0	3.8	3.8	4.6	5.5	4.0	3.7	3.8	3.3
Others	0.9	0.9	0.9	0.6	0.9	0.8	0.8	0.4	0.3	0.2	0.2	0.5	0.5
Sources of water:													
Tap / tube-well (for drinking purposes)	97.4	97.7	97.7	98.9	98.3	98.1	98.1	98.2	98.3	97.5	97.8	97.9	98.0
Tap /tube-well (for other purposes)	52.2	53.9	53.9	55.9	54.7	54.7	55.5	60.4	60.5	63.7	63.4	68.9	69.3
Sources of light:													
Electricity	-	43.5	44.3	50.7	53.4	54.4	54.6	63.6	65.6	66.9	67.8	77.9	81.2
Solar	-	-	-	-	-	-	-	-	-	-	-	5.4	5.6
Kerosene	-	56.5	55.7	49.3	46.7	45.6	43.1	35.4	33.1	32.3	31.4	16.3	13.0
Others	-	-	-	-	-	-	2.3	1.9	1.3	0.8	0.8	0.4	0.2
Sources of fuel:													
Straw/Leaf	38.9	41.4	41.5	42.3	38.88	37.5	42.6	39.3	40.2	36.3	36.3	30.7	31.1
Bran	4.8	4.8	4.8	4.0	4.15	5.8	5.3	4.0	-	2.8	3.7	3.0	3.8
Wood/bamboo/Khari	42.3	42.0	42.0	41.0	43.34	42.7	42.5	43.1	42.4	44.4	42.8	44.2	42.5
Kerosene	0.5	0.3	0.3	0.3	0.37	0.4	0.4	0.2	0.3	0.3	0.2	0.4	0.4
Electricity	0.5	0.4	0.4	0.4	0.47	0.6	0.9	0.4	0.6	0.9	0.7	1.1	1.0
Gas	8.7	10.3	10.3	10.5	12.05	9.8	6.7	11.0	10.4	13.9	15.1	19.7	20.5
Others	4.4	0.8	0.7	1.6	0.72	3.2	1.6	2.0	1.9	1.3	1.1	0.9	0.8
Toilet facilities:													
Sanitary	46.2	53.3	55.0	54.2	62.2	62.7	63.5	62.6	63.8	64.3	63.5	73.5	75.0
Others	38.3	37.6	36.2	38.6	31.1	30.1	34.3	33.7	33.6	34.5	34.4	23.2	22.3
Open	15.5	9.1	8.9	7.2	6.6	7.2	2.2	2.7	2.6	2.2	2.1	3.3	2.7
Economic solvency	16.9	19.2	19.3	19.4	19.5	21.1	22.0	21.4	21.5	21.6	22.1	36.2	38.7

Figure 2.3: Trends in sex ratios, SVRS 2003-16

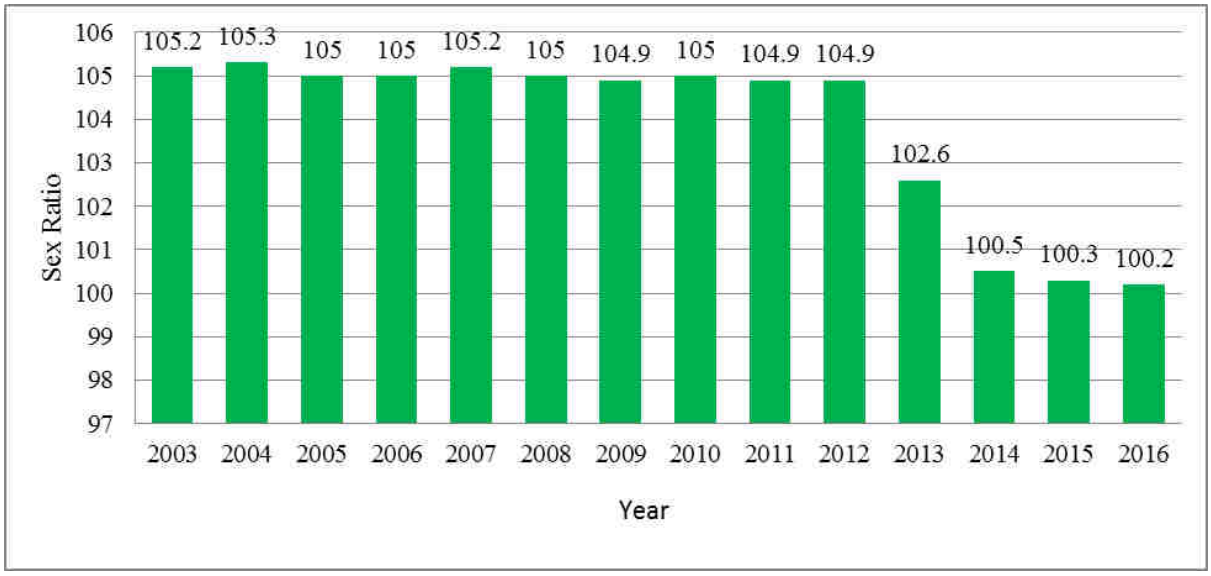


Figure 2.4: Trends in dependency ratios, SVRS 2003-16

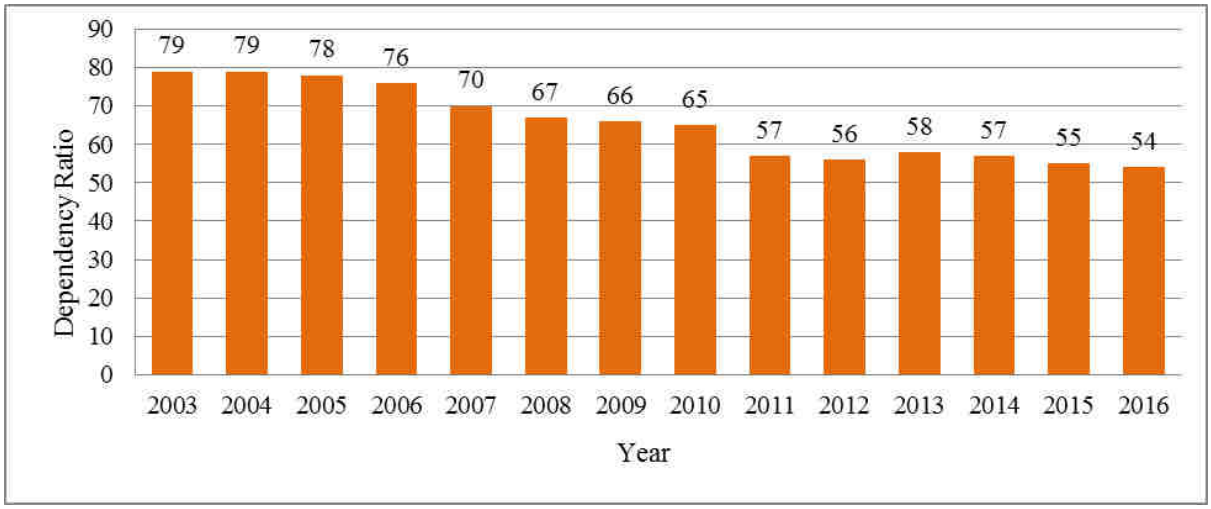


Figure 2.5: Trends in child-women ratios, SVRS 2003-16

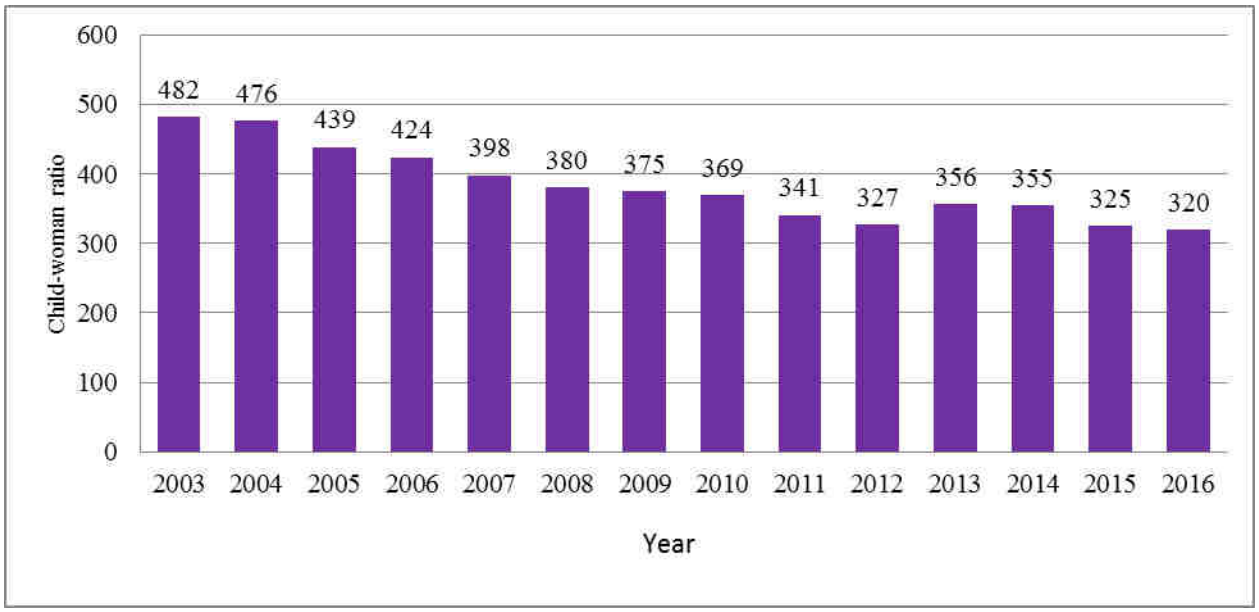
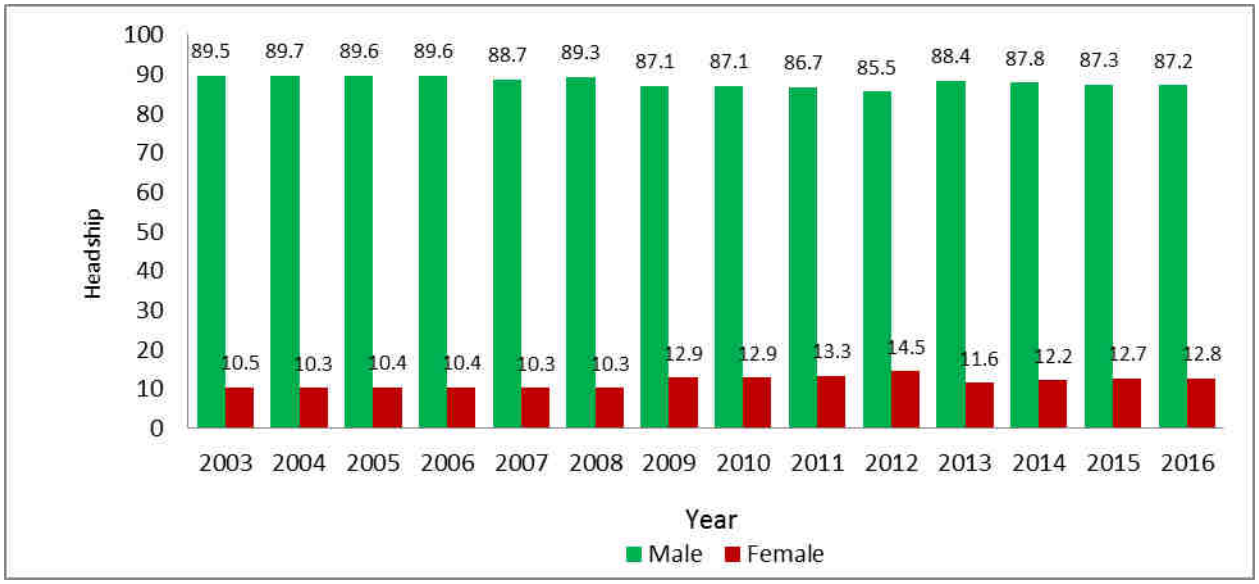


Figure 2.6: Trends in headship status, SVRS 2003-16



CHAPTER III

Fertility

3.1 Measures of Fertility

The term fertility refers to the state of being fertile, or in other words, it is the capability of producing offspring. For a human population, it is the state of being capable to produce offspring by a woman. Fertility is thus the frequency of childbearing among the population. The importance of fertility measurement stems from the fact that it is one of the three principal components of population dynamics that determine the size, structure, and composition of the population in any country. The present chapter is designed to describe the current fertility based on the data gathered in SVRS area in 2015.

The fertility measures presented in this chapter are primarily based on the birth history data collected from the sample households for all ever-married women aged 15–49 asking each woman a series of questions that resulted in a reproductive history of all births to the women interviewed.

Needless to say, we have a wide variety of conventional fertility rates and ratios in current use, each of which has advantages and limitations in particular analytic systems. In this chapter, we will discuss a few of these measures that include, among others, the (a) Crude birth rate (CBR), (b) General fertility rate (GFR), (c) Age-specific fertility rate (ASFR), (d) Total fertility rate (TFR), (e) Child-women ratio (CWR, (f) Gross reproduction rate (GRR) and Net reproduction rate (NRR). It is important to note that the last two measures are regarded as measures of reproduction but they have close association with fertility measures listed above.

In addition to the presentation of the fertility indicators as mentioned above, an attempt has also been made to study the fertility differentials by some selected background characteristics, such as residence, religion, and administrative divisions. The chapter also presents an overview of the trends in fertility over the period 1982-2016.

3.1.1 Crude Birth Rate

The crude birth rate (CBR) is the frequency of birth in a general population and is formally defined as the number of live births during a specified period (usually a calendar year) in a delineated area per 1000 mid-year population.

Table 3.1 shows the crude birth rates (CBR) by residence, administrative division and religion as derived from the recorded number of births and enumerated population in SVRS area. The overall CBR was computed to be 18.7 for 2016. This is comparable with the BDHS 2014 estimate of CBR of 22.2 per 1000 population and ICDDRB's estimate of 20.9 for 2013. The rural CBR, as expected, is higher (20.9) compared to the urban CBR (16.1) by about five births per 1000 population. The reported rate varies from as high as 21.5 in Chittagong to as low as 17.1 in Rajshahi division. A marked variation in CBR is also noted among the religious groups: Muslims have the highest CBR (19.1 per thousand), Hindus the intermediate (16.6) and the others (that includes the Christians, Buddhists etc.) the lowest (14.2). Since CBR is greatly influenced by the age structure of the population, it is too early to offer any firm comment on the differences in the rates presented by population compositions. The variations in the level of crude birth rate by districts are shown in Map 3.1 at the end of the chapter.

3.1.2 General Fertility Rate

Fertility is highly variable within sub-groups of a population. It is thus common to calculate age-specific, age-marital status specific, and other specific fertility rates. It is rare for a child to be borne to a woman before she reaches 15 years or at ages beyond 50 years. For this reason, one may partly refine measurement of fertility by using the women of ages between 15 years and 49 years in the denominator of the rates instead of the total population in the mid-year. The rate so computed is referred to as the general fertility rate (GFR). The GFR is defined as the number of live births per year per 1000 women of child-bearing age.

The GFR for the sample population was 69 per 1000 women of reproductive age, 15–49. This rate is much lower than the one (90 per 1000 women) obtained in 2014 BDHS but closed to ICDDR,B's estimate of 77 for the year 2013. The rate in rural area as obtained in SVRS 2016 is widely different from the rate in urban area: 79 versus 57. Rajshahi division recorded the lowest GFR (62), the highest being recorded in Chittagong division (80). Table 3.1 shows the results of SVRS for 2016. The variations in the level of general fertility rate by districts are displayed in Map 3.2 at the end of the chapter.

3.1.3 Child-Woman Ratio

The child-woman ratio (CWR) is a relative measure of fertility. It is defined as the ratio of the number of children of both sexes under-five years of age to the number of females of the reproductive ages 15–49 years (or sometimes 15–44 years). The CWRs calculated for the sample area are presented in Table 3.1 by residence, division and religion. For the total sample, the child-woman ratio was found to be 320 per 1000 women of reproductive age. In line with the other estimates of fertility, the CWR for the rural area was higher (347) than for the urban area (289). The 2011 sample census estimate of CWR is 392, while the ICDDR'B reported a rate of 395 for 2012. In this instance too, SVRS rate is lower than the rates reported in the two sources mentioned above.

Table 3.1: Crude birth rate, general fertility rates and child-woman ratios, SVRS 2016

Background Characteristics	CBR	GFR	CWR
Residence:			
Rural	20.9	79	347
Urban	16.1	57	289
Division:			
Barisal	18.2	68	315
Chittagong	21.5	80	362
Dhaka	19.1	70	329
Khulna	17.8	64	281
Rajshahi	17.1	62	284
Rangpur	18.5	69	311
Sylhet	17.7	66	342
Religion:			
Muslim	19.1	70	326
Hindu	16.6	60	271
Others	14.2	57	347
Total	**18.7**	**69**	**320**

3.1.4 Age-Specific Fertility Rates

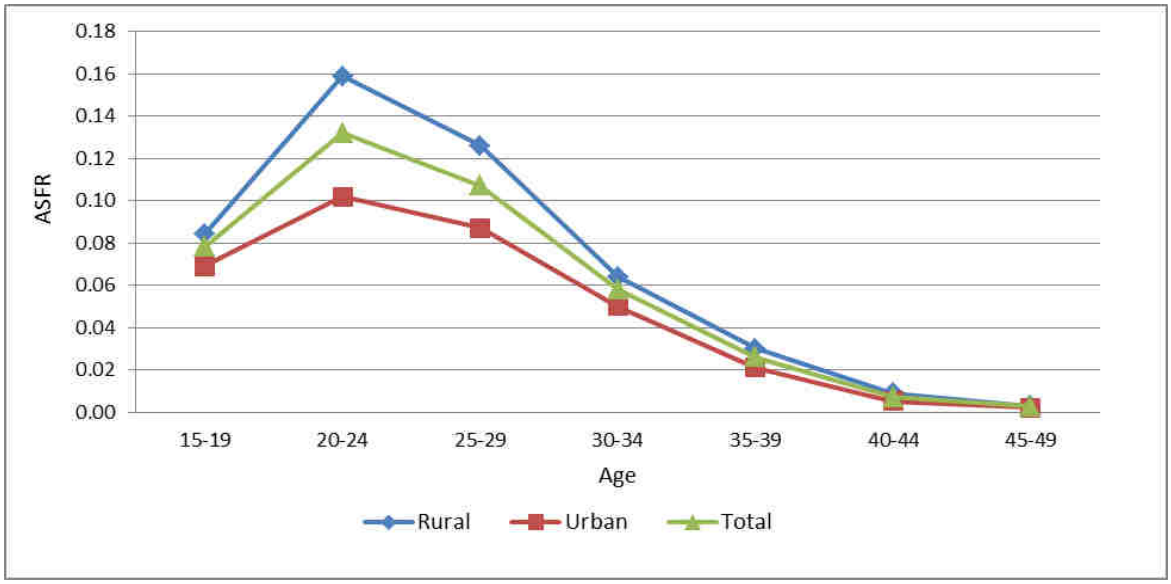
The frequency of child-bearing within the more narrow age range of 15–49 (such as 15–19, 20–24 etc.) varies markedly. In fact, there is a characteristics age pattern to fertility which is very similar to all over the world. This age pattern is best understood by computing, what we refer to as age-specific fertility rates. The age-specific fertility rates are defined as the number of live births during a specified period to women of reproductive period divided by the number of women lived in that age group during the specified period. The age-specific fertility rates (ASFRs) are considered as valuable measures of fertility to assess the current age pattern of child-bearing. In the present instance, these rates have been derived from birth history data. Table 3.2 presents the age-specific fertility rates of the SVRS area by urban-rural residence. According to the 2016 fertility schedule, on average, women will have a little more than 18 per cent of their births before reaching age 20, 58.2 per cent during their twenties, and 20.5 per cent during their thirties. These proportions are about of the same magnitude in both rural and urban areas. The achievement of births within the specified age range by the women in the SVRS area in 2016 is consistent with the 2014 BDHS findings (BDHS 2014 Final Report). The age-specific fertility rates are also shown for the seven administrative regions of the country in Table 3.3. The age-patterns of these rates demonstrate the same characteristic features as of the overall pattern. The age pattern of fertility discerned by the age-specific rates is compared in Figure 3.1 by residence with the overall rates.

Table 3.2: ASFRs derived from births during last 12-month period by residence, SVRS 2016

Age group	Residence		
	Rural	Urban	Total
15-19	0.085	0.069	0.078
20-24	0.159	0.102	0.132
25-29	0.126	0.087	0.107
30-34	0.064	0.050	0.058
35-39	0.030	0.021	0.026
40-44	0.009	0.005	0.007
45-49	0.003	0.002	0.003
TFR*	**2.380**	**1.680**	**2.055**

* Total fertility rate

Figure 3.1: Age-specific fertility rates by urban rural residence, SVRS 2016



As the graphs of the ASFRs show, the women in the sample population have an early child-bearing pattern. It is worth to note that fertility is higher in the age group 20–24 irrespective of the areas. This is almost a typical pattern of all fertility schedules among the women in Bangladesh including the BDHS, 2014, BMMHC survey, 2010 and ICDDR'B, 2013.

Table 3.3: Age-specific fertility rates by geographic division, SVRS 2016

Age group	Division						
	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
15-19	0.070	0.072	0.082	0.080	0.095	0.097	0.045
20-24	0.132	0.155	0.132	0.130	0.116	0.128	0.117
25-29	0.104	0.123	0.101	0.109	0.096	0.102	0.116
30-34	0.063	0.063	0.061	0.045	0.051	0.055	0.066
35-39	0.033	0.030	0.026	0.025	0.017	0.025	0.028
40-44	0.007	0.007	0.008	0.006	0.005	0.005	0.013
45-49	0.003	0.004	0.002	0.002	0.002	0.002	0.006
TFR	**2.06**	**2.28**	**2.07**	**1.98**	**1.91**	**2.08**	**1.95**

3.1.5 Total Fertility Rate

Total fertility rate (TFR) is a summary measure of fertility obtained by summing the age specific fertility rates for each single year or each age group (usually of five year age groups) of women in the child-bearing age. It states the number of children a woman would bear throughout her lifetime at the rates specified by the schedule of age specific fertility rates for a particular year. The TFRs derived from the 2016 SVRS data are presented in Table 3.4 by urban-rural residence, administrative division and religion. The overall TFR for the SVRS area was computed to be 2.1 per woman. The corresponding estimate for the BDHS of both 2011 and 2014 is 2.3. As expected, the TFR for rural women in SVRS is higher (2.38) than among their urban counterparts (1.68). This result is consistent with the BDHS 2014 (2.4 as against 2.0). As to the divisional variations, Chittagong division recorded the highest TFR (2.28) followed by Rangpur (2.08), the lowest being recorded for Rajshahi divisions (1.91). The current level of TFR by districts is shown in Map 3.3 at the end of the chapter.

3.1.6 Gross Reproduction Rate and Net Reproduction Rate

The 2015 SVRS collected data that permitted the computation of gross reproduction rate (GRR) and net reproduction rate (NRR). The gross reproduction rate (GRR) is similar to the total fertility rate except that it is the sum of age-specific fertility rates that include only female live births in the numerator. It states the number of girls a woman would bear throughout her lifetime at the rates specified by the schedule of age specific fertility rates computed from the female births only for a particular year. The gross reproduction rates computed from the data are also presented in Table 3.4 by residence, division and religion. Keeping consistency with the TFR, the GRR is higher among the rural women (1.15) than among the urban women (0.84), the highest in Chittagong division (1.07) and the lowest in Sylhet division (0.93), the highest among the Muslim women (0.91) and least among the Hindu women (0.83).

Another measure of reproduction is the net reproduction rate (NRR). Essentially, the net reproduction rate (NRR) is a GRR adjusted for mortality. The NRR tells us: how many daughters on the average, will be born to a hypothetical cohort of newborn girl babies during their child-bearing period, if we take into account the mortality of the girls from the time of their birth? The net reproduction rate is a measure of the extent to which a cohort of newly born girls will replace themselves under the given schedules of age-specific fertility and mortality. The current year estimate of NRR is 1.0 which is identical to the previous year's estimate (not shown in the table). The estimate of NRR for 2016 tends to confirm that Bangladesh has reached to the replacement level of fertility. The implication of this is that population of Bangladesh will cease to increase in near future.

Table 3.4: TFR and GRR by residence, division and religion, SVRS 2016

Background Characteristics	TFR	GRR
Residence:		
Rural	2.38	1.15
Urban	1.68	0.84
Division:		
Barisal	2.06	1.00
Chittagong	2.28	1.07
Dhaka	2.07	1.02
Khulna	1.98	0.92
Rajshahi	1.91	0.93
Rangpur	2.08	1.01
Sylhet	1.95	0.93
Religion:		
Muslim	2.07	0.91
Hindu	1.97	0.83
Others	1.93	0.87
Total	**2.10**	**1.02**

3.1. 7 Marital Fertility Rate

A major criticism of the basic fertility measures discussed so far is that they are not truly based on the population exposed to the risk of child-bearing. They include women who have never married or who are widowed or divorced; such women are not exposed to legitimate births or socially normal child-bearing. A refinement that is proposed, is therefore, is to compute nuptial fertility rates, in which the numerators refer to legitimate births and the denominators to currently married women. These rates

are called marital fertility or nuptial fertility rates. The first of this kind of rate is the general marital fertility rate (GMFR) defined as a ratio of the number of live births among the married women to the number of married women. The age specific fertility rates for married women will yield age-specific marital fertility rates. Where all births are legitimate, the marital fertility rates are simply ordinary or regular fertility rates weighted by the proportion of women who are married. When these age-specific rates are summed over all ages, the resulting estimate is known as the total marital fertility rate. These rates for urban-rural residence and by division are presented in Table 3.5.

The overall total marital fertility rate is 3.52, which is logically greater than the total fertility rate (2.05). It is higher (3.68) in rural area than in urban area (3.34). It is the highest (4.27) in Chittagong area and the lowest (2.93) in Rajshahi division.

Table 3.5: Age-specific marital fertility rates, SVRS 2016

Age	Residence			Division							Religion		
group	Rural	Urban	Total	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet	Muslim	Hindu	Others
15-19	0.30	0.34	0.32	0.30	0.41	0.30	0.27	0.26	0.37	0.38	0.33	0.34	0.36
20-24	0.19	0.15	0.17	0.17	0.21	0.17	0.16	0.15	0.16	0.20	0.19	0.17	0.27
25-29	0.13	0.10	0.12	0.11	0.13	0.11	0.12	0.10	0.11	0.13	0.11	0.11	0.11
30-34	0.07	0.05	0.06	0.06	0.06	0.06	0.05	0.05	0.06	0.07	0.06	0.05	0.05
35-39	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.02	0.02	0.05
40-44	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01
45-49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
TMFR	**3.68**	**3.34**	**3.52**	**3.44**	**4.27**	**3.38**	**3.16**	**2.93**	**3.64**	**4.15**	**3.60**	**3.38**	**4.30**

3.2 Trends in Fertility: 1982-2016

The trends in fertility over time have been examined in this section by comparing the CBR, GFR, TFR, GRR and NRR for the overall sample since 1982. Table 3.6 presents these estimates. The crude birth rate remained in the neighborhood of 35 till 1986, which thereafter began to decline and reached to 19 in 2001, implying almost a 50 per cent fall in about 15 years. The rate then recorded a slow rise for a short period of about 2 to 3 years and then started again to decline reaching its lowest level in the neighborhood of 19 as recorded in the last SVRS undertaken in 2016. The GFR also displays the same characteristic features. Beginning with a value of as high as 164 in 1982, the rate reached to 69 in 2016 implying roughly 60 percent decline in 35 years. The TFR declined sharply from 5.21 births per woman in 1982 to 2.10 in 2016. As the data show, the TFR has possibly reached a plateau in recent time with a value in the neighborhood of 2.1. The GRR and NRR demonstrate the same feature of trends as discerned by the remaining measures of fertility. A diagrammatic view of each of the rates is shown in Figure 3.2 through Figure 3.6 to understand the fertility trends more vividly over time.

Table 3.6 Trends in fertility as observed in the SVRS area, 1982–2016

	Fertility measures				
Year	CBR	GFR	TFR	GRR	NRR
1982	34.8	164	5.21	2.54	1.98
1983	35.0	162	5.07	2.45	1.92
1984	34.8	173	4.83	2.34	1.81
1985	34.6	156	4.71	2.20	1.79
1986	34.4	152	4.70	2.29	1.80
1987	33.3	150	4.42	2.14	1.69
1988	33.2	145	4.45	2.21	1.74

	Fertility measures				
Year	CBR	GFR	TFR	GRR	NRR
1989	33.0	144	4.35	2.10	1.72
1990	32.8	144	4.33	2.10	1.71
1991	31.6	145	4.24	2.06	1.70
1992	30.8	143	4.18	2.03	1.68
1993	28.8	138	3.84	2.01	1.57
1994	27.0	137	3.58	1.81	1.48
1995	26.5	130	3.45	1.68	1.48
1996	25.6	115	3.41	1.66	1.46
1997	21.0	110	3.10	1.52	1.37
1998	19.9	102	2.98	1.45	1.31
1999	19.2	84	2.64	1.29	1.25
2000	19.0	81	2.59	1.27	1.24
2001	18.9	80	2.56	1.26	1.23
2002	20.1	86	2.55	1.26	1.22
2003	20.9	84	2.57	1.24	1.20
2004	20.8	83	2.51	1.21	1.18
2005	20.7	82	2.46	1.19	1.17
2006	20.6	80	2.41	1.17	1.15
2007	20.9	79	2.39	1.17	1.14
2008	20.5	77	2.30	1.11	1.09
2009	19.4	72	2.15	1.07	1.06
2010	19.2	71	2.12	1.05	1.04
2011	19.2	70	2.11	1.04	1.03
2012	18.9	70	2.12	1.05	1.04
2013	19.0	71	2.11	1.02	1.01
2014	18.9	71	2.11	1.05	1.04
2015	18.8	69	2.10	1.05	1.00
2016	18.7	69	2.10	1.02	1.00

Birth data are also available for SVRS 2016 zilawise, from which CBR, GFR and TFR have been computed. Mapping of such rates have been shown separately in Maps 3.1, 3.2 and 3.3 respectively.

Figure 3.2 Crude birth rate (CBR) per 1000 population by locality, SVRS 2002-2016

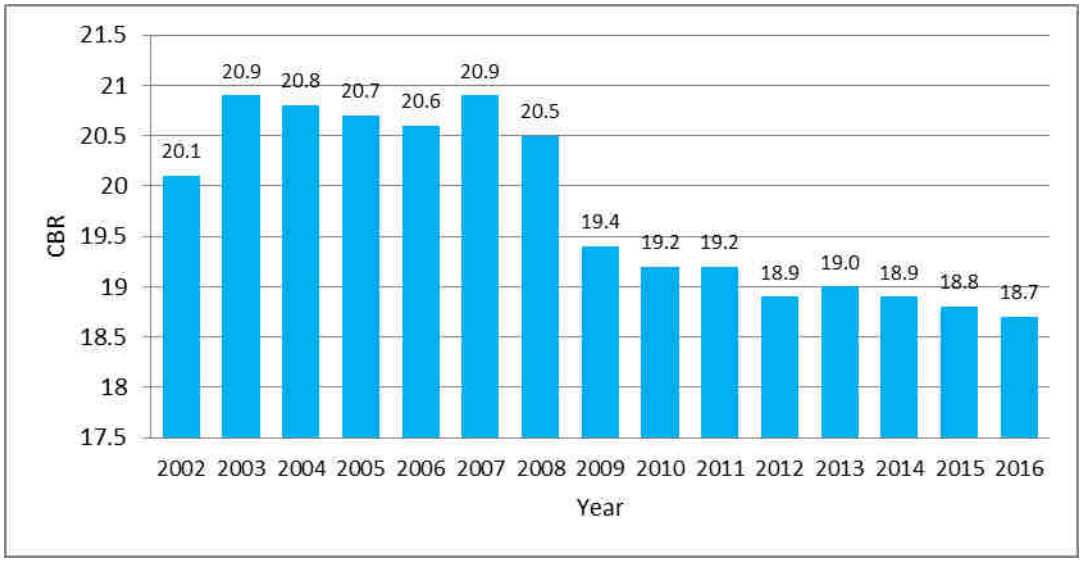


Figure 3.3 Trends in GFR, SVRS 2002–2016

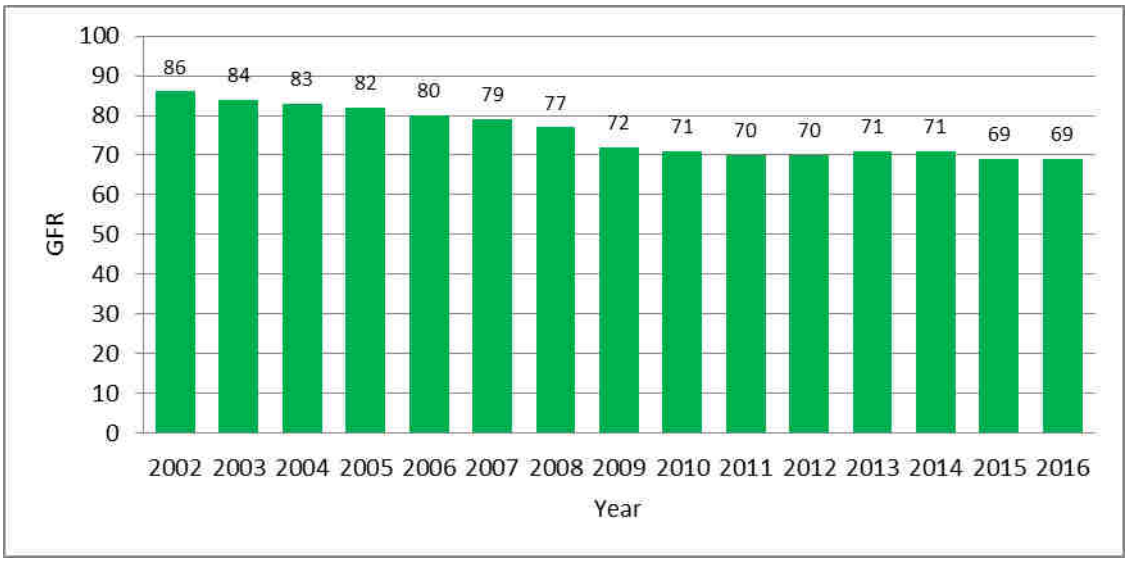


Figure 3.4 Trends in TFR, SVRS 2002–2016

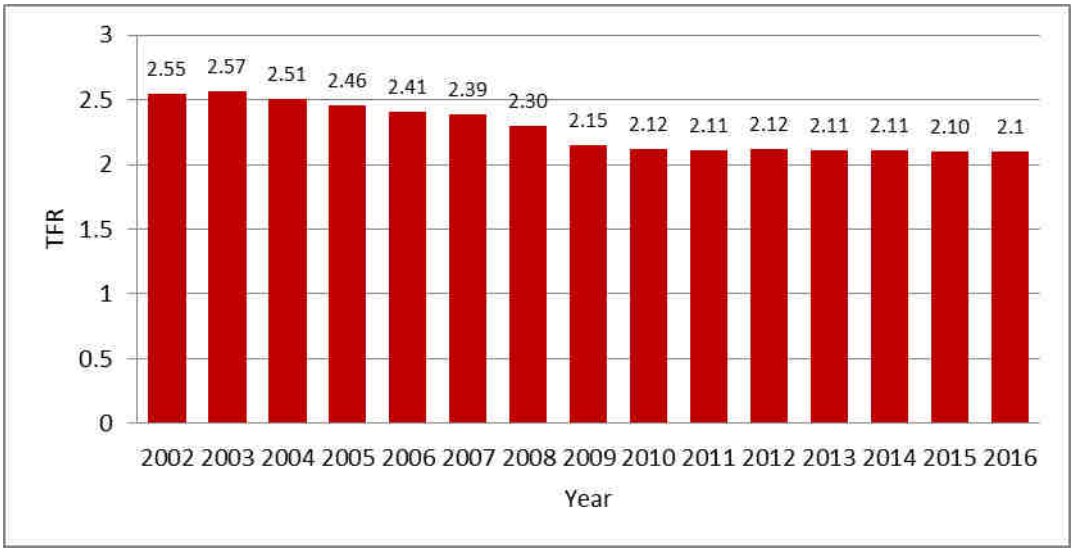


Figure 3.5 Trends in GRR, SVRS 2002–2016

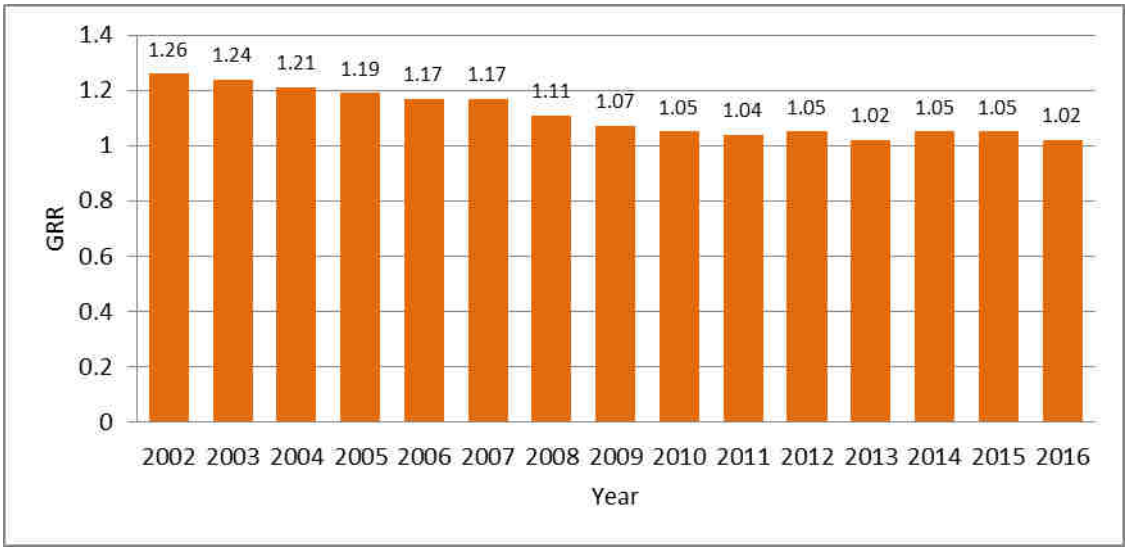
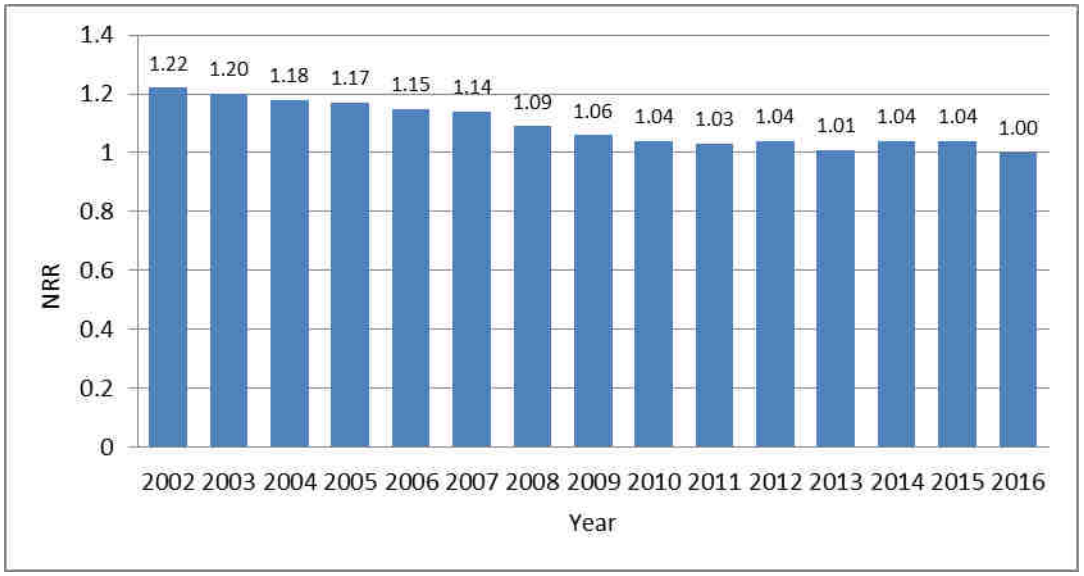
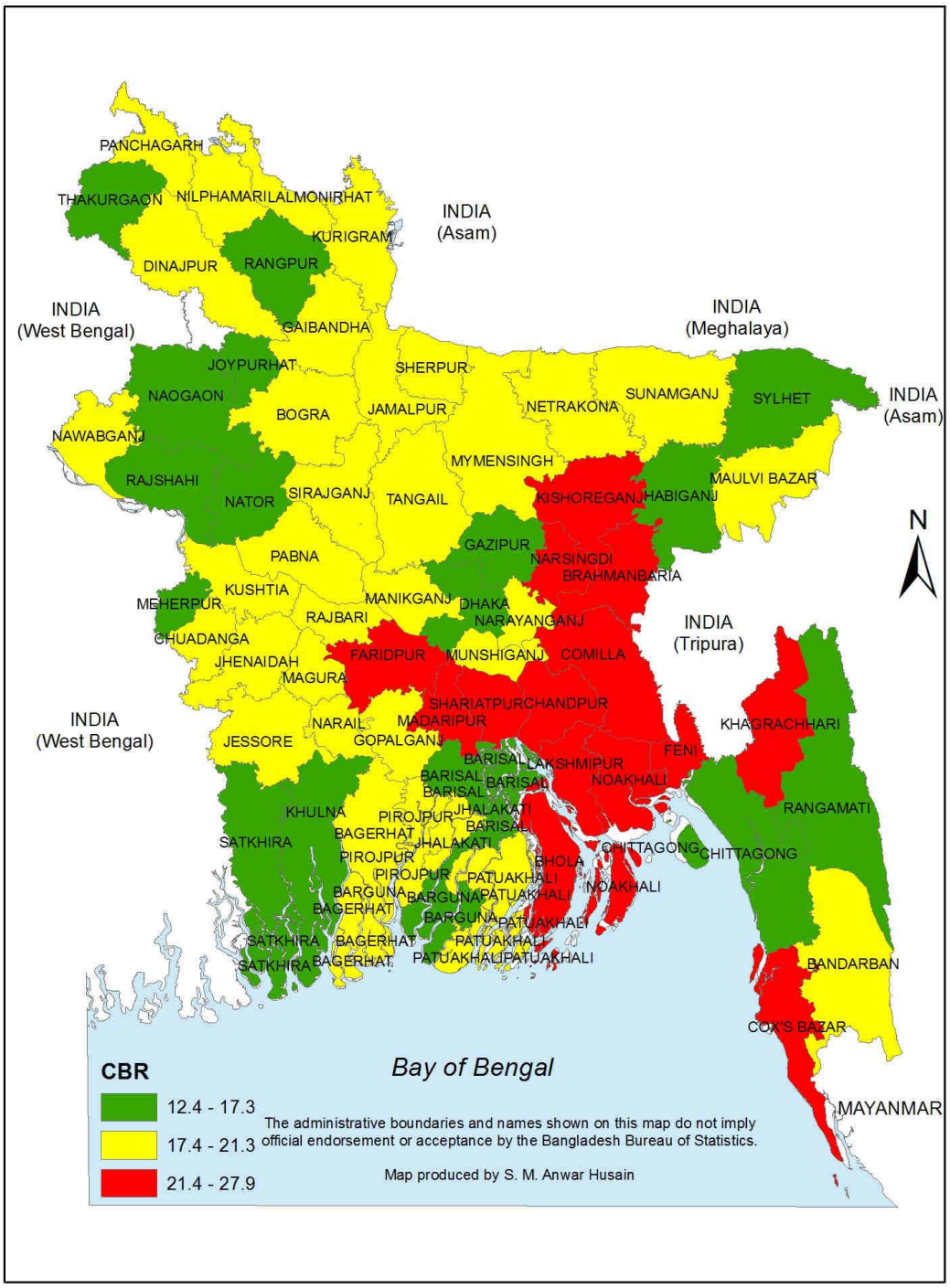


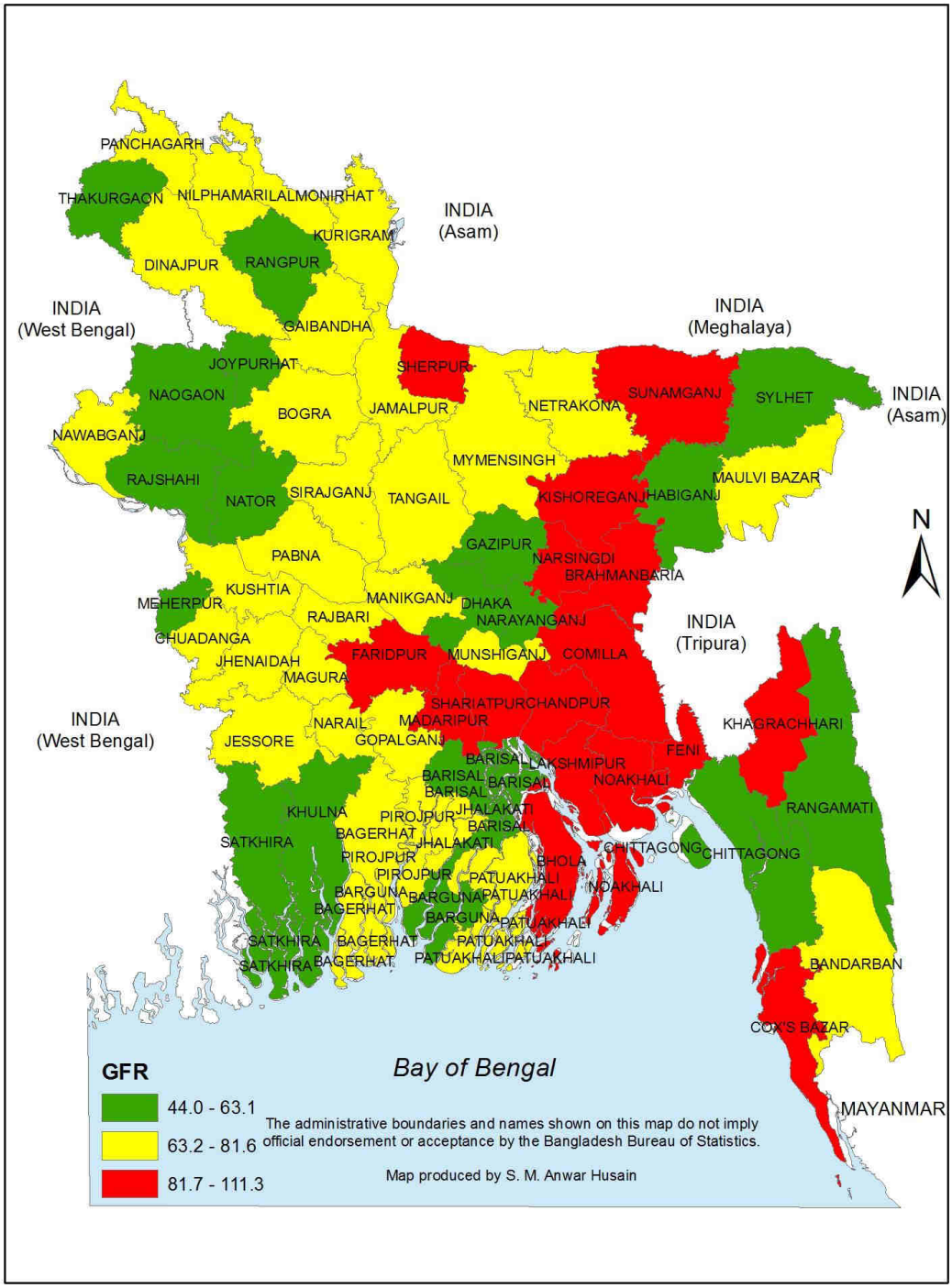
Figure 3.6 Trends in NRR, SVRS 2002–2016



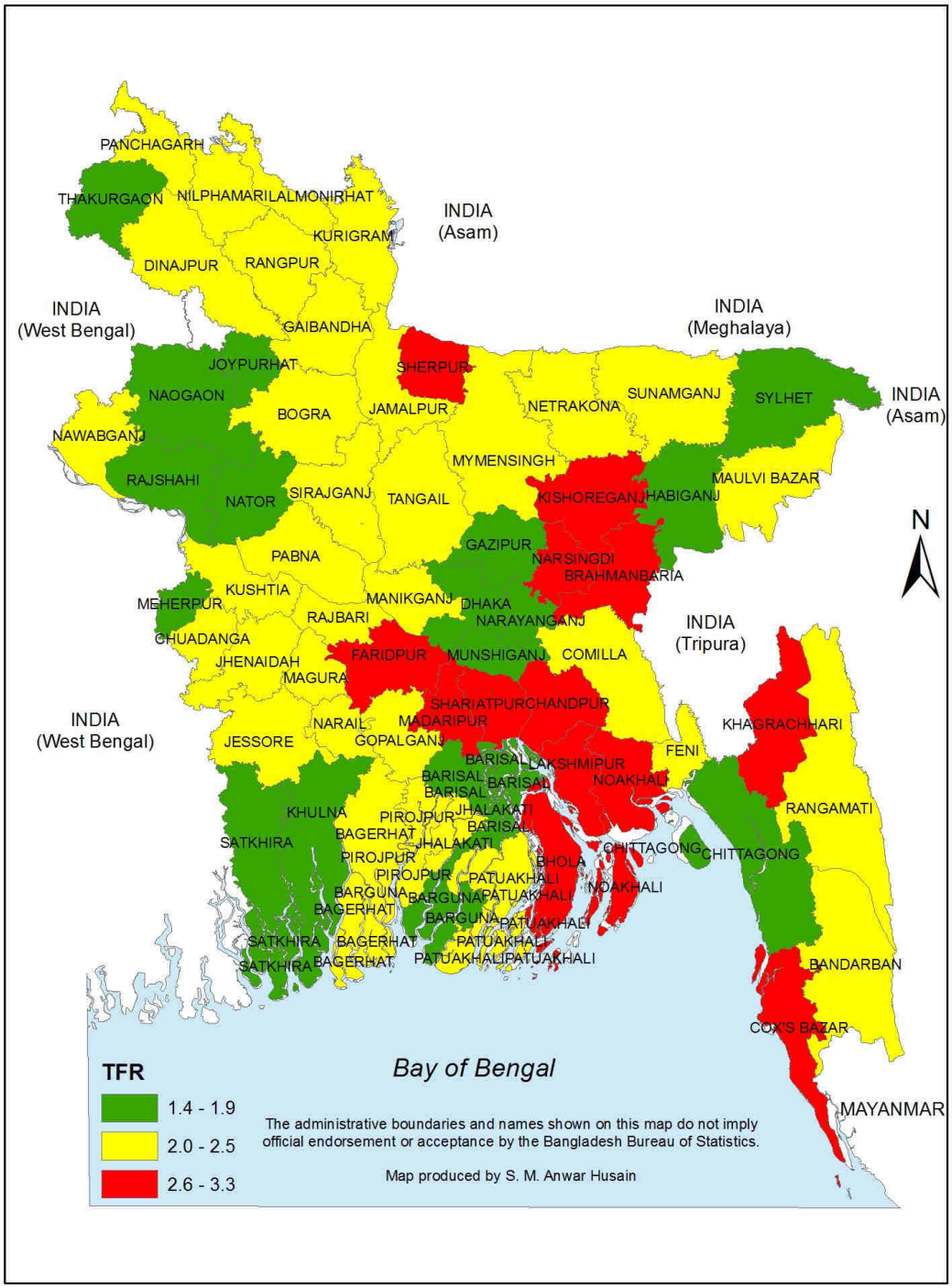
Map 3.1: Crude birth rate (CBR) by Zila, SVRS 2016



Map 3.2: General fertility rate (GFR) by Zila, SVRS 2016



Map 3.3: Total fertility rate (TFR) by Zila, SVRS 2016



CHAPTER IV

Mortality

4.1 Measures of Mortality

Mortality rates and ratios are important indicators reflecting the health situation of the population of a country. Levels, patterns, and trends in mortality indicate the prevailing mortality scenario, characteristic features and extent of variation over time. Therefore, evaluation of the patterns and determination of the levels and trends in mortality are needed for formulation of plans and implementation of programs especially in health and poverty alleviation related issues. Based on the death statistics registered in the SVRS area, in 2016, this chapter provides the following measures of mortality:

(a) Crude Death Rate;
(b) Age-Specific Death Rate;
(c) Childhood Mortality Rates;
(d) Maternal Mortality Ratio and
(e) Cause-Specific Death Rate.

4.1.1 Crude Death Rate

The simplest measure of mortality is the crude death rate (CDR), which is defined as the ratio of the number of deaths in an area during a specified period of time to the mid-year population of that area. The crude death rate (CDR) for the sample area was computed to be 5.1 per 1000 population in 2016.The comparable rate as observed in icddrb surveillance area in 2013 was 6.7. In rural areas, the CDR is 5.7 as against 4.2 in the urban area. The rate varied between 4.9 in each of Chittagong, Dhaka and Rangpur divisions and 5.7 in Barisal division. The rate is the highest (6.1) among the Hindus, followed by Muslims experiencing a rate of 4.9 as against a CBR of 4.8 amongst those who are followers of other religions. The results are summarized in Table 4.1.

Table 4.1: Crude death rate per 1000 population by background variables, SVRS 2016

Background Characteristics	No of deaths	Population	Crude death rate
Residence:			
Rural	3038	531328	5.7
Urban	1801	426585	4.2
Division:			
Barisal	594	103556	5.7
Chittagong	805	165147	4.9
Dhaka	1049	212279	4.9
Khulna	598	119433	5.0
Rajshahi	654	128222	5.1
Rangpur	616	125434	4.9
Sylhet	523	103842	5.0
Religion:			
Muslim	4174	846973	4.9
Hindu	620	101523	6.1
Others	45	9417	4.8
Total	**4839**	**957913**	**5.1**

The level of crude death rates by districts has been shown in Map 4.1 at the end of this chapter.

4.1.2 Age-Specific Death Rates

The age-specific death rate for persons of a given age *x* (or for a given age interval) is the number of persons who died aged *x* in a specified year divided by the population age *x* in the middle of the year. The rate is usually expressed per 1000 population per year and can be calculated for males and females separately. The rates calculated for the sample area by age and sex in 2016 are shown in Table 4.2. The usual pattern of mortality by age is reflected in the rates presented in the table under reference: it is the highest during infancy, thereafter it decreases as the risk of dying decreases as age advances and this pattern continues roughly till age 20-24 when it shows an upward shift due to higher risk of mortality at advanced ages. The overall pattern of the age-specific rates is also reflected in rates presented in the same table by urban-rural residence. The age patterns of mortality calculated for the rural, urban area and for the overall sample are compared in Figures 4.1 & 4.2.

Table 4.2: Age specific death rates (ASDR) by residence, SVRS 2016

Age group	Rural			Urban			Total		
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
<1	33.30	34.04	33.66	34.86	18.03	24.12	33.91	25.48	29.17
1-4	2.78	1.89	2.34	1.11	1.12	1.11	2.10	1.58	1.84
5-9	0.97	0.53	0.75	0.28	0.71	0.49	0.67	0.61	0.64
10-14	0.61	0.69	0.65	0.30	0.08	0.19	0.48	0.43	0.46
15-19	1.60	1.44	1.52	1.00	1.04	1.02	1.34	1.25	1.30
20-24	1.07	0.80	0.93	0.58	0.54	0.56	0.85	0.68	0.76
25-29	1.10	1.26	1.19	0.56	1.21	0.92	0.85	1.23	1.06
30-34	1.29	0.95	1.11	1.13	0.95	1.04	1.21	0.95	1.08
35-39	2.61	1.97	2.28	1.51	1.20	1.36	2.08	1.61	1.84
40-44	2.84	2.63	2.74	2.93	2.37	2.67	2.89	2.51	2.70
45-49	5.13	3.70	4.49	3.15	2.82	3.00	4.19	3.29	3.78
50-54	8.71	6.20	7.38	8.86	5.87	7.39	8.78	6.06	7.38
55-59	14.84	8.49	11.83	11.05	8.49	9.94	13.11	8.49	11.00
60-64	19.04	15.98	17.60	16.89	13.81	15.55	18.09	15.10	16.73
65-69	29.23	24.63	27.13	24.73	19.00	22.24	27.37	22.43	25.16
70-74	44.97	40.68	43.09	39.16	35.71	37.62	42.74	38.73	40.97
75-79	64.78	43.50	55.70	57.47	43.06	51.23	62.17	43.34	54.09
80+	112.32	104.58	108.41	111.37	111.43	111.40	112.00	107.01	109.45
CDR	**6.5**	**5.0**	**5.7**	**4.7**	**3.7**	**4.2**	**5.7**	**4.4**	**5.1**

The overall rate under one year of age is 29.2 per 1000 population with a wide variation between males (33.3) and females (25.5). A similar margin of difference is noted between rural area (33.7) and urban area (24.1). The old age mortality, for example, at 80+ is higher (112) among the males than among the females (107), higher in urban area (111.4) than in the rural area (108.4).

Figure 4.1: Age specific death rates (ASDR) by residence, SVRS 2016

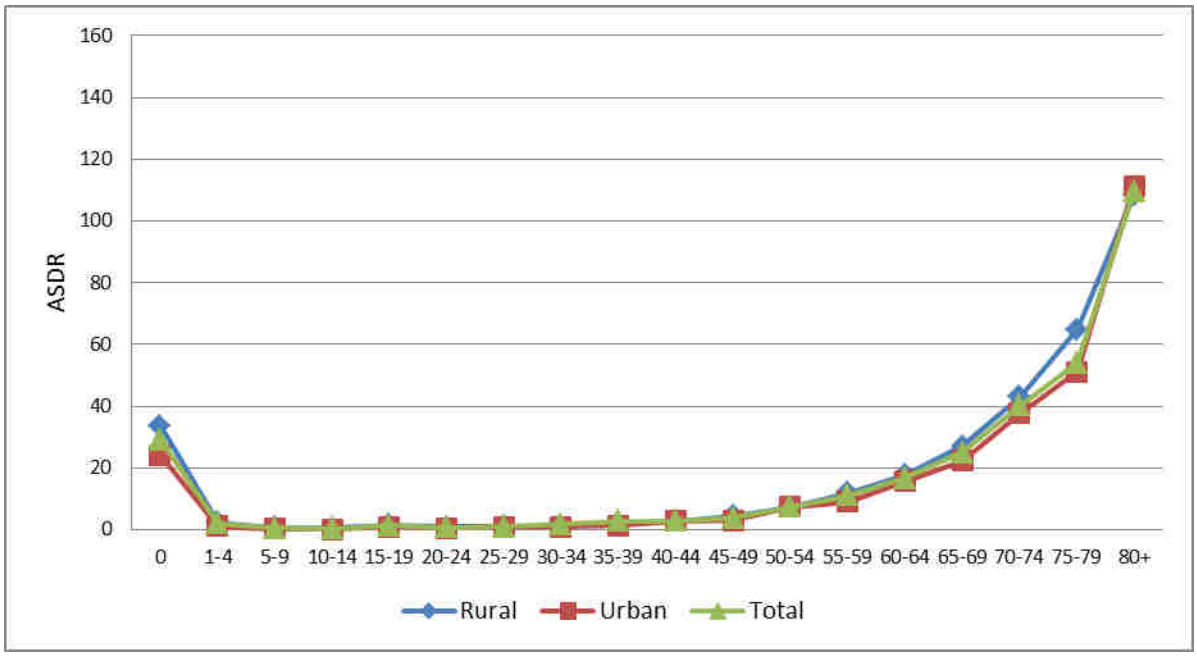
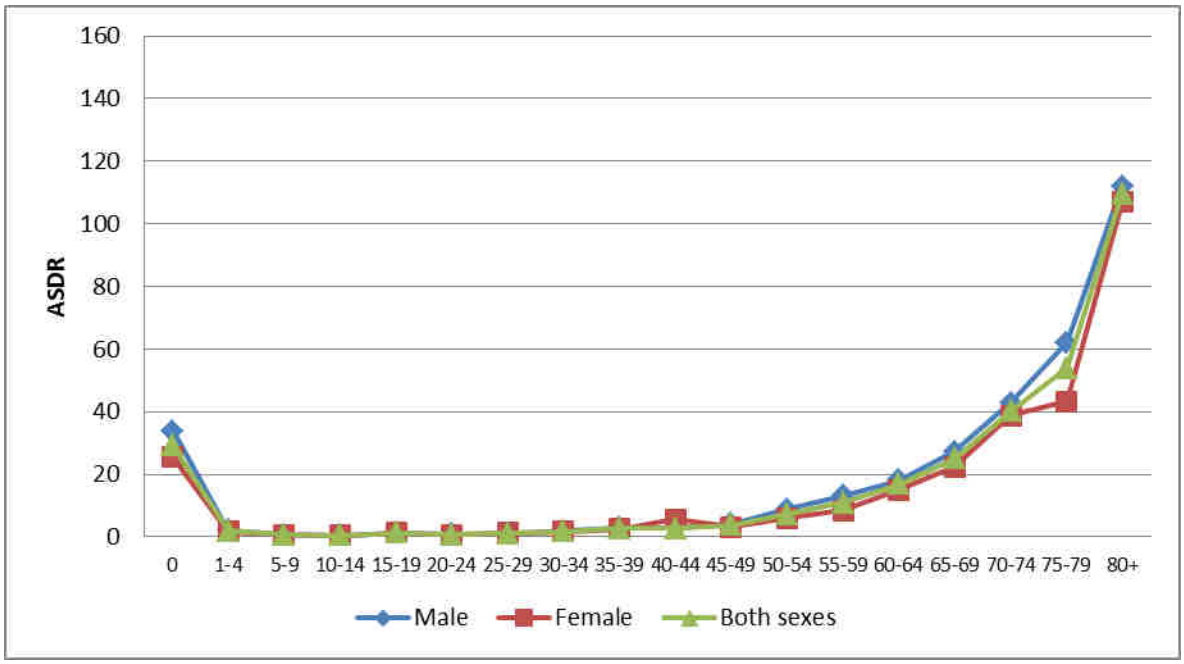


Figure 4.2: Age specific death rates (ASDR) by sex, SVRS 2016



The rates by age groups are computed also for the seven administrative divisions of the country. The resulting rates are shown in Table 4.3. As can be observed from the results presented in the table under reference, Sylhet experienced the highest death rate (32.4 per thousand) amongst those who are under age 1 followed by Rangpur (30.4 per thousand), the lowest (26.1 per thousand) being reported

in Barisal division. The old age mortality (at age 80+) in the highest (123.1) in Barisal division followed by Rangpur (122.0). It is the lowest (76.7) in Sylhet division.

Table 4.3: Age-specific death rate (ASDR) per 1000 population by division, SVRS 2016

Age	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
0	26.1	29.1	30.0	28.2	27.0	30.4	32.4
1	6.1	5.3	2.5	2.8	3.1	2.0	5.5
2	3.9	2.0	2.2	1.1	2.0	1.4	3.2
3	1.2	1.8	1.0	0.0	0.5	0.5	0.0
4	0.0	0.9	0.5	0.5	0.5	0.5	2.0
0-4	7.6	7.8	7.1	6.7	6.9	7.3	9.1
5-9	0.8	0.5	0.8	0.8	0.5	0.6	0.5
10-14	0.4	0.5	0.4	0.3	0.6	0.5	0.5
15-19	1.3	1.4	1.2	1.4	1.6	1.2	0.9
20-24	0.8	0.5	0.9	0.9	0.7	0.6	1.0
25-29	1.2	0.8	0.9	0.9	1.0	1.4	1.6
30-34	0.8	1.2	0.9	1.2	0.6	1.5	1.5
35-39	2.9	1.5	2.1	1.4	1.7	1.6	1.9
40-44	2.8	2.2	2.7	2.0	2.4	3.2	4.3
45-49	3.2	4.8	4.4	3.4	2.7	2.8	5.3
50-54	6.5	7.9	7.1	5.4	7.4	7.3	11.0
55-59	11.2	12.4	10.9	7.4	11.6	13.5	9.3
60-64	19.6	16.4	15.2	16.5	16.7	15.0	19.5
65-69	28.8	28.9	22.7	22.8	23.4	20.9	34.0
70-74	49.7	40.3	39.1	43.4	44.6	34.1	36.2
75-79	43.0	48.5	59.6	64.0	62.6	48.0	44.4
80+	123.1	116.5	106.2	107.0	112.4	122.0	76.7
CDR	**5.7**	**4.9**	**4.9**	**5.0**	**5.1**	**4.9**	**5.0**

4.2 Early Childhood Mortality

In human population, newborns and the elderly experience the highest mortality. Mortality among infants and children is dependent upon, among others, the medical and health care facilities provided to the mothers and their children in the community. Infant and child mortality rates are the basic indicators of a country's socio-economic situation and quality of life. They are used to monitor and evaluate population and health program and policies. The rates of infant and childhood mortality are also useful in identifying promising directions for health and nutrition programs.

Rates of childhood mortality vary over time in relation to changes in the epidemiological risks (exposure to disease) nutritional deficits (susceptibility to disease and death), and the extent to which a country's health and social service sectors prevent and mitigate these threats to health and survival.

The SVRS obtained information on early childhood mortality that permits the computation of the following rates:

(a) Infant mortality rate;
(b) Neo-natal mortality rate;
(c) Post neo-natal mortality rate;

(d) Child mortality rate and
(e) Under-five mortality rate.

Since different causes affect mortality between the time of conception and the end of the first year after birth, these periods have been divided into several sub-intervals under different measurable indicators. The accompanying table shows some accepted sub-divisions of these periods. The table also sub-divides the deaths beyond these periods.

Table 4.4: Sub-divisions of death by intervals

Interval	Type of death	Conventional rate
(a) Deaths under 4 weeks of life	Neo-natal death	Neo-natal mortality rate
(b) Deaths between 4 weeks and under one year	Post-Neo-natal deaths	Post-Neo-natal mortality rate
(c) Deaths under one year of age	Infant deaths	Infant mortality rate
(d) Deaths between first and the fifth birth day	Child deaths	Child mortality rate
(e) Deaths between birth and fifth birth day	Under-5 deaths	Under-5 mortality rate

4.2.1 Infant Mortality

The best-known and most widely available measure of mortality in early life is the infant mortality rate (IMR). Infant mortality has a great impact on the age distribution of the population.

As we can see in Table 4.4 above, infants are defined as those who are yet to celebrate their first birth day. All those who are under age 1, are infants and their ages are recorded as 0. Infant mortality rate is calculated from the deaths of those who died before reaching age 1. The overall infant mortality rate is estimated to be 28.0 per 1000 live births in the SVRS area in 2016 (see Table 4.5). The rate was 29 in 2015. The urban-rural rates in 2016 are equal to each other (28.0). The overall infant mortality rate as reported in icddrb surveillance area was 24.7 per 1000 live births. The BDHS 2014 however reported a much higher rate (38 per 1000 live births).

The rate shows substantial variations by administrative divisions, the highest in Sylhet (35.0) followed by Rangpur (29.0).Barisal division experiences the lowest (25.0) infant mortality. Hindus run the risk of higher infant mortality rate (31.0) than their Muslim counterparts (26.0). The overall male-female difference in the IMR is only 1.0 per 1000 live births: 27.0 among the males and 28.0 among those who are females. Unlike other divisions, the rates for males in Barisal division and Khulna divisions exceed the rates for females by substantial margin.

Among the Hindus, sex has important bearing on the infant mortality rate, where female infants are significantly more susceptible to death (35.0) during infancy than their male counterparts 27.0). This is in contrast to the Muslim infants, where male infants are as likely as the female infants to die in infancy.

Table 4.5: Infant mortality rates per 1000 live births by sex and background characteristics, SVRS 2016

Background Characteristics	Sex		
	Male	Female	Both sexes
Residence:			
Rural	26	28	28
Urban	28	28	28
Division:			
Barisal	21	31	25
Chittagong	28	25	26
Dhaka	26	30	28
Khulna	19	33	26
Rajshahi	24	29	26
Rangpur	34	24	29
Sylhet	40	30	35
Religion:			
Muslim	26	26	26
Hindu	27	35	31
Total	**27**	**28**	**28**

4.2.3 Neo-natal Mortality Rate

The Neo-natal mortality rate (NMR) is defined as the number of infants less than one month of age during a year per 1000 live births in the same year. Levels of NMR for the year 2016 by background characteristics have been presented in Table 4.6. The overall NMR is estimated to be 19.0 deaths per 1000 live births, there being virtually no sex and urban-rural differentials in the rate.

The Neo-natal mortality rate varies from as low as 14.0 deaths per 1000 live births in Chittagong division to as high as 27.0 deaths per 1000 live births in Sylhet division. Muslim neonates experience a somewhat lower risk of dying (18.0) than their Hindu counterparts (21.0).

Although the overall rate for males is in close agreement with the rate for females, the rates for males and females by divisions vary substantially in some cases. While males in Rangpur division, for example, experience a higher neo-natal mortality rates in NMR (27.0), the female neonates in Khulna and Rajshahi divisions experience significantly higher risk of dying (21.0 and 23.0) than their male counterpart (16.0 in each). No discernable difference was noted between the male neonates and female neonates among the Muslims.

Table 4.6: Neo-natal mortality rates (NMR) per 1000 live births by background characteristics, SVRS 2016

Background Characteristics	Sex of the neonates		
	Male	Female	Both sexes
Residence:			
Rural	17	19	19
Urban	20	20	20
Division:			
Barisal	13	24	19
Chittagong	12	16	14
Dhaka	20	19	19

Background Characteristics	Sex of the neonates		
	Male	Female	Both sexes
Khulna	16	21	18
Rajshahi	16	23	20
Rangpur	27	16	21
Sylhet	30	23	27
Religion:			
Muslim	18	19	18
Hindu	14	29	21
Total	**18**	**20**	**19**

The Neo-natal mortality rate in BDHS 2014 was reported to be 28, while this rate as observed in HDSS (icddrb) in 2013 was 19.1.

4.2.4 Post-Neo-natal Mortality Rate

Post Neo-natal mortality rate (PNMR) is also a mortality index of infants but limited to children of age 1 month to 11 months old. The rates obtained from the SVRS data have been presented in Table 4.7 by a few selected background characteristics of the population under study.

The overall post neo-natal mortality was estimated to be 9.0 deaths per 1000 live births. The comparable rate as obtained in 2014 BDHS is 10. The rates by sex have also been compared in the same table by urban-rural residence, geographic divisions and religion. As can be noted, the post neo-natal mortality for male births is 9.0 as against a rate of 8.0 for females. The highest rate (12.0) was reported in Chittagong division, the lowest (7.0 in each) in Barisal, Khulna and Rajshahi divisions. Notable difference does also exist between urban (8.0) and rural area (9.0). This also holds for religion: Muslim 7.0 and Hindu 10.0. Sex differentials in the rate are marked for almost all the divisions. The risk is more pronounced among the female neonates in Dhaka and Khulna divisions. In contrast, male neonates are at higher risks in Rangpur and Sylhet divisions.

Table 4.7: Post Neo-natal mortality rates per 1000 live births by background characteristics, SVRS 2016

Background Characteristics	Sex of the neonates		
	Male	Female	Both sexes
Residence:			
Rural	9	9	9
Urban	8	8	8
Division:			
Barisal	7	7	7
Chittagong	16	8	12
Dhaka	6	11	9
Khulna	4	12	7
Rajshahi	8	6	7
Rangpur	7	8	8
Sylhet	10	7	9
Religion:			
Muslim	8	7	7
Hindu	13	7	10
Total	**9**	**8**	**9**

4.2.5 Child Mortality Rate

Child mortality rate (C_hMR) is defined as the probability of dying of the children between their first and fifth birth day per 1000 children surviving to their fifth birth day. The computed rates for the SVRS area are shown in Table 4.8 by residence, division and religion according to the sex of the children. The rates shown in the table under reference confirm that male children aged 1–4 are more likely (2.1) to experience death than their female counterparts (1.6). This rate is 2.8 among the male children in the rural area as against 1.9 among the females in the same area, while in the urban area, male and female children are at an equal risk of dying, each with a rate of 1.1 per thousand children. So far as the regional variations are concerned, the child death varies from 0.9 deaths per 1000 children in Khulna division to 2.7 deaths per 1000 children in Barisal and Sylhet division. In Sylhet division, the female children are more vulnerable (3.1) to death than their male counterparts (2.2), while the male children suffer more in Barisal (4.1: 1.4) Chittagong division (3.1: 1.7). The data demonstrate that Muslim children are marginally at higher risk of dying (1.7) compared to the children of other religions (1.5) In contrast, both Muslim male children and Hindu male children are at greater risk than their respective counterparts.

Table 4.8: Child death rates (1-4 years) by background characteristics, SVRS 2016

Background Characteristics	Sex		
	Male	Female	Both sexes
Residence:			
Rural	2.8	1.9	2.3
Urban	1.1	1.1	1.1
Division:			
Barisal	4.1	1.4	2.7
Chittagong	3.1	1.7	2.4
Dhaka	1.6	1.5	1.5
Khulna	1.3	0.6	0.9
Rajshahi	1.5	1.5	1.5
Rangpur	1.2	1.2	1.2
Sylhet	2.2	3.1	2.7
Religion:			
Muslim	2.0	1.5	1.7
Hindu	1.7	1.3	1.5
Total	**2.1**	**1.6**	**1.8**

4.2.6 Under-5 Mortality Rate

Under-5 mortality rate (U_5MR) is the probability of dying of children between birth and the fifth birth day of children expressed per 1000 live births in a given year. Table 4.9 presents these rates for both sexes of the children by some selected background characteristics of the population under study. The overall under-five mortality rate is 35 deaths per 1000 live births with negligible variation by sex (35 for males versus 34 for females). In rural areas, the rate was 36.

Khulna Division experiences the lowest (29) under-five mortality, while Sylhet the highest (46). The rates in other divisions vary by a narrow margin. Keeping consistency with child mortality rates discussed earlier with respect to religion, Hindus are at a higher risk to experience under-five mortality with a rate of 37 compared to their Muslim counterpart with a rate of 33. In rural area, the rate is 36 as against a rate of 32 in urban area.

Marked variations in under-five mortality are seen at the divisional level, ranging between 46 in Sylhet division and 29 in Khulna division. This is also true when the rates are compared by sexes of the children. Substantial variations by sex are noted specially in Rangpur division where males are more vulnerable to under-five mortality than the females. Religion seems to be least associated with under-5 mortality in the present instance, although female children in Hindu families experience higher risk of mortality (41) than the male children (33). It is worth to mention that the overall under 5 mortality as reported in 2014 BDHS is 46, a much higher rate than the 2015 SVRS.

Table 4.9: Under- 5 mortality rate per 1000 live births by background characteristics, SVRS 2016

Background Characteristics	Sex of the children		
	Male	Female	Both sexes
Residence:			
Rural	36	35	36
Urban	32	33	32
Division:			
Barisal	35	36	35
Chittagong	38	31	35
Dhaka	32	36	34
Khulna	24	35	29
Rajshahi	29	34	32
Rangpur	38	27	33
Sylhet	49	44	46
Religion:			
Muslim	34	32	33
Hindu	33	41	37
Total	**35**	**34**	**35**

4.3 Maternal Mortality

A maternal death is a death that occurs to a woman due to complications during pregnancy, child birth and the peurperium (period after delivery). The "Tenth Revision of the International Classification of Diseases" defines a maternal death as any "death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes" (WHO, 2004).While not strictly a measure of risk, the maternal mortality ratio indicates the 'price' (in terms of mother's life) that a human population pays for each infant brought into the world.

Maternal mortality can be measured using a number of indicators. The most commonly used indicator is the maternal mortality ratio (MMR), which is calculated as the ratio of maternal deaths in a specified period to the number of live births during the same period:

The maternal mortality ratio is the most widely used and known indicator of maternal death. This indicator relates maternal deaths to a measure of risky events, namely births; ideally, the indicator should relate maternal deaths to the number of pregnancies, since pregnancies are the likely events, but good counts of pregnancies are rarely available

The maternal mortality ratio obtained from the reported maternal deaths and numbers of live births are presented in Table 4.10 by maternal age, urban-rural residence and for the administrative divisions of the country. The overall maternal mortality ratio was estimated to be 1.78 maternal deaths per 1000

live births. In general, the ratios are relatively lower at younger ages. The risk is significantly higher for older mothers. The ratio is higher (1.90) in rural area than in urban area (1.60). The lowest maternal mortality ratio as obtained in 2015 is 1.13 as recorded in Chittagong division and the highest (2.73) in Sylhet division. The comparable ratio as obtained in 2010 Maternal Mortality and Health Care Survey was 1.97 per 1000 live births.

Table 4.10: Age-specific maternal mortality ratio by background characteristics, SVRS 2016

Background characteristics	Age specific maternal mortality ratio
Maternal age	
15–19	2.06
20–24	1.45
25–29	1.65
30–34	1.27
35–39	8.00
40–44	9.57
45–49	16.95
Residence:	
Rural	1.90
Urban	1.60
Division:	
Barisal	2.65
Chittagong	1.13
Dhaka	1.24
Khulna	1.41
Rajshahi	1.82
Rangpur	2.58
Sylhet	2.73
Total	**1.78**

4.4 The Life Table

The life table is a life history of a hypothetical group of people which originates from some standard number of births and diminishes as age advances according to a predetermined schedule of mortality. It is a very useful device for studying the levels and trends in mortality and projecting population, labor force and school age population at some future dates. Insurance companies make extensive use of lie table in the determination of their insurance premium. The government may also find a life table very useful in determining age at retirement for the employees. There are usually two types of life table: complete and abridged. The complete life table is presented in single years while the abridged life table is presented in five-year age groups. The SVRS data on the deaths by age groups of the population permit us to construct such life tables for males and females separately. It is also possible to construct life table for both. Tables 4.11, 4.12 and 4.13 are such three life tables for males, females and both sexes respectively.

The interpretation of the various columns of a life table is beyond the scope of this report. The only column that we are frequently concerned with is the expectation of life denoted by e_x. These values represent the average longevities of individuals beyond a specified age (say x) and thus reflect the general level of mortality in a population. The most useful indicator of a life table is its e_0 value, which measures the average life expectancy of a population and hence a useful index of the level of mortality. Based on the life table values, constructed from the death statistics as obtained in 2016 SVRS, we find that females, on the average, have higher longevity (72.9 years) than their male counterparts (70.3 years). This difference has clearly been reflected in their life expectancies at different ages (see Figure 4.3). The number of survivors by age denoted by l_x also speak in favor of the higher survival status of the females compared to their male counterparts. The l_x values are shown in Figure 4.4. The overall expectation of life at birth for males and females as obtained in icddrb are in 2013 are respectively 70.0 years and 74 years as against 70.3 years and 72.9 years in SVRS area in 2016.

Table 4.11: Abridged life table for males, SVRS 2016

Age	${}_nq_x$	l_x	${}_nL_x$	T_x	e_x
0-1	0.03295	100000	97157	7030033	70.3
1-5	0.00836	96705	384845	6932876	71.7
5-10	0.00334	95897	478684	6548031	68.3
10-15	0.00240	95576	477310	6069347	63.5
15-20	0.00668	95347	475219	5592037	58.6
20-25	0.00424	94711	472510	5116818	54.0
25-30	0.00424	94309	470574	4644308	49.2
30-35	0.00603	93909	468233	4173735	44.4
35-40	0.01035	93342	464468	3705502	39.7
40-45	0.01435	92376	458753	3241034	35.1
45-50	0.02075	91051	450950	2782282	30.6
50-55	0.04304	89161	437054	2331332	26.1
55-60	0.06357	85324	413727	1894278	22.2
60-65	0.08671	79900	382980	1480551	18.5
65-70	0.12849	72972	342563	1097571	15.0
70-75	0.19368	63596	288194	755008	11.9
75-80	0.27007	51278	222755	466814	9.1
80+	...	37430	244059	244059	6.5

Table 4.12: Abridged life table for females, SVRS 2016

Age	${}_nq_x$	l_x	${}_nL_x$	T_x	e_x
0-1	0.02492	100000	97819	7291495	72.9
1-5	0.00629	97508	388486	7193677	73.8
5-10	0.00305	96894	483731	6805191	70.2
10-15	0.00215	96599	482475	6321460	65.4
15-20	0.00623	96391	480510	5838985	60.6
20-25	0.00339	95791	478139	5358475	55.9
25-30	0.00613	95465	475903	4880336	51.1
30-35	0.00474	94880	473301	4404433	46.4
35-40	0.00802	94430	470410	3931132	41.6
40-45	0.01248	93673	465612	3460722	36.9
45-50	0.01633	92504	459014	2995111	32.4
50-55	0.02988	90994	448677	2536097	27.9
55-60	0.04163	88275	432824	2087420	23.6
60-65	0.07293	84601	408632	1654597	19.6
65-70	0.10653	78430	372512	1245965	15.9
70-75	0.17691	70075	320083	873453	12.5
75-80	0.19645	57678	261439	553370	9.6
80+	...	46347	291931	291931	6.3

Table 4.13: Abridged life table for both sexes combined, SVRS 2016

Age	${}_nq_x$	l_x	${}_nL_x$	T_x	e_x
0-1	0.02844	100000	97509	7156377	71.6
1-5	0.00733	97156	386891	7058868	72.7
5-10	0.00319	96444	481449	6671977	69.2
10-15	0.00230	96136	480126	6190528	64.4
15-20	0.00648	95915	478084	5710402	59.5
20-25	0.00379	95293	475547	5232319	54.9
25-30	0.00529	94932	473440	4756772	50.1
30-35	0.00539	94430	470936	4283331	45.4
35-40	0.00916	93921	467617	3812395	40.6
40-45	0.01341	93061	462364	3344778	35.9
45-50	0.01874	91813	455109	2882414	31.4
50-55	0.03629	90092	442966	2427305	26.9
55-60	0.05361	86823	423166	1984339	22.9
60-65	0.08047	82168	395221	1561173	19.0
65-70	0.11873	75556	356558	1165952	15.4
70-75	0.18633	66585	302829	809394.2	12.2
75-80	0.23928	54178	239675	506565.3	9.3
80+	...	41214	266890	266890.1	6.5

Figure 4.3: Expectation of life by age and sex, SVRS 2016

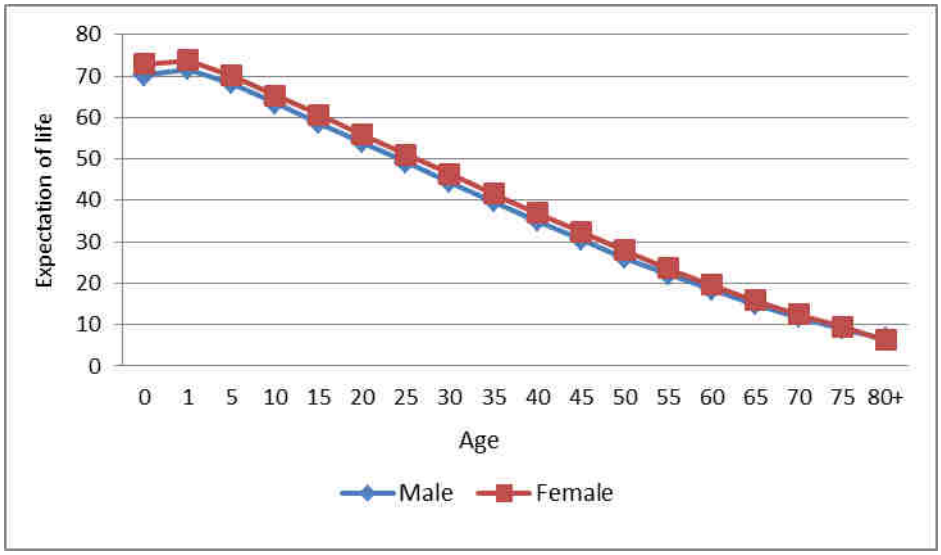
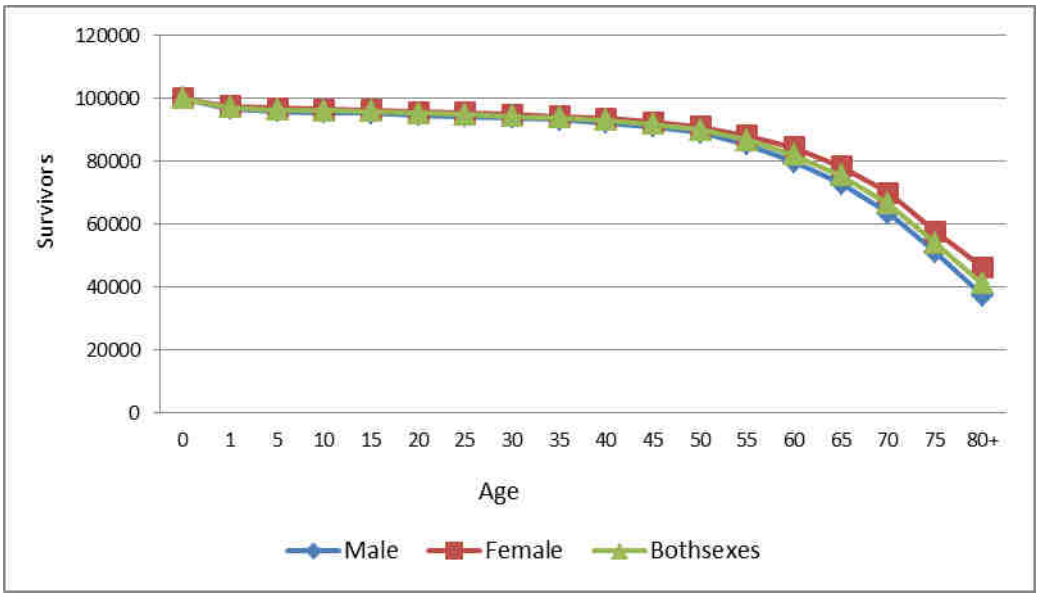


Figure 4.4: Life table survivors by age and sex, SVRS 2016



4.5 Causes of Death

The survey lists 15 major causes of death. The overall death rate from all theses causes was 5.1, which is essentially the crude death rate. Partitioning this rate by the causes of death shows that the old age claims the most of the total deaths accounting for 0.94 per thousand. This is followed by death due to stroke (0.82). Table 4.14 shows the results of this investigation.

Table 4.14: Deaths rates per 1000 population from top 15 causes by residence, SVRS 2016

Causes of death	Rural	Urban	Total
Old age	1.07	0.78	0.94
Heart attack	0.75	0.90	0.82
Cancer	0.56	0.36	0.47
Respiratory Disease	0.40	0.25	0.30
Heart disease	0.19	.27	0.23
Pneumonia	0.28	0.12	0.21
Asthma	0.22	0.10	0.17
High Blood Pressure	0.16	0.11	0.14
Other Fevers	0.14	0.08	0.11
Kidney problem	0.11	0.11	0.11
Other accident	0.11	0.09	0.10
Brain stroke	0.10	0.10	0.10
Diabetes	0.09	0.09	0.09
Drowning	0.11	0.04	0.08
Others Diseases	0.45	0.28	0.38
Total	**5.7**	**4.2**	**5.1**
N	3038	1801	4839

4.5.1 Major Causes of Death

Table 4.15 presents the percentage distribution of deaths by 15 major causes of deaths. Of all reported deaths in the survey, about 19 percent were due to old ages and 16.2 percent due to stroke. Cancer alone claims more than 9 percent of all reported deaths. Stroke claims relatively more people in the urban area (21.4%) as compared to the rural area (13.1%).

Table 4.15: Percentage of causes of death from top15 causes by residence, SVRS 2016

Causes of death	Rural	Urban	Total
Old age	18.7	18.4	18.6
Heart attack	13.1	21.4	16.2
Cancer	9.8	8.6	9.4
Respiratory Disease	7.9	6.6	7.4
Heart disease	5.9	5.8	5.9
Pneumonia	3.4	6.4	4.5
Asthma	4.8	2.9	4.1
High Blood Pressure	3.9	2.3	3.3
Other Fevers	2.8	2.6	2.7
Kidney problem	2.5	1.8	2.3
Other accident	2.0	2.7	2.2
Brain stroke	1.9	2.2	2.0
Diabetes	1.7	2.3	2.0
Drowning	1.6	2.2	1.8
Others Diseases	2.0	1.0	1.6
Total	**100.0**	**100.0**	**100.0**

4.5.2 Causes of Deaths among Infants

Table 4.16 presents the percentage distribution of the infant deaths due to 10 major causes by urban-rural residence. The table shows that infants are more vulnerable to pneumonia, which claims nearly one-third of the total infant deaths. Respiratory disease ranks next to pneumonia claiming 8 percent of the total deaths followed by malnutrition (6. 6).

Table 4.16: Percentage distribution of infant deaths due to 10 top causes by residence, SVRS 2016

Causes of death	Rural	Urban	Total
Pneumonia	40.2	21.0	32.7
Respiratory Disease	5.2	12.3	8.0
Malnutrition	7.2	5.6	6.6
Other Fever	4.2	8.2	5.8
Complex Diarrhea	2.3	9.7	5.2
Jaundice	2.9	2.1	2.6
Persistent Diarrhea	2.9	2.1	2.6
Typhoid	2.6	2.1	2.4
Influenza	1.6	2.1	1.8
Others Diseases	30.7	34.9	32.3
Total	**100.0**	**100.0**	**100.0**

4.5.3 Causes of Deaths among Under–5 Children

Keeping consistency with the causes of death among the infants, the highest under-five mortality rate is attributable to pneumonia claiming 30.5 percent of all deaths. Other prominent causes are fever (6.6%) and respiratory (6.9 %). Unidentified causes account for more than one third of the total deaths.

Table 4.17: Percentage distribution of under-5 mortality by causes and residence, SVRS 2016

Causes of death	Rural	Urban	Total
Pneumonia	35.9	20.9	30.5
Respiratory Disease	4.3	11.6	6.9
Other Fever	5.3	8.9	6.6
Drowning	7.5	3.1	5.9
Malnutrition	4.5	7.1	5.5
Complex Diarrhea	5.0	4.0	4.7
Heart Diseases	1.3	4.4	2.4
Jaundice	2.5	1.8	2.2
Persistent Diarrhea	2.5	1.8	2.2
Others Diseases	31.2	36.4	33.1
Total	**100.0**	**100.0**	**100.0**

4.5.4 Causes of Deaths at Old Ages

Table 4.18 shows the percentage distribution of the causes of deaths to old aged people by residence. Old age alone is responsible for about one third of the total deaths of the older people, followed by

heart attack (18%). At old ages, as expected, unidentified diseases are responsible for over 15 percent of the total deaths.

Table 4.18: Major 15 causes of deaths of elderly persons (60 years and over) by residence, SVRS 2016

Causes of death	Rural	Urban	Total
Old age	31.8	31.7	31.8
Heart Attack	15.3	22.7	18.0
Cancer	8.1	5.2	7.1
Respiratory Disease	6.6	6.2	6.4
Heart diseases	3.4	6.4	4.5
Asthma	4.9	3.3	4.4
High Blood Pressure	3.3	2.7	3.0
Brain stroke	1.9	2.7	2.2
Diabetes	1.5	2.4	1.8
Other Fever	2.1	0.5	1.5
Kidney problem	1.3	1.2	1.3
Phoral Ifusion	1.1	0.6	1.0
Other accident	0.7	1.3	0.9
Mental Diseases	1.1	0.4	0.9
Others Diseases	16.7	12.6	15.2
Total	**100.0**	**100.0**	**100.0**

4.5.5 Causes of Maternal Deaths

The most conspicuous reason for maternal mortality is the complex delivery claiming 28 percent of the maternal deaths followed by pregnancy related problems accounting for 25 percent of such deaths. Table 4.19 shows a list of all such reasons related to maternal deaths.

Table 4.19: Distribution of causes of maternal mortality, SVRS 2016

Causes of death	Total
Complex Pregnancy	25.0
Complex delivery	28.1
Bleeding after delivery (PPH)	15.6
Complex Abortion	18.8
Bleeding at Pregnancy period(APH)	12.5
Total	**100.00**

The decomposition of the maternal mortality ratio by major causes of death is presented in Table 4.20.

Table4.20: Maternal mortality ratio by causes per 1000 live births, SVRS 2016

Causes of death	Total
Complex pregnancy	0.45
Complex delivery	0.50
Bleeding after delivery (PPH)	0.28
Complex Abortion	0.33
Bleeding at Pregnancy period(APH)	0.22
Total	**1.78**

The results presented in the table confirm that complex delivery and pregnancy related problem explain over 53 percent of the overall rate.

4.6 Trends in Mortality: 1982-2016

4.6.1 Crude Death Rate

The crude death rates estimated by BBS through their SVRS program are presented in Table 4.21 since 1982. The rate was in the neighborhood of 12 per thousand population during 1982–95, which thereafter declined to 10 per thousand in 1993. However, the onset of a fast decline in the level of crude death rate was observed in 1994 which recorded a further decline of the rate to 5.1 in 2002. A temporary rise in the CDR was noted after this period. The current CDR is estimated to be in the neighborhood of 5 per thousand population. Table 4.21 below shows the level of crude death rate obtained from different sources. The rates from 2002 are the ones derived from the registered deaths in the SVRS area of BBS.

Table 4.21: Trends in crude death rates for Bangladesh, SVRS 1982-2016

Period	Crude death rate	Period	Crude death rate
1982	12.2	1999	5.1
1983	12.3	2000	4.9
1984	12.3	2001	4.8
1985	12.0	2002	5.1
1986	12.1	2003	5.9
1987	11.5	2004	5.8
1988	11.3	2005	5.8
1989	11.3	2006	5.6
1990	11.4	2007	6.2

Period	Crude death rate	Period	Crude death rate
1991	11.2	2008	6.0
1992	11.0	2009	5.8
1993	10.0	2010	5.6
1994	9.3	2011	5.5
1995	8.7	2012	5.3
1996	8.2	2013	5.3
1997	5.5	2014	5.2
1998	5.1	2015	5.1
1998	5.1	2016	5.1

Sources: (1) For the period 1881–1980: CPD–UNFPA Paper Series, (2) For 1981–2011, BBS (2013, 2014), (3) *SVRS–2013 Key Indicators (BBS, 2015)

4.6.2 Childhood Mortality

As the data in Table 4.22 display, Neo-natal mortality, under-five mortality and childhood mortality rates all have declined consistently from 2001 to 2016. Even more impressive is the decline in under-five mortality over the same period.

Table 4.22: Trends in childhood mortality rates, SVRS 2001-2016

Year	Infant mortality	Neonatal mortality	Post-neonatal mortality	Under-five mortality	Child mortality
2001	56	39	17	82	4.1
2002	53	36	17	76	4.6
2003	53	36	17	78	4.6
2004	52	36	17	74	4.5
2005	50	33	16	68	4.1
2006	45	31	14	62	3.9
2007	43	29	13	60	3.6
2008	41	31	10	54	3.1
2009	39	28	11	50	2.7
2010	36	26	10	47	2.6
2011	35	23	11	44	2.4
2012	33	22	12	42	2.3
2013	32	22	11	41	2.2
2014	30	21	09	38	2.0
2015	29	20	09	36	2.0
2016	28	19	09	35	1.8

Sources: BBS (2014),. SVRS–2013 Key Indicators (BBS, 2015), na: Not available

4.6.3 Maternal Mortality Ratio

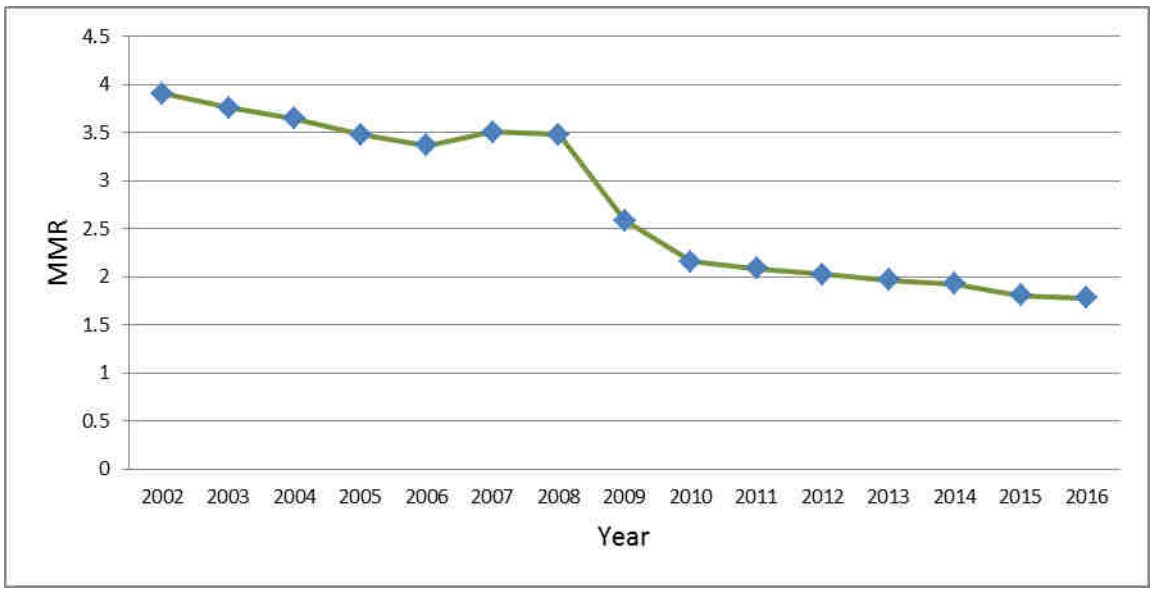
The trends in MMR during the period 1986–2016 are shown in the accompanying table (Table 4.23). As the estimates presented in the table dictate, the MMR declined from 6.48 per 1000 live births in 1986 to 3.15 in 2001, a more than 51 per cent decline in 15 years. The vital registration system initiated in 2002 records a somewhat higher rate (3.93) compared to the previous years. This ratio falls consistently to 1.78 in 2016. Figure 4.4 shows the trends in maternal mortality ratios over the period 1986–2014

Table 4.23: Trends in maternal mortality ratio per 1000 live births, SVRS 1986–2016

Year	MMR	Year	MMR
1986	6.48	2002	3.91
1987	5.96	2003	3.76
1988	5.72	2004	3.65
1989	5.08	2005	3.48
1990	4.78	2006	3.37
1991	4.72	2007	3.51
1992	4.68	2008	3.48
1993	4.52	2009	2.59
1984	4.49	2010	2.16
1995	4.47	2.011	2.09
1996	4.44	2012	2.03
1997	3.50	2013	1.97
1999	3.20	2014	1.93
2000	3.18	2015	1.81
2001	3.15	2016	1.78

Source: BBS (2013, 2014), *SVRS–2013 Key Indicators (BBS, 2015)

Figure 4.5: Maternal mortality ratio, SVRS 2002-2016



4.6.4 Expectation of Life at Birth

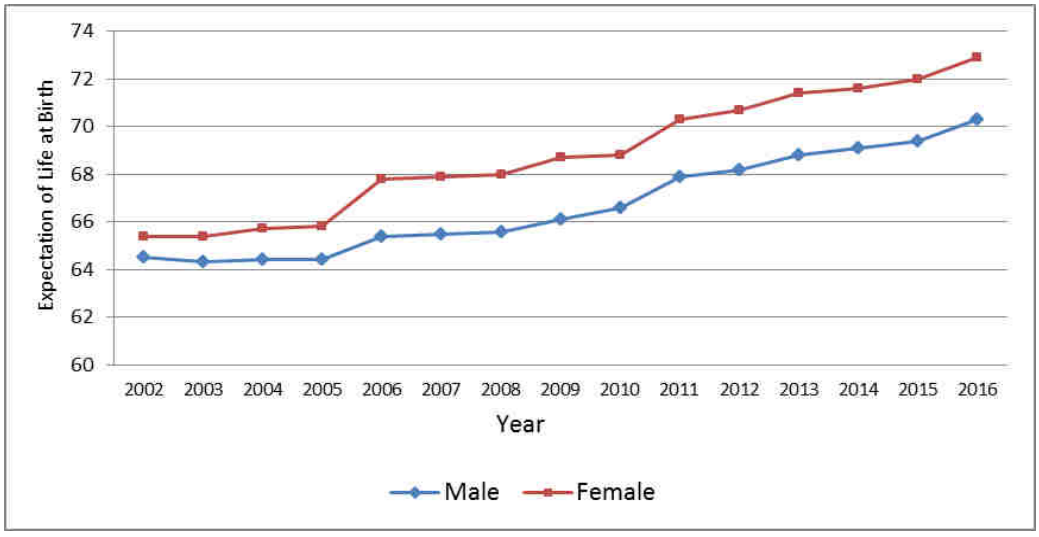
Expectation of life at birth is a summary measure of mortality that portrays the average longevity of life of an individual. The vital registration system in Bangladesh maintained and monitored by the Bangladesh Bureau of Statistics provides the estimates of life expectancy over the last 30 years. These estimates are shown in Table 4.24. The trends in the expectation of life at birth are displayed in figure 4.6 for the period 1981–2016. Note that the expectations of life at birth for males and females were 55.3 and 54.5 in 1981. These increased to 70.3 and 72.9 years in 2016 over a period of 35 years, implying an average annual increase 0.43 years for males and 0.53 years for females.

Table 4.24: Trends in expectation of life at birth by sex, SVRS 1981–2016

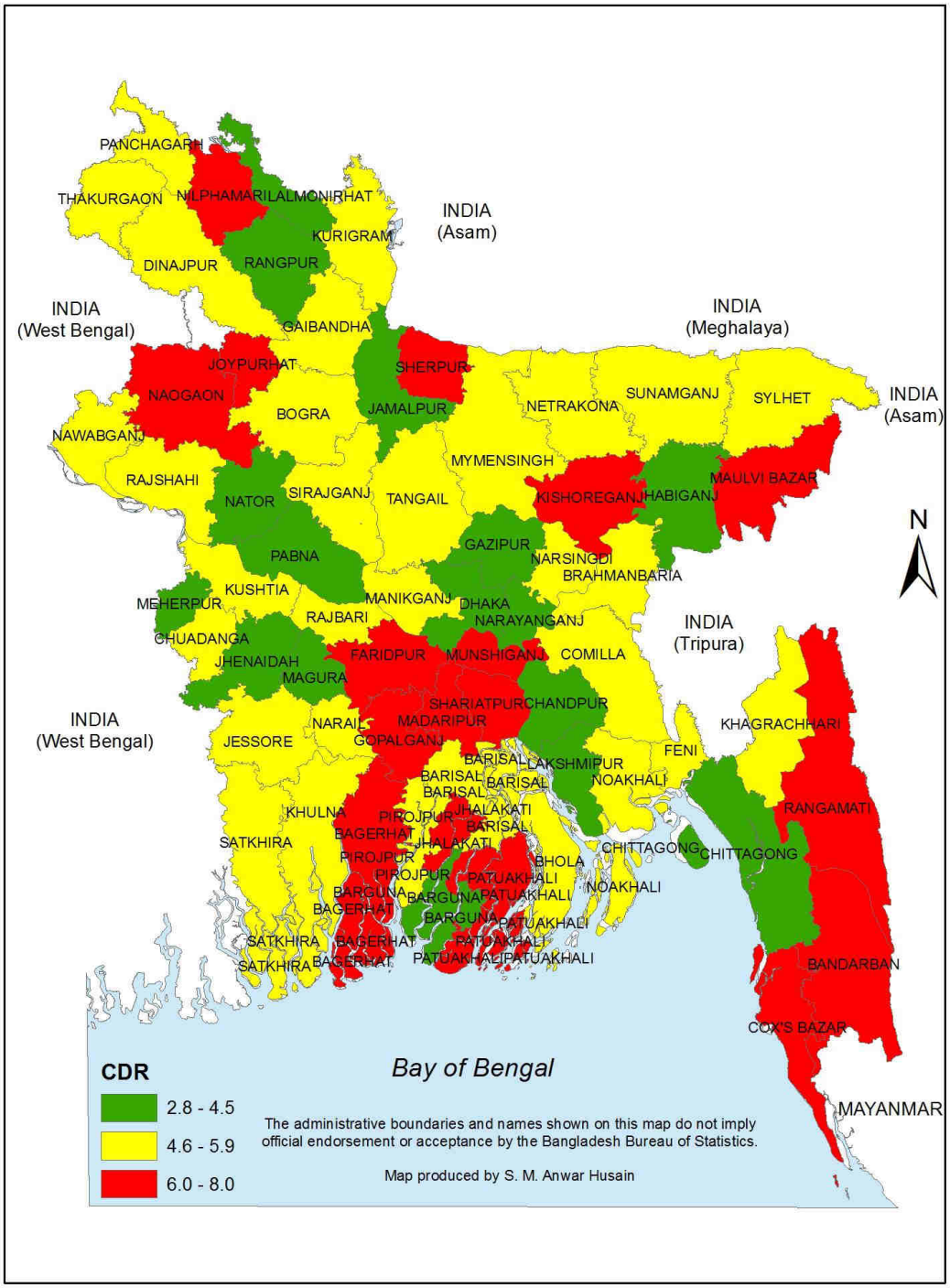
Year	Male	Female	Year	Male	Female
1981	55.3	54.5	1999	63.0	62.4
1982	54.5	54.8	2000	63.7	63.5
1983	54.2	53.6	2001	64.0	64.5
1984	54.9	54.7	2002	64.5	65.4
1985	55.7	54.6	2003	64.3	65.4
1986	55.2	55.3	2004	64.4	65.7
1987	56.9	56.0	2005	64.4	65.8
1988	56.5	55.6	2006	65.4	67.8
1989	56.0	55.6	2007	65.5	67.9
1990	56.6	55.6	2008	65.6	68.0
1991	56.5	55.7	2009	66.1	68.7
1992	56.8	55.9	2010	66.6	68.8
1993	58.2	57.7	2011	67.9	70.3
1994	58.2	57.9	2012	68.2	70.7
1995	58.4	58.1	2013	68.8	71.2
1996	59.1	58.6	2014	69.1	71.6
1997	60.3	59.7	2015	69.4	72.0
1998	61.7	61.2	2016	70.3	72.9

Source: BBS (2014), *SVRS–2013 Key Indicators (BBS, 2015)

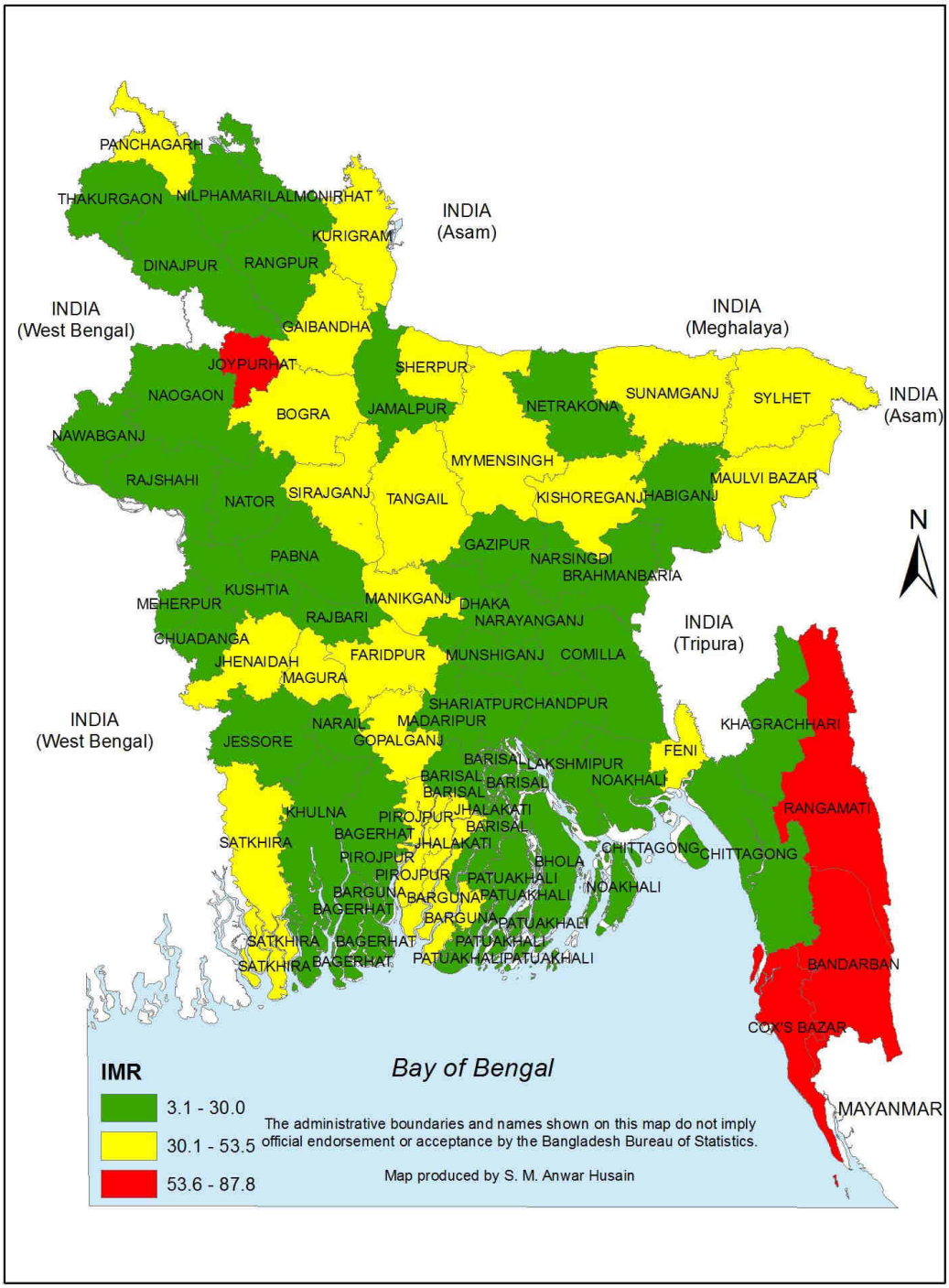
Figure 4.6: Trends in expectation of life at birth by sex, SVRS 2002–2016



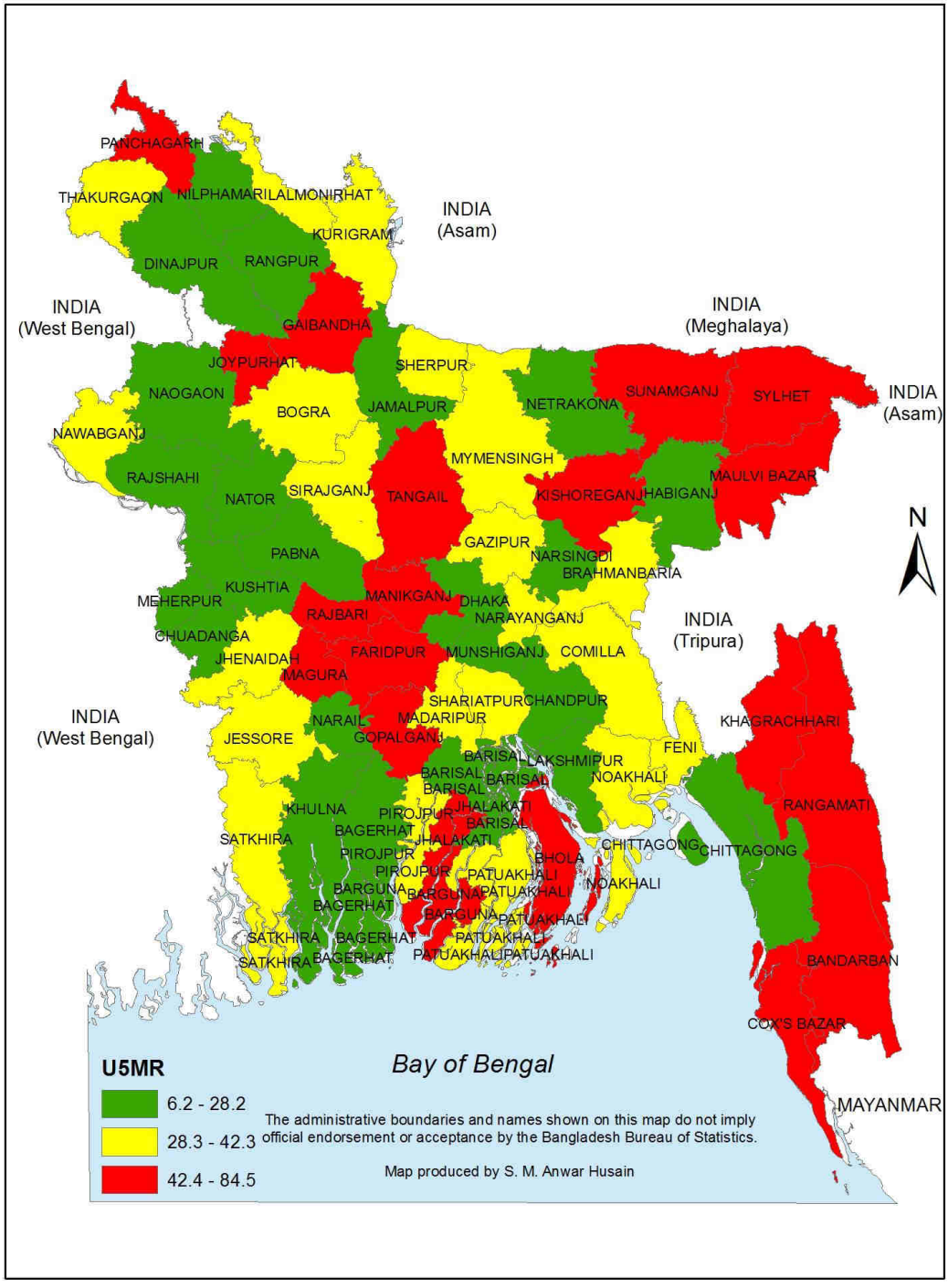
Map 4.1: Crude death rate (CDR) by Zila, SVRS 2016



Map 4.2: Infant mortality rate (IMR) by Zila, SVRS 2016



Map 4.3: Under-5 mortality rate (U5MR) by Zila, SVRS 2016



CHAPTER V

Marriage and Marriage Dissolution

5.1 Introduction

Marriage, separation, divorce and widowhood are demographic events that influence the course of population growth. These events together constitute what is called nuptiality. They influence the fertility and migration directly and mortality indirectly. Marriage, from the demographic point of view, should be looked upon as a continuous force of attrition, exerting its effect on the population of persons who are not currently married. As a result of its operation, the population of non-married persons is progressively reduced. Marriage is an important institution for both individuals and society as a whole.

Bangladesh has adopted the UN definition of marriage. It is the legal union of two persons of opposite sex. Registration of marriage in Bangladesh is obligatory for Muslims and Christians. In the case of other religions, it is optional and in that event, contractual marriage is performed in traditional way.

Marriages are mostly arranged either by the parents or other near relatives. At the time of marriage, the consent of both bride and groom is sought in presence of witnesses. There is a provision for registration of marriage on a form known as *Nikanamah*. An amount known as *Mohar* (bride price) is required to be committed by the husband to the bride with certain amount paid in cash or kind and the rest to be paid on demand. The bride price is determined in accordance with the social and economic position of both parties. Divorce is permitted among the Muslims and the Christians under certain conditions. Marriage of widows is permissible among all religions. Hindu marriage is a pre-ordained union and there is little scope for dissolution by divorce.

Bangladesh society is predominantly monogamous with marginal polygamy. Marriage in Bangladesh is virtually universal for both males and females and is considered an important process of social institution. Religious practices attach great importance to the family bonding established through marriage ties. The socio-cultural milieu of Bangladesh has long favored early and universal marriage. Early marriage is gradually changing as an impact of enactment of laws, uplifting of female education, and participation of women in gainful employment and the technological innovation and changes in the society. It is a fact that an upward shift in age at marriage would help curtailing the most fecund period, reduction in early child bearing, lower fertility level and thus reduce the rate of growth of population. Like other countries, Bangladesh is also trying to slow down population growth through raising the age at marriage of its population.

This chapter deals with the frequency of marriages, with the characteristics of persons and their union through marriage and the dissolution of such marriages. Data on some important indicators of marriage viz. crude marriage rate, general marriage rate, age specific marriage rate, mean age at marriage by sex and some marital dissolution indicators like crude divorce rate, general divorce rate, age specific divorce and separation rate by sex have been incorporated in this chapter.

5.2 Crude Marriage Rate

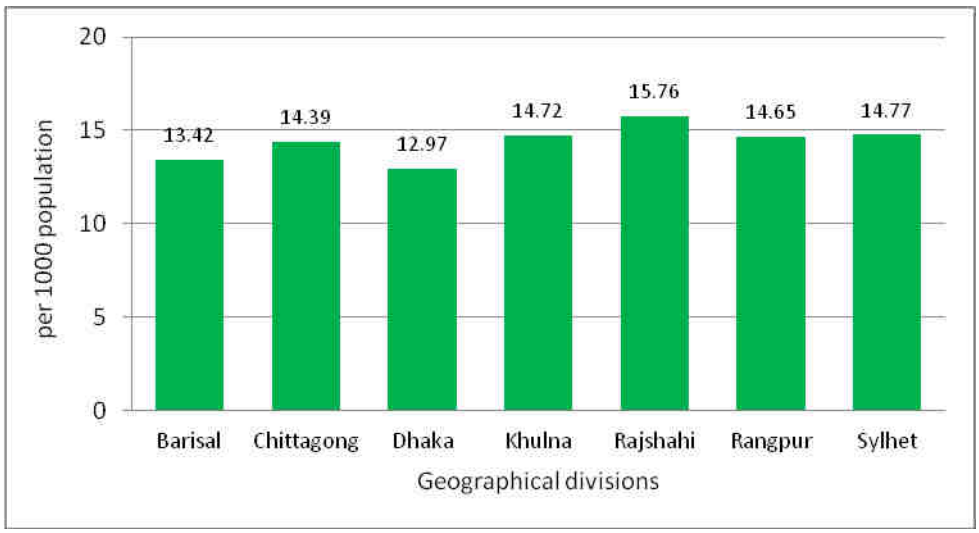
Crude Marriage Rate (CMR) is defined as the number of marriages solemnized per 1000 population. It measures the frequency of marriages in the total population. The CMR and its differentials, as obtained in MSVSB 2016 are shown in Table 5.1 by some background characteristics.

Table 5.1: Crude and general marriage rates per 1000 population by background characteristics, SVRS 2016

Background Characteristics	Crude marriage rate	General marriage rate		
		Both sexes	Male	Female
Residence:				
Rural	17.7	26.0	52.1	51.8
Urban	10.1	14.2	28.4	28.5
Division:				
Barisal	13.4	19.2	38.3	38.7
Chittagong	14.4	21.9	44.9	42.9
Dhaka	13.0	18.9	37.7	37.8
Khulna	14.7	20.3	40.4	40.8
Rajshahi	15.8	21.8	42.9	44.1
Rangpur	14.7	20.9	41.1	42.4
Sylhet	14.8	22.3	45.4	44.0
Religion:				
Muslim	14.5	21.1	42.3	42.1
Hindu	12.6	16.9	33.6	34.1
Others	13.9	20.5	39.4	42.7
Education:				
No education	3.5	6.2	14.0	11.0
Primary	10.9	19.0	37.0	39.1
Secondary	22.9	28.8	61.4	54.3
Secondary+	28.1	28.4	49.8	66.1
Total	**14.3**	**20.6**	**41.3**	**41.2**

The overall crude marriage rate (CMR) is 14.3 per 1000 population with a significantly higher rate (17.7) in rural area than in the urban area (10.1). A slight increase in crude rate is noted in the last one year: from 13 in 2015 to 14.3 in 2016. The crude marriage rate increased from 14.9 in 2015 to 17.7 in 2016 in rural area, while the rate in urban area remained static remaining in the neighborhood of 10 over this period. At the divisional level the CMR was reported to be the highest in Rajshahi division (15.8), followed by Sylhet division divisions with a rate of 14.8 per thousand population. The rate is the lowest in Dhaka division (13.0). A diagrammatic view of the crude marriage rates by geographic regions may be seen in Figure 5.1. The CMR varies marginally by religious affiliation: the Muslims experience the highest CMR (14.5), while Hindus the lowest (12.6).

Figure 5.1: Crude marriage rates by geographic divisions, SVRS 2016



5.3 General Marriage Rate

General marriage rate (GMR) is the refinement of CMR consisting of restricting the population to persons of marriageable age (15+ years). Thus, general marriage rate is the ratio of number of marriages in a year to the population of age 15+ years expressed in thousand.

The general marriage rate is often calculated separately for males and females. The rates will differ from each other in accordance with the level of the sex ratio in the marriageable ages. If it is calculated for males (for example), then numerator becomes the number of males marrying in a given year and the denominator becomes the total mid-year population of males aged 15 years and over.

If there is no multiple marriages in a society, the number of marriages among the males will be equal to the number of marriages among the females and in absence of any sex imbalance, GMR computed for both sexes will be half as likely as either the rate for male or for female. The general marriage rate computed in this fashion has been displayed in Table 5.1 for males and females separately and for both sexes together.

It is evident from Table 5.1 that the overall GMR is 20.6 per 1000 population. The rate in the rural area is higher (26.0) than in the urban area (14.2) by about 83 percent. The rates at the divisional level vary from as low as 18.9 in Dhaka division to as high as 22.3 in Sylhet division. The sex differentials in GMR are only but marginal: 41.3 versus 41.2. The religious variations in GMR are noteworthy. Muslims experience the higher GMR (21.1) than their non-Muslim counterparts (16.9). Surprisingly, education is highly positively correlated with general marriage rates with the lowest marriage rate for those who are illiterate (6.2) and the highest amongst those who have secondary level of education (28.4). This tends to indicate that a minimum level of education is required to have a positive impact of education on the marriage rate. It is however important to note that the rates so far presented are all unstandardized and hence may be affected by composition (e.g. religious, educational etc.) of the population. Hence no firm conclusion can be drawn on the differences with respect to the background characteristics of the population.

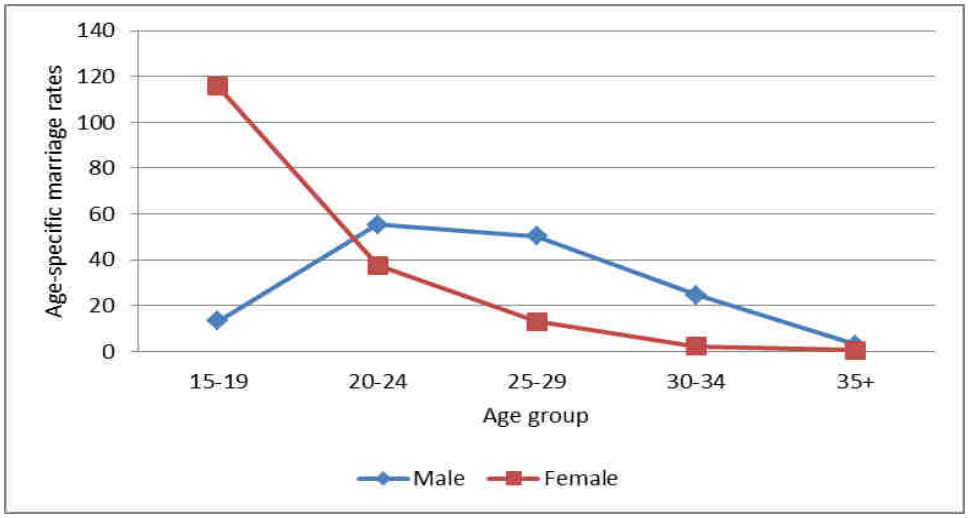
5.4 Age-Specific Marriage Rate

Because marriage is highly age-specific and demographers are primarily interested in age patterns of marriage, it is commonplace to construct age-specific marriage rates. Age-specific marriage rate is defined as the number of marriages to persons of a given age group per 1000 persons in the same age group. There is an additional complication in computing the age-specific marriage rate, however, since marriage involves two persons who may not be of the same age. In view of this, age-specific marriage rates are defined in terms of persons marrying, rather than marriages. The resulting age–sex specific marriage rates are displayed in Table 5.2 by urban –rural residence and sex. Figure 5.2 graphically displays the marriage rates for males and females. As we can note, for both males and females, the graph succinctly displays the concentration of marriages in the neighborhood of 18 years for females and 23 years for males. These rates are in close agreement with the legal age at marriage. Logically, the mean age at marriage will be closed to these levels.

Table 5.2: Age-specific marriage rates per 1000 population by sex and residence, SVRS 2016

Age group	Rural		Urban		Total	
	Male	Female	Male	Female	Male	Female
15-19	18.1	159.2	6.9	64.5	13.3	115.6
20-24	72.6	43.3	33.5	31.1	55.3	37.6
25-29	63.1	12.6	36.1	13.4	50.4	13.0
30-34	27.5	1.9	21.3	2.6	24.5	2.2
35+	3.1	0.5	2.5	0.4	2.9	0.4
Total	**23.1**	**28.8**	**12.8**	**15.7**	**18.4**	**22.9**

Figure 5.2: Age specific marriage rates by sex, SVRS 2016



5.5 Average Age at Marriage

Mean age at marriage (MAM) is one of the most important indicators of nuptiality. It has direct impact on fertility and duration of marriage. The SVRS Marriage Schedule–5 allows us to compute mean and median age at marriage including the age at first marriage for the current year for all persons according to their previous marital status. The proportions single by current age were used to

calculate the Singulate mean age at marriage (SMAM), an indirect measure of age at first marriage. The levels of mean and median age at marriage and Singulate mean age at marriage (SMAM) by sex and some selected background characteristics are presented in Table 5.3.

5.5.1 Mean Age at First Marriage

The mean and median age at first marriage computed from the previous marital status data specifically from those who were 'single' prior to their marriage in the reference year are presented in Table 5.3 by some selected background variables. The mean age at first marriage for males is 25.2 years, while it is 18.4 years for the females resulting in a spousal age difference of 6.8 years. The comparable mean ages as obtained in ICDDRB surveillance area for 2013 for males and females were respectively 27.3 years and 19.3 years. Both urban males and urban females marry at a later age than their rural counterparts, the differences in both cases being 1.6 years for males and 1.7 years for females. The median age at first marriage presented in the same table reflect the same scenarios as observed in the case of mean ages.

At the divisional level, Sylhet recorded the highest (26.6 years) mean age at marriage for males while Rajshahi the lowest (24.5 years). For females, Sylhet had the highest mean age (20.4 years) at marriage, while Rangpur the lowest (17.9 years).

For both males and females, Muslims have the lowest mean age at marriage (25.0 years for males and 18.3 years for females) compared to the followers of other religions. The level of education appears to have a favorable effect on the age at marriage for males but not for females. For example, when the males are illiterate, they tend to marry at a very early age of 23.4 years. This age increases consistently as the level of education rises reaching at 27 years when they have secondary and above level of education.

5.5.2 Singulate Mean Age at Marriage (SMAM)

Singulate mean age at marriage (SMAM) is defined as an estimate of the mean number of years lived by a cohort of men or women before their first marriage takes place. This is an indirect method of estimation of mean age at first marriage. SMAM was calculated from MSVSB 2016 data and presented in Table 5.3 for males and females separately. The overall SMAM was 25.7 years for males and 20.3 years for the females, showing an spousal age difference of 5.4 years. This result shows that the mean age at marriage has not been changed over the last two years.

It is important to note that the mean age at marriage does not deviate much from the median age at marriage. This is primarily because of the distribution of age at marriage is symmetrical about these averages. The SMAM is an indirect measure of age at first marriage and hence it is likely to be different from the mean and median ages.

Table 5.3: Singulate mean age at marriage (SMAM), mean age at first marriage (MAM) and median age at first marriage and by sex and background characteristics, SVRS 2016

Back ground Characteristics	Singulate mean age at marriage		Mean age at first marriage		Median age at first marriage	
	Male	Female	Male	Female	Male	Female
Residence:						
Rural	25.1	19.7	24.7	17.9	25	18
Urban	26.5	21.1	26.3	19.6	26	18
Division:						
Barisal	26.2	20.1	25.4	18.1	25	18
Chittagong	26.3	20.6	26.0	18.5	26	18
Dhaka	25.2	19.7	25.0	18.0	25	18
Khulna	25.6	20.1	25.1	18.3	25	18
Rajshahi	24.8	19.3	24.5	18.0	24	17
Rangpur	25.0	19.7	24.7	17.9	25	17
Sylhet	27.5	22.0	26.6	20.4	26	20
Religion:						
Muslim	25.2	20.1	25.0	18.3	25	18
Hindu	27.8	21.6	27.3	20.0	27	20
Others	26.6	23.3	26.4	21.1	27	19
Education:						
No education	24.0	19.7	23.4	18.6	24	19
Primary complete	24.1	18.8	23.7	17.4	23	17
Secondary incomplete	25.5	19.1	25.3	16.9	25	16
Secondary+	28.1	21.9	27.0	20.4	27	20
Total	**25.7**	**20.3**	**25.2**	**18.4**	**25**	**18**

5.5.3 Mean and Median Age at Marriage (MAM)

The mean and median ages for those who were widowed and divorced, and went on for subsequent marriages in 2016 are also presented in Tables 5.4 and 5.5 by sex along with those who were single.

Table 5.4: Percent distribution of the age at marriage by previous marital status, SVRS 2016: Males

Age at marriage	Single	Married	Widowed	Divorced	Separated	Total
10-14	0.0	0.0	0.0	0.0	0.0	0.0
15-19	11.9	4.6	0.9	2.5	0.0	10.7
20-24	37.6	21.2	9.4	20.3	12.5	35.1
25-29	32.1	27.1	9.4	30.0	37.5	31.3
30-34	14.6	16.2	8.4	23.6	12.5	15.0
35-39	2.9	10.9	4.7	10.6	25.0	3.9
40-44	0.4	7.4	14.0	6.3	0.0	1.4
45+	0.6	12.7	53.3	6.8	12.5	2.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Mean age	25.2*	32.0	45.7	30.9	32.8	26.3
Median age	25.0	29.0	46.0	29.0	30.0	25.0

*** Age at first marriage**

Table 5.5: Percent distribution of the age at marriage by previous marital status, SVRS 2016: Females

Age at marriage	Single	Married	Widowed	Divorced	Separated	Total
10-14	11.4	6.9	0.0	1.9	0.0	10.8
15-19	58.0	49.3	8.3	26.4	14.3	56.1
20-24	22.7	26.7	22.9	33.0	57.1	23.2
25-29	6.8	11.5	22.9	25.7	14.3	7.8
30-34	0.9	2.3	6.3	6.1	0.0	1.2
35-39	0.2	2.0	14.6	4.2	0.0	0.5
40-44	0.1	0.6	6.3	1.9	0.0	0.2
45+	0.1	0.9	18.8	0.8	14.3	0.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Mean age	18.4	20.4	32.5	23.5	25.9	18.8
Median age	18.0	19.0	28.0	22.0	20.0	18.0

*** Age at first marriage**

5.6 Marriage Dissolution: Divorce and Separation

Data on divorce and separation were collected employing Schedule-6. The data collected using this schedule include name and code of divorce/separated persons, sex, age, religion, level of education, reason for divorce/separation, marital status, age at marriage and duration of marriage. The following indicators were generated from the divorce/separation schedule (Schedule 6):

(1) Crude divorce rate;

(2) Crude separation rate;

(3) Divorce-marriage separation rate;

(4) Age-specific divorce rate;

(5) Age-specific separation rate;

(6) General divorce rate (GDR);

(7) General separation rate (GSR);

(8) Reasons for divorce and

(9) Reasons for separation.

5.6.1 Crude Divorce Rate and Crude Separation Rate

In all previous SVRS surveys, crude divorce rate has been calculated as the number of divorces per 1000 population. In the same way crude separation rate was calculated as the number of separations per 1000 population. Crude divorce rates and separation rates as obtained from SVRS 2016 are shown in Table 5.6. As can be seen from the table, the rural people are about 63 percent more likely than their urban counterpart to end their marriage in divorce. Rajshahi division experiences the highest rate of divorce (1.9 per thousand population) followed by Khulna (1.3). The rate is the lowest in Sylhet and Chittagong divisions each with a rate of 0.7 per thousand population.

In line with the other demographic measures, Muslims are more prone to end their marriage in divorce with a rate of 1.2 per 1000 population while the Hindus have much lower rate of divorce (0.32) compared to their to do so. It is largely due to the fact that Hindu marriage is a pre-ordained union and there is little scope for dissolution by divorce. Christians and others however have intermediate rate of

divorce than the Muslims and the Hindus. Educational level of the women appears to be positively associated with the crude divorce rate.

5.6.2 Divorce–Marriage Ratio

Another measure of divorce is the divorce to marriage ratio, which is the number of divorces to the number of marriages in a given year (the ratio of the crude divorce rate to the crude marriage rate). For example, if there are 500 divorces and 1,000 marriages in a given year in a given area, the ratio would be one divorce for every two marriages, e.g. a ratio of 0.5 (50%). The ratios calculated in this fashion are also presented in Table 5.6 by the background characteristics of the population. The overall divorce to marriage ratio for the 2016 sample is 0.08 percent, meaning that 8 per cent of the marriages in the area ended in divorce. This ratio does not vary by residence, while substantial variations were noted among the administrative divisions, the risk being the highest {0.12) in Rajshahi division. The lowest rate (0.04) is recorded in Sylhet division. The risk is invariant to religious affiliation while education has a curvilinear relationship with the risk factor in question.

5.6.3 General Divorce Rate (GDR)

General divorce rate (GDR) has been calculated as the relative number of divorces of age 15+ per 1000 population of the same age. General Divorce Rate by sex and division are presented in Table 5.6. The overall GDR is 1.5 for both sexes, there being no sex differential in the rate (3.1 for each sex).

Despite the fact that general divorce rate (GDR) does not vary by within the divisions, there appears to have wide regional variations in the rate under reference for both males and females. An examination of the results presented in Table 5.6 reveal that Rajshahi division experiences the highest GDR, 5.2 for males and 5.3 for females followed by Khulna division (3.6 for both males and females) while the lowest rate (1.9 for each sex) was reported in Sylhet division.

Muslims have four times higher rate (1.7) than their Hindu counterpart (0.4) as measured by general divorce rate. Education of the women does not seem to have any association with the divorce rate. This result is inconsistent with the rates reported in 2015 round of survey.

Table 5.6: Crude divorce rate, divorce-marriage ratio and general divorce rate by background characteristics, SVRS 2016

Background Characteristics	Crude divorce rate	Crude marriage rate	Divorce-marriage ratio	General divorce rate		
				Both sexes	Male	Female
Residence:						
Rural	1.3	17.7	0.11	1.9	3.8	3.8
Urban	0.8	10.1	0.11	1.1	2.2	2.2
Division:						
Barisal	1.1	13.4	0.08	1.5	3.1	3.1
Chittagong	0.7	14.4	0.05	1.0	2.0	1.9
Dhaka	0.9	13.0	0.07	1.3	2.7	2.7
Khulna	1.3	14.7	0.09	1.8	3.6	3.6
Rajshahi	1.9	15.8	0.12	2.6	5.2	5.3
Rangpur	1.0	14.7	0.07	1.5	2.9	3.0
Sylhet	0.7	14.8	0.04	0.7	1.9	1.9
Religion:						
Muslim	1.2	14.5	0.03	1.7	3.4	3.4
Hindu	0.3	12.6	0.03	0.4	0.8	0.9
Others	0.4	13.9	0.03	0.6	1.2	1.3

Background Characteristics	Crude divorce rate	Crude marriage rate	Divorce-marriage ratio	General divorce rate		
				Both sexes	Male	Female
Education:						
No education	0.5	3.5	0.15	0.9	2.1	1.6
Primary	1.0	10.9	0.09	1.8	3.5	3.6
Secondary	1.7	22.9	0.07	2.1	4.5	4.0
Secondary+	1.3	28.1	0.05	1.4	2.4	3.2
Total	**1.1**	**14.3**	**0.08**	**1.5**	**3.1**	**3.1**

5.6.4 Age-Specific Divorce Rate

Age-specific divorce rate for a specified age group has been calculated as the relative number of divorces of defined age group per 1000 population of the age group. Age specific divorce rates as obtained in 2016, are shown in Table 5.7. The results of this investigation reveal that the females experience the highest prevalence of divorce, as expected when they are under 30 years of age. This is by and large, true for both urban and rural areas. The prevalence of divorce among the males is pronounced when they are in their twenties.

Table 5.7 Age-specific divorce rates by sex and residence, SVRS 2016

Age group	Rural			Urban		
	Male	Female	Both sexes	Male	Female	Both sexes
15 – 19	0.7	7.8	4.0	0.2	3.9	2.0
20 - 24	2.5	7.0	4.9	1.3	2.8	2.1
25 - 29	2.7	2.8	2.7	1.9	1.9	1.9
30 - 34	1.5	1.7	1.6	1.2	1.3	1.3
35+	0.5	0.3	0.4	0.3	0.3	0.3
Total	**1.1**	**2.7**	**1.9**	**0.7**	**1.5**	**1.1**

5.6.5 Crude Separation Rate

Crude separation rate may be defined as the number of separations per 1000 population. The rate so calculated is presented in Table 5.8 by some selected background characteristics of the population. In terms of the crude separation rate, the surveyed population is about one-third as likely to experience separation as those who run the risk of divorce. It may be noted that the urban and rural areas do differ only marginally in crude separation rates. The situation is the worst in Sylhet divisions with the highest separation rate of (0.7) followed by Dhaka division (0.5).

5.6.6 General Separation Rate

The general separation rate (GSR) is the number of separations per 1000 persons exposed to the risk of separation restricted generally to the mid-year population aged 15 and over with the same number of separations in the numerator. GSR can be computed for males and females separately provided the data are available. The overall general separation rate is estimated to be 0.6 with no sex differential in the rate (1.1 in each case). The GSR is the highest in Sylhet division for both sexes (1.1) followed by Dhaka (0.7).

Table 5.8 Crude separation rates and general separation rates (aged 15+) by sex and residence, SVRS 2016

Background Characteristics	Crude separation rate	Crude marriage rate	separation-marriage ratio	General separation rate		
				Both sexes	Male	Female
Residence:						
Rural	0.4	17.7	0.04	0.7	1.3	1.3
Urban	0.3	10.1	0.05	0.5	0.9	0.9
Division:						
Barisal	0.2	13.4	0.01	0.4	0.7	0.7
Chittagong	0.3	14.4	0.02	0.4	0.9	0.8
Dhaka	0.5	13.0	0.04	0.7	1.4	1.4
Khulna	0.4	14.7	0.03	0.5	1.1	1.1
Rajshahi	0.4	15.8	0.03	0.6	1.1	1.1
Rangpur	0.2	14.7	0.01	0.3	0.7	0.7
Sylhet	0.7	14.8	0.05	1.1	2.1	2.1
Religion:						
Muslim	0.4	14.5	0.03	0.6	1.1	1.1
Hindu	0.4	12.6	0.03	0.5	1.1	1.1
Others	0.3	13.9	0.02	0.5	0.9	1.0
Education:						
No education	0.3	3.5	0.09	0.6	1.3	1.0
Primary	0.4	10.9	0.04	0.7	1.4	1.5
Secondary	0.5	22.9	0.02	0.6	1.3	1.2
Above secondary	0.4	28.1	0.01	0.4	0.6	0.8
Total	**0.4**	**14.3**	**0.03**	**0.6**	**1.1**	**1.1**

5.6.7 Age-Specific Separation Rate

Age specific separation rate has been calculated as the relative number of separation at a defined age group per 1000 population of that age group. Age specific separation rates as obtained in 2016 are shown in Table 5.9. The highest age-specific separation rates for both rural and urban females remain concentrated in age group 20-24. The age pattern of separation rates follows a curvilinear pattern: it is low at the younger ages, rises with age and finally drops down as age increases.

Table 5.9: Age-specific separation rate by sex, SVRS 2016

Age group	Rural			Urban		
	Male	Female	Both sexes	Male	Female	Both sexes
15 - 19	0.2	1.5	0.8	0.0	0.7	0.4
20 - 24	0.8	1.7	1.3	0.5	0.9	0.7
25 - 29	1.1	1.5	1.3	0.1	1.1	0.6
30 - 34	0.8	1.0	0.9	0.3	1.0	0.7
35+	0.2	0.3	0.2	0.2	0.5	0.3
Total	**0.4**	**0.9**	**0.7**	**0.2**	**0.7**	**0.5**

5.7 Trends in Marriage, Divorce and Separation: 2004-2016

The trends in some marriage and marriage related indicators are summarized in Table 5.10. The crude marriage rate shows a substantial increase over the last 13 years, from 12.4 per thousand population in 2004 to 14.3 per thousand population in 2016, an increase of over 15 percent over the stated period. A

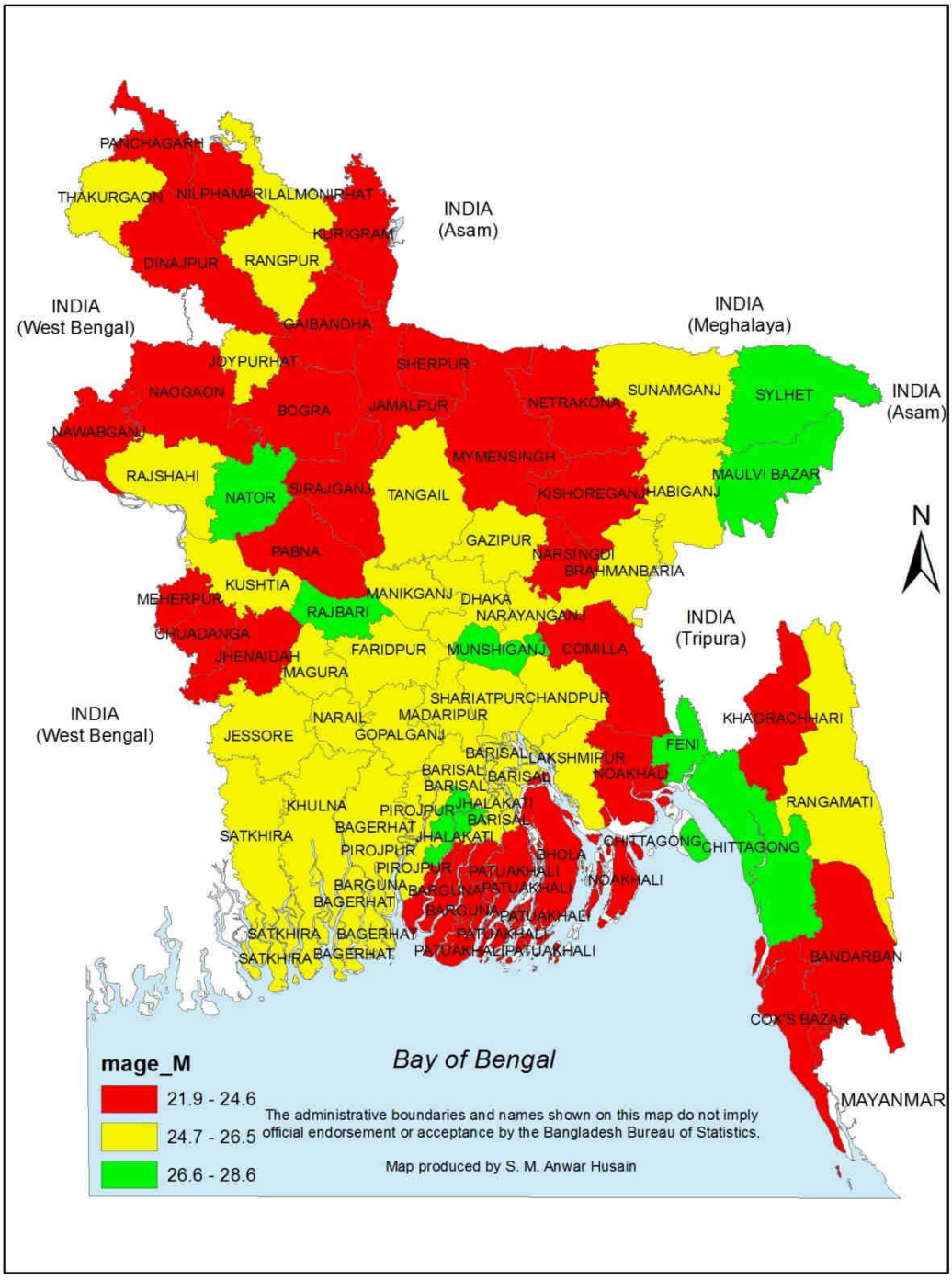
similar but somewhat slower increase in general marriage rate was also noted during this period: 20.2 in 2004 to 20.6 in 2016, the percentage increase being about 2. There has been essentially negligible increase in crude divorce rate and crude separation rate over the period under investigation. The Singulate mean age at marriage for both males and females has marked a negligible and irregular increase during this period.

Table 5.10: Trends in indicators of marriage, divorce and separation, SVRS 2004-2016

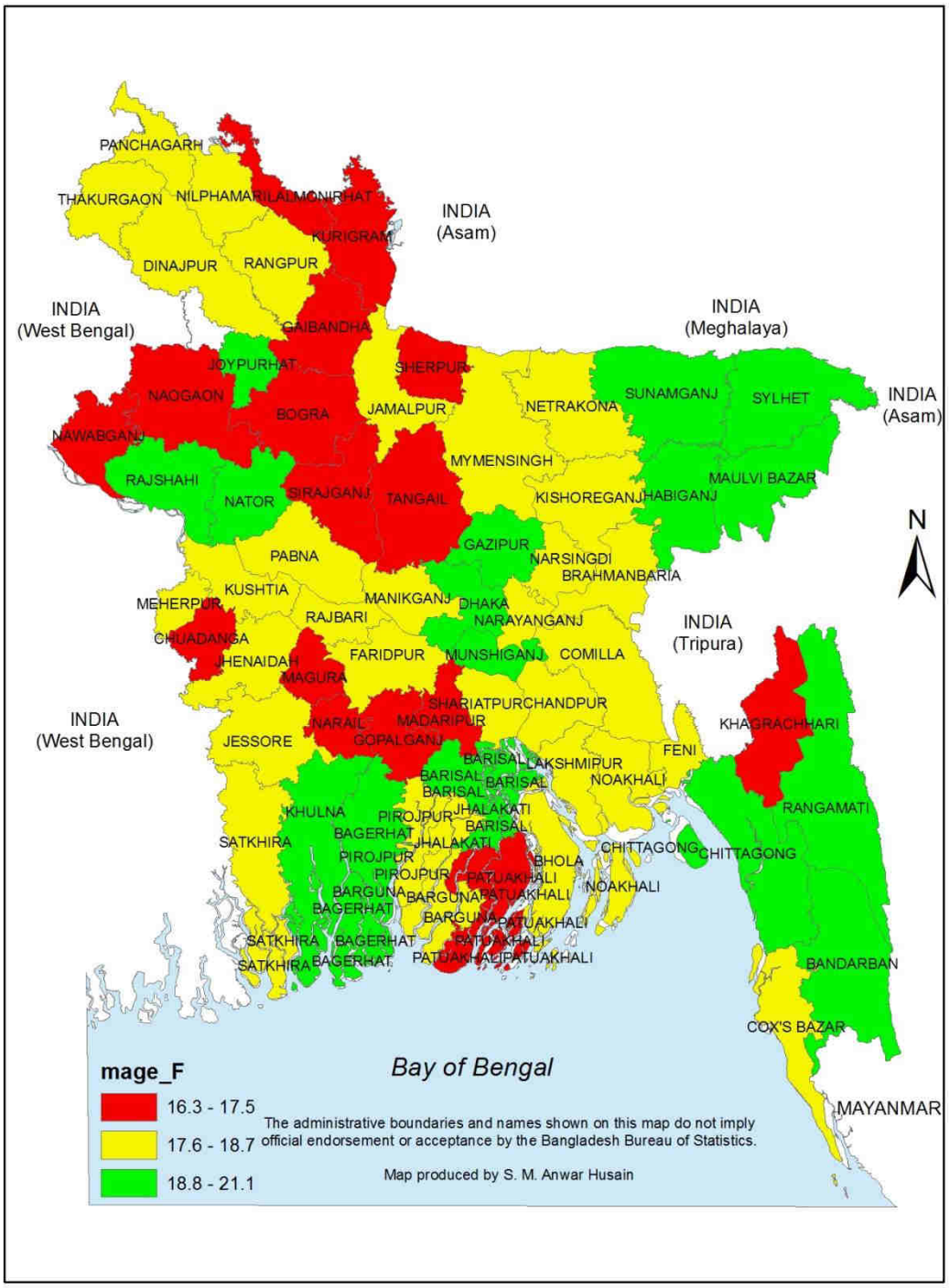
Background Characteristics	Year												
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Crude marriage rate	12.4	13.0	12.4	12.5	11.6	13.2	12.7	13.4	13.3	13.0	12.9	13.0	14.3
General marriage rate:	20.2	20.5	19.6	19.2	17.4	19.6	18.4	19.7	19.3	19.1	19.0	18.8	20.6
Male	21.1	19.0	18.3	18.2	16.1	18.1	17.4	18.1	38.1	38.1	38.1	37.9	41.3
Female	22.8	21.5	21.0	20.1	18.8	21.1	20.3	21.2	39.1	38.4	37.7	37.4	41.2
Crude divorce rate	0.6	0.7	0.6	0.6	0.6	0.7	0.8	0.8	0.8	0.6	.09	0.9	1.1
General divorce rate:													
Male	NA	NA	0.5	NA	NA	NA	NA	NA	0.7	1.8	2.8	2.6	3.1
Female	NA	NA	1.6	NA	NA	NA	NA	NA	1.7	0.9	2.7	2.6	3.1
Crude separation rate	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.6
General separation rate:													
Male	0.3	NA	0.3	NA	NA	NA	NA	NA	0.4	0.8	0.8	1.0	1.1
Female	0.5	NA	0.6	NA	NA	NA	NA	NA	0.6	0.8	0.8	1.0	1.1
Mean age at marriage:													
Male	25.3	25.3	23.4	23.6	23.8	23.8	23.9	24.9	24.8	24.3	25.9	26.4	26.3
Female	19.0	17.9	18.1	18.4	19.1	18.5	18.7	18.6	19.3	18.4	18.5	18.7	18.8
Median age at marriage:													
Male	NA	NA	NA	NA	NA	NA	NA	24.0	25.0	24.0	24.0	25.0	25.0
Female	NA	NA	NA	NA	NA	NA	NA	18.0	19.0	18.0	18.0	18.0	18.0
Mean age at first marriage:													
Male	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.3	24.9	25.3	25.2
Female	NA	NA	NA	NA	NA	NA	NA	NA	NA	17.9	18.3	18.4	18.4
Median age at first marriage:													
Male	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.0	24.0	25.0	25.0
Female	NA	NA	NA	NA	NA	NA	NA	NA	NA	18.0	18.0	18.0	18.0
SMAM:													
Male	25.4	25.6	25.7	25.6	25.9	26.0	26.1	26.1	26.0	25.47	25.4	25.8	25.7
Female	19.4	19.5	19.3	19.4	20.3	20.3	20.2	20.5	20.3	20.02	20.0	20.3	20.3

NA: Not available

Map 5.1: Mean age at first marriage of male by Zila, SVRS 2016



Map 5.2: Mean age at first marriage of female by Zila, SVRS 2016



CHAPTER VI

Contraceptive Usage

6.1 Introduction

The findings presented in this chapter are the outcomes of data collected through Schedule-9 canvassed for Monitoring the Situation of Vital Statistics of Bangladesh (MSVSB) project of BBS for the year 2016. The schedule in question was used for collecting data on the usage of the family planning methods. Specifically, the schedule includes such information on family planning as user's name, current age, level of education and economic activities of couples, ever-use and current use status of family planning methods, and methods used.

6.2 Current Use of Contraception

Current use of contraception is defined as the percent of currently married women who reported to have been using a family planning method at the time of the inquiry. The resulting value is the so called contraceptive prevalence rate (CPR). The estimated CPRs by some background characteristics have been presented in Table 6.1.

Overall, 62.3 per cent of the currently married women aged 15–49 are currently using any method of contraception. Urban women are more likely (65.9%) to adopt family planning methods than their rural counterparts (59.3%). Currently married women in Rangpur division are more likely to use contraception (82.8%) followed by the women in Khulna division (66.5%). The least use was reported to be prevalent in Chittagong division (50.4%).

As evident from the results presented in Table 9.1, the overall use of contraception does not seem to be in much variation over the last one year. For example, the CPR as recorded in 2015 was 62.1, which rose to 62.3 in 2016, a difference of only 0.2 percentage points. Urban women are more likely (65.9%) to adopt contraception than their rural counterpart (59.3%). The corresponding rates were 64.5 percent in urban area and 60.4 percent in rural area in 2015. Rangpur division, demonstrated an unprecedented rise the CPR: from 70.2 percent in 2015 to 82.8 percent in 2016, an increase of about 18 percent only in one year.

The age pattern of current use of contraception is seen to resemble the age pattern of fertility: younger women are in smaller proportion to use contraception, which increases as age advances and then declines at older ages. It is the highest (70.6%) for those who are aged 30–34 followed by (65.4%) for those who are aged 25-29. As observed the rate is the lowest at the extreme ages, 46.2 percent for those who are aged 45–49.

Table 6.1: Current use of contraceptive methods among the currently married women by background characteristics, SVRS 2016

Background Characteristics	Any Method	Modern Method	Traditional Method
Residence:			
Rural	59.3	55.9	3.4
Urban	65.9	61.4	4.4
Women age:			
15-19	61.4	59.4	2.0
20-24	63.2	61.3	1.9
25-29	65.4	62.8	2.5
30-34	70.6	68.0	2.6
35-39	63.1	60.1	3.0
40-44	54.5	47.8	6.7
45-49	46.2	34.5	11.7
Division:			
Barisal	56.8	53.2	3.6
Chittagong	50.4	46.9	3.4
Dhaka	62.1	58.3	3.8
Khulna	66.5	61.8	4.7
Rajshahi	62.2	59.2	3.0
Rangpur	82.8	78.2	4.6
Sylhet	54.2	50.1	4.2
Total	**62.3**	**58.4**	**3.9**

The current use of contraception as reported in BDHS 2014 was 62.4 percent, a result consistent with our findings of 2016, though the rates are not strictly comparable for methodological reasons.

As to the use of modern versus traditional methods, 58.4 percent of the currently married women in the SVRS area were the users of modern methods as opposed to only 3.9 percent of the women reporting to have been using traditional methods. The corresponding rates in the 2014 BDHS were reported to be 54.1 and 8.4 respectively resulting in an overall rate of 62.5 percent.

The use of modern methods is the highest for the younger women starting with a rate of 59.4 percent for those who are aged 15–19. This increases to 68.0 percent when they are 30-34 years of age. The rate then sharply falls as age advances and reaches to 34.5 percent when the women reach to the end of their reproductive life span.

The use of modern methods of contraceptives in urban area exceeds the use in rural area by 5.5 percentage points (61.4% vs 55.9%). a much wider gap compared to the previous year, which was 60.4 percent in urban area and 57 percent in rural area.

Use of modern methods of contraception varies substantially between administrative divisions ranging from as low as 46.9 percent in Chittagong division to as high as 78.2 percent in Rangpur division.

Use of traditional methods increases consistently with the age of the currently married women: from 2.0 percent when the women are aged 15-19, which monotonically increases to 11.7 when they are 45–49. Contrary to our common believe, urban women are more likely to use traditional methods (4.4%) compared to their rural counterparts (3.4%). The use rate of traditional methods is more

prevalent among the women of Khulna division (4.7%) followed by Rangpur division (4.6%). The least use rate of traditional methods (3.0%) was reported in Rajshahi division.

6.3 Ever Use of Contraception

Ever usage of family planning methods in SVRS refers to the use of any contraceptive methods at any point of time before the interview date without making distinction between past and current use. Any respondent reporting that she or her husband had used some form of contraception was included as an ever user regardless of the time of use. Thus, a reported ever user might be a past or current user.

Table 6.2 shows the prevalence of ever-use of any method of contraception by the currently married women with respect to a few selected background characteristics of the respondents. The overall rate of ever use is 82.2 percent showing an increase of only 0.3 percentage points in one year. The age-specific ever use rate is the highest (86.5%) who are aged 35–39 and the lowest (74.6%) among the women in 45–49 age group. The age pattern of ever use closely resembles the current use rate as shown in Table 6.1. The highest ever use (93.7%) was reported in Rangpur division followed by Khulna division (91.4%). The least (68.8%) ever-use rate was reported in Sylhet division. The urban-rural ever use rates differ by a big margin of over 5 percentage points, from 79.4 percent in urban area to 84.5 percent in rural area. In line with the current use rates of traditional methods, ever use rates of traditional methods progresses slowly as age advances, from 1.2 percent at ages 15–19 to 2.6 percent at ages 45–49.

Table 6.2: Ever use of contraceptive methods among the married women by background characteristics, SVRS 2016

Background Characteristics	Any method	Modern method	Traditional method
Women age:			
15-19	79.3	78.2	1.2
20-24	76.0	75.1	1.1
25-29	85.4	84.4	1.7
30-34	85.1	84.2	1.7
35-39	86.5	85.4	1.9
40-44	81.6	80.2	2.3
45-49	74.6	73.0	2.6
Residence:			
Rural	84.5	83.4	1.6
Urban	79.4	78.3	2.0
Division:			
Barisal	73.1	72.3	2.1
Chittagong	70.2	69.2	1.7
Dhaka	87.2	86.0	1.6
Khulna	91.4	90.6	2.1
Rajshahi	83.9	83.3	1.0
Rangpur	93.7	92.8	2.0
Sylhet	68.8	66.2	2.3
Total	**82.2**	**81.1**	**1.8**

6.4 Method-Specific Use

Table 6.3 presents the use of contraception by type of specific methods. As expected, oral pill is the most preferred choice among the women being reported by 33.4 percent of the total users. After oral pill, Bangladeshi women are more likely to use injections (15.2%) followed by condom (5.8%). Of the total users (62.3%) of any method, only 0.3 percent used male sterilization, 0.8 percent copper–T, 2.0 percent female sterilization, 0.4 percent foam and 0.5 percent Norplant. The remaining 3.9 percent was the users of any traditional methods. The level of traditional method use in 2016 is nearly similar to the one observed in 2015 round of survey.

Table 6.3.Method-specific contraceptive use rate among currently married women by age, SVRS 2016

Age group	Number of women	Method used									
		Any method	Condom	Oral Pill	Injections	Male Sterilization	Copper-T (IUD)	Female Sterilization	Foam tablet	Norplant	Traditional method
15-19	11576	61.4	8.9	42.1	7.2	0.1	0.3	0.3	0.3	0.3	2.0
20-24	34060	63.2	7.9	37.7	12.8	0.2	0.4	1.6	0.4	0.4	1.9
25-29	41182	65.4	5.5	39.5	15.1	0.3	0.8	0.7	0.4	0.5	2.5
30-34	37704	70.6	7.5	35.6	20.7	0.4	1.0	1.7	0.5	0.6	2.6
35-39	31613	63.1	4.9	33.2	16.7	0.5	1.2	2.7	0.4	0.6	3.0
40-44	25202	54.5	3.3	24.5	14.1	0.6	1.0	3.6	0.3	0.5	6.7
45-49	17599	46.2	2.4	15.8	11.5	0.3	0.5	3.6	0.1	0.3	11.7
Total	**198936**	**62.3**	**5.8**	**33.4**	**15.2**	**0.3**	**0.8**	**2.0**	**0.4**	**0.5**	**3.9**

6.5 Contraceptive Method-Mix

Contraceptive method-mix indicates the percentage distribution of contraceptive users by type of method used. Countries typically use this indicator for planning, especially for commodities and logistics planning. The method-mix provides a profile of the relative level of use of different contraceptive methods. A broad method-mix suggests that the population has access to a range of different contraceptive methods. Conversely, method mix can signal: (1) provider bias in the system, if one method is strongly favored to the exclusion of others; (2) user preferences; or (3) both. Table 6.4 shows the contraceptive method-mix by background characteristics of the women. Overall, pill is the most widely used method accounting for 57.3 percent of the CPR, followed by injections (26%). This pattern is uniformly maintained for all the background characteristics of the women. A close examination of the method-mix shows that the level of pill use is negatively associated with age: by and large, higher the age, lower is the preference for pill by the women except for a few age groups. On the other hand, age is positively associated with the use of injections in the broad age span 15–35. The distribution of the method-mix does not show any variation by divisions.

Table 6.4: Contraceptive method mix (%) by background characteristics, SVRS 2016

Background Characteristics	Modern	Condom	Oral Pill	Injections	Male Sterilization	Copper-T	Female Sterilization	Foam tablet	Norplant
Age group:									
15-19	100.0	14.9	70.8	12.1	0.2	0.5	0.5	0.6	0.4
20-24	100.0	12.8	61.5	20.9	0.3	0.7	2.6	0.6	0.6
25-29	100.0	8.9	62.6	24.2	0.5	1.3	1.1	0.6	0.8
30-34	100.0	11.0	52.5	30.3	0.6	1.5	2.5	0.7	1.0
35-39	100.0	8.1	55.3	27.7	0.7	1.9	4.5	0.7	0.9
40-44	100.0	7.0	51.2	29.5	1.2	2.0	7.5	0.7	1.0
45-49	100.0	6.9	45.8	33.2	0.9	1.6	10.5	0.4	0.7
Residence:									
Rural	100.0	4.5	59.9	28.6	0.8	1.5	3.2	0.7	0.9
Urban	100.0	16.0	54.3	23.0	0.4	1.3	3.6	0.6	0.8
Division:									
Barisal	100.0	9.9	55.0	28.5	0.6	1.4	2.1	0.9	1.7
Chittagong	100.0	7.5	56.5	30.3	0.5	1.2	2.6	0.6	0.7
Dhaka	100.0	10.0	62.8	22.0	0.5	1.2	2.9	0.4	0.4
Khulna	100.0	11.7	52.6	29.4	0.3	1.4	3.0	0.9	0.7
Rajshahi	100.0	12.6	53.5	24.5	0.6	1.9	5.5	0.9	0.6
Rangpur	100.0	8.2	58.6	27.0	1.0	1.1	2.9	0.4	0.9
Sylhet	100.0	10.2	58.0	20.3	0.9	1.7	6.3	0.9	1.6
Total	**100.0**	**9.9**	**57.3**	**26.0**	**0.6**	**1.4**	**3.4**	**0.7**	**0.8**

6.6 Trends in Contraceptive Use: 2004-2016

There has been a gradual increase in the use of contraceptive methods in Bangladesh over the last 40 years since 1975 when the First Bangladesh Fertility Survey was undertaken recording a contraceptive prevalence rate of 7.7 percent. The Bangladesh Demographic and Health Survey (BDHS) of 2014 reported this rate to be 62.4 percent, a more than 8-fold increase in the last 40 years. The SVRS area also demonstrated a substantial increase from 56.0 in 2004 to 62.2 in 2016, nearly an 11 percent increase in about 13 years' time. During this period, the increase in the contraceptive use rate in rural area was also about 11 percent, from 53.3 percent in 2004 to 59.3 percent in 2016, while in the urban area this increase was only to the extent of 8 percent: from 60.9 percent to 65.9. Table 6.5 presents an overview of the trends in contraceptive use since the initiation of the SVRS program of registration of the vital events in Bangladesh. Note that, while the modern method use has shown an increase of 15 percent during 2004–2016, the traditional method use has correspondingly gone down by about 20 percent. Use of condom over this time recorded an erratic increase from 5.5 percent in 2004 to 5.8 percent in 2016, while the use of oral pill remained static centering somewhere between 35 and 36 percent reaching at 33.4 percent in 2016.

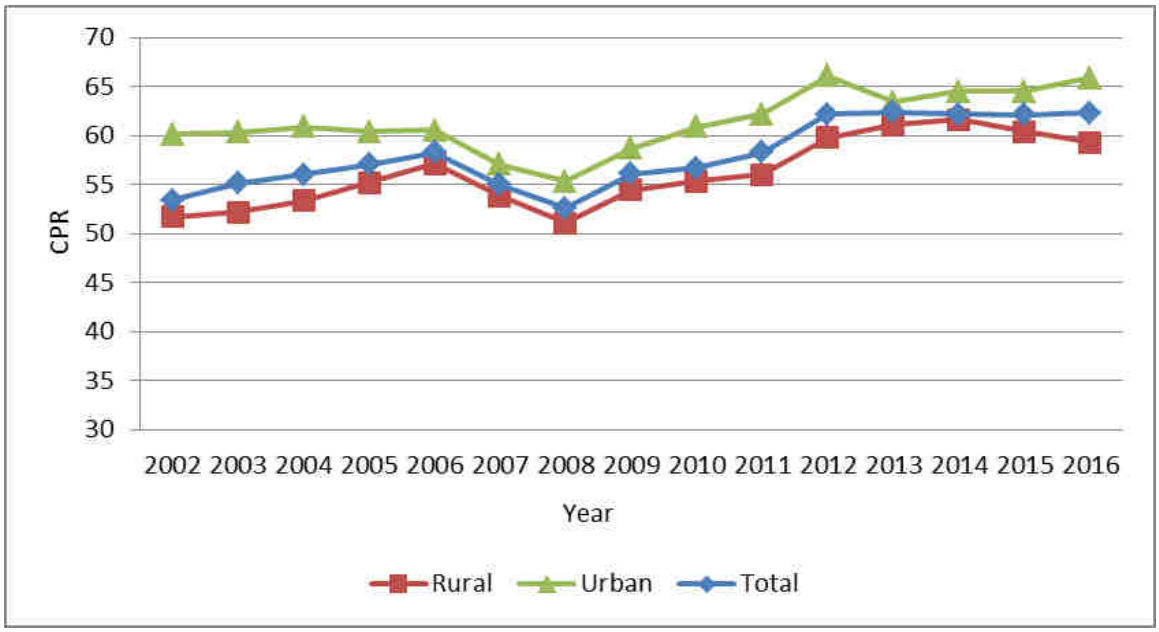
Table 6.5: Trends in current use of contraceptive methods (%), SVRS 2004–2016

Method	Years												
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Any method	56.0	57.0	58.3	55.0	52.6	56.1	56.7	58.3	62.2	62.4	62.2	62.1	62.3
Any method (rural	53.3	55.2	57.1	53.8	51.1	54.4	55.3	56.0	59.8	61.1	61.6	60.4	59.3
Any method (urban)	60.9	60.4	60.5	57.0	55.3	58.7	60.9	62.2	66.1	63.4	64.5	64.5	65.9
Any modern method:	50.9	51.7	52.5	51.8	50.6	53.6	54.8	56.6	60.2	60.0	58.4	58.4	58.4
Condom	5.5	5.2	6.8	4.4	3.2	5.5	3.8	4.0	5.3	5.0	5.1	7.2	5.8
Oral pill	32.8	35.4	36.2	34.5	37.9	37.1	34.4	35.0	35.8	36.1	34.8	32.7	33.4
Injections	10.0	8.5	7.0	10.3	8.0	9.0	12.7	12.8	14.0	14.6	14.7	14.5	15.2
Male sterilization	0.2	0.2	0.3	0.3	0.2	0.2	0.4	0.5	0.49	0.6	0.5	0.3	0.3
Copper–T	0.6	0.6	0.7	0.8	0.4	0.4	0.8	0.9	1.1	0.9	0.9	1.0	0.8
Female sterilization:	1.8	1.8	1.7	1.9	0.9	1.3	2.0	2.1	2.5	1.8	1.7	1.8	2.0
Foam	NA	NA	NA	NA	NA	NA	NA	0.4	0.6	0.5	0.4	0.3	0.4
Norplant	NA	NA	NA	NA	NA	NA	0.0	0.5	0.6	0.6	0.5	0.5	0.5
Any traditional method	**4.9**	**5.1**	**5.3**	**5.8**	**3.2**	**2.1**	**2.5**	**2.0**	**1.8**	**2.0**	**2.4**	**3.8**	**3.9**

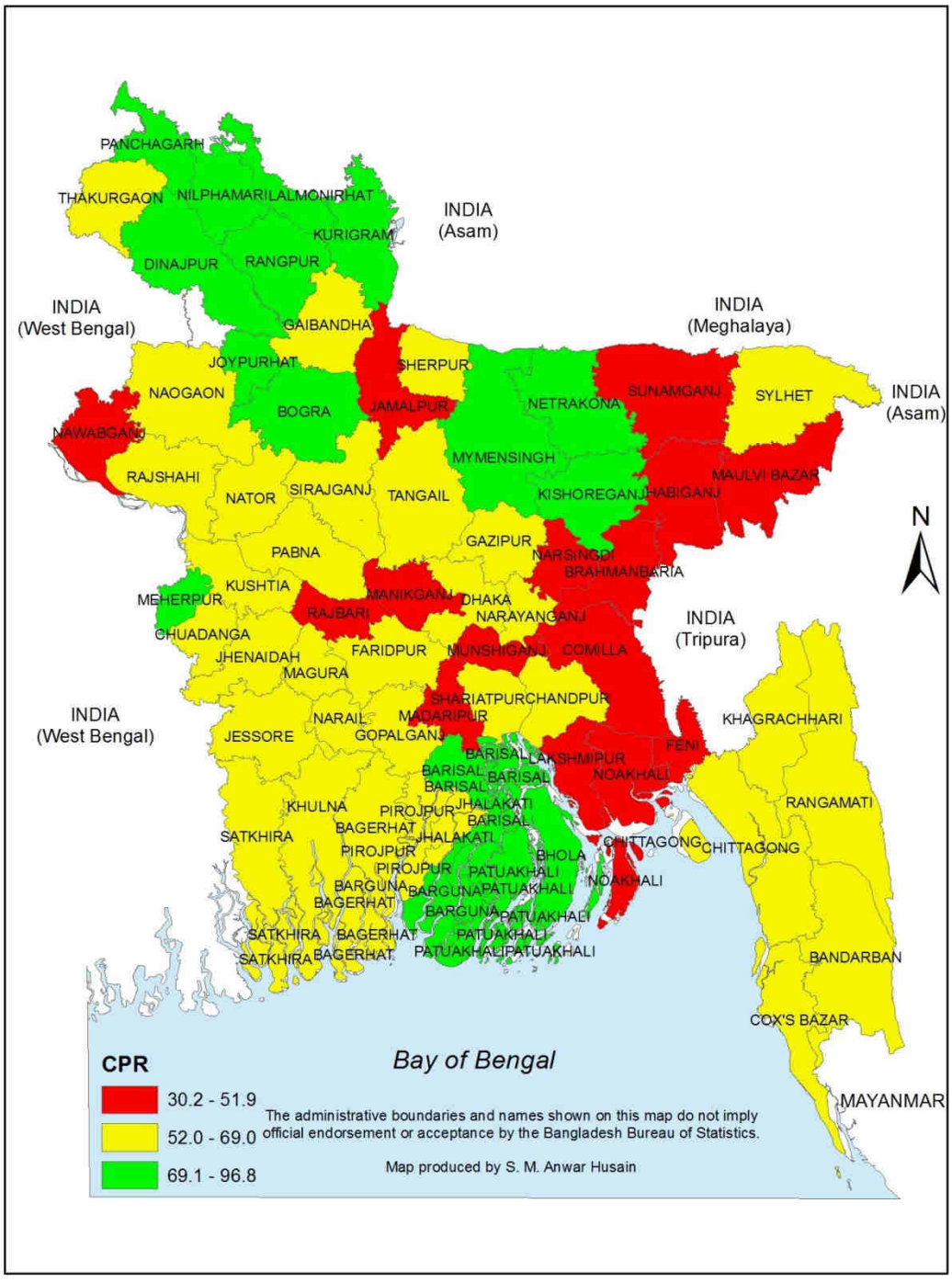
NA- Not Available

Trends in CPR by locality in case of current use are provided in Figure 6.1.

Figure 6.1: Trends in current use of contraception by locality, SVRS 2016



Map 6.1: Current usage of contraception by Zila, SVRS 2016



CHAPTER VII

Internal Migration

Migration, more specifically the human migration is the movement by people from one place to another with the intention of settling in new and geographically different locations. The movements, more specifically the spatial movements, involve a change of place of usual residence and crossing of a political boundary resulting in taking-up of life in a new or different place. Migration may involve individuals, family units or large groups.

In the study area migration data were collected using Schedule -7 & 8. The period of movement in the case of SVRS has been fixed at six months or more except for marriage in which case the time period is not fixed.

7.1 Migration Rate

The overall in-migration rate in the sample area in 2016 was estimated to be 76.7 per thousand population. This compares with an out-migration rate of 78.5 per thousand population resulting in a net loss of 1.8 persons per thousand population. These rates were much lower in 2015: 54.2 versus 54.5, a gain of 0.3 persons per 1000 population. Females are significantly more mobile than their male counterparts. For example, while only about 69 per thousand males made moves to the sample area, the corresponding rate for females was to the extent of 84 per thousand. A similar feature of movement was also noted in the case of out-migration: 72 for males and over 85 for females.

The incidence of in-migration in rural area was almost one third of the incidence with respect to the same event in urban area (39.5:123.0). The tendency to out-migrate of the urban people was also very high compared to their rural counterparts, the urban-rural ratio being 2.5 versus 1.0.The flow of out-migration from rural area exceeds the in-migration by about 0.80 percentage points, resulting in a net loss of 8.0 persons per thousand population. The urban area, on the contrary, is a gaining population with a net migration rate of 5.8 persons per thousand populations.

The overall in and out-migration rates resulted in a gross migration rate of 155.2 per thousand population, Dhaka division recorded the highest out migration rate (98.0), while Rangpor the lowest (56.0). Barisal division experienced the highest in-migration rate (95.0) while the lowest rate (57.1) was experienced in Rajshahi division.

Table 7.1: Migration rates per 1000 population by sex and selected background characteristics, SVRS 2016

Back ground Characteristics	Male		Female		Both sexes	
	In-migration	Out-migration	In-migration	Out-migration	In-migration	Out-migration
Residence:						
Rural	30.2	39.0	48.9	56.0	39.5	47.5
Urban	117.7	112.7	128.2	121.7	123.0	117.2
Division:						
Barisal	86.6	88.2	103.6	99.6	95.0	93.9
Chittagong	67.8	67.5	81.3	81.3	74.6	74.5
Dhaka	82.6	92.0	94.1	103.9	88.3	97.9
Khulna	73.2	73.2	88.8	89.2	80.9	81.1

Back ground Characteristics	Male		Female		Both sexes	
	In-migration	Out-migration	In-migration	Out-migration	In-migration	Out-migration
Rajshahi	47.1	47.7	67.3	65.8	57.1	56.7
Rangpur	48.5	49.3	65.7	62.8	57.0	56.0
Sylhet	74.0	76.3	87.8	86.2	81.0	81.3
Total	**69.1**	**71.8**	**84.3**	**85.3**	**76.7**	**78.5**

7.2 Age–Specific Migration Rates

Age specific migration rates presented in Table 7.2 are simple refinements of the migration rates presented above in Table 7.1. The age specific rates are particularly important in understanding how the incidence of migration varies over the life cycle. The rates by five-year age groups of the migrants are presented in Table 7.2. The highest incidence of in and out migration for both sexes together was noted in the broad age group 15–29.

Both in and out-migration are highly prevalent among the males of 25–29 age group. Thereafter, both these events sharply fall as age advances. A high proportion of females move in and out when they are in the broad age group 15–29. Investigation shows that a substantial number of children of 0–4 age group move in and out along with their parents as a result of which migration of these children occurs at a high rate. The age patterns of migrants obtained in 2016 are similar to the one obtained in 2015 in terms of their patterns but significantly different from one another in terms of its structure.

Table 7.2: Age -specific migration rates per 1000 population by sex, SVRS 2016

(Overall)

Age group	Male		Female		Both sexes	
	In-migration	Out-migration	In-migration	Out-migration	In-migration	Out-migration
0-4	99.1	90.9	94.0	82.3	96.5	86.5
5-9	74.2	73.9	71.4	72.5	72.9	73.2
10-14	56.0	60.4	58.9	71.2	57.4	65.7
15-19	54.1	62.5	169.7	171.3	108.7	113.8
20-24	63.9	78.8	132.6	141.6	101.6	113.2
25-29	103.3	104.7	110.2	114.2	107.1	109.9
30-34	93.3	98.4	72.6	76.0	82.4	86.6
35-39	91.2	89.4	69.7	69.8	80.4	79.6
40-44	67.0	73.0	46.4	53.7	56.9	63.6
45-49	57.6	57.1	52.1	48.5	55.1	53.2
50-54	45.2	50.7	37.7	38.7	41.3	44.5
55-59	39.0	40.5	39.8	33.1	39.3	37.1
60-64	38.4	38.7	43.7	34.2	40.8	36.7
65-69	32.4	31.6	46.2	30.1	38.6	30.9
70-74	32.6	28.8	55.5	32.5	42.7	30.4
75+	33.7	23.4	67.5	29.8	49.8	26.4
Total	**69.1**	**71.8**	**84.3**	**85.3**	**76.7**	**78.5**

Tables 7.3 and 7.4 present the age and sex specific migration rates for rural and urban areas separately. Here too, in the rural area, migratory movement both in and out is more pronounced among the females compared to the males. In contrast, there is little sex-differentials in migration in the urban area.

Table 7.3: Age-specific migration rates per 1000 population by sex, SVRS 2016

(Rural area)

Age group	Male		Female		Both sexes	
	In-migration	Out-migration	In-migration	Out-migration	In -migration	Out -migration
0-4	46.5	47.7	48.6	46.7	47.5	47.2
5-9	36.3	41.8	34.9	41.9	35.6	41.9
10-14	26.0	34.2	32.3	49.8	29.1	41.8
15-19	23.3	37.9	154.8	167.1	83.4	96.9
20-24	29.3	48.5	83.5	105.1	58.3	78.8
25-29	46.9	59.1	54.2	68.2	50.9	64.1
30-34	37.7	55.3	30.1	40.3	33.6	47.3
35-39	37.7	47.9	27.1	32.9	32.3	40.3
40-44	26.0	37.3	17.3	23.4	21.6	30.3
45-49	20.5	25.2	21.2	19.2	20.8	22.5
50-54	15.4	22.7	18.8	17.0	17.2	19.7
55-59	15.4	17.9	18.8	15.9	17.0	16.9
60-64	15.7	16.8	23.9	16.0	19.6	16.4
65-69	15.1	14.3	29.8	15.9	21.8	15.0
70-74	15.3	15.3	39.5	19.9	25.9	17.3
75+	23.3	11.3	51.9	17.0	36.8	14.0
Total	**30.2**	**39.0**	**48.9**	**56.0**	**39.5**	**47.5**

Table 7.4: Age-specific migration rates per 1000 population by sex, SVRS 2016

(Urban area)

Age group	Male		Female		Both sexes	
	In-migration	Out-migration	In-migration	Out-migration	In-migration	Out-migration
0-4	176.9	154.8	152.7	128.2	164.1	140.7
5-9	124.5	116.5	120.1	113.2	122.3	114.9
10-14	98.1	97.2	94.5	99.9	96.3	98.5
15-19	95.5	95.5	187.1	176.1	140.5	135.0
20-24	107.5	117.0	188.0	182.9	152.8	154.1
25-29	166.8	156.1	172.3	165.1	169.8	161.0
30-34	154.0	145.4	122.1	117.5	137.5	131.0
35-39	146.9	132.8	117.5	111.2	132.5	122.2
40-44	111.2	111.6	82.2	91.1	97.6	102.0
45-49	98.7	92.3	87.0	81.6	93.5	87.5
50-54	79.0	82.5	63.0	67.8	71.2	75.3
55-59	67.1	67.3	69.1	57.2	68.0	62.9
60-64	67.3	66.7	72.8	61.0	69.7	64.2

Age group	Male		Female		Both sexes	
	In-migration	Out-migration	In-migration	Out-migration	In-migration	Out-migration
65-69	57.1	56.1	71.7	52.3	63.4	54.5
70-74	60.5	50.6	80.3	52.0	69.3	51.2
75+	53.2	46.0	95.7	52.6	73.6	49.2
Total	**117.7**	**112.7**	**128.2**	**121.7**	**123.0**	**117.2**

7.3 Causes of Out-Migration

The causes of migration have been presented in Table 7.5. A large number of people move (in and out) for shear reasons of living with their family members. This cause accounts for about 46 percent of all causes in the case of in-migration and 41 percent in the case of out-migration. Matrimonial cause also stands out as a second important cause especially among the females. Farming also plays a vital role in the process. Causes of migration by age, sex and distributions of migrants by causes are shown in the appendix in greater details.

Table 7.5: Causes of in and out-migration by sex, SVRS 2016

Causes of migration	In-migration			Out-migration		
	Male	Female	Both sexes	Male	Female	Both sexes
Marriage	5.3	16.8	11.6	7.7	19.3	14.0
Education	4.5	3.8	4.1	4.2	3.1	3.6
In search of job	5.6	3.3	4.3	5.8	3.1	4.3
To perform job duty	4.3	2.1	3.1	4.0	1.9	2.9
Transfer	6.4	3.1	4.5	6.6	3.7	5.0
River eroded	1.9	1.4	1.6	2.0	1.6	1.8
Farming	15.1	6.7	10.5	15.1	7.2	10.8
To live with family	38.5	52.5	46.2	34.3	46.2	40.7
Business	5.3	1.7	3.3	4.3	1.8	3.0
Retirement	0.3	0.1	0.2	0.4	0.3	0.4
Abroad	0.5	0.2	0.3	0.9	0.6	0.8
Others	12.4	8.4	10.2	14.7	11.3	12.8
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

The trends in migration rates in Bangladesh over the last 30 years both in and out are shown in Figure 7.1 and Figure 7.2.

Figure 7.1: In-migration rates per 1000 population, SVRS 2002-2016

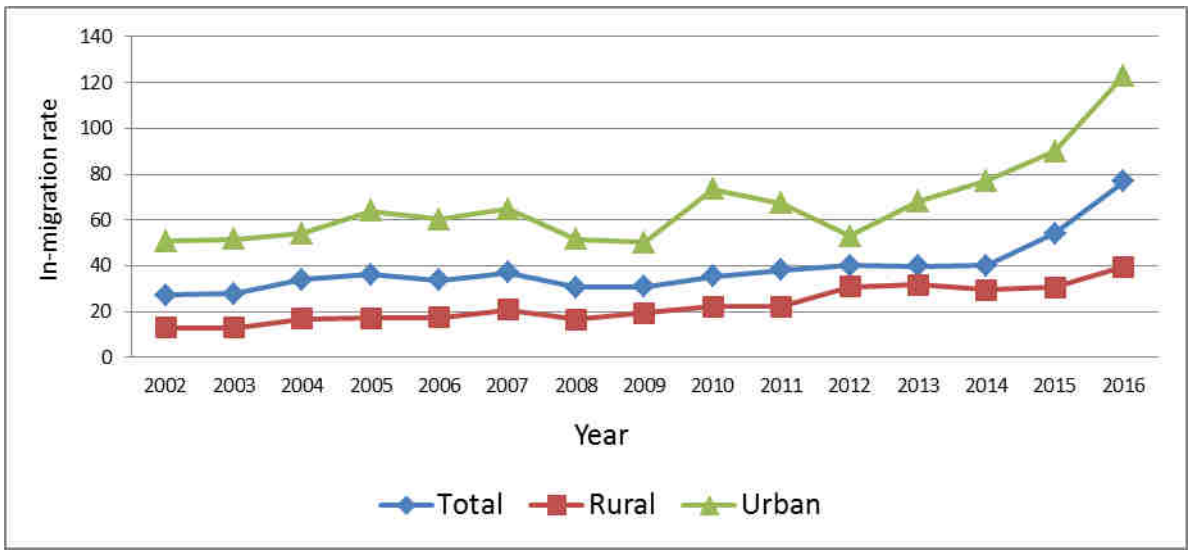
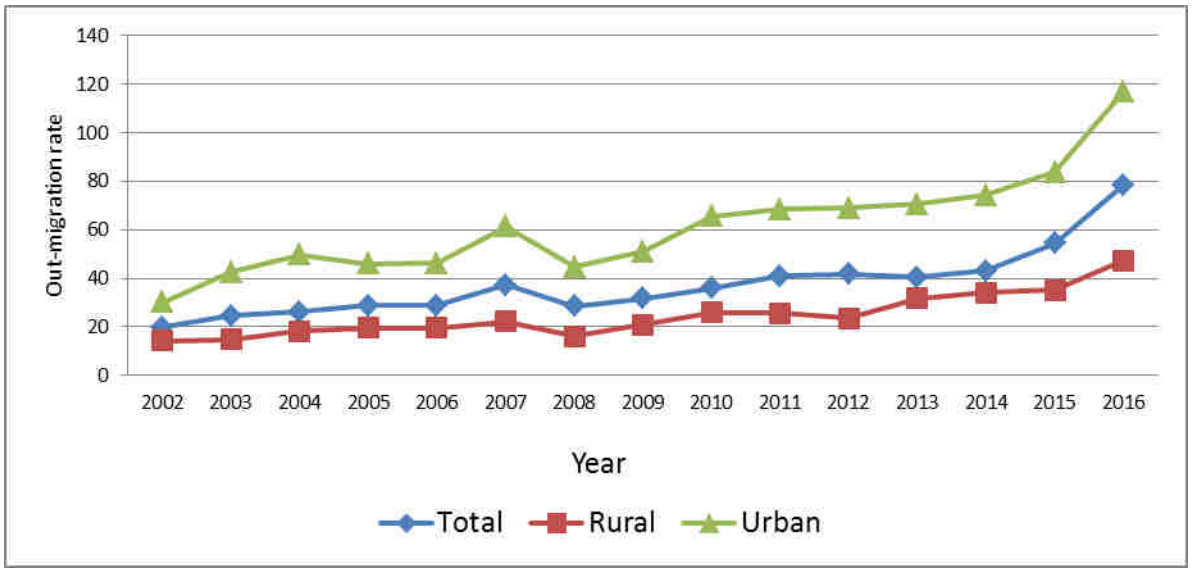


Figure 7.2: Out- migration rates per 1000 population, SVRS 1984-2016



CHAPTER VIII

Disability

Disability is an umbrella term, a consequence of impairment that covers physical activity limitations, and participation restrictions. Impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations. Thus, disability is a complex phenomenon, reflecting an interaction between features of a person's body and features of the society in which he or she lives. A disability may remain present from birth, or occur during a person's lifetime.

An individual may also be labeled disabled if he/she has had impairment in the past or is seen as disabled based on a personal or group standard or norm. Such impairments may include physical, sensory, and cognitive or developmental disabilities. Mental disorders (also known as psychiatric or psychosocial disability) and various types of chronic disease may also qualify as disabilities.

Some advocates object to describing certain conditions (notably deafness and autism) as "disabilities", arguing that it is more appropriate to consider them developmental differences that have been unfairly stigmatized by society. Furthermore, other advocates argue that disability is a result of exclusion from mainstream society and not any inherent impairment.

The types of disability present in a member of a household considered in SVRS-2015 are as follows:

- Problem to view even with spectacles;
- Problem of hearing even with hearing aids;
- Problem to wake up;
- Problem to remember something due to sickness;
- Problem of self-care such as eating, bathing, using toilet and wearing dress;
- Problem to understand another person and
- Problems of communicating to others and the like.

8.1 Level of Disability

Based on the information collected through SVRS Schedule–10, the present chapter has been developed to shed light on the disability scenario in the study area. The simplest measure of disability is the crude disability rate. It is defined as the ratio of the disabled persons to the total mid-year population expressed in percentage. These rates have been presented in Table 8.1 with respect to some background characteristics of the population. These characteristics include, among others residence, geographic division, religion and level of education of household head.

As noted in the table under reference, 9 per thousand population suffer from some form of disability. Males suffer relatively more (9.8) from disability than their female counterparts (8.3). The overall disability rate as recorded in 2016 has shown a moderate increase over the last one year: from 8.8 in 2015 to 9.0 in 2016 per thousand population.

Urban people are less likely (6.8) than the rural people (10.8) to suffer from disability. This is in agreement with the 2015 results but in contrast with the results obtained in 2014 survey, where urban

population was more vulnerable to the event of disability. Rangpur has the highest (11.1)) disability rate followed by Sylhet and Khulna each with a rate of 10.3 per thousand population and the lowest (7.0)) is prevalent in Barisal division.

Hindus are less likely (8.1) to suffer from disability compared to their Muslim counterpart 9.2). The prevalence is the highest (11.9) amongst those who are the followers of other religions. By and large, the disability rate shows a consistent fall as the level of education increases except that for those who have above secondary level of education. In contrast to our findings, the sample census of 2011 revealed an overall disability rate of 14.1. This might have fallen to a lower level within a time lag of 6 years since 2011 thus approaching the SVRS findings of 2016.

Table 8.1: Disability rate per 1000 population by sex and background characteristics, SVRS 2016

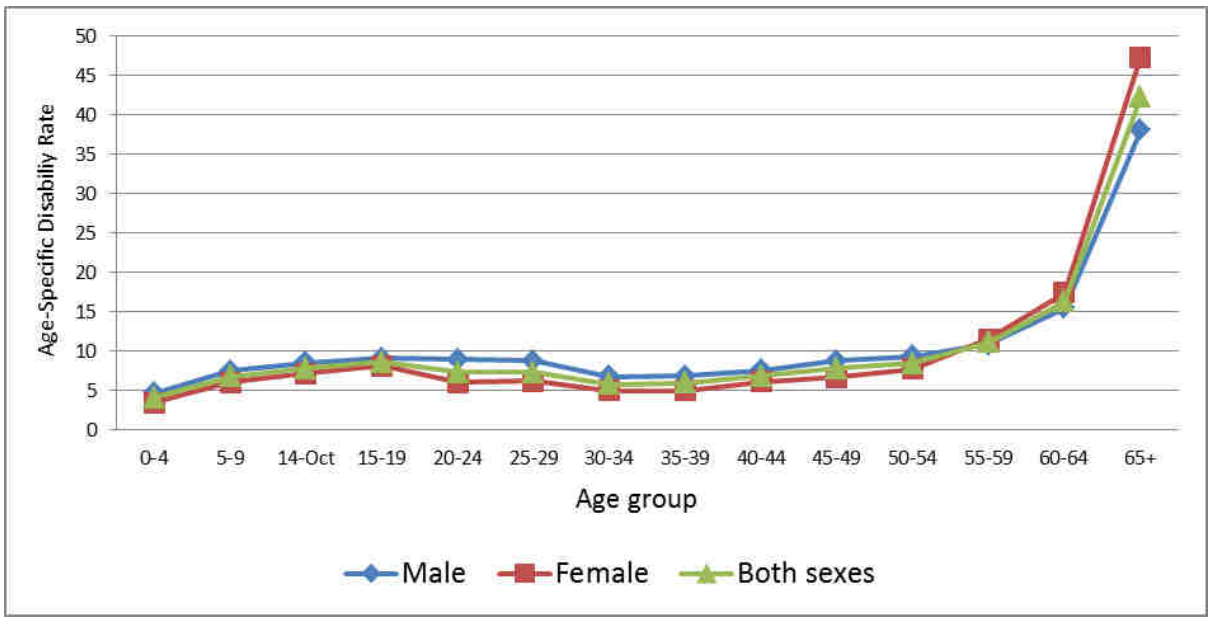
Background Characteristics	Sex		
	Male	Female	Both sexes
Residence:			
Rural	11.8	9.9	10.8
Urban	7.2	6.4	6.8
Division:			
Barisal	7.6	6.4	7.0
Chittagong	9.3	8.1	8.7
Dhaka	7.5	7.3	7.4
Khulna	11.5	9.1	10.3
Rajshahi	10.5	8.9	9.7
Rangpur	11.9	10.3	11.1
Sylhet	11.8	8.9	10.3
Religion:			
Muslim	9.8	8.4	9.2
Hindu	9.9	7.4	8.1
Others	10.8	12.1	11.9
Household head education:			
No education	11.4	9.1	10.9
Primary	9.2	7.8	8.5
Secondary	8.5	8.4	8.6
Above secondary	8.8	8.5	8.0
Total	**9.8**	**8.3**	**9.0**

As shown in Table 8.2, the disability rates do not seem to vary by age until age 55 years when the rate shows an alarmingly increasing trend. The rate progresses at a slow pace from 4.1 per thousand population at age 0–4 to 8.5 per thousand population at age 50–54 and thereafter shows an abrupt increase as expected. The age pattern of disability among the males is almost identical to the pattern as observed among females. The rates are displayed graphically in Figure 8.1.

Table 8.2: Disability rates per 1000 population by age and sex, SVRS 2016

Age groups	Sex		
	Male	Female	Both sexes
0-4	4.8	3.5	4.1
5-9	7.6	6.1	6.8
10-14	8.6	7.2	7.9
15-19	9.1	8.2	8.7
20-24	9.0	6.1	7.4
25-29	8.8	6.2	7.4
30-34	6.8	5.0	5.9
35-39	6.9	5.1	6.0
40-44	7.6	6.2	6.9
45-49	8.8	6.8	7.9
50-54	9.4	7.7	8.5
55-59	10.9	11.5	11.2
60-64	15.5	17.4	16.4
65+	38.1	47.4	42.3
Total	**9.8**	**8.3**	**9.0**

Figure 8.1: Age pattern of disability by sex, SVRS 2016



The district level disability rates are shown in Map 8.1.

8.2 Intensity of Disability

The survey captured three types of disability that reflect the intensity associated with disability, viz. complete disability, complex disability and light or partial disability. The resulting estimates of these phenomena are presented in Table 8.3. As shown in the table under reference, of those who were reported to be disabled, 29.5 percent of them were completely disabled, 40.1 percent had complex

disability and 30.5 percent were partially or light disabled. A close examination of the data presented in Table 8.3 by sex reveals that there are virtually no differences between males and females with respect to the intensity of disability. The same is true with regard to the residential status: urban residents are as likely as the rural people to experience disability. This is true across all intensities of disability.

8.3 Types and Causes of Disability

Most people were reported to be suffering from 'wake up' type of disability. This accounts for about 23 percent of all cases. Next to this is the problem of taking care of self in performing such activities as eating, bathing, toilet use, and wearing dress. This accounts for 17.3 percent of all cases. A substantial proportion (18.5) of the people are unable to understand others or even themselves. These findings are in close agreement with results obtained in 2015 round of survey. The results of this investigation are presented in Table 8.3.

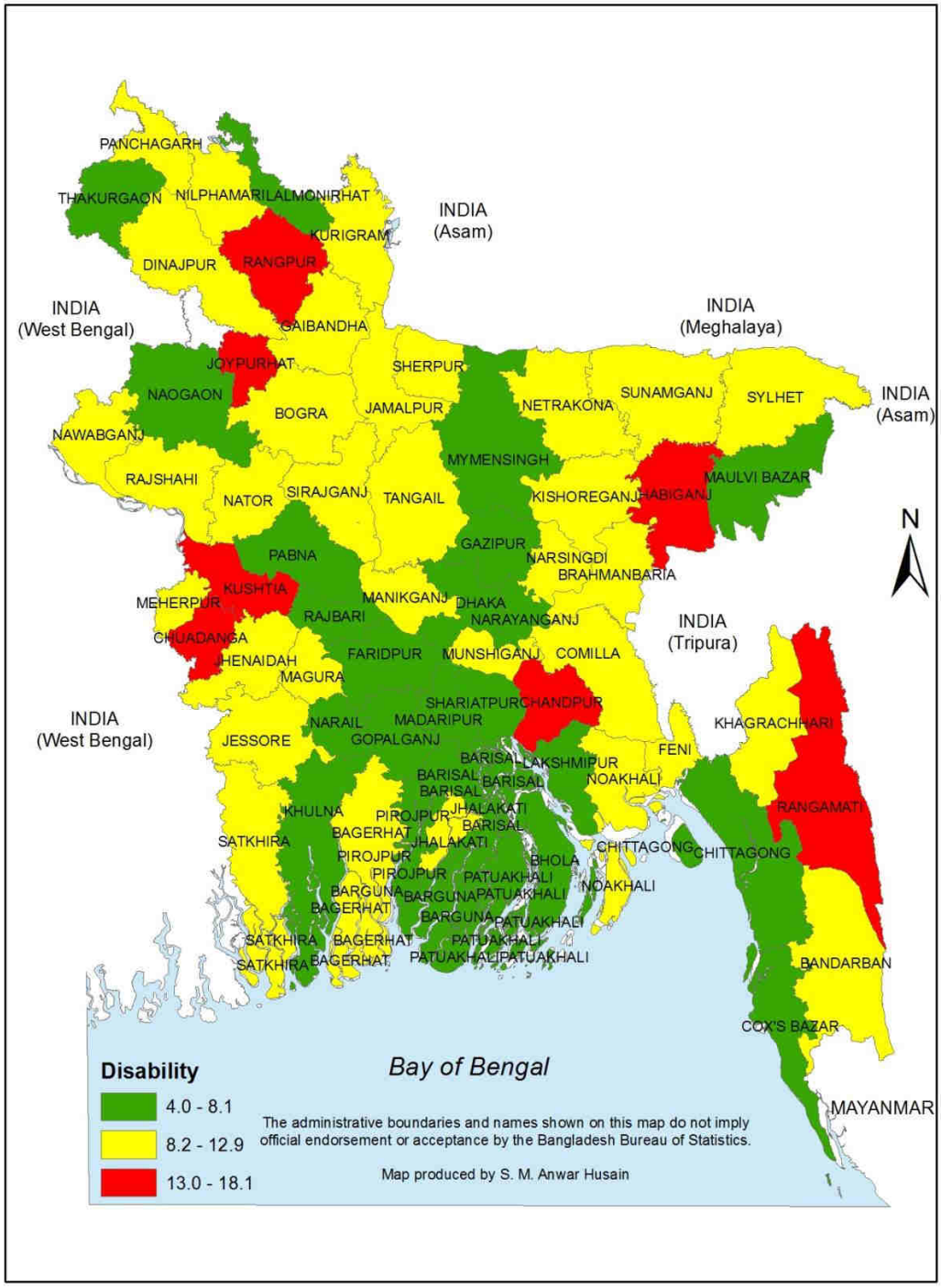
The survey made an effort to identify the causes of disability prevalent in the study area. These include, among others, natal, accident, general illness, old age, wrong treatment. The most conspicuous cause of disability has been identified to be associated with birth or birth injury (natal). This accounts for a little over half (51%) of the total cases of disability followed by some sort of undefined illness (21.7%). The other causes as reported were accident (10.6%), old age senility (11.5%), and due to wrong treatment (2.9%). Table 8.3 also shows these findings.

Table 8.3: Intensity, type and causes of disability by background characteristics, SVRS 2016

Intensity, Type and Causes of Disability	Rural			Urban			Total		
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
Intensity of disability:									
(a) Completely disabled	28.9	32.3	30.5	27.8	27.3	27.6	28.6	30.6	29.5
(b) Complex disabled (not completely disabled)	40.6	38.0	39.4	42.9	40.0	41.5	41.4	38.7	40.1
(c) Light disabled	30.4	29.7	30.1	29.3	32.7	30.9	30.0	30.7	30.5
Type of disability:									
(a) Problem to see even with eye glass	8.8	9.5	9.1	9.4	9.9	9.6	9.0	9.7	9.3
(b) Hard of hearing even with hearing aids	7.4	9.1	8.2	5.3	6.9	6.0	6.7	8.3	7.5
(c) Problem to wake up	25.3	20.9	23.3	24.1	21.9	23.1	24.9	21.3	23.2
(d) Problem to remember something for sickness	12.3	12.6	12.4	12.7	11.5	12.1	12.4	12.2	12.3
(e) Problem of taking care of self in performing such activities as eating, bathing, toilet using and wearing the dress	16.2	17.4	16.8	18.8	18.1	18.4	17.0	17.6	17.3
(f) Problem to understand others or even self	18.4	18.8	18.6	16.4	20.3	18.2	17.7	19.4	18.5
(g) Others	11.7	11.6	11.7	13.4	11.6	12.5	12.3	11.6	12.0

Intensity, Type and Causes of Disability	Rural			Urban			Total		
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
Causes of disability:									
(a) Natal	52.2	49.5	51.0	51.6	50.3	51.0	52.0	49.8	51.0
(b) Accident	13.1	9.0	11.2	12.0	6.4	9.3	12.7	8.1	10.6
(c) Illness	20.6	21.9	21.2	21.7	23.8	22.6	20.9	22.5	21.7
(d) Being old aged	9.1	13.9	11.3	9.6	14.6	11.9	9.2	14.1	11.5
(e) Wrong treatment	2.9	3.1	3.0	2.9	2.6	2.8	2.9	3.0	2.9
(f) Others	2.1	2.5	2.3	2.4	2.4	2.4	2.2	2.5	2.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Map 8.1: Disability rates (per 1000 population) by Zila, SVRS 2016



CHAPTER IX

HIV/AIDS Related Knowledge and Attitudes

9.1 Introduction

Human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS) is a spectrum of conditions caused by infection with the human immunodeficiency virus (HIV). Following initial infection, a person may experience a brief period of influenza-like illness. This is typically followed by a prolonged period without symptoms. As the infection progresses, it interferes more and more with the immune system, making the person much more susceptible to common infections like tuberculosis, as well as opportunistic infections and tumors that do not usually affect people who have working immune systems. The late symptoms of the infection are referred to as AIDS. This stage is often complicated by an infection of the lung known as pneumocystis pneumonia, severe weight loss, a type of cancer known as Kaposi's sarcoma, or other AIDS-defining conditions.

HIV is transmitted primarily via unprotected sexual intercourse (including anal and oral sex), contaminated blood transfusions, hypodermic needles, and from mother to child during pregnancy, delivery, or breastfeeding. Some bodily fluids, such as saliva and tears, do not transmit HIV. Common methods of HIV/AIDS prevention include encouraging safe sex, needle-exchange programs, and treating those who are infected. There is no cure or vaccine; however, antiretroviral treatment can slow the course of the disease and may lead to a near-normal life expectancy. While antiretroviral treatment reduces the risk of death and complications from the disease, these medications are expensive and have side effects. Without treatment, the average survival time after infection with HIV is estimated to be 9 to 11 years, depending on the HIV subtype.

Since its discovery, AIDS has caused an estimated 36 million deaths worldwide (as of 2012). In 2013 it resulted in about 1.34 million deaths. As of 2012, approximately 35.3 million people are living with HIV globally. HIV/AIDS is considered a pandemic—a disease outbreak which is present over a large area and is actively spreading. Genetic research indicates that HIV originated in West-Central Africa during the late nineteenth or early twentieth century. HIV/ AIDS was first recognized by the United States Centers for Disease Control and Prevention (CDC) in 1981 and its cause—HIV infection—was identified in the early part of the decade.

HIV/AIDS has had a great impact on society, both as an illness and as a source of discrimination. The disease also has significant economic impacts. There are many misconceptions about HIV/AIDS such as the belief that it can be transmitted by casual non-sexual contact. The disease has become subject to many controversies involving religion. It has attracted international medical and political attention as well as large-scale funding since it was identified in the 1980s.

9.2 Level of Knowledge

Bangladesh is a low HIV-prevalence country, and as such poses no immediate threat to the general population. Yet the country's HIV/AID prevention program was initiated in 1985. The first case of HIV was detected in 1989. In 2014, a total of 433 new cases of HIV infection, 251 AIDS cases and 91 deaths due to AIDS were reported (BDHS, 2014). The number of HIV-positive people increased, from 1207 in 2007 to 3674 in 2014, implying a 3-fold increase over a period of 7 years (Bdnews 24.com, 2014). Keeping this aggravating scenario in perspective, it is important to assess the current knowledge, awareness and attitudes towards HIV/AID prevention and transmission among the general population particularly among those who are the most vulnerable group. Correct knowledge and

information is the first step towards raising awareness and thus protect them from this deadly disease. The present chapter is devoted to assess the knowledge and attitude of the respondents in the SVRS area on the HIV/AIDS through a limited number of questions incorporated in Schedule–11.

9.2.1 Awareness of HIV/AIDS

On a query to the reasons associated with the causes of HIV/AIDS, a little over 65 percent women mentioned 'unsafe sexual relation' as one of the main causes of HIV/AIDS as shown in Table 9.1. This knowledge has increased by about 15 percent in one year period, from 56.3 percent in 2015 to 65.3 percent in 2016. Urban women are over 22 percent more aware of this knowledge compared to their rural counterparts. A little more than 4 percent of the women believe that some supernatural means might be responsible to cause this havoc. This belief is more prevalent among the rural women (5.5%) than their counterpart (3%). Non-use of condoms was held responsible as a causative agent of HIV/AIDS by about 17 percent of the respondents. This was believed by 22 percent respondents in 2015. The respondents also had a misconception that mosquitoes carry this deadly disease to the human body. This was reported by 7.8 percent of the women showing no variation over the last one year. About 5 percent of the respondents had a feeling that sharing food with a person who has AIDS may also cause this disease, while BDHS 2014 reports this knowledge to be 64 percent.

Table 9.1: Awareness of respondent about HIV/AIDS by background characteristics, SVRS 2016

Background Characteristics	Awareness of respondent							
	Correct knowledge of at least one mode of transmission	Unsafe sexual relationship	Because of Magic or other super natural means	Not using a condom every time they have sex	From mosquito bites	By sharing food with a person who has AIDS	Others	Total
Residence:								
Rural	76.3	59.4	5.5	17.9	10.1	6.1	1.0	100.0
Urban	84.5	72.6	3.0	15.3	4.8	2.8	1.5	100.0
Age group:								
15-19	86.9	70.2	3.2	15.2	6.3	3.7	1.5	100.0
20-24	86.9	68.9	3.5	16.0	6.4	4.1	1.1	100.0
25-29	84.3	67.4	3.8	17.0	6.7	4.1	1.1	100.0
30-34	79.5	64.2	4.4	17.2	8.2	5.0	1.1	100.0
35-39	74.8	61.8	5.1	17.7	8.9	5.3	1.2	100.0
40-44	67.5	57.6	6.4	17.7	10.8	6.2	1.3	100.0
45-49	64.9	55.6	7.3	18.3	10.9	6.3	1.6	100.0
Division:								
Barisal	87.2	67.6	3.7	16.8	7.5	3.5	0.9	100.0
Chittagong	79.4	58.3	6.6	17.6	10.0	6.7	0.9	100.0
Dhaka	78.3	68.8	3.4	15.3	6.8	4.5	1.2	100.0
Khulna	84.9	66.5	3.4	19.9	6.1	3.0	1.2	100.0
Rajshahi	74.0	63.5	3.7	20.6	7.0	3.9	1.2	100.0
Rangpur	77.6	68.2	4.8	13.8	7.8	3.9	1.6	100.0
Sylhet	80.5	62.4	5.3	13.6	9.8	7.2	1.8	100.0
Total	**79.7**	**65.3**	**4.4**	**16.8**	**7.8**	**4.6**	**1.2**	**100.0**

About 80 percent of the women were found to have correct knowledge of at least one mode of transmission of HIV/AIDS in human body. This was to the extent of 82 percent in 2015. Rural women were significantly less likely (76.3%) to have correct knowledge than their urban counterparts (84.5%). Age of the respondents was highly negatively correlated with this knowledge: higher the age, lower is the extent of knowledge. Regional variations are marked. Women of Barisal division

were more knowledgeable (87.2%) about the correct mode of transmission followed by the women of Khulna division (84.9%), the least (74.0%) being prevalent among the women of Rajshahi division.

9.2.2 Knowledge on Mode of Transmission of HIV/AIDS

All respondents were asked to say yes or no on a query to whether HIV/AIDS virus might be transmitted in a child through his/her mother (i) while the mother is pregnant, (ii) during delivery or (iii) while she is breast-feeding. The results of this investigation have been presented in Table 9.2. A little more than 54 percent of the ever-married women believed that AIDS may be transmitted to the child from its mother while the mother is pregnant. This belief is more prevalent in the urban area (59.8%) than in rural area (50.4%). The regional variations in knowledge level are wide ranging between 47.9 percent in Rajshahi division to 61.8 percent in Barisal division. About 52 percent women believe that breast-feeding is a viable means of transmission of HIV/AIDS in newborns from mothers. Keeping in line with the previous findings, the urban women are more in proportion (55.6%) than the rural women (49.3%) to believe that breast-feeding is a viable means through which AIDS may be transmitted in children from their mothers.

A pretty more than one-third of the women have a misconception that the disease in question might be transmitted to the children during delivery. This is more prevalent (42%) among the urban women, than their rural counterparts (35.5%).

Table 9.2 further shows that nearly 9 percent of the women expressed their complete ignorance about the mode of transmission of the HIV/AIDS virus from mothers to their children, while at least one mode of transmission is known to 67 percent of the women. It is encouraging to know that over a period of only one year, the percentage of people showing their complete ignorance about the mode of transmission has decreased by about 75 percent: from 35 percent to 9 percent. A little over 29 percent of the women were on the opinion that all the three means viz. during pregnancy, during delivery and through breast-feeding, are responsible to cause HIV/AIDS to their offspring. The overall impression from the survey results is that younger women are more aware of the transmission of HIV from mother to child.

Table 9.2: Knowledge of mother-to-child HIV transmission by background characteristics, SVRS 2016

Background Characteristics	No knowledge of transmission	Know at least one mode of transmission	Know that all modes of transmission	During pregnancy	During delivery	Through breastfeeding
Residence:						
Rural	9.6	63.2	27.0	50.4	35.5	49.3
Urban	7.6	72.1	31.9	59.8	42.0	55.6
Age group:						
15-19	7.2	74.2	34.4	61.7	43.4	59.4
20-24	7.0	74.6	33.9	61.7	43.4	59.1
25-29	7.6	71.0	31.6	58.0	41.0	55.8
30-34	8.8	67.1	28.5	53.9	38.1	51.2
35-39	10.1	61.4	25.4	48.9	34.1	46.7
40-44	11.6	55.0	21.5	43.1	29.9	41.0
45-49	12.4	51.6	20.0	40.1	28.3	38.1

Background Characteristics	No knowledge of transmission	Know at least one mode of transmission	Know that all modes of transmission	During pregnancy	During delivery	Through breastfeeding
Division:						
Barisal	12.3	73.3	32.6	61.8	43.5	53.5
Chittagong	17.7	63.6	18.2	49.3	28.3	44.8
Dhaka	11.3	65.8	33.3	55.2	40.1	53.7
Khulna	2.9	73.2	26.1	60.1	33.8	57.9
Rajshahi	3.0	63.6	27.2	47.9	39.7	48.7
Rangpur	3.0	65.5	38.1	55.2	46.8	52.8
Sylhet	8.7	67.2	27.1	53.2	35.6	53.9
Total	**8.8**	**66.9**	**29.1**	**54.3**	**38.2**	**52.0**

ANNEXURE - 1

Zila Table

Table A1:TFR, CBR, GFR, CDR, IMR, U5MR, CPR, Disability and Mean age at first marriage by Zila, SVRS 2016

Zila	CBR	GFR	TFR	CDR	IMR	U5MR	CPR	Crude	Mean age at first marriage	
								Disability Rate	Male	Female
Barguna	12.6	45.8	1.4	4.4	49.0	49.0	78.3	5.6	23.9	17.6
Barisal	17.2	61.1	1.8	5.6	16.3	25.1	88.4	7.1	26.4	18.9
Bhola	22.0	89.5	2.7	5.5	26.6	47.9	62.6	6.6	24.6	18.0
Jhalokati	18.4	68.7	2.2	8.0	47.2	47.2	57.8	9.6	27.4	18.0
Patuakhali	18.1	69.8	2.1	6.2	22.4	37.3	71.1	5.9	23.7	17.0
Pirojpur	21.1	80.3	2.4	5.7	36.7	36.7	63.1	8.1	25.4	17.9
Bandarban	19.8	74.6	2.2	6.1	84.5	84.5	60.2	12.0	24.1	19.3
Brahmanbaria	22.4	92.0	2.6	4.7	26.3	34.2	30.2	10.6	25.2	17.7
Chandpur	25.7	96.1	2.8	4.0	3.1	6.2	55.0	17.1	26.5	18.2
Chittagong	17.3	59.9	1.7	4.1	14.6	24.6	53.5	5.1	28.6	20.1
Comilla	22.7	83.0	2.4	5.1	21.9	32.9	49.7	8.9	24.6	17.7
Cox's Bazar	27.8	108.2	3.2	7.6	69.5	81.6	57.6	6.5	24.5	18.5
Feni	22.6	83.6	2.3	5.0	30.5	30.5	49.3	9.0	27.5	18.7
Khagrachhari	25.5	103.5	3.0	4.9	27.5	45.9	61.3	12.2	22.0	16.8
Lakshmipur	22.2	86.6	2.7	3.7	19.0	23.7	43.9	5.8	25.9	18.5
Noakhali	23.6	91.3	2.6	5.4	24.9	35.9	45.3	11.2	24.5	18.0
Rangmati	16.6	61.9	1.9	7.9	76.9	76.9	63.3	16.9	25.6	20.6
Dhaka	15.7	52.9	1.5	3.2	20.4	24.0	64.2	4.0	26.2	19.4
Faridpur	22.4	84.8	2.6	6.6	45.7	50.8	59.7	6.8	25.4	17.9
Gazipur	16.0	51.3	1.4	4.2	29.9	29.9	57.3	6.7	25.4	18.9
Goplaganj	19.1	76.5	2.3	6.7	43..5	54.3	61.0	6.9	25.4	16.5
Jamalpur	19.4	77.7	2.4	4.4	20.0	20.0	49.0	9.7	23.4	17.6
Kishorganj	23.5	95.3	2.8	7.3	30.6	45.9	77.6	10.3	24.1	17.9
Madaripur	25.9	111.3	3.3	6.2	16.0	32.0	42.1	6.8	26.5	17.5
Manikganj	20.5	74.6	2.2	5.9	43.5	52.2	51.8	9.8	25.2	18.2
Munshiganj	18.2	64.7	1.8	6.1	16.7	25.0	39.0	10.2	28.5	19.8
Mymensing	20.2	81.6	2.4	5.0	33.8	35.9	75.1	8.1	23.1	18.0
Narayanganj	17.8	63.0	1.8	4.5	26.6	31.0	60.2	6.3	25.5	17.7
Narsindi	23.1	88.4	2.6	5.7	19.5	23.3	43.8	8.8	24.1	17.8
Netrokona	18.3	71.0	2.2	5.0	17.6	23.4	79.6	12.0	24.3	18.3
Rajbari	18.1	67.3	2.0	5.0	18.9	47.2	33.9	7.9	27.2	18.2

Zila	CBR	GFR	TFR	CDR	IMR	U5MR	CPR	Crude Disability Rate	Mean age at first marriage	
									Male	Female
Sariatpur	23.7	93.2	2.9	6.6	22.1	29.4	59.5	4.9	25.4	17.8
Sherpur	21.3	86.5	2.8	6.7	36.0	36.0	58.5	10.5	21.9	16.3
Tangail	19.6	73.3	2.3	5.7	47.0	50.2	61.7	9.5	25.5	16.9
Bagerhat	17.7	67.0	2.1	6.5	24.1	24.1	56.8	9.3	25.0	19.2
Chuadanga	18.3	65.9	2.1	5.3	13.4	13.4	66.3	18.0	23.1	17.2
Jessore	18.4	65.9	2.1	5.4	28.4	31.5	64.5	10.3	25.3	18.2
Jhenaidah	18.6	67.5	2.1	4.1	30.7	30.7	69.0	12.9	24.4	17.9
Khulna	17.3	59.2	1.8	4.6	18.4	25.8	64.0	6.2	26.0	19.6
Kushtia	18.4	66.4	2.1	4.8	28.2	28.2	61.8	13.7	25.0	18.0
Magura	20.6	75.3	2.5	4.2	53.4	61.1	64.3	9.8	25.2	17.3
Meherpur	14.5	51.3	1.7	4.2	15.2	15.2	73.0	10.1	24.3	18.0
Narail	21.3	79.2	2.4	5.2	22.2	22.2	61.4	7.1	24.8	17.3
Sathkira	15.6	56.4	1.7	5.9	31.9	37.2	68.5	11.8	26.0	17.8
Bogra	19.0	70.1	2.2	5.1	32.8	35.3	73.5	9.4	23.6	17.2
Joypurhat	12.8	45.7	1.4	6.1	87.7	58.2	87.1	14.9	25.0	18.9
Naogaon	14.6	53.1	1.8	6.2	20.7	25.9	58.3	7.1	24.2	16.9
Natore	12.4	43.9	1.4	2.8	16.7	25.0	68.2	12.3	27.8	19.5
Nawabganj	19.2	68.6	2.0	5.4	20.8	31.3	46.2	10.4	24.0	17.0
Pabna	19.3	72.2	2.2	4.3	17.9	21.5	59.8	8.0	24.5	18.1
Rajshahi	15.9	54.1	1.7	5.0	19.8	24.8	54.8	10.3	25.5	19.2
Sirajganj	20.2	77.8	2.3	5.9	36.6	39.4	57.0	8.8	24.3	17.3
Dinajpur	18.7	68.6	2.1	4.9	24.9	27.7	72.5	10.2	24.1	18.2
Gaibandha	20.1	78.2	2.4	5.5	42.1	45.6	62.9	10.4	23.8	16.9
Kurigram	18.4	69.2	2.2	5.9	34.6	38.5	82.5	11.0	23.9	17.1
Lalmonirhat	19.8	77.7	2.3	3.6	21.1	42.3	70.2	6.8	25.6	17.3
Nilphamari	20.8	78.8	2.3	5.9	23.8	23.8	87.3	12.5	23.7	18.1
Panchaghar	18.7	71.3	2.1	5.1	50.0	58.3	77.3	9.7	24.3	17.8
Rangpur	17.7	63.0	1.9	4.3	26.6	28.0	96.7	13.1	25.8	18.7
Thakurgaon	16.2	59.1	1.7	5.0	19.2	32.1	62.3	7.6	25.9	18.1
Habiganj	16.4	62.2	1.9	4.1	17.9	25.0	51.1	15.7	26.3	19.9
Maulvibazar	21.0	76.0	2.3	6.3	34.9	47.6	46.0	7.7	26.7	20.1
Sunamganj	20.7	83.1	2.4	4.7	40.2	55.8	49.1	10.8	26.4	19.8
Sylhet	15.8	57.6	1.9	5.1	39.3	48.2	57.2	9.2	26.8	21.1
Total	**18.7**	**69.0**	**2.1**	**5.1**	**28.0**	**35.0**	**62.3**	**9.0**	**25.2**	**18.4**

Supplementary Tables

Table 2A. Population in SVRS area, SVRS 2016

Age group	Male	%	Female	%	Both Sexes	%
0-4	40864	8.5	42626	8.9	83490	8.7
5-9	50714	10.6	49122	10.3	99836	10.4
10-14	56682	11.8	55119	11.5	111801	11.7
15-19	49131	10.2	43888	9.2	93019	9.7
20-24	38671	8.1	46906	9.8	85577	8.9
25-29	37771	7.9	45377	9.5	83148	8.7
30-34	37087	7.7	40981	8.6	78068	8.1
35-39	33732	7.0	33610	7.0	67342	7.0
40-44	29795	6.2	28269	5.9	58064	6.1
45-49	26704	5.6	21909	4.6	48613	5.1
50-54	22666	4.7	23917	5.0	46583	4.9
55-59	16855	3.5	14139	3.0	30994	3.2
60-64	14924	3.1	12515	2.6	27439	2.9
65+	24001	5.0	19938	4.2	43939	4.6
Total	**479597**	**100.0**	**478316**	**100.0**	**957913**	**100.0**

Table 2B: Distribution of out- migrants by age and causes of migration for males, SVRS 2016

Age group	Causes of out-migration												
	Marriage	Education	Looking for Job	Getting Job	Transfer	Floating/ river fall	Earning	Living with family	Business	Retirement	Abroad	Other	Total
0-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81.7	0.0	0.0	0.0	18.4	100.0
5-14	0.0	1.9	0.5	0.2	0.6	0.4	1.7	76.1	1.9	0.3	0.2	16.5	100.0
15-24	9.8	7.9	8.2	4.6	3.1	1.7	20.7	31.1	2.3	0.4	4.4	6.3	100.0
25-34	21.8	4.5	9.5	7.1	7.4	1.9	23.9	17.1	4.9	0.3	4.0	1.1	100.0
35-44	0.6	1.6	8.3	4.6	10.5	1.9	22.4	14.4	6.2	0.3	2.9	27.0	100.0
45-54	0.7	1.7	5.7	3.5	9.5	2.3	20.1	15.3	8.0	0.5	1.8	31.4	100.0
55-64	0.6	1.4	4.9	1.4	6.7	3.6	17.8	19.3	7.6	3.8	0.6	32.9	100.0
65+	0.3	1.0	3.0	1.6	4.9	4.2	13.9	31.8	6.0	2.3	1.0	30.5	100.0
Total	**7.1**	**2.6**	**5.8**	**3.6**	**5.0**	**1.5**	**15.6**	**37.5**	**3.9**	**0.4**	**2.4**	**14.7**	**100.0**

Table 2C: Distribution of out- migrants by causes of migration and age for females, SVRS 2016

Age group	Causes of out-migration												
	Marriage	Education	Looking for Job	Getting Job	Transfer	Floating/river fall	Earning	Living with family	Business	Retirement	Abroad	Other	Total
0-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81.3	0.0	0.0	0.0	18.8	100.0
5-14	7.1	1.3	0.4	0.3	0.7	0.3	1.6	70.5	1.8	0.3	0.2	15.9	100.0
15-24	45.0	3.2	3.3	2.0	2.5	0.1	6.2	34.8	1.3	0.4	0.2	0.5	100.0
25-34	8.7	1.8	4.3	3.2	5.2	1.6	8.8	48.2	2.2	0.3	0.3	15.9	100.0
35-44	1.3	2.1	3.5	2.1	4.3	2.0	11.0	48.5	2.6	0.3	0.6	22.0	100.0
45-54	1.1	1.6	2.8	1.7	4.0	2.6	10.0	48.6	2.5	0.1	0.4	24.2	100.0
55-64	0.9	0.9	1.9	1.3	4.5	3.9	6.9	55.8	1.8	0.7	0.7	21.2	100.0
65+	0.7	1.3	2.1	1.3	2.9	2.3	5.1	63.3	1.5	0.7	.5	18.7	100.0
Total	**18.8**	**2.0**	**2.6**	**1.7**	**2.8**	**1.1**	**6.0**	**50.9**	**1.6**	**0.3**	**0.2**	**12.0**	**100.0**

Table 2D: Distribution of out-migrants by causes of migration and age for both sexes, SVRS 2016

Age group	Causes of out-migration												
	Marriage	Education	Looking for Job	Getting Job	Transfer	Floating/river fall	Earning	Living with family	Business	Retirement	Abroad	Other	Total
0-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81.5	0.0	0.0	0.0	15.6	100.0
5-14	3.6	1.6	0.4	0.2	0.7	0.4	1.6	73.3	1.9	0.3	0.2	16.2	100.0
15-24	33.2	4.7	5.0	2.9	2.7	1.2	11.0	33.6	1.6	0.4	1.6	2.5	100.0
25-34	15.3	1.7	6.9	5.2	6.3	1.8	16.4	32.5	3.5	0.3	2.1	8.4	100.0
35-44	0.9	1.8	6.3	3.5	8.0	1.9	17.7	28.3	4.7	0.3	2.0	24.9	100.0
45-54	0.9	1.6	4.5	2.7	7.2	2.4	15.9	29.2	5.7	0.7	1.2	28.4	100.0
55-64	0.7	1.2	3.6	1.4	5.8	3.7	13.2	34.4	5.2	2.5	0.6	28.1	100.0
65+	0.5	1.2	2.6	1.5	3.9	3.3	9.8	46.6	3.9	1.5	0.8	24.9	100.0
Total	**13.2**	**2.3**	**4.1**	**2.6**	**3.9**	**1.3**	**10.6**	**44.5**	**2.7**	**0.4**	**1.3**	**13.3**	**100.0**

Table 2E: Distribution of in- migrants by causes of migration and age for males, SVRS 2016

Age group	Causes of in-migration												
	Marriage	Education	Looking for Job	Getting Job	Transfer	Floating/river fall	Earning	Living with family	Business	Retirement	Abroad	Other	Total
0-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	89.0	0.0	0.0	0.0	11.1	100.0
5-14	0.0	2.2	0.5	0.3	0.4	2.1	5.9	75.1	1.7	0.2	0.1	11.7	100.0
15-24	10.8	7.9	5.2	2.8	3.6	1.6	13.0	46.2	3.3	0.3	1.8	4.0	100.0
25-34	14.0	1.6	8.5	8.5	8.4	1.3	20.5	21.5	6.6	0.3	3.6	5.6	100.0
35-44	0.7	1.8	7.5	5.7	10.6	2.2	21.9	15.5	8.6	0.3	3.2	22.4	100.0
45-54	0.7	2.2	6.9	4.3	10.3	2.2	21.6	14.6	9.7	0.5	3.8	23.5	100.0
55-64	0.5	1.8	4.2	3.2	7.3	4.7	21.8	18.1	8.4	2.6	1.7	25.7	100.0
65+	0.5	1.5	2.8	1.3	3.7	4.2	15.2	37.4	6.0	2.4	1.4	23.9	100.0
Total	**5.1**	**2.6**	**4.8**	**3.8**	**5.4**	**1.8**	**14.2**	**43.0**	**4.9**	**0.4**	**2.0**	**12.5**	**100.0**

Table 2F: Distribution of in- migrants by causes of migration and age for females, SVRS 2016

	Causes of in-migration												
Age group	Marriage	Education	Looking for Job	Getting Job	Transfer	Floating/river fall	Earning	Living with family	Business	Retirement	Abroad	Other	Total
0-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	87.7	0.0	0.0	0.0	12.3	100.0
5-14	4.0	2.1	0.6	0.3	0.5	2.2	6.6	71.6	1.7	0.1	0.1	10.6	100.0
15-24	42.9	3.8	3.3	1.9	2.2	0.8	4.7	39.1	1.2	0.1	0.1	0.2	100.0
25-34	5.3	1.8	4.9	3.5	4.3	1.1	8.3	55.2	2.1	0.1	0.2	13.5	100.0
35-44	1.8	2.7	4.6	2.5	3.7	2.1	11.1	53.1	2.6	0.1	0.4	15.1	100.0
45-54	1.9	1.8	2.6	1.3	4.3	2.6	9.9	57.8	2.6	0.4	0.4	14.8	100.0
55-64	0.8	0.4	2.5	2.4	3.0	2.4	8.3	63.0	2.3	0.4	0.1	15.0	100.0
65+	0.4	0.1	1.1	0.6	1.9	2.2	4.7	76.5	0.4	0.5	0.4	10.8	100.0
Total	**16.5**	**2.4**	**2.8**	**1.8**	**2.3**	**1.3**	**6.2**	**56.5**	**1.6**	**0.1**	**0.2**	**08.6**	**100.0**

Table 2G: Distribution of in- migrants by causes of migration and age for both sexes, SVRS 2016

	Causes of in-migration												
Age group	Marriage	Education	Looking for Job	Getting Job	Transfer	Floating/river fall	Earning	Living with family	Business	Retirement	Abroad	Other	Total
0-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	88.4	0.0	0.0	0.0	11.7	100.0
5-14	2.0	2.2	0.5	0.3	0.4	2.2	6.3	73.3	1.7	0.1	0.1	11.2	100.0
15-24	34.0	5.0	3.8	2.2	2.5	1.0	7.1	41.1	1.8	0.1	0.5	1.3	100.0
25-34	9.6	1.7	6.7	5.9	6.3	1.2	14.3	38.6	4.3	0.2	1.9	9.6	100.0
35-44	1.2	2.1	6.3	4.4	7.8	2.1	17.5	31.1	6.2	0.2	2.1	19.4	100.0
45-54	1.2	2.0	5.0	3.0	7.7	2.4	16.5	33.3	6.6	0.5	2.4	19.8	100.0
55-64	0.7	1.2	3.5	2.8	5.3	3.6	15.5	39.1	5.5	1.6	1.0	20.7	100.0
65+	0.5	1.2	1.8	0.9	2.7	3.0	9.1	60.2	2.7	1.3	0.8	16.3	100.0
Total	**11.3**	**2.5**	**3.7**	**2.7**	**3.7**	**1.5**	**9.9**	**50.3**	**3.1**	**0.2**	**1.0**	**10.4**	**100.0**

Table 2H: Out- migration rates per 1000 population by sex and direction, SVRS 2016

Direction of out-migration	Male	Female	Both sexes
Total out-migrants	71.8	85.3	78.5
Rural out-migrants	39.0	56.0	47.5
Rural to Rural	16.0	31.2	25.1
Rural to Urban	12.4	13.7	12.8
Urban out-migrants	112.7	121.7	117.2
Urban to Rural	11.7	14.9	13.8
Urban to Urban	70.3	72.9	71.8

Table 2I: Distribution of out-migrants by sex, causes and direction, SVRS 2016

Causes of out-migration	Male	Female	Both sexes
Total out-migrants	100.0	100.0	100.0
Marriage	7.1	18.8	13.3
Education	2.7	2.0	2.3
Looking for Job	5.8	2.6	4.1
Getting Job	3.6	1.7	2.6
Transfer	5.1	2.8	3.9
Floating/river eroded	1.5	1.2	1.3
Earning	15.6	6.0	10.6
Living with family	37.5	50.9	44.6
Business	3.9	1.6	2.7
Retirement	0.5	0.3	0.4
Abroad	2.4	0.3	1.3
Other	14.7	12.0	13.3
Rural out-migrants			
Marriage	3.6	30.3	18.1
Education	2.9	1.8	2.3
Looking for Job	8.6	3.3	5.7
Getting Job	5.0	1.7	3.2
Transfer	3.0	2.1	2.5
Floating/river eroded	2.2	1.4	1.8
Earning	23.8	7.6	15.0
Living with family	35.2	44.0	40.0
Business	3.1	1.3	2.1
Retirement	0.3	0.2	0.3
Abroad	5.5	0.3	2.7
Other	7.1	6.3	6.7
Rural to Rural out-migrants			
Marriage	5.6	40.1	27.7
Education	1.8	0.8	1.1
Looking for Job	3.8	1.2	2.1
Getting Job	1.8	0.5	1.0
Transfer	4.7	2.4	3.2
Floating/river eroded	4.1	1.9	2.7
Earning	13.0	3.7	7.1
Living with family	49.4	40.4	43.6
Business	2.9	1.1	1.7
Retirement	0.2	0.2	0.2
Abroad	0.0	0.0	0.0

Causes of out-migration	Male	Female	Both sexes
Other	12.8	7.9	9.7
Rural to Urban out-migrants			
Marriage	2.3	12.2	7.3
Education	4.9	3.8	4.3
Looking for Job	12.1	7.2	9.6
Getting Job	9.9	3.9	6.9
Transfer	2.4	1.6	2.0
Floating/river eroded	0.6	0.5	0.6
Earning	26.6	14.3	20.4
Living with family	33.2	51.8	42.5
Business	4.4	1.8	3.1
Retirement	0.3	0.2	0.2
Abroad	0.0	0.0	0.0
Other	3.6	3.1	3.3
Urban out-migrants			
Marriage	8.9	12.2	10.6
Education	2.5	2.2	2.3
Looking for Job	4.3	2.3	3.3
Getting Job	2.9	1.7	2.3
Transfer	6.1	3.2	4.6
Floating/river eroded	1.1	1.0	1.1
Earning	11.4	5.1	8.2
Living with family	38.7	54.9	47.1
Business	4.3	1.8	3.1
Retirement	0.5	0.4	0.5
Abroad	0.9	0.2	0.5
Other	18.6	15.3	16.9
Urban to Rural out-migrants			
Marriage	6.1	18.7	13.1
Education	1.3	1.2	1.3
Looking for Job	2.2	1.2	1.7
Getting Job	1.6	0.9	1.2
Transfer	4.7	2.3	3.4
Floating/river eroded	0.7	0.6	0.6
Earning	12.0	5.1	8.1
Living with family	52.5	57.8	55.4
Business	4.5	1.9	3.1
Retirement	1.4	1.1	1.2
Abroad	0.0	0.0	0.0
Other	13.3	9.6	11.2
Urban to Urban out-migrants			
Marriage	9.6	10.7	10.2
Education	2.8	2.4	2.5
Looking for Job	4.6	2.5	3.5
Getting Job	3.1	1.9	2.5
Transfer	6.5	3.5	5.0
Floating/river eroded	1.3	1.1	1.2
Earning	10.7	5.0	7.8
Living with family	36.8	54.4	45.8
Business	4.4	1.8	3.1
Retirement	0.3	0.2	0.3
Abroad	0.0	0.0	0.0
Other	20.2	16.7	18.4

Table 2J: In-migration rates per 1000 population by sex and direction, SVRS 2016

Direction of in-migration	Male	Female	Both sexes
Total in-migrants	69.1	84.3	76.7
Rural in-migrants	30.2	48.9	39.5
Rural to Rural	25.2	43.9	34.5
Urban to Rural	5.1	5.0	5.0
Urban in-migrants	117.7	128.2	123.0
Rural to Urban	27.4	33.3	30.3
Urban to Urban	90.3	95.0	92.6

Table 2 K: Distribution of in-migrants by sex, causes and direction, SVRS 2016

Causes of in-migration	Male	Female	Bothsexes
Total in-migrants:	100.0	100.0	100.0
Marriage	5.1	16.5	11.3
Education	2.6	2.4	2.5
Looking for Job	4.8	2.8	3.7
Getting Job	3.8	1.8	2.7
Transfer	5.4	2.3	3.7
Floating/river eroded	1.8	1.3	1.5
Earning	14.2	6.2	9.9
Living with family	43.0	56.5	50.3
Business	4.9	1.6	3.1
Retirement	0.4	0.1	0.2
Abroad	2.0	0.2	1.0
Other	12.5	8.6	10.4
Rural in-migrants			
Marriage	4.3	31.5	20.5
Education	1.7	1.3	1.5
Looking for Job	4.3	1.8	2.9
Getting Job	2.2	0.9	1.4
Transfer	3.1	1.8	2.3
Floating/river eroded	5.0	3.2	3.9
Earning	10.4	4.1	6.7
Living with family	52.6	49.5	50.7
Business	3.0	0.9	1.7
Retirement	0.5	0.1	0.3
Abroad	6.2	0.3	2.7
Other	7.0	4.9	5.8
Rural to Rural in-migrants			
Marriage	4.7	34.3	23.4
Education	1.9	1.2	1.5
Looking for Job	5.2	1.9	3.1
Getting Job	2.2	0.9	1.4
Transfer	3.6	1.8	2.4
Floating/river eroded	6.5	3.4	4.5
Earning	11.4	3.8	6.6
Living with family	53.5	47.0	49.4
Business	3.2	08	1.7
Retirement	0.2	0.1	0.1
Abroad	0.0	0.0	0.0
Other	7.8	5.1	6.1
Urban to Rural in-migrants			
Marriage	2.5	12.7	8.1

Causes of in-migration	Male	Female	Bothsexes
Education	5.0	4.7	4.8
Looking for Job	5.8	3.7	4.6
Getting Job	5.5	2.7	3.9
Transfer	4.5	1.3	2.8
Floating/river eroded	1.3	1.0	1.2
Earning	22.3	11.0	16.1
Living with family	39.6	55.9	48.5
Business	8.0	2.5	5.0
Retirement	0.2	0.1	0.1
Abroad	0.0	0.0	0.0
Other	5.6	4.7	5.1
Urban in-migrants			
Marriage	5.3	9.4	7.5
Education	2.9	2.9	2.9
Looking for Job	4.9	3.3	4.1
Getting Job	4.4	2.2	3.2
Transfer	6.2	2.6	4.3
Floating/river eroded	0.6	0.4	0.5
Earning	15.5	7.2	11.2
Living with family	39.6	59.9	50.2
Business	5.6	1.9	3.7
Retirement	0.3	0.1	0.2
Abroad	0.6	0.1	0.3
Other	14.4	10.3	12.3
Rural to urban in-migrants:			
Marriage	2.5	12.7	8.1
Education	5.0	4.7	4.8
Looking for Job	5.8	3.7	4.6
Getting Job	5.5	2.7	3.9
Transfer	4.5	1.3	2.8
Floating/river eroded	1.3	1.0	1.2
Earning	22.3	11.0	16.1
Living with family	39.6	55.9	48.5
Business	8.0	2.5	5.0
Retirement	0.2	0.1	0.1
Abroad	0.0	0.0	0.0
Other	5.6	4.7	5.1
Urban to urban in-migrants:			
Marriage	5.3	9.4	7.5
Education	2.9	2.9	2.9
Looking for Job	4.9	3.3	4.1
Getting Job	4.4	2.2	3.2
Transfer	6.2	2.6	4.3
Floating/river eroded	0.6	0.4	0.5
Earning	15.5	7.2	11.2
Living with family	39.6	59.9	50.2
Business	5.6	1.9	3.7
Retirement	0.3	0.1	0.25
Abroad	0.6	0.1	0.3
Other	14.4	10.3	12.3

ANNEXURE - 2

Operational Definitions of Indicators

(a) SOCIAL INDICATORS

Household

Household is defined as a unit consisting of group of persons, related or unrelated, live together and taking food from the same kitchen.

Dependency Ratio

Dependency ratio is defined as the ratio of sum of population aged 0-14 years and 65+ years to the population aged 15-64 years expressed as percentage.

Sex Ratio

The ratio of males to females in a given population usually expressed as the number of males per 100 females.

Index of Ageing

Index of ageing is the ratio of older persons of age 60 years and above to the population of age 0-14 years expressed as percentage.

Literacy

A person who is able to write a simple letter is defined as literate.

Literacy Rate (Age 7+yrs)

Percentage of population of age 7 years and over who can write a letter to the total population of the same age-group is the literacy rate.

Adult Literacy (Age 15+ yrs)

Percentage of population of age 15 years and over who can write a letter to the total population of the same age-group is the adult literacy rate.

Child- Woman Ratio (CWR)

The ratio of children under five (0-4) years old to women of ages 15-49 is called the child-women ratio.This is commonly expressed per 1000 women.

Gross Enrolment Rate (GER)

GER is the relative number of boys and girls enrolled in the grade I to V in a year to the total population of the age-group 6-10 years expressed in percentage.

Net Enrolment Rate (NER)

NER is the percentage of boys and girls of age 6-10 years enrolled in grade 1-V to the total population of the same age-group.

(b) FERTILITY RELATED INDICATORS

Crude Birth Rate (CBR)

The ratio of livebirths in a specified period (usually one calendar year) to the average population in that period (normally taken to be the mid year population). The value is conventionally expressed per 1000 population.

General Fertility Rate (GFR)

The ratio of number of live births in a specified period to the average number of women of child bearing age in the population during the period.

Age-Specific Fertility Rate (ASFR)

Number of live births occurring to women of a particular age or age group normally expressed per 1000 women in the same age- group in a given year. It is usually calculated for 5 years age groups from 15-19 to 40-44 or 15-19 to 45-49.

Total Fertility Rate (TFR)

The sum of the age-specific fertility rates (ASFRs) over the whole range of reproductive ages for a particular period (usually a year).It can be interpreted as the number of children; a woman would have during her lifetime if she were to experience the fertility rates of period at each age and no mortality till they reach to their reproductive period. .

Gross Reproduction Rate (GRR)

The average number of daughters that would be born to a woman during her lifetime if she would passed through the childbearing ages experiencing the average age-specific fertility pattern of a given year. and no mortality till they reach to their reproductive period.

Net Reproduction Rate (NRR)

The average number of daughters that would be born to a woman if she passed through her lifetime from birth confirm to the age specific fertility rates of a given year. This rate is similar to the gross reproduction rate and takes into account that some women will die before completing their childbearing years. NRR means each generation of mothers is having exactly enough daughters to replace itself in the population.

(c) MORTALITYRELATED INDICATORS

Crude Death Rate (CDR)

The crude death rate (CDR) is the number of deaths per 1000 mid-year population in a given year.

Child Death Rate (ChDR)

Child death rates is defined as the number of deaths among children in age 1-4 per 1000 mid-year population in the same age group.

Under-Five Mortality Rate (U5MR)

The under-five mortality rate is defined as the number of deaths to children under five year of age per 1000 live births in a given year.

Infant Mortality Rate (IMR)

The number of deaths occurring during a given year among the live-born infants who have not reached their first birthday, divided by the number of live births in the given year and usually expressed per 1000 live births.

Neo-Natal Mortality Rate (NMR)

The neo-natal mortality rate is defined as the number of deaths of infants under one month of age during a year per 1000 live births in that year.

Post-Neo-natal Mortality Rate (PNMR)

The post-Neo-natal mortality rate is defined as the number of deaths of infants of age 1 month through 11 months per 1000 live births in that year.

Maternal Mortality Ratio (MMR)

The maternal mortality ratio is defined as the number of total deaths of women due to complications of pregnancy, child birth and puerperal causes per 1000 live births during a year.

Life Expectancy (e_x)

Expectation of life is the average longevity of an individual or the average number of years of life remaining at specified age x. Expectation of life at birth (e_o) is the average number of years of life remaining at beginning, i.e. '0' year of age.

Natural growth rate (NGR)

The natural growth rate is the difference between crude birth rate (CBR) and crude death rate (CDR) expressed in percentage.

(d) NUPTIALITY RELATED INDICATORS

Crude Marriage Rate (CMR)

Crude Marriage Rate is defined as the number of marriages solemnized per thousand mid year population irrespective of their marital status.

General Marriage Rate (GMR)

GMR is the relative number of marriage of population aged 15+ years per 1000 population of the same group.

Age-Specific Marriage Rate (ASMR)

ASMR is defined as the relative number of marriage per 1000 population of specific age group

Singulate Mean Age at Marriage (SMAM)

SMAM is defined as an estimate of the mean number of years lived by cohort of women before their first marriage. This is an indirect method of estimation of the mean age at first marriage.

Crude Divorce Rate (CDiR)

Crude Divorce Rate is a relative number of divorces per 1000 population.

General Divorce Rate (GDR)

General Divorce Rate is a relative number of divorces of population of age 15+ years per 1000 population of the same age group.

Crude Separation Rate (CSR)

Crude separation rate is a relative number of separations per 1000 population.

General Separation Rate (GSR)

Relative number of separations of persons of age 15+ years to total population of the same age-group.

(e) MIGRATION RELATED INDICATORS

Migration Rate (MR)

The in and out migration rate is defined as the number of in or out migration per 1000 mid-year population of a particular area for a specified time interval.

Internal Migration (IM)

Migration that takes place within the country.

Rural to Rural Migration

Migration that takes place from rural to rural areas of Bangladesh.

Rural to Urban Migration

Migration that takes place from rural to urban areas of Bangladesh.

Urban to Rural Migration

Migration that takes place from urban to rural areas.

Urban to Urban Migration

Migration that takes place firm urban to urban area.

(f) DISABILITY RELATED INDICATORS

Crude Disability Rate

Crude disability rate is defined as the number of disabled persons per1000 population.'

(g) CONTRACEPTIVE USE RELATED INDICATORS

Contraceptive Prevalence Rate (CPR): CPR is defined as the percentage of couple currently practicing any contraceptive method to number of currently married women of reproductive age.

(h) DATA QUALITY RELATED INDICATORS

Whiple's Index: The Whiple's index is a simple, robust and easy to interpret index to measure age heaping. As per definition the Whiple's Index is the ratio of the observed frequency of ages ending in 0 or 5 to the frequecny predicted by assuming a uniform distribution of terminal digits.

Myer's Blended Index: Myer's Blended Index is calculated for the age above 10 years and shows the excess or deficit of people in ages ending in any of the 10 terminal digits expressed as percentages. It is based on the assumption that the population is equally distributed among the different ages.

UN Age-Sex Accuracy Index/Un Joint Score Index: UN Age-sex accuracy index is a measure of the quality of age data presented in 5-year age groups by sex. The index in based on the age rates and sex ratios and is computed as 3(mean of the differences in sex ratios) + mean of the differences in age ratios for males + mean of the differences in age ratios for females

The quality of data is ranked as accurate of the index is below 20, inaccurate of it is between 20 & 40 & highly inaccurate if it is over 40.

(j) **Zila:** District.

ANNEXURE - 3

Composition of Steering Committee

01	Secretary, Statistics and informatics Division, Ministry of Planning	Chairperson
02	Director General, BBS	Member
03	Representative, Ministry of Public Administration{ (not below the Joint Secretary(JS)}	Member
04	Representative, Finance Division, Ministry of Finance (not below the JS)	Member
05	Representative, LG Division, Ministry of LGRD (not below the Joint Secretary)	Member
06	Representative, Ministry of Health & Family Welfare (not below the Joint Secretary)	Member
07	Representative, Ministry of Information (not below the Joint Secretary)	Member
08	Representative, Information & Communication Technology Division (not below the Joint Secretary)	Member
09	Representative, Ministry of Women & Children Affairs (not below the JS)	Member
10	Joint Secretary (Development), Statistics and Informatics Division	Member
11	Director General, IMED	Member
12	Deputy Director General, BBS	Member
13	Director General, NIPORT	Member
14	Joint Chief, Population Planning Wing, Planning Commission	Member
15	Joint Chief, Programming Division, Planning Commission	Member
16	Joint Chief, GED, Planning Commission	Member
17	Project Director, A2i Program, Prime Minister's Office	Member
18	Director, Demography and Health Wing, BBS	Member
19	Director, Census Wing, BBS	Member
20	Project Director, MSVSB Project, BBS	Member
21	Deputy Secretary (Development), Statistics and Informatics Division	Member Secretary

Terms of reference:

1. Policy decision in connection with MSVSB activities.
2. Coordination of MSVSB activities with concerned Ministries.
3. Assessment of data needs by different Ministries, Government, Semi-Government organization and Autonomous bodies.
4. Administrative and Financial support in implementing the Project activities.
5. They may Co-opt additional members when needed.
6. Miscellaneous.

ANNEXURE - 4

Composition of Technical Committee

01	Director General, Bangladesh Bureau of Statistics	Chairperson
02	Prof. Barkat-e-khuda, Economics Department, University of Dhaka	Co-Chairperson
03	Joint Secretary (Development), Statistics and Informatics Division	Member
04	Deputy Director General, Bangladesh Bureau of Statistics	Member
05	Representative, Applied Statistics Department, University of Dhaka	Member
06	Representative, Department of Gender Statistics, University of Dhaka	Member
07	Deputy Secretary (Development), Statistics and Informatics Division	Member
08	Representative, Ministry of Health and Family Welfare (not below DS)	Member
09	Director (Research), NIPORT	Member
10	Director (MIS), DG Health, Mohakhali, Dhaka	Member
11	Representative, Population Planning Wing, Planning Commission	Member
12	Representative, GED, Planning Commission	Member
13	Representative, Programming Division, Planning Commission	Member
14	Representative, IMED, Ministry of Planning	Member
15	Director (Demography), ICDDR'B	Member
16	Director, Demography and Health Wing, BBS	Member
17	Project Director, MSVSB Project, BBS	Member Secretary

The terms of reference of the committee are as follows:

(1) To review the technical activities and progress of the wing and guide for undertaking future survey activities;

(2) To identify the data gaps in the areas of population, health and demography and suggest ways and means for the improvement of data collection, compilation and dissemination systems;

(3) To provide technical backstopping for conducting health survey including HIV/AIDS and health expenditure, nutrition, demography and population composition related surveys between the census years to meet the annual data needs;

(4) To suggest techniques for improvement of migration and urbanization related data and development of MNSDS (Minimum National and Social Data Set) and indicators of MDGs;

(5) To suggest suitable studies/investigations in the field of fertility, mortality, morbidity nutrition to complement the census results;

(6) To undertake critical studies of different approaches to population projection and recommend method suitable for the country;

(7) To recommend improvement of urbanization, migration statistics and other social statistics; and

(8) Any other tasks assigned by the NSC from time to time.

ANNEXURE – 5

Survey Team

Consultant:

Prof. Dr. M. Nurul Islam

Former Professor, Department of Statistics, Biostatistics and Informatics, DU
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3.Mr. Monir Ahmed, Statistical Officer, MSVSB Project, BBS
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03. Project Personnel

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2. Mr. Md. Enamul Haque, ECA
3.Mr. Sheikh Md. Alamgir Hossain, DEO
4. Md. Fakhar Uddin Raji, DEO
5. Mr. Thorikul Islam, DEO
6. Mr. Md. Hafizur Rahman, DEO
7. Mr.Md. Abu Taleb Miah, DEO
8. Mr. Md. Moshiur Rahman, DEO
9. Mr. Kazi Enamul Hasan, DEO
10. Mr. Md. Serajul Islam, Computer Operator

Team Leader
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Project Director
MSVSB Project
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Phone: 02-9137338

ANNEXURE - 6

Schedules

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
বাংলাদেশ পরিসংখ্যান ব্যুরো
মনিটরিং দি সিচুয়েশন অফ ভাইটাল স্ট্যাটিসটিকস্ অফ বাংলাদেশ (MSVSB) প্রকল্প
পরিসংখ্যান ভবন

ই

খানা তালিকা প্রণয়ন তফসিল

নমুনা এলাকার মৌজা/মহল্লা

খানা সংক্রান্ত তথ্য

	খানা প্রধানের তথ্য					
গৃহ/ হোল্ডিং নম্বর	খানার নম্বর	খানা প্রধানের নাম	পিতা/স্বামীর নাম	বয়স	লিংগ পুঃ	মন্তব্য

নমুনা এলাকার খানার হ্রাস/বৃদ্ধির তালিকা

ভাইটাল স্ট্যাটিসটিকস্

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নেপাল	03
শ্রীলংকা	04
ভূটান	05
সৌদি আরব	06
ইরাক	07

১২ । আগমন/ বহির্গমনের দেশসমূহঃ	
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মৃত্যুর কারণ	কোড
গুটি বসন্ত	

ANNEXURE – 7

Abbreviation

ASMFR	:	Age-Specific Marital Fertility Rate
ASDR	:	Age-Specific Death Rate
ASFR	:	Age- Specific Fertility Rate
ASMR	:	Age- Specific Marriage Rate
BBS	:	Bangladesh Bureau of Statistics
BFS	:	Bangladesh Fertility Survey
BS	:	Both Sexes
CBR	:	Crude Birth Rate
CDR	:	Crude Death Rate
CDiR	:	Crude Divorce Rate
ChDR	:	Child Death Rate
CMR	:	Crude Marriage Rate
CPR	:	Contraceptive Prevalence Rate
CPS	:	Contraceptive Prevalence Survey
CSDR	:	Cause Specific Death Rate
CSR	:	Crude Separation Rate
GDR	:	General Divorce Rate
GFR	:	General Fertility Rate
GMR	:	General Marriage Rate
GSR	:	General Separation Rate
HDS	:	Health and Demographic Survey
HH	:	Household
IMR	:	Infant Mortality Rate
MAM	:	Mean Age at First Marriage
MMR	:	Maternal Mortality Ratio
NGR	:	Natural Growth Rate
NMR	:	Neo-Natal Mortality Rate
NRR	:	Net Reproduction Rate
OMR	:	Optical Marks Reader
OCR	:	Optical Character Reader
ICR	:	Intelligent Character Reader
PNMR	:	Post Neo-Natal Mortality Rate
PSU	:	Primary Sampling Unit
SMA	:	Statistical Metropolitan Area
SSVRS	:	Strengthening of Sample Vital Registration System
SVRS	:	Sample Vital Registration System
TFR	:	Total Fertility Rate

ANNEXURE – 8

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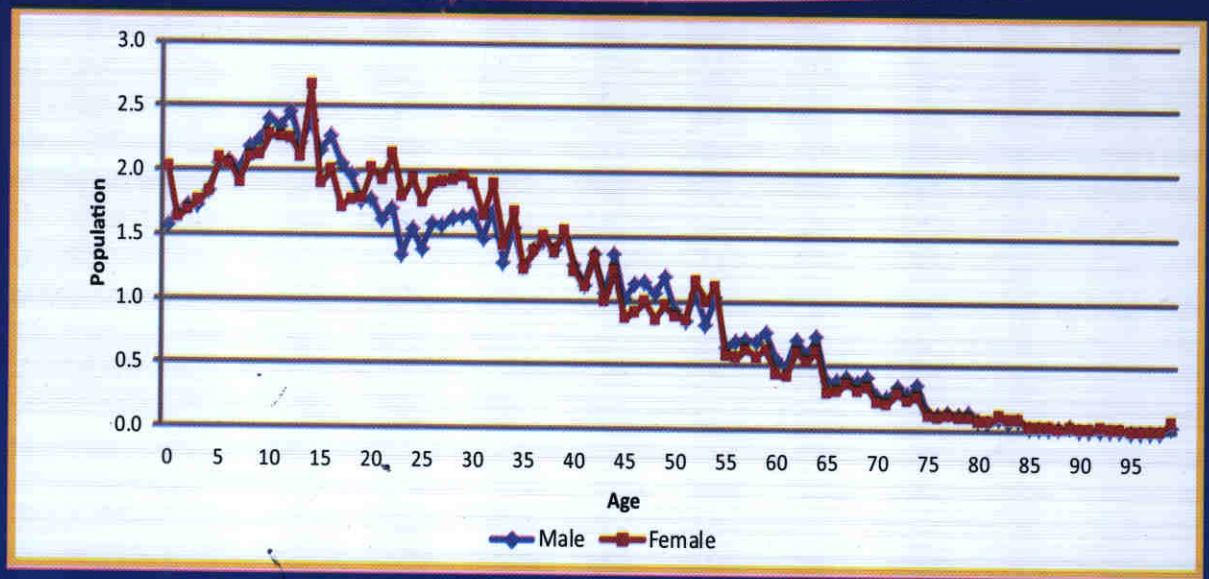

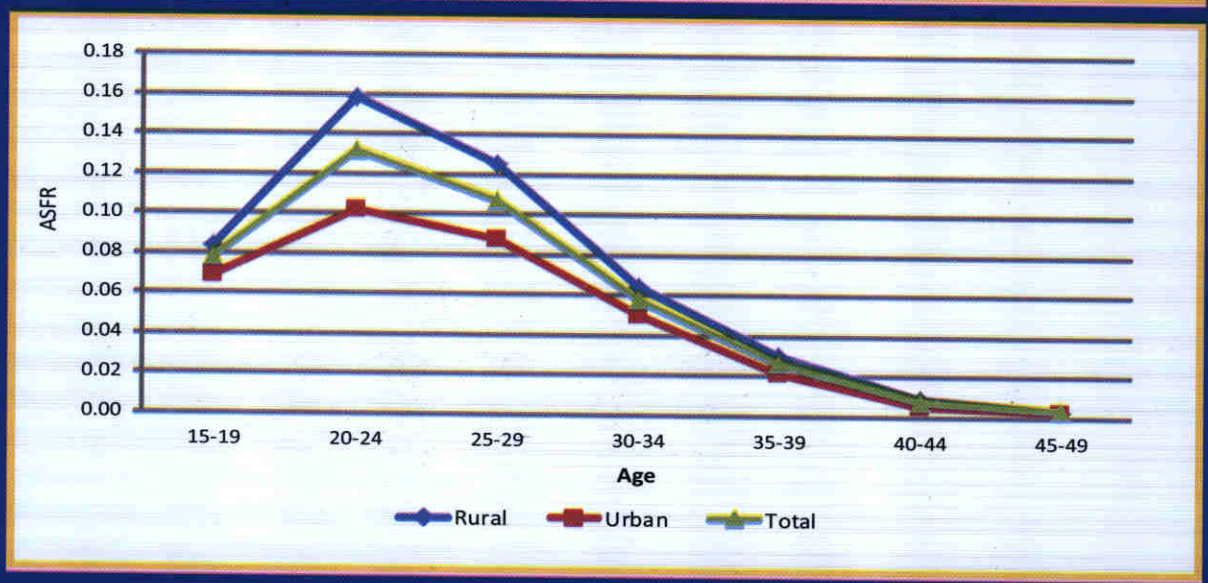

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