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Special Research Report

**Health and Demographic Profile
Of the Urban Population
Of Bangladesh:**

AN ANALYSIS OF SELECTED INDICATORS

**Aye Aye Thwin
M Ataharul Islam
Abdullah Hel Baqui
William A Reinke
Robert E Black**



**CENTRE
FOR HEALTH AND
POPULATION RESEARCH**

**MCH-FP Extension Project (Urban)
Health and Population Extension Division**

1996

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Foreword

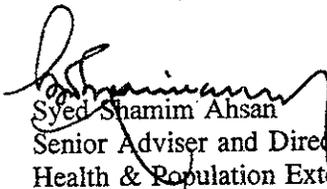
I am pleased to release these reports on urban Maternal and Child Health and Family Planning issues which are based on the operations research activities of the MCH-FP Extension Project (Urban) of the Centre. Over the years, the Centre has acquired a unique expertise on urban development matters that ranges from operations research on reproductive health, child survival and environmental issues to providing technical assistance for capacity building to service delivery organizations working in urban areas.

This work has produced important findings on the health conditions of city dwellers, particularly the poor and those living in slums in the entire country. The research has also identified service delivery areas in which improvements need to be made to enhance effectiveness. Together, these research findings form the basis in designing interventions to be applied in government and non-government settings.

In order to carry out this innovative work, the Centre has established a partnership effort known as the Urban MCH-FP Initiative, with different ministries and agencies of the Government of Bangladesh and national non-government organizations, notably Concerned Women for Family Planning, a national NGO with wide experience in the delivery of MCH-FP services. The partnership receives financial and technical support from the United States Agency for International Development (USAID).

The overall goal of the partnership is to contribute to the reduction of mortality and fertility in urban areas. In practice, this joint work has already resulted in the development and design of interventions to improve access, coordination and sustainability of quality basic health services to urban dwellers with emphasis on the needs of the poor and those living in slum areas.

The Centre looks forward to continuing this collaboration and to assist in the wider dissemination and application of sustainable service delivery strategies in collaboration with providers in government, the NGOs and the private sector.


Syed Shamim Ahsan
Senior Adviser and Director
Health & Population Extension Division

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Executive Summary

The urban needs assessment is a study with several components designed to provide an overview of health status, and the access to and utilisation of health services among the urban population of Bangladesh. The study components comprise the review of reports, documents and publications, and the analysis of secondary data from the Bangladesh Demographic and Health Survey (BDHS) of 1993-1994 and the Urban Surveillance System (USS) of 1991-1993. The quantitative analysis was on differentials according to comparison between Dhaka and other urban areas, slum and non-slum populations of the country from the BDHS and an in-depth review of indicators in selected slums of Dhaka through the USS. The analyses revealed the following issues:

i. Demographic Profile

The proportion of women in the childbearing age group is higher in Dhaka, compared to other urban areas in the country.

The slum population in Bangladesh is relatively younger than in the non-slum areas, with high fertility and high rate of family migration, with child population at proportions similar to the rural areas.

Family size is relatively smaller in Dhaka compared to other urban areas.

There are more nuclear families in Dhaka slums.

ii. Socioeconomic Profile

Illiteracy is highest among Dhaka slums and lowest among women.

One third of slum households in the country do not have either a cot or a bed, but one out of ten has a TV, which probably enables access to the media by a larger share of the population.

Most households in Dhaka, including Dhaka slums, have access to electricity.

The extent of crowding at the household level is worst in Dhaka slums.

Divorce, separation and widowhood are more common in Dhaka than in other urban areas, especially among the poor. The proportion of female-headed households is also larger in Dhaka than in other urban areas, especially in the slums.

There are high rates of teenage marriages and consequent teenage pregnancies among slum women.

iii. Water, Environment and Sanitation

Most Dhaka residents have piped water supply inside the house, but people in other urban areas depend on tubewells for drinking water.

A substantial proportion of households in other urban areas uses surface water.

Almost half of the households in Dhaka slums need more than 30 minutes per trip to collect water every day.

Only one out of 20 households in Dhaka slums has private toilet facilities, and more than half use communal latrines.

iv. Reproductive Health

Family Planning

The proportion of currently pregnant women in the younger age groups is much higher in the slums than in non-slum areas.

The contraceptive prevalence rate (CPR) is 61 per cent in Dhaka city, and 52 per cent in other urban areas. The CPR in non-slum areas of the country is 55 per cent, and 45 per cent in the slums.

In Dhaka, pill and condom are the most popular methods. IUD use, i.e. at 5.5 per cent of currently married women of reproductive women and - also the use of traditional methods - are higher than in other urban areas.

Pills and condoms are preferred by non-slum residents, but the use of injectables and female sterilization is higher in the slums.

The pill is used most, among women below 35 years, and female sterilization is popular among those aged above 35 years.

There is a high unmet need for family planning methods among slum women.

Pharmacies, shops, field workers and NGO facilities are the main sources of family planning services.

Antenatal Care, Delivery

Two thirds of women in Dhaka seek antenatal care, in contrast to less than one-third in the slums, and often at late stages of pregnancy.

The proportion of deliveries in hospitals and those conducted by doctors are higher in Dhaka than in other urban areas.

Most deliveries in Dhaka slums take place at home without the assistance of any trained personnel.

Unwanted Pregnancies, MRs and Abortions:

There is a high incidence of unwanted pregnancies in the urban areas, especially in Dhaka and highest in Dhaka slums. Most slum women do not get access to safe MR and abortion services.

v. *Illness Profile, Health Practices*

More breast-fed infants in Dhaka than in other urban areas receive food supplementation before six months of age.

Almost one-third of breast-fed infants in the slums do not receive adequate food supplementation after six months of age.

There is low coverage of immunizations among children less than two years in Dhaka slum, and high rates of neonatal, post-neonatal and infant mortality.

The prevalence of diarrhoea and acute respiratory infections is higher in all the slums and highest in Dhaka slums.

The use of ORS is lowest in Dhaka slums.

The infant mortality rate is 138 per 1000 live births in all slums in Bangladesh, and 129 in Dhaka slums.

The assessment highlighted the need to have interventions specifically designed for the urban poor and the slums. Special areas for public health programmes relate to promoting community education and awareness for diarrhoea, ARI, EPI, family planning, antenatal care, proper delivery care and postnatal care. Strategies for targeting of slum women for maternal and child health care, and for non-users of family planning to reduce unmet need are essential. Environmental health services, especially safe water supply and sanitary latrines are urgently needed. Overall, the government and the public should be made aware of the social responsibility towards prioritizing the urban poor for human capital investment and poverty alleviation. Further research is necessary to examine nutritional problems and food security of the urban poor, the culture, health needs and communal behaviour of the slums and the floating population, and a more extensive investigation of environmental pollution in the urban areas.

Chapter I

Study Description

1.1 Introduction

Current trends indicate that urbanisation is inevitable and unavoidable in most developing countries, and brings substantial negative consequences. Problems occur especially when the rate of growth of the urban population is too fast and exceeds the capacity of the infrastructure to absorb and support it. In Bangladesh, urban population growth has been fastest in Dhaka, at an annual rate of 10 per cent, and in other cities and municipalities at a rate three times as fast as the country itself, i.e. 6 per cent vs. 2 per cent. (Task Force on Bangladesh Development Strategies for the 1990s, 1991, Paljor et al, 1994, Arifeen and Mookherji, 1995) A major consequence has been the explosion of slum and squatter settlements amidst mass poverty and gross inequality regarding basic service provision. In such situations, the urban poor bear the brunt of insufficient resources, unemployment, substandard housing and an inadequate supply of clean water and sanitation, high incidence of diseases, insufficient health care, traffic problems and road accidents, social problems and increased crime rates. The Report of the Task Forces of Bangladesh's Development Strategies for the 1990s highlighted these features as being characteristics of all major cities in the country, particularly Dhaka.

In this context, the access, availability and provision of basic services in urban areas become an important development agenda for government, donors and non-governmental agencies. Inherent with the plans to address this agenda is an imperative need for information that outlines the magnitude and extent of the prevailing situation. The main interest is to identify the current health and socioeconomic status of the urban population, as the first step in analysing the need to improve the health of the urban population. In doing so, intra-urban differences demand specific attention. For example, the overall infant mortality rate (IMR) in urban areas may be lower, if compared to the national figure, but the IMR in the slums is higher even than in the rural areas. Thus, information across differentials of slum and non-slum, or through comparisons of Dhaka city with other cities and municipalities is necessary to plan for effective, sustainable development.

Hence, the MCH-FP Extension Project (Urban) of the International Centre of Diarrhoeal Disease Research (ICDDR,B) and the Johns Hopkins University (JHU), with assistance from the United States Agency for International Development (USAID) initiated a special study that examines health and demographic status of the urban populace in Bangladesh. The collaboration further included Dhaka University's resources, i.e. the Department of Statistics and the Centre for Urban Studies. Two major data sets were explored, the first concerned the urban portion of the Demographic and Health Survey 1993-1994, which permitted comparison of Dhaka versus other urban areas and the comparison between slum and non-slum areas of the whole country. The second source of quantitative data concerned a longitudinal surveillance of health and demographic indicators in slums of five thanas in Dhaka, compiled between 1991-1993 by the Urban Health Extension Project (UHEP) of the ICDDR,B, the predecessor of the MCH-FP Extension Project (Urban). Dually, a review of published study reports and other documents was conducted to complement the quantitative analysis.

The areas covered in the present study include the demographic profile, socioeconomic status, water supply and sanitation, reproductive health issues (i.e. family planning, antenatal care, delivery, postnatal care and abortions), health status indicators, and health practices of both slum and non-slum population in Dhaka and other cities. Not all aspects of basic health needs are explored, and the assessment is limited to what is available in the existing data sets. Nevertheless, the analyses do provide an overall picture of the urban health situation and the areas for intervention. Special attention was given towards examining the extent of problems in the slums and the urban poor, and the final analysis will concentrate on the situation of the slum communities in comparison with the rest of the urban population.

The significant outcome of the study is to provide an overview of the urban health situation in Bangladesh that may guide policy makers, programme managers and researchers towards identifying areas for intervention and further research. It is hoped that the efforts initiated through this study facilitates concrete steps to address, plan and programme for an important health problem of the nineties, leading into the next century, with examples and lessons to be demonstrated through the Bangladesh experience.

1.2 Study Objectives

The assessment was made to have an overview of health and demographic status prevailing in the urban areas of Bangladesh. The specific objectives of the study were to:

- a. examine the demographic and socioeconomic profile of the urban population;
- b. assess the current levels of morbidity, mortality and fertility;
- c. examine access to water supply and latrine services; and
- d. provide an overview of health practices and behaviour including contraceptive use, the use of antenatal care, delivery and abortion services, use of immunization and basic medical care services.

The aim is to develop a pool of data that would form the basis of further sound and systematic planning for health improvement in the urban areas, that could be shared among donors and development agencies including the government, non-governmental organisations (NGOs) and the private sector.

Chapter II

The Urban Population of Bangladesh: an Overview

The process of urbanization in Bangladesh gained momentum after 1971. The urban population doubled, with an increase from 2.43 per cent to 5.19 per cent during the period 1901 to 1961 (BBS, 1994). Subsequently, according to the 1974 and 1981 Censuses, the share of urban population became 8.78 per cent and 15.18 per cent, respectively. The annual growth rates were 6.6 per cent and 10.6 per cent during the intercensal periods 1961-1974 and 1974-1981, respectively. During 1981-1991, the growth rate was estimated as 5.4 per cent and the urban population was more than one-fifth of the total population according to the 1991 Census. Thus, ample evidence exists to indicate that urbanization in Bangladesh has been rapid since its independence. Urban population growth has been about three times faster than that of rural, which marks it as one of the fastest growing urban populations in the world. Islam et al. (1991) observed that three factors attributed to this growth:

- i. high overall growth rate of population
- ii. territorial extension due to change in the definition of urban areas in the 1981 Census, and
- iii. rural to urban migration.

Rural to urban migration was the major factor even during the 1961-1974 period, contributing to more than 70 per cent of the total growth in Dhaka and Khulna and more than 40 per cent in Chittagong.

The proportion of total population living in urban areas by division is highest in Dhaka (28 per cent) followed by Khulna (18.3 per cent) and Chittagong (18 per cent) as observed in 1991 (BBS, 1991). Distribution of urban population shows that almost half of the total urban population lived in Dhaka Division (44 per cent) followed by Chittagong (24 per cent) and Rajshahi (17 per cent). The intercensal growth rate during 1981-91 reveals that the growth in Dhaka city was more than 100 per cent. In two other cities among 18 cities (including Dhaka and three Statistical Metropolitan Areas [SMAs]) with population of more than 100,000, namely Rajshahi and Nawabganj, the growth was more than 100 per cent. The origins of more than three-fourths of the migrant

population of Dhaka city are Faridpur (16.5 per cent), Dhaka (16.1 per cent), Comilla (14.5 per cent), Barisal (13.2 per cent), Noakhali (9.0 per cent), and Mymensingh (6.7 per cent) districts. However, three-fourths of the poor migrants come to Dhaka city from four districts: Faridpur (20.6 per cent), Dhaka (19.7 per cent), Barisal (18.6 per cent) and Comilla (15.3 per cent) (Mahbub and Islam, 1990).

Similar evidences were found from another study on the floating population in Dhaka city (URC, 1993). Out of the enumerated population of 106.31 million in Bangladesh according to the 1991 Census, 0.42 million were counted in the category of floating population. The share of floating population living in Dhaka city was nearly one-fourth (0.1 million) of the total floating population enumerated in Bangladesh. However, considering the extent of underenumeration in the municipalities (estimated at 8.6 per cent) and other urban areas (at 5 per cent), it can be assumed that the coverage of floating population was even worse because of the difficulty in reaching these people.

The slum population in three SMAs, namely, Dhaka, Chittagong and Khulna, was 0.83 million according to the 1986 Slum Area Census, and constituted 15 per cent of the total urban population and 0.86 per cent of the total population of Bangladesh. Dhaka SMA had the largest share (69 per cent) of the slum population followed by Chittagong SMA (17 per cent) and Khulna SMA (14 per cent).

Chapter III

Design and Methodology

The principal objective of the present study is to describe the health and socio-demographic status, and the conditions of the people living in urban areas, with particular reference to slums. A slum is defined (BBS, 1988) as a cluster of housing units which grow unsystematically in government owned or private vacant lands. The walls and the roofs of such houses are generally made of straw, leaves, gunny sacks, polythene, bamboo, etc. A tin shed house or even a building may be included within the jurisdiction and environment of a slum. Islam and Mahbub from the Centre for Urban Studies (CUS) in 1988 defined slums in terms of high density of population as well as high room crowding. According to them, slums are defined as areas and communities of high area density (over 300 persons per acre), high room crowding (three or more adults in a room), and poor housing (generally shacks, katcha structure, or semi-pucca flimsy structures or very old dilapidated buildings), poor sewerage and drainage, inadequate water supply, irregular or no clearance of garbage, little or no paved streets, insufficient or absence of street lighting, and with little or no access to gas facility.

Researchers from the Urban Health Extension Project of ICDDR,B adapted Islam and Mahbub's definition, and defined slum units as having at least 10 households, in order to identify more pockets of urban poor communities in Dhaka. (Arifeen and Mahbub, 1991) Thus, slums are settlements or areas with the following criteria, that provide the basis of the USS data:

- i. poor housing, e.g. shacks ("jhupris"), flimsy structures (katcha), semi-pucca flimsy structures (flimsy structure with brick or concrete floors), and dilapidated buildings
- ii. very high gross area density (over 300 persons per acre) and high room crowding (3 or more adults per room)
- iii. poor sewerage and drainage
- iv. inadequate water supply
- v. irregular or no clearance of garbage
- vi. little or no paved streets
- vii. insufficient or absence of street lighting
- viii. little or no access to gas facility.

For operational purposes, the following characteristics were applied in order of importance, to identify slum settlements:

- i. predominantly poor housing
- ii. very high housing density, and
- iii. poor sewerage and drainage facility.

The term "squatter" was given to slums that are located illegally on property belonging to governmental, semi-governmental, autonomous and other organisations. A slum household is defined as one that is located in a slum settlement, and uses shared water and latrine sources.

The design of secondary data analyses is described in the following sections.

3.1 Description of Data for Analyses of Urban Demographic and Health Indicators

Quantitative analysis for this study was based on two different data sources:

- i. the Bangladesh Demographic Health Survey (BDHS) 1993-1994, and
- ii. the Urban Surveillance System (USS) of the Urban Health Extension Project, ICDDR,B.

3.1.1 BDHS 1993-1994 data

The BDHS source, using data from probability samples, provides estimates for rural and urban Bangladesh. In this study, the urban data were used for the analysis of health needs of urban residents.

The analyses were according to the following different segments:

- i. Dhaka municipality in comparison with other urban areas in Bangladesh, and
- ii. slum and non-slum areas in urban Bangladesh.

a. Sample description

In the BDHS, a total of 9,174 households were successfully interviewed, out of which 1,376 households were from urban areas. The number of eligible women interviewed

in the urban areas was 1,466. A two-stage sampling procedure was used to collect nationally representative data for rural and urban areas of Bangladesh. The primary sampling unit in urban areas was the Mahalla and the secondary sampling unit was household. All eligible women in a household were interviewed.

Analyses of Dhaka and non-Dhaka differentials are based on 316 and 1,059 households from Dhaka and other urban areas, respectively. The total number of household members interviewed were 1,732 in Dhaka and 6,138 in other urban areas, out of which the number of ever-married women in the childbearing age groups were 329 in Dhaka and 1,137 in other cities. The sample was collected independently to represent the urban population of Bangladesh, hence any comparison between Dhaka and other urban populations should be interpreted with caution. Census data indicates that urban areas of Dhaka Metropolis constitute about one third of the total urban population of Bangladesh. In the BDHS, the per centage of urban population from Dhaka was 28.2 per cent which is lower/higher than the proportion observed in the 1991 Census.

The results of slum and non-slum comparisons are based on 170 and 1,203 households from a national sample of slum and non-slum areas, respectively. The total number of household members interviewed were 918 in slums and 6,934 in non-slum urban areas, out of which, the number of ever-married women in the childbearing age groups was 186 in slums and 1,277 in non-slum areas. According to the BDHS, 13.2 per cent of the total urban population live in slum areas. However, according to the 1986 Slum Area Census (BBS, 1988), about 15.3 per cent of the total urban population of Bangladesh lived in slum areas.

3.1.2 USS 1991-1993 data

The USS is a surveillance and monitoring system of the activities of the Urban Health Extension Project (UHEP) of the ICDDR,B. The UHEP provided services to selected slum residents of five out of the 14 thanas in the Dhaka metropolitan area. The selected thanas are Mohammadpur, Kotwali, Lalbagh, Sutrapur and Demra. The UHEP operations began in 1981 and the USS was initiated in 1989, as the health, family planning and demographic surveillance system in the catchment population in the slums covered by the project.

(a) Sample description

The USS data represent selected slums in five thanas of Dhaka city, and provide important information on urban health, compiled through round-wise data collection through household interviews. Based on the sampling frame of the slums identified in 1989, a multistage areal sampling was used for drawing clusters of an average size of 33 households (Baqui et al, 1994). In the initial phase, 4,558 households were selected from 168 clusters and 92 additional clusters, known as "Update-I Clusters" were included in 1991. For the present analysis, data from 12 rounds as well as from special surveys conducted during January 1990 to March 1994, were examined. Generally, most of the information represent mid-1993 unless if mentioned otherwise.

Although the cluster maps are well defined in terms of identification of a slum and its households, these (i.e. locations, size and boundary) appear to be unstable (Arifeen and Mahbub, 1993). The phase-I baseline survey was conducted from January 1990 to April 1990. The first phase survey included information on mothers' knowledge about immunization and immunization coverage in the old clusters. The second phase was conducted from August 1990 to December 1990. Later, a three-monthly data collection system was initiated from April 1991 onwards. Similarly, the two phases of data collection in the Update-I clusters were introduced during October to December, 1991 and January to April, 1992. The three-monthly data collection for the USS locations in the 243 clusters of the combined old and Update-I began on January 1, 1992. The USS data contain information from the following components: (a) demographic events schedule (3-monthly cycles), (b) family planning and health schedule (3-monthly cycles), (c) socioeconomic survey schedule (yearly), and (d) special surveys.

3.2 Analysis Plan

The analysis of data from the BDHS (1993-1994) and the USS encompassed the following aspects:

- i. household socio-demographic and economic characteristics
- ii. water and sanitation
- iii. reproductive health status and service use
- iv. health status indicators and service use.

The following variables were analysed:

i. Household socioeconomic and demographic characteristics

- age-sex composition
- education
- marital status
- parity
- family size
- age at marriage/union for females
- number of children ever born
- housing conditions
- household income
- possession of household durable goods
- electricity in the house
- household headship
- employment status of women
- kinship structure

ii. Water and sanitation

- source of drinking water
- source of water for purposes other than drinking
- time needed to get water
- place for defaecation

iii. Reproductive health

a. Family planning

- current status of pregnancy
- current use of contraceptive methods
- current use of contraception by age
- current use of contraception by parity
- intended use of contraception
- reasons for non-use
- sources of supply
- side-effects

b. Antenatal care, delivery, postnatal care

the utilisation of antenatal care services
time of first antenatal care
number of visits for antenatal visit
place of delivery and birth attendant

c. Unwanted pregnancies and abortions

number of miscarriages/abortions;

iv. Health profile, practices and service utilisation

immunization status
breast-feeding practices
whether taken Vitamin A
prevalence of diarrhoea
treatment of diarrhoea
whether taken ORS
prevalence of cough (as a proxy for acute respiratory infections), and
treatment for cough.

Whenever relevant, statistical significance was tested using the Chi-square and Z tests. The analysis also involved constructing specific indices of socioeconomic status, and housing quality. The details of these indices are as follows:

a. Socioeconomic index

An index for socioeconomic status of the urban population was developed on the basis of ownership of household durable goods. For each durable good possessed by a household, a score was given according to the frequency of ownership. Thus, the following scores were assigned:

Television -	6
Watch/clock -	5
Bicycle -	4
Almirah -	3
Radio -	2
Cot/bed -	1

After summation of the scores for the household goods possessed by a household, the following categories were defined:

- Very poor** - if the total score is less than 4
- Poor** - if the total score is greater than or equal to 4, but less than 11, and
- Middle income** - if the total score is greater than or equal to 11.

These categories were then used for examining the association between socioeconomic status and some selected variables.

b. Housing quality index

For constructing an index for house quality, three categories were defined by combining the scores for main materials of roof, walls and floor. If brick/cement was used in any of these, a score of 3 is given. Similarly, 2 is assigned for basic materials of roof, walls or floor such as tin and wood, and for the lowest quality housing materials such as katcha (jute/bamboo), a score of 1 was given. A score of "very poor" is categorized if the total score of housing index is less than 4. The condition is assumed to be "poor" if the housing condition index is at 4 and goes up to 6, and a higher value than 6 indicates a better housing condition.

3.3 Limitations of the Study

- a. The Dhaka city sample of 316 households, i.e. 329 eligible women, is not large, and is inadequate to examine differential patterns according to certain sub-populations, particularly with categories of infants and children. Likewise, the slum sample of 170 households, i.e. 186 eligible women, from the BDHS data is also quite small, and conclusions of comparisons between slum and non-slum areas should be drawn with caution.
- b. The samples of Dhaka and other urban areas are not independent from that of slum and non-slum areas; in fact, Dhaka and other urban areas include slum and non-slum population. Therefore, it would not be appropriate to compare across sample groups such as Dhaka and slum areas or Dhaka and non-slum areas, and others. However, the USS sample of 4,558 households represents slums in five thanas of Dhaka and

therefore, provides a close estimate of the situation of slums in the capital city. Additionally, the slums in Dhaka city constitute the major share of slums in Bangladesh. The characteristics of USS slum population reflect, to some extent, the features of slums in the whole country.

- c. The housing quality index is based on defining the type of materials for roof, floor and walls. This may not be sensitive enough to distinguish special types of urban poor housing, such as those types of houses built above the water, and those with mud floor, which are also more exposed to environmental hazards. In this sense, the analysis is not comprehensive due to limitations in the data.
- d. The present data sets have limited information on health status, such as morbidity, disease types and severity, and also on the use of and accessibility to health services. Therefore, a full assessment of health care needs of the urban population cannot be undertaken. The results permit an overview of selected indicators only.

The study highlights that exploring intra-urban differentials are essential components of health and population research in urban areas, as the analyses prove that different urban populations are actually quite diverse in their health, socioeconomic and demographic characteristics. Future national surveys should expand the slum strata of urban samples to permit sound and rigorous analysis of urban-rural differentials and comparisons between different urban sub-populations.

Chapter IV

Results

This chapter provides results of the assessment of selected urban demographic and health indicators, through analysis of secondary data from the BDHS (1993-1994), and the USS (1991-1993). The findings are presented in the following sections:

- 4.1 Demographic profile
- 4.2 Socioeconomic profile
- 4.3 Water and solid waste disposal
- 4.4 Reproductive health issues
- 4.5 Health profile and service use.

4.1 Demographic Profile

The demographic profile of the urban population has direct implications on the socioeconomic, health and environmental situation, relevant to the following policy concerns:

1. high population density and unplanned growth of the urban population can rapidly change health and environmental conditions in cities, affecting a large number of people, and
2. demand for housing, schools, health centers, etc, in urban settings increase on the basis of the pace of growth of the population, which - at present - is nearly three times higher than that of the rural population.

In this chapter, results based on BDHS and USS data are presented for important demographic characteristics, such as age-sex composition, marital status, women's age at first union / first marriage, parity and family size. (The first four categories in the tables, i.e. Dhaka, other urban, slum and non-slum are derived from the BDHS (93-94), and the last one, i.e. USS slum, presents data from the Urban Surveillance System (91-93). All analyses are presented as per cent distributions.) The comparison between the

BDHS and the USS-based indicators for Dhaka city and other urban areas, slum and non-slum areas, and the USS slum locations should be interpreted carefully for the reasons mentioned in the methodology.

4.1.1 Age-sex composition

The analysis of age-sex composition reveals important features of the urban population in Dhaka city and other urban areas. Key results of comparisons based on the BDHS and the USS data are listed as follows (See Table 4.1):

1. The sex ratio (number of men per woman) is relatively higher in Dhaka city and slums, compared to other urban and non-slum populations.
2. The proportion of females age less than 15 years is significantly higher in slum areas than in non-slum areas. However, these proportions are not significantly different for Dhaka and other urban areas of Bangladesh as observed from the BDHS data.
3. Nearly 40 per cent of males and females in Dhaka and other urban areas are below 15 years of age. Corresponding figures for men and women living in slum areas are 47 per cent and 44 per cent, respectively. These differences are statistically significant.
4. The proportion of women in the childbearing age groups is significantly higher in Dhaka (55 per cent) than in other urban areas (51 per cent). The difference between the proportions of women in the reproductive age groups in all slum (49 per cent) and non-slum (52 per cent) areas is not statistically significant.
5. The proportion of urban male and female populations in the age groups above 60 is significantly lower in Dhaka (about 3 per cent for males and females) than in other urban areas (nearly 6 per cent for males and 5 per cent for females). This may be in relation to the higher proportions in the lower age groups. The difference between elderly men in the age group 60 years or above is significant. A significantly larger proportion of men in the older age groups live in non-slum areas. However, the proportion of elderly women is not statistically different between slum and non-slum areas.

6. The dependency ratio (ratio of the population in the oldest age groups [65 years or above] and in the youngest age groups [less than 15 years] to the population between the ages 15-64 years multiplied by 100) appears to be very low in the urban population, and even lower in Dhaka (less than 70 per cent) than in other urban areas (around 74 per cent). The slum areas of the BDHS sample show a relatively higher dependency ratio (87 per cent). The higher dependency ratio in slum areas may be attributable to the higher proportion of population in the younger age groups, i.e. below 45 years.

Table 4.1 Age-sex related characteristics (per cent distribution)

Selected indicators	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=1732)	Other urban (n=6138)	Non-slum (n=6934)	Slum (n=918)	Slum (n=39572)
Sex ratio	105.4	97.6	98.3	105.4	100.6
Male <5	11.6	11.6	11.3	13.8	15.2
Female <5	10.4	12.6	11.7	15.2	15.1
Male <15	38.9	38.2	37.3	46.7	44.9
Female <15	37.7	40.4	39.3	44.1	42.9
Male 15-59	58.3	56.1	57.4	50.3	51.8
Female 15-49	55.4	50.7	52.1	49.0	50.7
Male 60+	2.8	5.7	5.3	3.0	3.3
Female 60+	3.0	4.7	4.5	3.4	2.7
Dependency ratio	67.0	74.0	71.0	87.0	88.0

4.1.2 Marital status

Proportions of currently married, widowed and divorced women were compared using the BDHS data on ever-married women in the childbearing age groups. The proportion of currently married women in the childbearing age groups in Dhaka is lower (89 per cent) than in other urban areas (93 per cent). However, the proportion of currently

married women in slum and non-slum areas appear to be same. More than 92 per cent of women in the childbearing age groups in both slum and non-slum areas are currently married. The proportions of widowed and divorced women do not seem to be different in these areas. On the other hand, both the per centages of divorced/separated (4.6 per cent) and of widowed (6.4 per cent) women are higher in Dhaka than in other urban areas. These estimates are based on the sample of eligible ever-married women from the BDHS and should not be compared with the corresponding census figures.

Table 4.2 Marital status of women aged between 15 and 49 years (per cent distribution)

Marital status	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=329)	Other urban (n=1139)	Non- slum (n=1277)	Slum (n=186)	Slum (n=9825)
Never married	-	-	-	-	11.1
Currently married	89.1	93.1	92.2	92.5	78.0
Widowed	6.4	3.8	4.2	4.8	4.9
Divorced/separated	4.6	3.2	3.6	2.7	6.0

Among all women in the childbearing age groups in the USS locations, 78 per cent are currently married, 6 per cent are currently divorced, and 4.9 per cent are currently widowed, and the rest have never been married. The proportion of married women is largest among the poor women of the USS slums. The proportion of divorced women is negatively associated with socioeconomic status, the largest proportion being observed amongst the very poor (4 per cent) and the lowest amongst the middle income group (2 per cent). (See Chapter III for calculation of socioeconomic index).

The proportion of currently married women in the childbearing age groups is substantially low in the slums of USS locations as compared to other urban population groups (Dhaka and other urban areas, slums and non-slums). The proportion of divorced women in the reproductive age groups appears to be the highest in the USS areas. In the 1986 census of the slum populations in Chittagong, Dhaka and Khulna SMAs, the

proportion of currently married women in all age groups was higher (53 per cent) than the overall national level (BBS, 1988).

4.1.3 First union

The USS data gives information only on age at marriage of women living in the selected slum areas in Dhaka. Other studies indicate that slum dwellers, both male and female, usually get married at an early age. More than 90 per cent of females from slums get married when they are in their teens (Roy, 1994). The possible reason for an early marriage may be the lack of security, particularly for the females living in slums, to stay unmarried without facing any untoward incidents.

Instead of the age at marriage, the BDHS data provide us with information regarding the age at first union after the marriage of a woman. The age at union is expected to be slightly higher than the corresponding age at marriage. The women of Dhaka have a relatively higher age at first union than those who live in other urban areas. In Dhaka, 55 per cent of the first unions occurred before age 15 years as compared to 60 per cent for other urban areas. However, in the age group 20-24 years, the proportion of first union is about 12 per cent in Dhaka and 7 per cent in the other urban areas. In other age groups, the proportions are almost similar.

Table 4.3 Age at first union/age at first marriage for urban women (per cent distribution)

Age (years)	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=329)	Other urban (n=1137)	Non- slum (n=1277)	Slum (n=186)	Slum (n=9825)
<15	55.0	59.6	56.4	74.2	32.5
15-19	32.5	32.1	33.7	22.0	56.0
20 or above	12.5	8.3	9.9	3.8	12.5

Women living in the slums have their first union at an earlier age compared to all other urban groups. Three-fourths of slum and nearly three-fifths of non-slum women in

Bangladesh were reported as having experienced their first union before the age of 15 years. Only about 4 per cent of the women living in slums reported their age at first union as 20 years or above which is substantially lower than the other groups (8-13 per cent).

In the USS slum areas, most of the marriages (56 per cent) take place in the 15-19 years age groups. One-third of the first marriages have taken place before age 15 years and about 90 per cent of the marriages took place before these women reached their twentieth birthday. A relatively higher age at marriage in the USS slums as compared to the BDHS slums or other urban areas is surprising, as that the age at first union would be higher than the corresponding age at marriage. One of the plausible reasons might be the variation in the different methodologies for getting age information in the BDHS and the USS data.

4.1.4 Parity levels

Women living in urban areas outside Dhaka were noted to have higher parity compared to women in Dhaka. In Dhaka, about 83 per cent of the ever-married women have delivered four or less children, in comparison with 74 per cent in other urban areas.

Table 4.4 Parity levels of ever-married women (per cent distribution)

Parity	BDHS (1993-1994)			USS (1991-1993)	
	Dhaka (n=329)	Other urban (n=1137)	Non- slum (n=1277)	Slum (n=186)	Slum (n=9825)
0	11.3	10.8	10.7	12.9	13.9
1-2	38.9	38.9	40.4	28.5	32.3
3-4	33.1	23.8	26.2	24.2	24.9
5-6	9.1	15.3	12.6	23.1	16.1
7+	7.6	11.2	10.2	11.3	12.8

Women in slum areas have higher parity levels compared to women in non-slum areas. About one-third of the ever-married women in slums have delivered five children or more, compared to 23 per cent among the ever-married women in non-slum areas.

In the Dhaka slums, high parity women comprise a large proportion. About 54 per cent of women have delivered at least three times or more. Similarly, three out of every ten women have delivered five times or more.

It was observed that the women living in urban areas outside Dhaka have higher parity compared to women in Dhaka.

4.1.5 Family size

Family size in Dhaka city appears to be smaller than the rest of the urban areas in Bangladesh. Similar comparison between slum and non-slum urban areas indicate that family size in slum areas is smaller than that in non-slum areas. A comparison based on BDHS data exhibits that the slum population comprises a higher proportion (about 11 per cent) of families of size 1-2, compared to Dhaka, other urban and non-slum populations (around 7 per cent). Only one-fourth of households in Dhaka have a family size of seven members or more, compared with one-third of households in other urban areas. Other than for the slum population, the distribution of households by family size shows a notable difference only with family sizes of more than 4 persons. The proportion of families with four or fewer members is almost the same for Dhaka, other urban and non-slum areas, as opposed to slum areas, where the proportion of families with four or less members is slightly higher.

The slum area samples of BDHS and USS are reasonably similar in terms of family size distribution. Both slum populations show relatively smaller families in comparison with Dhaka, other urban and non-slum areas. In other words, there is a relatively higher proportion of families with four persons or less in the slums. Nevertheless, 55-60 per cent of slum households have five or more members which may be considered high, especially given the low levels of household income and poor housing conditions.

The average family size was estimated to be 4.7 in the slums as compared to the national average of 5.7 in 1981 and 5.5 in 1991 (BBS, 1994). The relationship between family

size and kinship structure also needs to be considered. (Further discussion on these issues is continued in Section 4.2.7.)

Table 4.5 Family size (per cent distribution)

Family size	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=316)	Other urban (n=1060)	Non- slum (n=1204)	Slum (n=170)	Slum (n=8240)
1-2	7.3	7.4	6.9	10.6	11.6
3-4	29.8	29.0	29.2	29.4	33.0
5-6	37.7	31.5	33.1	31.8	29.6
7+	25.3	32.1	30.9	28.2	25.8

4.2 Socioeconomic Status

This section describes the socioeconomic indicators of the different categories of the urban population. The urban population in Bangladesh, like other countries, is characterized by a higher level of education for both men and women, better housing conditions, and a higher level of possession of household goods than in the rural areas. However, with a rapid increase in the urban population size, slum population growth has increased at a faster pace. The growth of slums occurs in conjunction with inequity in the distribution of income, maximum utilization of arable lands, and less favorable growth in the income generating activities. It is generally believed that slum dwellers do not have adequate access to social services, which makes their efforts towards improving status even more difficult. In this section, the analysis of socioeconomic status is based on the following characteristics:

- i. household headship
- ii. level of education
- iii. housing conditions, and
- iv. possession of household goods.

Additional information on the labour force participation of women in the slums and kinship structure is presented from the USS data sources.

4.2.1 Household headship

The analysis revealed a striking feature of Dhaka, where the proportion of female household heads is substantially higher than in other urban areas (14 per cent versus 7 per cent, respectively). According to BDHS estimates, the proportion of female household heads has been increasing rapidly. The proportion of divorced/separated or widowed women is much higher in Dhaka city which is a plausible explanation for the higher proportion of female-headed households. Although the difference in proportion of female household heads is small for slum and non-slum areas of the BDHS, the slum areas of Dhaka - based on USS data - exhibits an even higher proportion of female headed households (about 15 per cent) than the corresponding proportion in Dhaka city in general.

The slightly higher proportion of female household heads in the slums compared to non-slum areas (9.4 per cent in comparison with 8 per cent) reflects that a larger proportion of slum women have to take the responsibility of supporting their households due to absence, separation/divorce, or death of their husbands.

Table 4.6 Household headship (per cent distribution)

Household head	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=316)	Other urban (n=1060)	Non- slum (n=1204)	Slum (n=170)	Slum (n=8240)
Male	86.1	93.4	91.9	90.6	85.2
Female	13.9	6.6	8.1	9.4	14.8

4.2.2 Educational status

The rate of illiteracy in Dhaka, other urban and non-slum areas falls within the range of 23-29 per cent, apparently lowest in Dhaka and highest in other urban areas.

As anticipated, the rate of illiteracy - among those above six years of age - is much higher in slum populations than that in non-slum populations (55 per cent and 25 per cent, respectively). In slum areas, only one-tenth of the population above 6 years appears to be educated up to high school level or above, as compared to more than 43

per cent in non-slum areas. The rates (i.e. of those who are educated up to high school level or above) are 37 per cent in other urban areas, and fifty per cent in Dhaka city.

Table 4.7 Educational level of household members [age 6 years or above] (per cent distribution)

Education level	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=1502)	Other urban (n=5238)	Non- slum (n=5972)	Slum (n=751)	Slum (n=31877)
Illiterate	23.4	29.4	24.7	55.3	73.0
Primary	27.0	33.6	32.0	34.2	19.1
High school	29.1	25.2	28.3	8.1	7.3
College/university	20.5	11.8	15.1	2.4	0.6

The rate of illiteracy is very high in the USS slums. Nearly three-fourths of the population above 6 years of age do not have any formal education at all. Only 19 per cent of the population above 6 years of age have primary and 8 per cent have six or more years of schooling. The proportion of literate persons by different SES categories show a positive association between socioeconomic status and education. Only one-fifth of the very poor, one-third of the poor, and one-half of the middle or higher socioeconomic categories of people appear to have had any education. The figures of those who have been educated up to high school level and above are extremely small in the Dhaka slums.

Poverty in the slums is often combined with poor education and limited skills. Although sufficient educational opportunities exist for the urban upper and middle income groups, the urban poor have much less access to schooling or vocational training. It was observed from various studies that the lack of adequate support and awareness for schooling resulted in very low levels of literacy among slum dwellers (CUS, 1979, 1983, 1985, 1989; BBS, 1988, BIDS, 1988, Majumdar, 1992, Rowshan, 1989, Tapan and Samad, 1988), i.e., even lower than the average literacy rate of rural areas. Those who migrate from rural areas to Dhaka slums are mostly illiterate, and therefore, most slum dwellers engage in lower wage activities which compel them to lead a substandard life in Dhaka city. Educational attainment among slum women is even worse if compared

with their male counterparts. Female literacy in the slums is as low as 7 per cent. Given this low or poor educational background among the slum women, a recent study (Khanom, 1995) indicates that education does not play a significant role on reproductive health status of slum women. This study further observed that the women living in slums suffer in many respects, particularly in problems associated with reproductive health and child care, stemming from lack of adequate knowledge and awareness.

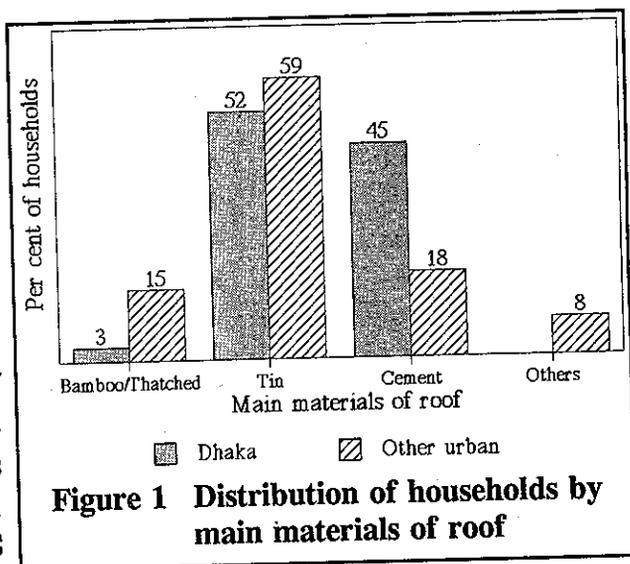
The analysis of intercensal data, shown by the CUS (CUS, 1989) reveals that the urban literacy rate, particularly for large cities like Dhaka has not been improving much over the years. The reason for this is the mass migration of rural illiterate and destitute population to the urban slums in recent years.

4.2.3 Housing conditions

In the absence of data on income levels, housing conditions can provide an indirect measure of socioeconomic status of families. In addition to a proxy for income, this indicator may also reflect the health and environment situation of a household. Through the BDHS data, housing conditions in the urban areas were analysed in terms of materials used for constructing the floor, walls and the roof of a family dwelling. Availability of electricity in a household has also been included in this section.

4.2.3.1 Materials for floor, walls and roof

In Bangladesh, the most common roofing material in both rural and urban areas is tin; 56 per cent in urban and 52 per cent in rural areas (BDHS, 1994). In urban Dhaka, most of the households have tin or pucca roof (80-95 per cent). In other urban areas, tin roofs are found in one out of every two households. In slum areas, one-fifth of the houses have bamboo/thatch roofs although most of the remaining houses have tin roofs (58 per cent). Similarly, in slum areas of Dhaka (USS



locations), three out of four families live in dwellings with tin roofs. The housing conditions by roof quality appears to be similar in Dhaka slums and overall slum areas in Bangladesh.

Among the very poor households, three-fourths have houses with tin roofs and the remaining have katcha roofs. Among the better off, however, three-fourths of houses have tin roofs and the remaining houses have cement/brick materials.

In about half of the houses in urban areas outside Dhaka, jute/bamboo materials are used for walls as compared to one-fourth in urban Dhaka. In rural areas of Bangladesh, 77 per cent of the households live in

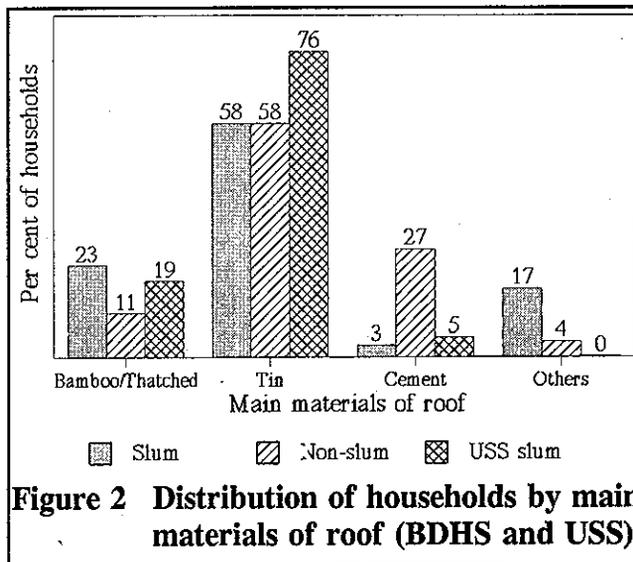


Figure 2 Distribution of households by main materials of roof (BDHS and USS)

dwellings with jute/bamboo wall materials (BDHS, 1994). Roughly two-thirds of the houses in Dhaka and one-third in other urban areas have brick/cement materials in walls. However, a comparison between slum and non-slum areas show that two-thirds of slum and slightly more than one-third of non-slum houses have katcha wall materials. About half of the houses in non-slum and one-tenth in slum areas have brick/cement materials in walls. In Dhaka slum areas (USS), the use of katcha wall materials is even greater than that in other slum areas of Bangladesh. Nearly three-fourths of houses have used katcha wall materials in constructing a house.

The main materials of floor in 24 per cent of houses in Dhaka and 60 per cent of houses in other urban areas of Bangladesh are earth/mud/bamboo. About three-fourths of houses in Dhaka and 38 per cent of houses in other cities have brick/cement floor materials. Roughly 69 per cent of houses in slums and about 50 per cent of houses in non-slum areas have katcha floor materials. In slum areas, 13 per cent of households live in dwellings with brick/cement floor, and the per centage of such housing is 50 per cent in non-slum areas.

Table 4.8 Main materials of walls (per cent distribution)

Main material of walls	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=316)	Other urban (n=1060)	Non-slum (n=1204)	Slum (n=170)	Slum (n=8240)
Katcha (jute/bamboo)	22.8	46.4	37.4	67.1	74.2
Tin	7.6	9.1	9.0	7.1	6.2
Cement/brick	69.3	37.4	49.3	11.8	19.2
Others	0.3	7.1	4.3	14.1	0.4

Most of the houses (three-fifths) in other urban areas have katcha floor materials. However, most houses in Dhaka have brick/cement floor materials. In slum areas, more than two-thirds of houses have katcha floor materials and only one-eighth have brick/cement materials.

Table 4.9 Main materials of floor (per cent distribution)

Main material of floor	BDHS (1993-1994)			
	Dhaka (n=316)	Other urban (n=1060)	Non-slum (n=1204)	Slum (n=170)
Katcha (earth/mud/bamboo)	23.7	59.9	49.3	68.8
Wood	3.5	2.4	0.4	18.2
Brick/cement	72.8	37.6	50.3	12.9

A housing quality index was developed to summarize the quality of housing conditions for all the urban settings of Bangladesh (Dhaka, other urban, slum and non-slum areas). The very poor, poor or middle/high quality of housing indices reflect the overall living conditions in different urban settings in terms of materials used in the construction of a house. However, it should be noted that an index that measures only the materials used in construction does not represent housing quality in the ideal sense, which may be more appropriately described together with other factors such as space, neighbourhood

atmosphere, cleanliness, environmental conditions (such as garbage disposal, sewerage) etc. The index of crowding per room is also an important indicator in this regard. In other words, a house in slum areas with brick/cement roof, walls and floor may vary qualitatively from that in non-slum areas. To avoid complexity, other factors have not been considered in the present analysis, and the index based on housing materials is designed initially, to indicate the extent of variation in housing conditions at an aggregate level.

Table 4.10 Housing quality index for different urban settings (per cent distribution)

Housing quality index	BDHS (1993-1994)			
	Dhaka (n=316)	Other urban (n=1060)	Non-slum (n=1204)	Slum (n=170)
Very poor	2.9	18.0	13.0	25.3
Poor	25.6	45.4	37.7	63.5
Middle or high	71.5	36.5	49.3	11.2

The association between housing quality index and different urban settings (Dhaka as compared to other urban, and slum as compared to non-slum) appears to be statistically significant. In other words, housing quality of Dhaka and non-slum areas are significantly different from that of other urban and slum areas, respectively. In Dhaka city, 72 per cent of the houses are middle or high quality, compared to 37 per cent in other urban areas. The quality of houses is worst in the slums among all these urban settings with only 11 per cent middle or high quality of housing. The very poor quality of housing in slum areas is 25 per cent, compared to 13 per cent in non-slum areas, 3 per cent in Dhaka and 18 per cent in other urban areas. If we combine very poor and poor quality of housing, then slums comprise 89 per cent as compared to 41 per cent in non-slum areas. It is likely that a large proportion of houses in slums might have been categorized as better quality due to exclusion of additional components such as crowding, sewerage, water and other environmental facilities in the house.

4.2.3.2 Electricity

It is observed that a large per centage (nearly 40 per cent) of households in other urban areas still do not have electricity, while almost 93 per cent of households in Dhaka have

electricity. In slum and non-slum areas, 46 per cent and 70 per cent of the households, respectively, are reported to have electricity. Nearly three-fourths of the households in the USS slum locations have electricity. The lack of electricity in the house appears to be strongly associated with socioeconomic status. Among the very poor households, 34 per cent do not have electricity as compared to 11 per cent in poor households and less than 1 per cent in the middle socioeconomic category.

Households with electricity are commonly found in urban areas. In rural areas, only 10 per cent of the households have electricity (BDHS, 1994). In another study of slums in Dhaka (Islam and Mahbub, 1988), electricity connections were found in 55 per cent of the slums. Most of these electricity connections were unauthorized. Over the years, the extent of illegal electrical connections may have increased. However, the slum sample for the 1988 study covered a representative sample from Dhaka city but the USS sample covered only a selected area of Dhaka city. Hence, these results should not be compared. There is remarkable difference between the slums located on government property and private land. More than half of the slums on public land and about a third of the private slums do not have any electricity at all (Arifeen and Mahbub, 1993). In the case of smaller slums, however, the situation is much better, as residents usually get gas and electricity services from their landlord's house with monthly bills paid to the landlord (Roy, 1994).

4.2.4 Possession of household goods

Possession of household goods reflects a partial view about the socioeconomic status of a household. However, many of these goods such as radio or table/chair are not very common in Bangladesh (BDHS, 1994). Surprisingly, 6 per cent households in urban Dhaka, 10 per cent in non-slum and 14 per cent of households in other urban areas do not possess even a cot or a bed. The lack of possession of a cot or a bed is even more evident in the corresponding figures for slum populations of BDHS and USS, 33 per cent and 30 per cent, respectively.

One out of every two households in Dhaka, one out of three households in non-slum areas and one out of every four households in other urban areas have a television set in their households, while in slum areas (both BDHS and USS), 8 per cent of the households reported to own televisions. About one out of every two households possess

a radio in Dhaka, as compared to around 40 per cent of households in other urban areas. About one-fifth of the slum households of BDHS and USS are reported to have radios in their possession. Three-fourths of Dhaka households and 57-66 per cent of other urban and non-slum area households possess either a clock or a watch. The corresponding figures for possession of watch/clock in households located in slums of BDHS and USS areas are around 30 per cent.

Table 4.11 Possession of household goods (per cent distribution)

Household goods	BDHS (1993-1994)			USS (1991-1993)
	Dhaka (n=316)	Other urban (n=1060)	Non- slum (n=1204)	Slum (n=8240)
Almirah	62.0	45.9	53.6	21.2
Watch/clock	74.7	57.2	65.7	29.4
Cot/bed	94.3	85.8	90.5	67.6
Radio	47.2	38.7	43.4	20.6
Television	52.5	25.9	35.3	8.2
Bicycle	7.3	20.6	19.2	5.3

Overall, ownership of durable goods listed in the above table for urban households, except for bicycle, is in higher proportions than for rural households (BDHS, 1994). Findings in this section indicate that households in Dhaka possess every household durable goods, except bicycles, in higher proportions than all other urban areas. Households from slum areas of the BDHS and USS are very similar in terms of ownership of durable household goods. Interestingly, the possession of durable goods in slum households is similar to that of rural households, except for ownership of bicycles.

4.2.5 Employment status of women

The Urban Surveillance System data provides information on the employment status of urban slum women. It has been observed that more than 6 per cent of the females are employed in the garments industries and 5 per cent work as housemaids. The proportion of unemployed females is 27 per cent of the total female population.

The employment status of the poor in Dhaka shows that 65 per cent of all forms of employment were in the informal sector. Anam (1993) categorized the main employment categories on the basis of the findings from the study conducted by Islam et al. (1990) as, street trading, repair and other personal services, handicrafts and manufacturing, transport services, manual labour, domestic service, small business and trade, etc. In the formal sector, the urban poor work mostly in factories or in low paid office jobs.

4.2.6 Socioeconomic status index

Based on possession of household goods, an index was developed for this study to measure the socioeconomic status of households of Dhaka and other urban areas. Using the criteria defined in the methodology section, about half of Dhaka and two-thirds of other urban households can be considered as poor or very poor. The extent of very poor households is higher in other urban areas (44 per cent) than in Dhaka (31 per cent).

Table 4.12 Socioeconomic status index (per cent distribution)

Socioeconomic status	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=316)	Other urban (n=1060)	Non-slum (n=1204)	Slum (n=170)	Slum (n=8240)
Very poor	30.7	44.1	32.2	71.5	71.7
Poor	20.9	23.1	24.5	18.0	20.4
Middle or high	48.4	32.8	43.3	10.5	7.9

In the slums, the proportions of very poor and poor households are 72 per cent and 18 per cent, respectively. The socioeconomic status of non-slum households appears to be better, as expected, than slum households. One-third of the non-slum households can be categorized as "very poor" and 25 per cent as "poor."

According to the defined socioeconomic status index, 71 per cent of the USS households can be considered very poor and 21 per cent, poor. Only 8 per cent of slum households in the USS locations can be categorized in the middle socioeconomic category. In other words, 92 per cent of the households in the USS slums can be classified as "poor".

Access and utilisation of basic services are analyzed according to these SES differentials and presented in the following sections.

In a study conducted by CUS (Islam et al., 1990), the urban poor was defined in terms of income. An average household of 6 persons was determined by the study to have a monthly income of Tk. 2,600 for meeting the minimum requirements for food, clothing, medical care, education and shelter. This definition was used to identify the absolute poor, and a monthly household income of less than Tk. 1,724 was considered as severe poverty. All these estimates were based on 1985-86 price levels. Projections of the poorest segment of the urban population, showed that the urban population in severe poverty will increase from 6.87 million in 1990 to 10.8 million in 2010, and those in the absolute poor category will increase from 11.45 million in 1990 to 22.72 million in 2010. These projections indicate that the future growth of slum population will continue to increase well into the next millennium and without taking account of this reality, any effort to improve the health and family planning situation will fall short of the targets to be achieved.

4.2.7 Kinship structure of households

Analysis was based on three types of households:

- i. single member household
- ii. nuclear families comprising of parents and their children
- iii. households with other kinship structures.

Two-thirds of the households in the Dhaka slums are composed of nuclear families, more than one-fifth as single member, and slightly more than one-tenth as other types of households. The single member households exist the most (22.5 per cent) among households in the very poor economic condition category of households. Among the poor and middle income group households, the proportions of single member families are 2 per cent and 16 per cent, respectively. However, the other types of households (extended and other types of families) are found the most among the middle socioeconomic group (19 per cent) and the least among the very poor (9 per cent). One study of the Agargaon slums found the proportion of nuclear families in these areas to be about 71 per cent, compared to 24 per cent joint families (Majumder, 1988).

4.3 Water Supply and Sanitation

Access to safe drinking water is an important indicator of health and development situation, and insufficient water supply has become a common problem in most cities (Task Force on Bangladesh's Development Strategies for the 1990s, 1991). Slum dwellers, being located largely within municipal limits, manage to get drinking water from various sources in or outside the slum. A large proportion of the city's poor collect drinking water from municipal taps located either along public streets or in other public places (CUS, 1983, 1989, Mahbub, 1993). In such situations, a few hours are routinely spent in collecting the family's daily water supply, usually by women and children. Slum residents who live on private land often get their water from the landlord's house (Roy, 1994). Besides tap water, tubewells within the slum or neighbouring areas also provides a major share of safe water. A substantial proportion of slum families, mostly squatters, do not have access to safe water and therefore, they mostly depend on unsafe sources like ponds, rivers or surface wells. The following tables show analyses from BDHS data; information on water and sanitation from Dhaka slums (i.e., USS data) is discussed separately as the indicators are different and does not permit direct comparison.

4.3.1 Supply of drinking water

The main source of drinking water in the majority of households in Dhaka is piped water inside the dwelling (58 per cent). One-fourth of Dhaka households get their supply of drinking water from tubewells. In contrast, tubewell water inside the dwelling (31 per cent) is the major source in other urban (86 per cent), non-slum (74 per cent) and slum (61 per cent) areas. Other than tubewell, a substantial proportion of slum households (31.2 per cent) use sources of piped water outside the dwelling, and one-fifth of the non-slum households use piped water inside the dwelling for drinking purposes.

In the USS slum locations, most households collect their drinking water from communal facilities, i.e. from a shared source. One out of six households collect their drinking water from outside the slum, and two-thirds collect from water sources shared by more than 10 households. About 90 per cent of families among the very poor have to get their supply of drinking water from outside the slum or from communal sources used by more than 10 households. The per centages of among poor and middle socioeconomic group households in this categories, are 78 per cent and 60 per cent, respectively.

Table 4.13 Supply of drinking water (per cent distribution)

Source	BDHS (1993-1994)			
	Dhaka (n=316)	Other urban (n=1060)	Non-slum (n=1204)	Slum (n=170)
Piped water inside dwelling	57.6	7.0	20.3	5.9
Piped water outside dwelling	17.1	5.4	4.8	31.2
Tubewell	24.7	85.9	73.5	60.6
Surface well	0.6	1.0	1.0	0.6
Surface water	0.0	0.8	0.4	1.8

The availability of safe water and hygienic sanitation systems are the two basic environmental services that directly influence the health conditions of people. Dhaka has long experienced a severe shortage of water supply and an inadequate sanitation system. This is clearly evident from the findings of various surveys on slum populations. Recent studies (CUS, 1989, Arifeen and Mahbub, 1993, Roy, 1994, Mahbub and Islam, 1991) indicate that the health and sanitary conditions of slum dwellers in Dhaka city are extremely poor. The large majority of the poor have no access to sewerage systems, garbage disposal services and tap water. Absence of adequate sanitation and drainage therefore, has therefore, become a potential threat to the health situation of Dhaka city's population.

4.3.2 Time needed to get drinking water

Data from the USS slum areas are used to highlight this important issue. One fourth of slum households get their drinking water within 15 minutes per trip. About 23 per cent of the households spend 16 to 30 minutes for collecting drinking water in the USS slums. More than 50 per cent need more than 30 minutes time to collect water. For 7 per cent of the households, the time needed for collecting water is more than 2 hours. The median time needed to collect drinking water is almost the same (around 30 minutes) irrespective of socioeconomic categories, ranging from 14 per cent of the very poor households to 23 per cent of the middle socioeconomic category households, with the exception that a higher proportion of households of higher socioeconomic category have water inside the dwelling.

4.3.3 Supply of water for purposes other than drinking

Two major sources of water for purposes other than drinking in Dhaka are piped water inside dwelling (58 per cent) and tubewell (23 per cent). Altogether, piped water is used in three-fourths of households in Dhaka. For all other urban segments, namely, other urban, slum and non-slum areas, the major source of water is tubewell. Tubewell water is used by 37 per cent of slum and 52 per cent of non-slum households.

Table 4.14 Supply of water for purposes other than drinking (per cent distribution)

Source	BDHS (1993-1994)			
	Dhaka (n=316)	Other urban (n=1060)	Non-slum (n=1204)	Slum (n=170)
Piped Water Inside Dwelling	57.9	13.4	25.9	6.5
Piped Water Outside Dwelling	15.8	4.3	4.6	23.5
Tubewell	22.5	58.0	51.7	37.1
Surface Well	2.2	3.4	3.0	4.1
Surface Water	1.6	20.9	14.8	28.8

In other urban areas, more than one-fifth of households use surface water for other needs. In slum area households, surface water is the other major source of water for other needs, i.e. with three out of ten households. Surface water is used by 21 per cent of households in other urban areas and 29 per cent of households in slum areas. In non-slum areas, other than tubewell, the next major source is piped water inside dwelling (26 per cent).

4.3.4 Time needed to get water for purposes other than drinking

Nearly 12 per cent of the households in Dhaka and 20 per cent of the households in other urban areas reported needing 1-5 minutes to get water for other purposes. Similarly, 38 per cent of slum households and 15 per cent of non-slum households need 1-5 minutes for collecting water. Roughly one out of five households in the slums have to spend more than 5 minutes to get water for purposes other than drinking. (See details in the following table.)

Table 4.15 Time needed to get water for purposes other than drinking (per cent distribution)

Time (in minutes)	BDHS (1993-1994)			
	Dhaka (n=316)	Other urban (n=1060)	Non-slum (n=1204)	Slum (n=170)
On premises	83.5	75.2	81.8	43.5
1-5	11.7	19.5	14.9	38.2
6-10	2.2	2.9	1.6	11.2
11 or more	2.5	2.4	1.8	7.1

4.3.5 Toilet facilities for adults

According to the BDHS 1993-1994, about 69 per cent of the households in Bangladesh have sanitation facilities. However, only 41 per cent of the households have hygienic toilets and 30 per cent have no facilities at all (BDHS, 1994). If modern toilets, slab latrines and pit latrines are considered as hygienic toilets, the data indicates that more than 90 per cent of households in Dhaka have hygienic toilets, compared to 71 per cent in other urban areas, and 78 per cent in non-slum areas. In slum areas, on the other hand, 57 per cent of the households have access to hygienic toilets. About 16 per cent of the slum households do not have any toilet facilities.

Table 4.16 Toilet facilities for adults (per cent distribution)

Place of defaecation	BDHS (1993-1994)			
	Dhaka (n=316)	Other urban (n=1060)	Non-slum (n=1204)	Slum (n=170)
Modern	71.2	33.5	45.9	14.7
Slab Latrine	16.8	25.6	22.7	30.0
Pit Latrine	2.5	11.6	9.1	12.4
Other	9.2	18.7	15.0	27.1
No Facilities	0.3	10.7	7.2	15.9

Communal slab latrines are the main toilet facilities for a large proportion of tenants in slum areas (three out of ten). One-sixth of the households in slums do not have any toilet facilities at all, in addition to more than one-fourth without any hygienic toilet facilities. In contrast, the majority of households in non-slum areas have modern latrines, at a proportion three times higher than in slum areas, i.e. about 46 per cent and 15 per cent, respectively.

In the USS slum areas, only 5 per cent of the households have private toilet facilities. More than 50 per cent share toilet facilities among more than 10 households. About 42 per cent of the households have to share toilet facilities among 10 or fewer number of households.

Dhaka city has a wide variety of sanitation and sewerage system comprising septic tanks, pit latrines, bucket latrines and katcha/hanging latrines. Only 35 per cent of households have access to sewerage lines. Slum dwellers usually depend on impermanent latrine systems, and a large majority of these are shared by several households in the community. About one-fourth of families that are mostly squatters use railway lines, drains and nearby ditches. Only some private land dwellers, particularly those who reside in small slums (Roy, 1994) have a better situation as they often get access to the landlord's hygienic toilet facilities.

4.4 Reproductive Health Issues

4.4.1 Family planning

Within the past two decades, the family planning program in Bangladesh has been successful in increasing the level of contraceptive prevalence for spacing or limiting births from 8 per cent to 45 per cent. According to the Bangladesh Demographic and Health Survey of 1993-1994, the rural and urban levels of contraceptive prevalence are 43 per cent and 54 per cent, respectively. The achievements of the family planning program occurred without any remarkable developments in the socioeconomic status of the people. Comparisons of family planning related issues between slum and non-slum populations, Dhaka City and other urban populations are presented in this section.

4.4.1.a Current status of pregnancy and use of contraception

A relatively higher proportion of women in the childbearing age groups in urban areas were currently pregnant at the time of the survey, i.e. 7 per cent in Dhaka and 8 per cent in other urban areas, but these figures are not significantly different. On the other hand, a significantly higher proportion of women in the childbearing age groups in the slums were found to be currently pregnant (13 per cent in the slums and 7 per cent in the non-slum areas).

Table 4.17 Pregnancy status of currently married women (per cent distribution)

Currently pregnant	BDHS (1993-1994)			
	Dhaka (n=293)	Other urban (n=1058)	Non-slum (n=1177)	Slum (n=172)
Yes	6.8	7.8	6.8	13.4
No	93.2	92.2	93.2	86.6

Contraceptive prevalence in Dhaka City is relatively higher (61 per cent as opposed to 52 per cent in other urban areas). In both BDHS and USS slum areas, contraceptive prevalence appears to be lowest, about 45 per cent. The relationship between current pregnancy and contraceptive prevalence rates does not conform with the expected impact of higher CPR on the level of fertility.

Current pregnancy is much higher among younger women, i.e. those below 25 years, in urban areas among all urban segments (Dhaka, other cities, slums and non-slums). However, the proportion of currently pregnant women in the younger age groups is much higher in slum populations.

In both Dhaka and other urban areas, as well as in slum and non-slum areas, the pill is the most commonly used method of contraception. Condom is the next frequently used method in both Dhaka and other urban areas, i.e. nearly one out of six users. The use of IUD is substantially higher in Dhaka than in other urban areas. Interestingly, one of the major reasons for a higher contraceptive prevalence in Dhaka relates to the much higher reported use of traditional methods, i.e. mostly periodic abstinence and withdrawal methods. (See Table 4.18).

Table 4.18 Current use of contraceptives by currently married women (per cent distribution)

Method of contraception	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=293)	Other urban (n=1058)	Non-slum (n=1177)	Slum (n=172)	Slum (n=5206)
Oral pill	22.5	20.6	22.2	12.8	19.2
Condom	9.2	8.2	9.2	3.5	2.0
Injection	4.8	4.5	4.0	8.7	6.5
Iud	5.5	2.7	3.7	1.2	1.8
Female sterilization	5.5	7.0	6.1	10.5	9.9
Male sterilization	1.0	0.8	0.6	2.3	0.9
Traditional methods	12.0	7.4	8.6	6.4	4.1
Other methods	0.3	0.5	0.5	0.0	0.3
Non-user	39.2	48.3	45.1	54.6	55.3

As a result of a higher pregnancy rate among slum women, the age composition in the slums show a higher proportion in the younger age groups. The contraceptive prevalence rates in slum and non-slum areas are 45.4 and 54.9, respectively. In both slum and non-slum areas, the pill is most commonly used, but at a substantially higher rate in non-slum areas. The use of injectable contraceptives and sterilization is much higher in the slums than in non-slum areas. On the other hand, a higher use of condom is observed in non-slum areas than in slum areas.

The contraceptive prevalence rate in the USS areas was 44.7 per cent. The oral pill is the most popular method of contraception used by more than 19 per cent of currently married women. The acceptance of female sterilization appears to be high as well, with a prevalence of one out of every ten currently married women. Among other methods, the use of injectable is quite high (about 7 per cent of currently married women in the reproductive age group).

4.4.1.b Current use status by age

The use of contraception in all age groups is higher in Dhaka compared to other urban areas. The proportion of users increased with age for Dhaka, slum and USS slum areas. There are marked variations in the proportion of contraceptive users in the age groups below 25 and above 35 years. In the age group 35 years and above, about 70 per cent of women use contraceptives in Dhaka, compared to 56 per cent in other urban areas.

The proportion of contraceptive users is relatively lower in the slum areas (28 per cent) than in the non-slum areas (42 per cent) among those less than 25 years of age. The pattern remains the same among the 25-35 years age group. However, the proportion of users in the slums is higher among women in the age group 35 years and above. In other words, use rates are highest in the slums among those above 35 years, and highest in the non-slum areas between 25-35 years. These indicate that the proportion of users in the slums increase uniformly with increase in age, but in non-slum areas, there is an increase before 35 years, and a decrease is noted afterwards.

Table 4.19 Current use of contraceptives by currently married women by age (per cent distribution)

Age	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=293)	Other urban (n=1058)	Non- slum (n=1177)	Slum (n=172)	Slum (n=5206)
< 25	46.6	38.5	42.0	27.7	35.1
25-34	64.5	60.9	63.1	52.2	48.3
35 and above	70.4	55.9	58.6	63.2	51.1

4.4.1.c Current use status by method and age

The oral pill is used by high proportions of currently married women below 25 years, i.e. almost two out of three users. The use of injectables also appears to be substantial at younger ages (below age 35 years). About half of the users that are 35 years or older were found to have undergone female sterilization.

The oral pill is used by a larger proportion among currently married, younger (less than 25 years) women in both slum and non-slum areas and by women between 25-35 years in non-slum areas. In non-slum areas, the oral pill is the most common method of contraception among middle-aged women, i.e., those in the 25-35 years age group. Contrastingly, in slum areas, oral pill, female sterilization and injectable contraceptives are equally popular among women in this age group. Female sterilization is the most common method for older women, i.e., 35 years and above, in both slum and non-slum areas, but much higher in the slums.

4.4.1.d Current use of contraception by parity

The use of contraception among women with seven or fewer deliveries is substantially lower in urban areas other than Dhaka. In these cities, only those women who have delivered at least seven times or more use contraception at a higher rate than in Dhaka. The use of contraception in Dhaka increases steadily from one out of every four women who have not delivered any children to three out of four women with who have delivered at least 3-4 times, compared to one out of eight women of zero parity to two out of three women of parity 3-4 in other urban areas. The use rates by parity in non-slum areas are slightly higher than in other urban areas. However, in the BDHS and USS slums, the use rates are much lower, by about 10 to 15 per centage points for parity 1-4, compared to the corresponding rates for Dhaka, other urban and non-slum areas.

Table 4.20 Current use of contraception by parity (per cent distribution)

Parity	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=293)	Other urban (n=1058)	Non- slum (n=1177)	Slum (n=172)	Slum (n=5087)
0	25.0	12.2	13.4	13.0	14.3
1	51.2	40.9	44.3	26.3	36.8
2	66.2	62.4	64.5	51.7	46.8
3-4	75.3	65.0	69.7	54.6	54.2
5 or more	53.5	53.5	53.3	54.4	53.7

The use of contraception increases with parity and reaches the highest level for women who have delivered at least 3-4 times. This is evident for currently married women living in Dhaka, other urban, slum and non-slum areas. In non-Dhaka urban areas, contraceptive use ranges from 12 per cent among those who have never delivered to 65 per cent of women who have delivered at least 3-4 times. Women in Dhaka City have the highest use of contraception for parities less than 5, and more than 50 per cent of women in Dhaka City who have delivered once, use contraception as compared to only 41 per cent in other urban areas. The use of contraception among those women who have never delivered children is very low in both slum and non-slum areas, i.e. around 13 per cent. Contraceptive use among lower parity women is substantially lower in slum areas.

Lower parity women in the slums prefer oral pills, condoms and injectables and higher parity women prefer female sterilization and injectable in addition to oral pills. Similarly, in the USS slum locations, lower parity women prefer oral pill, condom and injectable while higher parity women prefer sterilization and injectable in addition to oral pills.

4.4.1.e Intended use of contraception

Intended use of contraception within the coming 12 months among non-users is about the same in Dhaka and other urban areas (43 - 44 per cent). However, the intended use of contraception at any time in the future is substantially higher in Dhaka (34 per cent in Dhaka and 24 per cent in other urban areas).

Table 4.21 Intended use of contraception among non-users (per cent distribution)

Intention of use	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=115)	Other urban (n=511)	Non- slum (n=532)	Slum (n=94)	Slum (n=1498)
Within 12 Months	42.6	43.8	42.1	52.1	-
Anytime in Future	33.9	23.9	25.8	25.5	45.5
No Intention/ Don't Know	23.5	32.3	32.1	22.3	54.5

The intention to use contraception within 12 months is much higher among slum women (52 per cent) than among non-slum women (42 per cent), but there is no difference for intention of use at any time in the future between slum and non-slum samples of the BDHS. The USS data provides an estimate of 46 per cent for intended use in the future among current non-users. It seems that the extent of unmet need for family planning methods is much higher in slum areas, especially in Dhaka slums. This issue requires proper attention from policy makers, and extra effort towards bringing these women who have intentions to adopt contraception into the family planning program with regular follow-up support would increase contraceptive use noticeably in the slum areas.

4.4.1.f Reasons for not using contraceptives

Women who were not using any family planning methods were asked the reasons for non-use of contraception at the time of interview through the Bangladesh Demographic and Health Survey and the Urban Surveillance System. In both Dhaka and other urban areas, the main reasons for not using contraceptives among the non-user women of childbearing age groups are related to past, current or future pregnancy. Three main reasons for non-use in all the areas are the desire for additional children, menstruation not returned after childbirth and being currently pregnant. Infrequent sex or husband living away from home were cited as reasons for non-use of contraceptives among a substantial proportion, i.e. 17 per cent of women in Dhaka. The same issue was noted in the non-slum areas.

The main reasons for not using contraceptives in Dhaka slums are similar to those for all other urban groups. Three main reasons were noted as follows:

- i. menstruation not returned after delivery (22.3 per cent)
- ii. desire for additional children (18.4 per cent), and
- iii. no need (17.5 per cent).

At the national level, according to the BDHS 1993-1994, 40 per cent of the women mentioned "difficulty to get pregnant" or menopause (or infecundity) as reasons for non-use of contraception (BDHS, 1994). If reasons such as menstruation not returned after delivery, menopause and difficulty to get pregnant are combined as infecundity, then infecundity becomes the major reason for non-use in all the urban settings discussed above, reported by about 33 - 36 per cent.

4.4.1.g Sources of supply of contraceptives

Fieldworkers are the main suppliers of oral pills and condoms in slums, non-slums, other cities (50 per cent in slums and other urban areas, 44 per cent in non-slum areas). In Dhaka, the major source of oral pills and condoms is the private sector, including clinics, doctors, traditional doctors and pharmacies (43 per cent), while slightly more than one-fourth get supplies from fieldworkers.

In both slum (BDHS and USS) and non-slum areas, FP workers supply most of the oral pills. More than one-fourth of the users of oral pills in USS slum locations purchase pills from pharmacies.

Public sector facilities (hospital/medical college hospital/FWC/THC/Satellite Clinic) are the main sources of clinical contraceptives (injectable and IUD) for more than 50 per cent of users in both Dhaka and other cities. Other than those, fieldworkers supply clinical contraceptives to about one-fifth of the users in other urban areas.

Public sector facilities are the main sources of clinical contraceptives in more than half of the cases for both slum and non-slum areas. Other than public sector facilities, fieldworkers supply clinical contraceptives to about one-third of the users of clinical contraceptives in slum areas.

In the Dhaka slum areas, FP fieldworkers are the main suppliers for more than 50 per cent of oral pill users. More than one-fourth of oral pill users purchase supplies from pharmacies. About 41 per cent of condom users purchase supplies from pharmacies, and the rest get their supplies from family planning fieldworkers, family planning clinics or hospitals.

Public sector facilities are the main sources of clinical contraceptives in the USS slums. Family planning clinics and hospitals provide services to 88 per cent of IUD users, 72 per cent of injectable users, and to almost all sterilization clients.

4.4.2 Antenatal care

4.4.2.a Utilisation of antenatal care

About two-thirds of pregnant women in Dhaka and less than 50 per cent in other urban areas receive utilise health services during pregnancy. The proportion of pregnant women who receive antenatal services is much lower in slum areas. Less than one-third of pregnant women living in the slums obtain antenatal care, in contrast to more than 50 per cent in non-slum areas.

Table 4.22 Utilisation of antenatal care services (per cent distribution)

Used antenatal care	BDHS (1993-1994)			
	Dhaka (n=135)	Other urban (n=568)	Non-slum (n=591)	Slum (n=111)
Yes	65.2	47.4	54.7	31.5
No	34.8	52.6	45.3	68.5

4.4.2.b Time of receiving first antenatal care service

Almost 66 per cent of those who received antenatal care in Dhaka, had their first visit before three months of pregnancy. In contrast, more than 50 per cent of pregnant women who received antenatal care in other urban areas, sought services only after three months of pregnancy (i.e. 54 per cent). This indicates that those who live in Dhaka City either have a relatively better awareness about antenatal care or that they have more choices and opportunities to use antenatal care services.

The majority of those who receive antenatal care in the slums, obtain services for the first time during the second trimestre, in contrast to the majority of non-slum women who receive care in the first trimestre. This indicates that women in non-slum areas are more aware of the necessity to have pregnancy-related health care since the first trimester of pregnancy. Only one-third of pregnant women in slums seek antenatal care and most of them obtain antenatal care at an advanced stage of pregnancy. (There is no data available on utilisation of antenatal and postnatal care in the USS slum locations, so a comparison is not possible.)

Table 4.23 Time of first antenatal care visit (per cent distribution)

Time of first antenatal care (months)	BDHS (1993-1994)			
	Dhaka (n=88)	Other urban (n=271)	Non-slum (n=323)	Slum (n=35)
1-3	65.9	45.8	52.6	31.4
4-6	28.4	39.5	34.7	57.1
7 or more	5.7	14.8	12.7	11.4

4.4.2.c Frequency of antenatal care use

It has been observed from Table 4.24 that pregnant women living in Dhaka seek antenatal services at a much higher rate than those in other urban areas. Among those who received antenatal care, two-thirds obtained services for more than four times during their course of pregnancy. On the other hand, two-thirds of pregnant women who sought antenatal care in other urban areas and more than 50 per cent in non-slum areas, used services only three or fewer times. Among those who receive antenatal care in the slums, more than 50 per cent received such care only 1-2 times.

Table 4.24 Number of antenatal care visits (per cent distribution)

Number of antenatal care visits	BDHS (1993-1994)			
	Dhaka (n=88)	Other urban (n=271)	Non-slum (n=323)	Slum (n=35)
1	6.8	16.2	13.7	17.1
2	12.5	24.7	20.4	34.3
3	17.0	21.8	20.4	22.9
4-6	28.4	24.7	26.8	17.1
7-9	35.2	11.8	18.3	8.6

4.4.3 Delivery

4.4.3.a Place of delivery

In Dhaka, 31 per cent of deliveries take place in government or private hospitals and clinics, compared to 14 per cent in other urban areas. Two-thirds of deliveries in Dhaka and about 85 per cent of the deliveries in the rest of the urban areas take place in people's homes, while more than 9 out of 10 deliveries in slum areas and 8 out of ten deliveries in non-slum areas take place in people's own homes or other homes. Only 5 per cent of deliveries take place in hospitals for slum women, compared to 19 per cent for women living in non-slum areas. This is a striking difference between slum and non-slum areas.

Only 17 per cent of deliveries take place in government or private hospitals and clinics, but more than 8 out of 10 occurred in homes. The utilization of hospital or clinic facilities for deliveries is very low among slum women in Dhaka, but still higher when compared to other slums.

Table 4.25 Place of delivery (per cent distribution)

Place of delivery	BDHS (1993-1994)			USS (1991-1993)
	Dhaka (n=135)	Other urban (n=568)	Non- slum (n=591)	Slum (n=4293)
Home	68.2	84.5	79.3	92.8
Maternity home/ Clinic/hospital	31.1	13.8	19.2	5.4
Other places	0.7	1.8	1.5	1.8

4.4.3.b Birth attendant

Trained personnel (doctors/nurse-midwives/FWVs/Trained Birth Attendants, i.e. those who have had formal training in Western childbirth and midwifery techniques) perform about 41 per cent of deliveries in Dhaka and 29 per cent of deliveries in the rest of the urban areas. In the other urban areas, two-thirds of the deliveries are not attended by any trained personnel.

Table 4.26 Birth attendant (per cent distribution)

Birth attendant	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=135)	Other urban (n=568)	Non- slum (n=591)	Slum (n=111)	Slum (n=4293)
Doctor	28.9	12.6	16.9	6.3	0.3
Nurse/midwife/FWV	11.9	15.9	32.2	9.0	8.8
Trained birth attendant	1.7	6.2	6.9	4.5	2.7
Others	57.5	65.3	44.0	80.2	88.2

Relatives (with three-fourths of the cases) and traditional birth attendants (for more than half) attend most of the deliveries in slum areas. The traditional birth attendants (popularly known as dais in Bangladesh) do not have any training in midwifery. Most of the time they practise unhygienic procedures at the time of performing a delivery. In addition to relatives, nurse-midwives, doctors, and trained birth attendants attend 32 per cent, 17 per cent, and 7 per cent of the deliveries, respectively, in non-slum areas, as compared to 9 per cent, 6 per cent, and 5 per cent, respectively, in the slums. The presence of trained personnel at the time of delivery, particularly in the slums, is remarkably low.

4.4.5 Unwanted pregnancies, menstrual regulation and abortion services

About one-fourth of the last pregnancies in Dhaka and other urban areas, both slum and non-slum areas are reported to be unwanted. The proportion is slightly higher in Dhaka and slum areas, compared to other urban and non-slum areas. Around 14 per cent of the unwanted pregnancies in Dhaka and other urban areas resulted in either menstrual regulation procedures (MRs) or abortions. (Menstrual regulation is a procedure usually done to ensure the appearance of regular menstruation, i.e., through vacuum extraction of uterine contents, permissible in the period up to eight weeks of amenorrhoea. In real terms, the procedure removes any possible product of conception, but is considered dangerous for the woman if the pregnancy is too advanced.)

Table 4.27 Unwanted pregnancies [last pregnancy, currently married women aged 15-49 years] (per cent distribution)

Unwanted pregnancy	BDHS (1993-1994)			
	Dhaka (n=329)	Other urban (n=1137)	Non-slum (n=1141)	Slum (n=162)
Yes	26.1	24.1	24.3	26.4
No	73.9	75.9	75.7	73.6

The extent of MRs and abortions among those who had unwanted pregnancy is much higher in non-slum areas than in slum areas. About 14-15 per cent of the unwanted pregnancies in Dhaka, other urban areas and non-slum areas as compared to only 8 per cent of the unwanted pregnancies in slum areas resulted in MRs and abortions. The higher rate of MRs and abortions for unwanted pregnancies in non-slum areas may be attributed to costs involved with such services.

Overall, about one-fourth of the most recent pregnancies in both Dhaka and other cities are reported to be unwanted; the incidence is slightly higher in Dhaka. The extent of unwanted pregnancy for the last birth is slightly higher in slums, i.e. one-third of the last pregnancies.

Table 4.28 Unwanted pregnancies that ended in MR/abortion (per cent distribution)

MR/abortion	BDHS (1993-1994)			
	Dhaka (n=86)	Other urban (n=274)	Non-slum (n=310)	Slum (n=49)
Yes	14.0	14.6	15.2	8.2
No	86.0	85.4	84.8	91.8

Analysis of USS data revealed that about one in nine pregnancies in the Dhaka slums end in induced or spontaneous miscarriage. About 3 per cent of pregnancies result in stillbirths in the slums of USS locations.

4.5 Health Profile and Practices

4.5.1 Breast-feeding practice

It is widely acknowledged that breast-feeding is a very important factor for the health of both the mother and the child, in relation to the nutritional status, morbidity and mortality of infants, and facilitating postpartum infertility of mothers to a certain extent. The timing of initiation of breast-feeding has direct impact on the health of a child. The first breastmilk contains colostrum which helps a child to develop immunity against diseases. Table 4.29 shows that the timing of initiation of breast-feeding is similar in Dhaka, other urban, slum and non-slum areas. Slightly more than ten per cent of babies are breast-fed within one hour of birth. About half of all new born babies are breast-fed in their first day of life in all urban areas except in Dhaka, where the rate is higher, at 60 per cent.

Table 4.29 Time of first episode of breast-feeding for the last child (per cent distribution)

Time [after birth] (in hours)	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=115)	Other urban (n=445)	Non- slum (n=474)	Slum (n=85)	Slum (n=906)
0	11.3	12.1	12.2	10.6	14.8
1-6	37.4	31.7	32.5	35.3	31.8
7-24	9.6	6.1	7.4	3.5	15.2
>24	41.7	50.1	47.9	50.6	38.2

In the BDHS, questions were asked about the nature of breast-feeding of the last child born within the past three years. If the child was breast-fed, then the respondent was asked whether the child was exclusively breast-fed, breast-fed with plain water, or breast-fed with other food supplements. Early supplementation of food may have adverse effects on the health of an infant. Table 4.30 displays the breast-feeding status of infants less than 6 months old and 6-11 months for different urban areas. Among infants less than 6 months, more mothers living in Dhaka City appear to give supplementation of

food in addition to breast-feeding (71 per cent). In other urban and non-slum areas, about 50 per cent of infants less than 6 months old are either exclusively breast-fed or breast-fed with water, and the remaining 50 per cent are breast-fed with other food supplements. In Dhaka, other urban and non-slum areas, around 80 per cent of the infants aged 6 months or older are breast-fed with food supplements, whereas the corresponding proportion for slum areas is 71 per cent. This indicates that a substantial proportion of infants in the slums do not receive adequate food supplementation after six months of age.

Table 4.30 Breast-feeding status of infants of age less than 6 months and 6-11 months (per cent distribution)

Breast-feeding status	BDHS (1993-1994)							
	Dhaka		Other urban		Non-slum		Slum	
	<6* (n=17)	6-11* (n=14)	<6* (n=78)	6-11* (n=60)	<6* (n=16)	6-11* (n=14)	<6* (n=79)	6-11* (n=60)
Exclusively breast-fed	29.4	14.3	42.3	6.7	50.0	21.4	37.9	5.0
Breast-fed with water	0.0	0.0	7.7	15.0	0.0	7.1	7.6	13.3
Breast-fed with food supplement	70.6	85.7	50.0	78.3	50.0	71.4	54.4	81.6

4.5.2 Illness profile

4.5.2.a Child health issues

Child health care indicators, including immunization of children, intake of Vitamin-A, childhood diseases (diarrhoea, cough with rapid breathing) and their treatment, are analysed for the urban population of Bangladesh. These indicators provide important insights to the current state of urban health care systems.

Vitamin A deficiency is a crucial condition that can potentially cause blindness among children. About 50 per cent of the children less than 3 years old in Dhaka City, other urban and non-slum areas have received Vitamin A during the last six months prior to the survey. However, in slum areas, the intake of Vitamin A among children less than 3 years appears to be lower than in other urban settings, i.e. around 41 per cent.

Table 4.31 Whether taken Vitamin A capsule in the six months preceding the BDHS and three months preceding the USS survey (per cent distribution)

	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=99)	Other urban (n=393)	Non- slum (n=420)	Slum (n=71)	Slum (n=4869)
Yes	46.5	50.4	51.2	40.8	24.1
No/don't know	53.5	49.6	48.8	59.2	75.9

The intake of Vitamin A capsule in the three months prior to the USS among children under 3 years is only 24 per cent.

The prevalence of diarrhoea among children aged less than three years in the reference period of two weeks preceding the BDHS for Dhaka, other urban and non-slum areas ranges from 9-12 per cent. As expected, the prevalence of diarrhoea in slum areas (both BDHS and USS) is much higher, about twice (18-20 per cent) as high than in Dhaka City.

Table 4.32 Prevalence of diarrhoea during the past two weeks ((per cent distribution)

Whether suffered from diarrhoea	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=130)	Other urban (n=527)	Non- slum (n=557)	Slum (n=99)	Slum (n=4869)
Yes	9.2	12.1	10.5	18.2	20.3
No	86.9	86.9	88.3	80.8	79.7
Don't Know	3.9	1.0	1.3	1.0	-

Both in Dhaka City and slum areas, most of the children (about 60 per cent) did not receive any treatment of diarrhoea, but in other urban and non-slum areas about 70 per cent received treatment from pharmacies and private hospitals/doctors. However, these findings are based on only 12 and 18 patients from Dhaka City and slums respectively, compared to 64 and 58 patients, from other urban and non-slum areas.

Table 4.33 Sought treatment for the last episode of diarrhoea in the past two weeks (per cent distribution)

Source of treatment	BDHS (1993-1994)			
	Dhaka (n=130)	Other urban (n=527)	Non-slum (n=557)	Slum (n=99)
No treatment	58.3	31.3	27.6	61.1
Hospital/doctor	25.0	26.7	31.0	11.0
Pharmacy/traditional doctor	16.7	42.2	41.4	27.8

More than two out of every three sick children are given ORS for diarrhoea in Dhaka as compared to one out of two in other urban areas. The analysis seems to imply that children in other cities are more likely to receive treatment from traditional medical practitioners but the children of Dhaka City are more likely to receive ORS fluid. The use of ORS seems to be the lowest in the USS locations in Dhaka City, where one-third of the children suffering from diarrhoea receive ORS. It seems that caretakers in these areas are either unaware of how to prepare ORS solution or unable to recognise the signs that require ORS use.

Table 4.34 Whether given ORS (per cent distribution)

Given ORS	BDHS (1993-1994)				USS (1991-1993)
	Dhaka (n=12)	Other urban (n=64)	Non-slum (n=58)	Slum (n=18)	Slum (n=990)
Yes	66.7	50.0	53.5	50.0	33.1
No	33.3	50.0	46.5	50.0	66.9

Table 4.35 Prevalence of cough and ARI during the two weeks preceding the survey (per cent distribution)

Cough with or without Rapid breathing	BDHS (1993-1994)			
	Dhaka (n=130)	Other urban (n=527)	Non-slum (n=557)	Slum (n=99)
Cough with rapid breathing	21.5	24.3	23.1	28.3
Cough without rapid breathing	14.6	14.4	14.8	13.1
No/don't know	63.8	61.3	62.2	58.6

Acute respiratory infection (ARI) can be diagnosed by the symptoms of cough and rapid breathing, and inquiry about the prevalence of cough with or without rapid breathing was made during the BDHS. ARI is more common in other urban areas (24 per cent) than in Dhaka, while a higher proportion of children suffer from ARI in slums (28 per cent) than in non-slums (23 per cent). The prevalence of cough without rapid breathing is about the same (ranging from 13 per cent to 15 per cent) in all the urban settings considered here. The high prevalence of ARI in the slums may be attributed to poor housing conditions and less awareness about health among those who live in the slums.

Table 4.36 Places where treatment for cough was sought (per cent distribution)

Places where treatment was sought	BDHS (1993-1994)			
	Dhaka (n=47)	Other urban (n=204)	Non-slum (n=210)	Slum (n=41)
No treatment	21.3	32.8	31.4	26.8
Hospital/doctor	46.8	27.4	32.8	22.0
Pharmacy/traditional doctor	31.9	39.7	35.7	51.3

Children in Dhaka are more likely to receive treatment for cough. Advice from hospitals and doctors are sought in highest proportion in Dhaka City (47 per cent), compared to the lowest utilization of health facilities among those who live in the slums (only 22 per cent). Advice is sought from pharmacies and traditional doctors in the highest proportion by slum dwellers, and in the lowest proportion by Dhaka residents. (Unfortunately, the

numbers of those who sought care for cough combined with rapid breathing were too small to permit any meaningful analysis.)

4.5.3 Immunization

The per centage of children aged 12-23 months who received vaccines are shown in the following table for both BDHS and USS sources. In the BDHS, the respondents were asked to show the EPI card to confirm the record of vaccination. However, the per centage of children whose vaccination cards could not be shown is very high in all urban settings. The coverage of vaccines is presented here on the basis of combined proportions for with or without cards. The number of children between 12-23 months for Dhaka and slum areas are 30 and 20, respectively, and therefore, the results presented in this section should not be used as estimates for EPI coverage.

The coverage of BCG vaccine among children of age 12-23 months is quite high. Ninety per cent of the children aged 12-23 months in both Dhaka City and other urban areas of Bangladesh have received BCG. All children (age 12-23 months) in slums and nine out of 10 children in non-slum areas have taken BCG. The hundred per cent coverage in slum areas might be attributed to the small sample size or erroneous reporting for slum areas.

The coverage of vaccination against measles is 80 per cent among children of age 12-23 months in Dhaka City compared to the coverage of 76 per cent in other cities. Sixty five per cent of slum and 79 per cent of non-slum children between 12-23 months have received vaccination against measles. Although the coverage in Dhaka, other urban and non-slum areas is about 80 per cent, the coverage of vaccination against measles appears to be low for slums.

Ninety per cent of the children between 12-23 months have received the first dose of polio vaccine in both Dhaka and other urban areas. The coverage of the second dose is the same as the first dose in all areas. Nearly three out of four children in Dhaka and four out of five children in other urban areas received the third dose. The data indicates that coverage of the third dose of polio vaccination appears to be higher in other urban areas than in Dhaka City.

Ninety per cent of the children between 12-23 months in both Dhaka and other urban areas received the first dose of DPT vaccine. The second dose of DPT was received by 87 per

cent of children aged 12-23 months in all urban areas. Around three-fourths of children between 12-23 months in all urban areas obtained the third dose of DPT vaccine.

Table 4.37 Immunization of children aged between 12 and 23 months (per cent distribution)

Immunization	BDHS (1993-1994)			
	Dhaka (n=30)	Other urban (n=125)	Non-slum (n=135)	Slum (n=20)
BCG (overall)				77.3
Immunized (card)	43.3	48.8	45.2	65.0
Immunized (no card)	46.7	43.2	45.2	35.0
Measles				43.9
Immunized (card)	36.7	41.6	40.7	40.0
Immunized (no card)	43.3	34.4	37.8	25.0
Polio - First Dose				-
Immunized (card)	43.3	48.8	45.2	65.0
Immunized (no card)	46.7	41.6	44.4	30.0
Polio - Second Dose				-
Immunized (card)	43.3	48.0	45.2	60.0
Immunized (no card)	46.7	40.0	43.0	30.0
Polio - Third Dose				-
Immunized (card)	43.3	46.4	44.4	55.0
Immunized (no card)	30.0	33.6	34.1	25.0
DPT - First Dose				78.7
Immunized (card)	43.3	48.8	45.2	65.0
Immunized (no card)	46.7	40.8	38.1	30.0
DPT - Second Dose				67.8
Immunized (card)	43.3	48.0	45.2	60.0
Immunized (no card)	46.7	38.4	41.5	30.0
DPT - Third Dose				57.3
Immunized (card)	43.3	46.4	44.4	55.0
Immunized (no card)	30.0	32.0	33.3	20.0

According to the BDHS data, the majority of children in both slum and non-slum areas have received all three doses of polio vaccine. The coverage of the three doses of DPT vaccine is at substantial levels. However, the sample used for the slum areas in the BDHS is too small to arrive at any conclusion. Coverage of vaccination in the USS slum locations provides an overall picture of the immunization status of children in slums. In addition, the extent of coverage by socioeconomic status indicates the existing pattern of use of immunization services by different strata of people. The data are presented as follows:

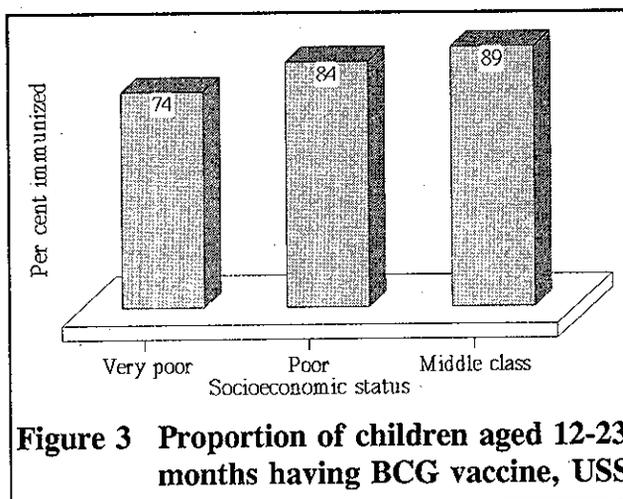


Figure 3 Proportion of children aged 12-23 months having BCG vaccine, USS

The coverage of BCG appears to be reasonably high in the USS locations (77 per cent). Positive association between socioeconomic status and immunization is evident from the data. The estimates of coverage of BCG vaccination among the children of age 12-23 months vary from 74 per cent for very poor to 89 per cent for middle socioeconomic status category in the USS locations. (See figure 3)

The coverage of vaccination against measles is lower in the USS slums. Only 44 per cent of the children between 12-23 months received vaccination against measles in the USS locations compared to about 80 per cent in Dhaka and other urban areas. According to the BDHS data, 65 per cent of slum children between 12-23 months were vaccinated against measles. In the lowest socioeconomic status group of the USS, the coverage of vaccination against measles is 37 per cent, compared to 53 per cent for the

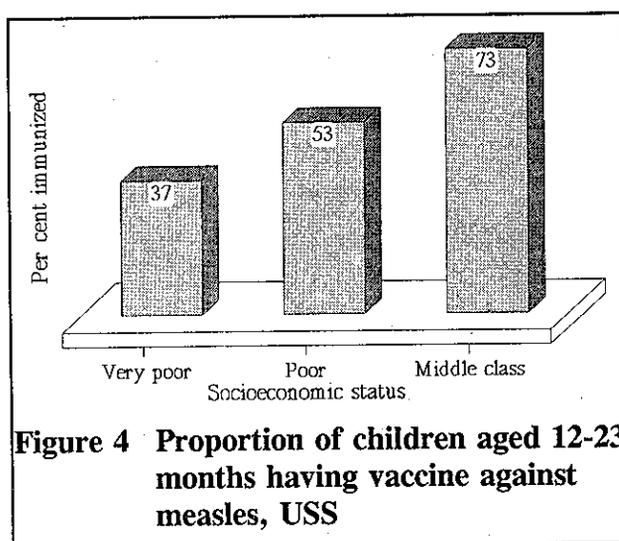


Figure 4 Proportion of children aged 12-23 months having vaccine against measles, USS

poor and 73 per cent for the middle or high socioeconomic categories. The details are shown in Figure 4.

The coverage of the first dose of DPT vaccination is about 79 per cent in the USS slum areas of Dhaka. In the USS slum areas, the coverage of the second and third dose of DPT is around 68 per cent and 57 per cent, respectively. The coverage is positively associated with socioeconomic status (The information is summarized in Figure 5).

Only 41 per cent of the children between 12-23 months completed the entire range of EPI vaccinations in the USS slum locations (Figure 6). Only one-third of the children completed

vaccination in the very poor socioeconomic group which is much higher (72 per cent) for the middle or high socioeconomic groups.

The success of the Expanded Programme on Immunization in Bangladesh was evident even in the most disadvantaged sections of slum dwellers. This will have a major impact in the reduction of incidence and resultant fatality due to diphtheria, pertussis, tetanus, polio, measles and tuberculosis. The problems associated with urban EPI are complex through reasons identified by Talukder et al. (1991) as mobility of the poor population and lack of a coherent health delivery system in the municipality.

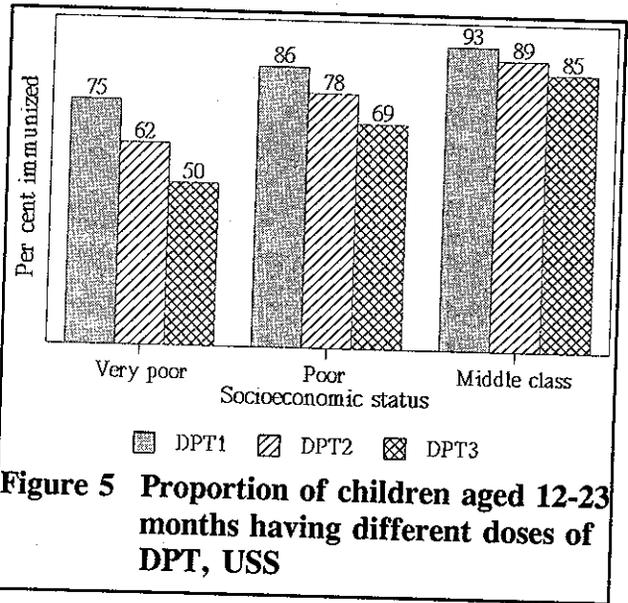


Figure 5 Proportion of children aged 12-23 months having different doses of DPT, USS

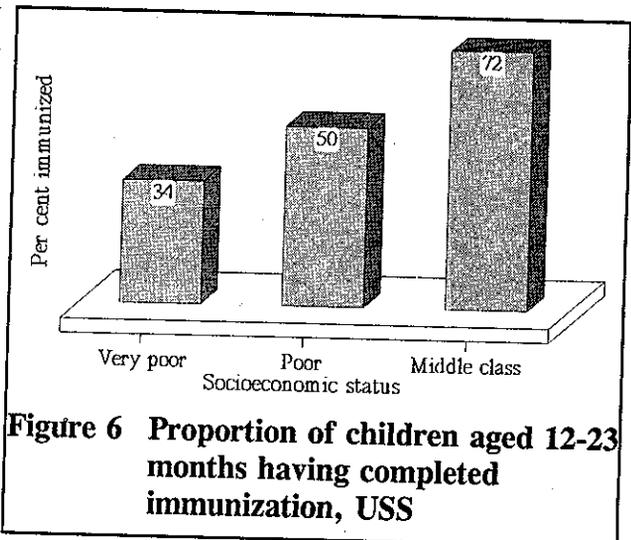


Figure 6 Proportion of children aged 12-23 months having completed immunization, USS

4.5.4 Infant deaths

Both neonatal and post-neonatal deaths in non-Dhaka urban areas are very high. The extent of neonatal deaths is about 48 per 1000 live births in these other urban centres. Post neonatal death rate was estimated at 38 per 1000 live births, and infant mortality in these cities is 86 per 1000 live births. The small numbers for Dhaka City makes it impossible to derive comparable estimates.

Both neonatal and post-neonatal deaths in the slums occur more than twice as high as compared to that in non-slums. The rate of neonatal deaths is more than 88 deaths per 1000 live births in the slums as compared to that of 34 neonatal deaths per 1000 live births in non-slum areas. The postneonatal death rate in slum areas is 50 per 1000 live births as compared to that of 29 per 1000 live births in non-slum areas. The infant mortality in slum and non-slum areas are 138 and 63 per 1000 live births, respectively. The infant mortality is 129 deaths per 1000 live births in the USS slum locations.

In summary, the health profile of the urban poor as revealed from the above study showed that, at any time, a third of the urban population suffered from any morbidity. The data indicated poor environmental conditions, poor personal hygiene and lack of access to proper medical care, especially in the slum areas. Diseases such as diarrhoea and respiratory tract infections were highly prevalent, and the major killer diseases for infants were identified as tetanus, diarrhoea, respiratory tract infections and measles.

Chapter V

Discussion of Key Findings

The main aim of the present study is to have an overall assessment of selected health and demographic indicators of urban areas with a particular emphasis on the slum population. The analysis described the demographic profile of the urban population, their socioeconomic status, conditions of water supply and the availability of latrines, reproductive health profile, morbidity and mortality. Comparisons were made between Dhaka and other urban areas, and between the slum and non-slum populations of Bangladesh through the Bangladesh Demographic and Health Survey of 1993-1994. An in-depth analysis of the slum population in selected areas of Dhaka was also done with the data collected through the Urban Surveillance System between 1991 and 1993 by the Urban Health Extension Project of ICDDR,B.

Thus, two different data sets were used in analyzing the conditions prevailing in the slums. As the data were used from sources of different design, the comparisons between the two surveys should be interpreted with precaution.

In a survey of slums and squatters in the Dhaka Municipal Corporation, in 1988, 1,125 slums and squatter settlements were identified in a total land area of about 2 square miles, out of which three quarters were established after the liberation of Bangladesh (Islam and Mahbub, 1988). The population density of slums and squatters in Dhaka City was estimated around 420,000 per square mile which was more than five times than that of Dhaka City. The majority of slums were in settlements smaller than an acre. About 50 per cent of the households in slums were occupied by tenants, 40 per cent by owners and the remainder by free occupants, i.e. those who reside without paying rent.

The 1991 slum survey (Arifeen and Mahbub, 1991) reported evidence of the growth of slums in Dhaka City more frequently on private land, with high population density, amidst poor housing and environmental conditions, and being especially prone to flooding.

The following section summarizes and discusses findings presented in the previous sections. Certain similarities and dissimilarities emerged as a result of comparison among different segments of the urban population of Bangladesh. The final analysis provides a special emphasis on the slums of Dhaka, typifying the worst conditions of urbanisation and being a setting ripe for interventions.

Thus, the key features of the urban population in Bangladesh are described as follows:

5.1 Demographic and Socioeconomic Characteristics

5.1.1 Population structure

The sex ratio in Dhaka is higher and there is a larger proportion of females in the reproductive age groups in comparison with other urban areas. The population in the younger age groups is less in Dhaka. In other urban areas, a higher proportion of elderly persons indicates a higher dependency ratio.

Special characteristics of the slum population are:

- i. younger population*
- ii. less population in the elderly age groups*
- iii. higher sex ratio in the overall slum sample, but the Dhaka slums have a sex ratio closer to the non-slum areas*
- iv. high dependency ratio.*

According to various studies, the sex ratio for Dhaka City population seems to be lowest among slum dwellers and highest among the floating population (BBS, 1988, 1993, CUS, 1979, 1983, 1985, Majumder, 1992, Roy, 1994). Those who live in slums and squatter settlements usually have a fairly balanced sex ratio that varies from 96 to 112. The main reason behind this is that slum dwellers that migrate to the city mostly come from rural areas accompanied by their family members. That is, family migration mostly occurs among the urban poor and single migration is more common among the non-slum population. The very high sex ratio in the floating population (BBS, 1988) is a result of restricted female mobility. In comparison, slums are more stable than the floating population, and provides a setting for families to reside together. The lack of housing

and a socio-cultural environment that prevents women to leave the house are obstacles for females to participate in a floating population.

The slum population is relatively young. This has several implications:

- i. that fertility level is high in the slums compared to other segments of the urban population of Bangladesh
- ii. contraceptive use (or rather, family planning programmes) have not been effective
- iii. the high dependency ratio indicates a relatively higher proportion in the age groups of active labor force participation, and
- iv. that elderly people do not live in slums in large proportions.

5.1.2 Marital status

A relatively higher age at marriage and age at union is noted among Dhaka women, however, there is also more widowhood and desertion in contrast with other urban areas.

Special characteristics of the slum population are:

- i. low proportion of currently married women in the childbearing age groups*
- ii. high proportion of divorced women*
- iii. lower age at marriage*
- iv. high rate of teenage marriages.*

There are several distinctive features regarding the pattern of nuptiality of slum women:

- i. low proportion of currently married in the childbearing age groups could be due to higher proportion of divorce/separation and widowhood; and
- ii. substantial proportion of marriages in the slums takes place even before the childbearing period is started.

These features of slums imply the following consequences:

- i. high proportion of divorce may lead to lack of economic security
- ii. women are involved with income generating activities
- iii. high risk of teenage childbirths which may be fatal for both mother and child.

Thus, the findings imply a combined situation of divorce/desertion, poverty and female-headed households, and dangerously early pregnancies among the urban poor.

It is evident from other studies that slum dwellers, both male and female, usually get married at an early age. More than 90% of the females from slums get married while they are in their teens (Roy, 1994). The possible reason for early marriage may be the lack of security, particularly for females living in slums, to stay unmarried without facing untoward incidents. A plausible factor may be the lack of security combined with violence in slum life, particularly for women, that pose a difficult and formidable situation for an unmarried young girl facing adverse incidents.

5.1.3 Fertility

Dhaka women have lower parity levels, but the numbers of currently pregnant women were not significantly different in comparison with other urban areas. Family size is relatively smaller in Dhaka than in other urban areas.

Special characteristics of the slum population are:

- i. larger proportion of higher parity women*
- ii. small family size*
- iii. large proportion of currently pregnant women in the childbearing age groups*
- iv. high rate of teenage pregnancy.*

The level of fertility is expected to be higher in the slums as observed in the age-sex composition. The parity of slum women is relatively higher amongst a younger population. The proportion of currently pregnant women is very high compared to other segments of urban population, especially among the younger age groups. The larger proportion of higher parity women with smaller family sizes imply the effect of very high infant mortality. Policy makers may have to consider slum women as a priority group for programmes aimed to reduce the level of fertility and infant mortality.

Family size in slum areas is smaller than in non-slum areas. However, in USS slum areas, one-third of households have 6 or more members, which may be considered very high, especially considering the low levels of household income and poor housing conditions in slum areas. The proportion of nuclear families in the Agargaon slums was about 71 per cent as compared to 24 per cent joint families (Majumder, 1988). The

average family size was estimated to be 4.7 as compared to the national average of 5.7 in 1981 and 5.5 in 1991 (BBS, 1994). The predominance of nuclear families in Dhaka slums explains the smaller family size in slum areas.

5.1.4 Socioeconomic status

There are more female-headed households in Dhaka, compared to other urban areas. The population in Dhaka is more educated, particularly at college or university levels. Housing conditions are better in Dhaka, and the population is of better socioeconomic status.

Special characteristics of the slum population are:

- i. low literacy*
- ii. poor housing conditions*
- iii. higher proportion of female-headed households*
- iv. high proportion of women in the labour force*
- v. possession of household goods is poor, and*
- vi. crowding per room is extreme.*

One fifth of the slums in Dhaka were found to be in extremely bad conditions. Such houses were observed to be constructed with jute hessian, polythene sheet, paper boards, etc. However, most of the houses are built with bamboo walls and mostly tin, bamboo or straw roofing. Gas connection was found in 30 per cent and electricity connections in 55 per cent of houses in the slums. However, most of these electricity connections are unauthorized.

In comparison with other urban populations, women living in slums have the following features:

- i. a larger proportion are household heads, and*
- ii. greater participation in the labour force that implies the ability to have more control over family income.*

Thus, slum women are considerably more mobile, and probably have more autonomy than the lower middle income group. However, certain conditions present obstacles against social advancement, such as:

- i. low literacy, and
- ii. sub-standard living conditions, especially with regard to access to housing, water and sanitation, and food security.

The combined impact of these characteristics can have a crippling effect on the family's health, welfare and economic capacity, especially those with female household-heads.

In general, female-headed households comprise about one-tenth of slum and one-twelfth of non-slum households (based on DDS 1993-1994 data). Most of the female heads are widowed, divorced or abandoned, who come to the cities with their children and other family members. The majority work as domestic servants (Naripokkho, 1991). In contrast, a study based on data from the Agargaon slums (Majumder, 1992) revealed that among eight per cent of female household heads, almost all migrated to Dhaka alone. This was evident from a relatively higher proportion of women in the age group 15-29 years. This imbalance had increased during the period 1983-88, and the growth of garment industries may have contributed to this development. Majumder mentioned that the per centage of female-headed households did not increase during a period of ten years prior to the 1988 survey, but remained constant around 7-8 per cent. However, in the present study, an increase in the proportion of female-headed households in slums and non-slum areas of Dhaka City was observed. Female labor force participation in the slums (about 26 per cent) appears to be three times higher than that at the national level.

The employment status of the poor in Dhaka showed that 65 per cent of all forms of employment were in the informal sector. Anam (1993) categorized the main employment categories on the basis of the findings from the study conducted by Islam et al. (1990) as: street trading, repair and other personal services, handicrafts and manufacturing, transport services, manual labour, domestic service, small business and trade, etc. In the formal sector, the urban poor work mostly in factories or in offices in low paid jobs.

Bangladesh has experienced a high rate of dropouts from primary school. Nearly 88 per cent of students enrolled in the first grade drop out before completing primary education. The situation in the slums is even worse. Poverty and mass illiteracy among the parents have been identified as the main reason for low literacy and a very high rate of drop-out among slum children. Tapan and Samad (1988) showed that the per centage enrollment

of slum children varies from 11 - 45 per cent and the attendance rate of those who are enrolled varies from 64 - 92 per cent.

The learning environment for slum children in school as well as at home is very poor and unsatisfactory. At school, they are generally neglected by their teachers and at home, they do not have minimum space and light required for regular study. Moreover, parents cannot, if they so desire, help their children due to their own illiteracy.

5.2 Water Supply and Sanitation

During the past decade, the rapid growth in the urban population of Bangladesh resulted in overcrowded slums that lacked minimal provision of safe water, sanitation and health services (Anam, 1993). This urban growth is one of the fastest in Asia, and the extent of urban growth in Dhaka City is even higher.

The urban population in Dhaka have higher access to piped water supply and modern latrines. The population in other areas relies on tubewells as their main source of drinking water, and also use surface water much more commonly.

Special features of the slum population regarding water supply and sanitation are:

- i. sources of drinking water are communal (shared) facilities located either inside or outside slums*
- ii. high use of surface water for purposes other than drinking*
- iii. needing more than half-an-hour per trip to collect drinking water*
- iv. lack of hygienic toilet facilities.*

About half of the slum houses get water supply from municipality taps or have their own connections. Most of the slums, i.e. 87 per cent, have their own community toilet facilities but those toilets are not considered hygienic.

Safe water and sanitation are the two necessary preconditions for improving health conditions in the slums. It does seem that a large proportion of households have access to safe water, but the opportunity cost of time needed to collect water lead to using contaminated surface water in many slums. Arifeen and Mahbub (1993) observed that 90 per cent of the slums have access to drinking water but most of the sources are

municipal taps located in public places. In the slums of Dhaka, only 1.1 per cent have private latrines in all houses, and in 89 per cent of the slums, more than three-fourths of the households have to use shared latrines. Sanitation is worst compared to all other urban segments of Bangladesh, which is probably associated with a large number of diseases. Hence, the effectiveness of other programmes is limited in the absence of providing opportunity for slum dwellers to live in better and healthier conditions.

5.3 Reproductive Health Issues

5.3.1 Contraceptive use

The use of contraception is higher among the Dhaka population, a feature seen in all age groups. In this context, the capital city has a CPR of 61 per cent, the highest among all urban centres. More women in Dhaka use IUDs and traditional methods. Contraceptive prevalence among married women who have not delivered children is also higher in Dhaka compared to other urban areas. Female sterilization is more widely practiced in other urban areas.

On the overall, the use of modern family planning methods among slum dwellers, i.e. at 45 per cent, is much lower than the rest of the urban population.

Special characteristics of the slum population are:

- i. higher use of long-term methods in age groups 35 years and above*
- ii. sterilization as the principal method of contraception among those 35 years and above*
- iii. low use of contraception in younger age groups*
- iv. high use of contraception in older age groups*
- v. low use of contraception among lower parity women*
- vi. higher parity women prefer female sterilization and injectables*
- vii. intended use of contraception being highest among all urban populations.*

The popularity of oral pill among slum women, and their non-use of contraceptives being related to past, present and future pregnancy are similar to the rest of the urban populations.

The use of contraceptives is low in slum areas, but the important consideration in this regard is whether slum women use the method effectively or not. In 1990, the contraceptive prevalence rate in Dhaka urban slums was about 36 per cent (Jamil, Baqui and Paljor, 1993) which increased to 44.7 per cent in 1993. This increase is at par with similar increase at the national level. However, the appropriate use of contraception may be still a problem in the urban slums. The findings indicate the need for more concerted efforts to motivate people for effective use of contraception for spacing or limiting births. The same study by Jamil, Baqui and Paljor (1993) observed that those who migrated from rural area during the past year had a much lower (25 per cent) contraceptive prevalence.

It was observed that contraceptive use among younger women is much lower than that of any other segment of urban population. Most women use long term methods only after 35 years of age when the desired size of the family has already been achieved. The intention to use any method was expressed by 62 per cent of the currently married non-contracepting women in Dhaka slums in 1990 (Jamil, Baqui and Paljor, 1993).

Fronczak, Amin and Nahar (1993) found that oral pills and condoms are received by 79 per cent of the women and only 16 per cent received injectables implying problems of access to more effective methods. If other methods can be made easily accessible to the women in the slums then there is every likelihood of an increase in the use of clinical methods as well. The approach of satellite clinics can be an immediate solution to this problem.

5.3.2 Antenatal care

Women in Dhaka have a higher use of antenatal health services, at earlier stages of their pregnancy and therefore, accumulate a higher frequency of visits in contrast to women in other urban areas.

Special features of slum women are:

- i. very low use of antenatal care*
- ii. seeking antenatal care at a relatively later stage of pregnancy*
- iii. low number of antenatal care visits.*

Among all pregnant women in the slums, only a small fraction seek antenatal care, and in most cases, only at later stages of pregnancy, which further limits the desired positive effect of care. In addition, the number of visits for antenatal care, among those who make any visit at all, is minimal when compared to any other segments of urban population. These findings clearly show that women living in slum areas do not receive adequate antenatal care.

5.3.3 Delivery

More hospital deliveries take place in Dhaka than in other urban areas. The proportion of deliveries conducted by doctors is higher in Dhaka, contrasting with a higher proportion of deliveries assisted by traditional birth attendants in other urban areas.

Special features seen among the slum population are:

- i. low use of hospitals and clinics*
- ii. the use of trained personnel at the time of delivery is lowest.*

An overwhelming majority of childbirth and deliveries in the urban areas take place at home, usually attended by relatives and traditional birth attendants who are not trained in safe delivery practices. The extreme lack of supervised care is observed among women in the slums, where utilization of hospitals or any trained personnel is the lowest. Reduction of complications at the time of delivery, of neonatal mortality, and of pregnancy-related morbidity and mortality of mothers necessitates that the assistance of skilled personnel providing emergency obstetric care at deliveries should be ensured. Women in the slums are the most disadvantaged group in this regard.

5.3.4 Unwanted pregnancy

One out of four pregnancies in Dhaka and in other urban areas turn out to be unwanted, and about one in seven unwanted pregnancies in these areas are terminated either through MRs or other means.

Special features seen among the slum population are:

- i. higher rate of unwanted pregnancy*
- ii. less incidence of unwanted pregnancies ending in MR/abortion.*

The extent of unwanted pregnancies is higher among married women living in slums. The level of contraceptive prevalence is the lowest among the slums in Dhaka City. Unmet need is the highest amongst slum women, meaning that, a large proportion of women exist in the slums who want to avert childbirth but do not use any contraception. The data indicates that the extent of unwanted pregnancies ending in MRs and abortions is relatively lower in slum areas. This can be associated with:

- i. the inability to afford the expenses required for an MR or a "safe" abortion, and
- ii. the lack of awareness regarding the time limit allowed for MR.

Those conditions reflect a situation that can push women to either pursue dangerous abortion practices or be caught in a vicious cycle of fertility and poverty.

5.4 Health Practices and Preventive Care

5.4.1 Breast-feeding

The proportion of infants below six months of age who are exclusively breast-fed is higher in other urban areas. On the other hand, the proportion of infants aged less than one year who are breast-fed with food supplementation is higher in Dhaka.

Special features seen among the slum population are:

- i. duration of breast-feeding is shorter*
- ii. inadequate food supplementation after six months of age is very high.*

The timing of first episode of breast-feeding is similar in all urban populations.

Baqui et al. (1993b) observed that a large proportion (30 per cent) of babies did not receive breast milk within three days of birth; this can be improved through special IEC programs for slum dwellers. Exclusive breast-feeding after 6 months of age is very high in urban slums. In the BDHS 1993-1994, it is reported that among infants aged 10-11 months, less than half are fed any solid or mushy food. This may cause infant and childhood malnutrition and with long-term adverse consequences on health status and productive capacity.

5.4.2 Morbidity, treatment practices and preventive care

The prevalence of diarrhoea among children is lower in Dhaka than elsewhere. More children, in other urban areas, receive treatment for diarrhoea from pharmacies. However, the use of ORS is higher among children in Dhaka.

Special features seen among the slum population are:

- i. highest prevalence of diarrhoea*
- ii. seeking care mostly from pharmacies for treatment of diarrhoea and cough*
- iii. very high neonatal, post-neonatal and infant mortality*
- iv. low intake of Vitamin A.*

The prevalence of diarrhoea appears to be highest in the slums, which is to be expected considering the lack of safe water supply and the absence of sanitation systems. A small proportion of patients seek treatment, relying mostly on advice given at pharmacies. Due to the lack of proper knowledge of when and where to go for appropriate health care, the resultant impact is a high neonatal, post neonatal and infant mortality in the slums.

In summary, urban health and demographic indicators of the capital city indicate a positive situation when contrasted with other urban areas. The population is younger, with smaller family sizes, better educated and at higher socioeconomic status levels. There is access to piped water supply and modern latrines. Health care behaviour is advanced, with frequent use of antenatal care, ORS, hospital deliveries and deliveries assisted by trained personnel. However, Dhaka does have its own share of problems also. Widowhood and desertion among the women, combined with in-migration of single women to work in the city, has produced a substantial proportion of female-headed households living in poverty.

The analysis of slums, however, show a dismal scenario of poverty, high fertility, high morbidity, infant mortality, and inadequate use of health and family planning services. The USS data show that indicators in Dhaka slums are worst, but this is not evident in the overall Dhaka sample as the slum population of Dhaka City in the BDHS is very small, and is therefore, masked by the non-slum picture. The analyses strongly suggest that further in-depth examination of specific problems is required to develop appropriate interventions to address the urgent health problems of the slum population.

Chapter VI

Conclusions and Policy Implications:

Present and Future Challenges

The present study concerns a situational analysis of health and health-related indicators of the urban population in Bangladesh. The findings are the product of secondary data analysis and review of pertinent literature. The main issues raised through the assessment are as follows:

- a. Urbanisation in Bangladesh has taken place at different pace and momentum in different areas. The capital city has grown fast, and the overall image shows advancements and modernisation regarding health and socioeconomic development. The rest of the urban centres in the country, i.e. comprising other cities and smaller towns lag behind and display characteristics that often resemble rural areas. On the other hand, intra-urban differences and disparities are also quite pronounced in Dhaka, and health indicators of the city's slum communities are actually worse than in rural areas. The following issues highlight implications specific to the urban poor.
- b. The rapid growth of the city has produced an alarming proportion of people living in slum and squatter conditions. A large majority do not have adequate housing, clean water and sanitary latrines. The extent of crowding at the household level is worst in Dhaka slums, with high prevalence of diarrhoea and cough. Even if projects to provide adequate housing are considered too costly and unrealistic for the present, efforts to provide certain basic services, such as sufficient clean water and sanitary latrines can be undertaken. Other aspects of environmental sanitation should also be investigated, especially with regards to garbage disposal, drainage and sewerage to further augment the issues raised through the present analyses. Provision of basic water and sanitation services should be complemented with information and community education on personal and household-level hygienic practices, management of acute respiratory infections and diarrhoea for the purpose of health maintenance and disease prevention for families living under such conditions.
- c. The average slum is typified by high rates of fertility, family migration and a child population at proportions similar to rural areas. There is high unmet need for

modern contraception among slum women, and a high prevalence of unwanted pregnancies. Most slum women do not get access to safe MR and abortion services, and all these issues strongly suggest the urgency for prioritisation and differential targeting of at-risk clients, especially those with unmet need and a history of abortion(s). The findings clearly justify the need to provide intensified family planning programmes, specially tailored for the slum context.

- d. The main sources of supply for pills and condoms are pharmacies and field workers. Static - and outreach - centres provide maternal health care and clinical contraceptives. The role of clinics as the hub of MCH-FP service delivery in the urban areas should be strengthened, with outreach services such as satellite clinics for special areas such as the slums. The need for outreach in urban areas should be considered from two aspects, whether there is overload of patients/clients at the primary care centre, or if there are subpopulations who do not have access to the main clinic, thus, considering relevant issues of quality, management and equity in service delivery.
- e. Fewer women in the slums seek antenatal care, and often at late stages of pregnancy. Most urban women - especially in the slums - still continue to deliver at home. This indicates the need for IEC programmes that inform women (and their birth attendants) of danger signs of high-risk pregnancy and delivery, when to seek professional assistance, and where to go. Referral networks should be developed to enable access to emergency obstetric care, if and when necessary. Training on safe delivery practices, the detection of complications in pregnancy and childbirth, and appropriate referral should be further reinforced among TBAs in the slum communities.
- f. High rates of teenage marriage and teenage pregnancy prevail in the slums, together with a high proportion of female-headed households and female illiteracy. Special efforts to link slum women with existing women's advocacy groups and women's development programmes are necessary to strengthen and optimize their capacity for economic productivity and improve their and their family's well-being.
- g. Most households in Dhaka, and in Dhaka slums have access to electricity. One-third of slum households in the country do not have either a cot or a bed, but one out of ten has a TV, and one out of five has a radio, which probably enables access to the

media for a large share of the population. Thus, IEC programmes for various issues especially concerning teenage pregnancies and teenage marriages can be transmitted through either TV or radio.

- h. High rates of morbidity from ARI and diarrhoea, combined with high rates of neonatal, postnatal and infant mortality indicate that most child deaths are due to a few potentially preventable causes. There is a need to develop coordinated disease control programmes and effective referral services that activate the triage of home management, when to seek care, where to seek care and when to be referred for severe cases. This clearly indicates the requirement to coordinate between the community, pharmacies and clinics, and tertiary care centres of both public and private sectors. A demand analysis of health care behaviour that includes information on choice of provider, medical expenditures and other costs for travel and time taken to obtain care would facilitate the planning process to be sound and systematic.
- i. There is low coverage of immunizations among children less than two years old in Dhaka slums. Special strategies specifically designed to promote the use of EPI services by the slum and urban poor communities are needed.

The overall findings suggest numerous interventions for the improvement of urban health. The main issues in addressing urban health needs, especially in the case of Bangladesh concerns two major aspects:

- a. human capital investment that calls for an alleviation of urban poverty, through increasing family income and certain social development measures such as special schooling programmes for slum and migrant communities may be necessary.
- b. other special efforts to target the urban poor and slum communities in gaining access to adequate basic services, specifically clean and safe water supply, environmental sanitation, housing, food security, education, primary medical care, family planning and livelihood programmes. The inability to commit such investments by the government will continually limit health and productivity of a vast majority of the nation's population, which would further create economic disparity, social tension and societal conflict. Policy makers should consider the role - and capacity - of the local government in addressing those basic health needs within the current urban setting.

The roles of different actors such as governmental and non-governmental service providers need to be defined, in conjunction with harnessing the vast contribution of the private sector in urban health service delivery.

Lastly, the different analyses in the present study has illuminated several areas for further research, outlined as follows:

- a. the need for intensified programmes to deliver health and family planning services to the slum and urban poor communities was highlighted. Further research is necessary to understand the behaviours and culture of slum populations, including the concentration and distribution of power in the community, health seeking behaviours and intra-household resource allocation, to enable the design of meaningful and effective interventions.
- b. the data were not adequate to examine the nutritional situation of the urban poor. Additional studies would be necessary to determine the nature and extent of food security and nutritional problems in the slums.
- c. another area for research concerns the growing problem of environmental pollution, including factory waste disposal, air quality, noise trauma and the health effects and behaviour of people in relation to these.
- d. lastly, the need to study different subgroups of urban poverty other than the slums, e.g. to examine communities considered as "urban poor," their location and their access to basic needs, and also the "floating" population and their health behaviours.

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MCH-FP Extension Work at the Centre

An important lesson learned from the Matlab MCH-FP project is that a high CPR is attainable in a poor socioeconomic setting. The MCH-FP Extension Project (Rural) began in 1982 in two rural areas with funding from USAID to examine how elements of the Matlab programme could be transferred to Bangladesh's national family planning programme. In its first years, the Extension Project set out to replicate workplans, record-keeping and supervision, within the resource constraints of the government programme.

During 1986-89, the Centre helped the national programme to plan and implement recruitment and training, and ensure the integrity of the hiring process for an effective expansion of the work force of governmental Family Welfare Assistants. Other successful programme strategies scaled up or in the process of being scaled up to the national programme include doorstep delivery of injectable contraceptives, management action to improve quality of care, a management information system, and developing strategies to deal with problems encountered in collaborative work with local area family planning officials. In 1994, this project started family planning initiatives in Chittagong, the lowest performing division in the country.

In 1994, the Centre began an Urban MCH-FP Extension Project in Dhaka (based on its decade long experience in urban health) to provide a coordinated, cost-effective and replicable system of delivering MCH-FP services for Dhaka urban population. This important event marked an expansion of the Centre's capacity to test interventions in both urban and rural settings. The urban and rural extension projects have both generated a wealth of research data and published papers.

The Centre and USAID, in consultation with the government through the project's National Steering Committees, concluded an agreement for new rural and urban Extension Projects for the period 1993-97. Salient features include:

- To improve management, quality of care and sustainability of the MCH-FP programmes
- Field sites to use as "policy laboratories"
- Close collaboration with central and field level government officers
- Intensive data collection and analysis to assess the impact
- Technical assistance to GoB and NGO partners in the application of research findings to strengthen MCH-FP services.

The Division

The reconstituted Health and Population Extension Division (HPED) has the primary mandate to conduct operations research to scale up the research findings, provide technical assistance to NGOs and GoB to strengthen the national health and family planning programme.

The Centre has a long history of accomplishments in applied research which focuses on the application of simple, effective, appropriate and accessible health and family planning technologies to improve the health and well-being of the underserved and population-in-need. There are several projects in the Division which specialize in operations research in health, family planning, environmental health and epidemic control measures which cuts across several Divisions and disciplines in the Centre. The MCH-FP Extension Project (Rural), of course, is the Centre's established operations research project but the recent addition of its urban counterpart - MCH-FP Extension Project (Urban), as well as Environmental Health and Epidemic Control Programmes have enriched the Division with a strong group of diverse expertise and disciplines to enlarge and consolidate its operations research activities. There are several distinctive characteristics of these endeavors in relation to health services and policy research. First, the public health research activities of these Projects focus on improving programme performances which has policy implications at the national level and lessons for international audience. Secondly, these Projects incorporate the full cycle of conducting applied programmatic and policy relevant research in actual GoB and NGO service delivery infrastructures; dissemination of research findings to the highest levels of policy makers as well as recipients of the services at the community level; application of research findings to improve programme performance through systematic provision of technical assistance; and scaling-up of applicable findings from pilot phase to the national programme at Thana, Ward, District and Zonal levels both in the urban and rural settings.



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