BURDEN OF DISEASE ON THE URBAN POOR: A STUDY OF MORBIDITY AND UTILISATION OF HEALTHCARE AMONG SLUM DWELLERS IN DHAKA CITY

M. A. Mannan

Bangladesh Institute of Development Studies
www.bids.org.bd

BIDS-REF Study Series No.17-01

BURDEN OF DISEASE ON THE URBAN POOR: A STUDY OF MORBIDITY AND UTILISATION OF HEALTHCARE AMONG SLUM DWELLERS IN DHAKA CITY

M. A. Mannan

Bangladesh Institute of Development Studies (BIDS)
E-17 Agargaon, Sher-e-Bangla Nagar
GPO Box No.3854, Dhaka-1207
Bangladesh

Burden of Disease on the Urban Poor: A Study of Morbidity and Utilisation of Healthcare among Slum Dwellers in Dhaka City

M. A. Mannan
Former Senior Research Fellow, BIDS

Published by

Bangladesh Institute of Development Studies
E-17 Agargaon, Sher-e-Bangla Nagar
GPO Box No.3854, Dhaka-1207

E-mail: publication@bids.org.bd
Fax: 880-2-8141722
Website: www.bids.org.bd

First Published May 2018

Price: Tk. 100.00; US$ 12

Typesetting and Layout

Md. Ahshan Ullah Bahar
Publication Assistant, BIDS

Printed in Bangladesh at Panguchi Color Graphics, 117 Fakirapool, Dhaka

CONTENTS

List of Tables and Figures

Page No.

Tables

Figures

ACRONYMS

BIDS	Bangladesh Institute of Development Studies
FGD	Focus Group Discussion
HIES	Household Income and Expenditure Survey
HSC	Higher Secondary Certificate
NGO	Non-governmental Organisation
OOP	Out-of-Pocket
SDG	Sustainable Development Goals
SSC	Secondary School Certificate
WASH	Water, Sanitation and Hygiene
WHO	World Health Organisation

FOREWORD

This study was undertaken by BIDS with its own funds to explore and review important question related to access to healthcare by underprivileged communities in Dhaka. There are few studies on morbidity and healthcare available, especially for urban areas in Bangladesh. The focus on the urban poor is particularly important given that almost a third of the urban population is estimated to fall in this category.

We hope that the information and analysis presented in the study will attract the attention of policy makers who are in charge of drawing up plans for setting up clinics, medical centres and hospitals as well as engaged in building water-sanitation facilities specifically addressed to the needs of the disadvantaged population of Dhaka city. Given the estimated population of Dhaka at around 20 million, the need for health and water-sanitation services is acute. Given large demographic shifts, migration and feminisation of the labour force, provision of these basic health services represents a major developmental challenge.

I would like to take this opportunity to thank Dr. Mannan for undertaking this very relevant and useful study for BIDS.

May 2018

K. A. S. Murshid
Director General

ABSTRACT

Bangladesh is urbanising rapidly, around one-third of the country's population comprising 50 million people live in urban areas. Accompanying this rapid pace of urbanisation, there has been a faster growth in the population residing in slums and squatters. Slums and squatters are characterised by crowded living conditions, unhygienic surroundings and lack of basic amenities such as garbage disposal facilities, water and sanitation. Slum residents are especially vulnerable to health risks.

The present study is an attempt to explore morbidity patterns and health-seeking behaviour of the urban poor living in slums of Dhaka city. An attempt has also been made to estimate self-reported morbidity, the proportion of individuals seeking care given the reported morbidity, determinants of morbidity and the utilisation of professional care during sickness.

The study is based on a household survey conducted in slum and non-slum locations of Dhaka city. A sample of 800 households living in the slum clusters, and another 400 households from non-slum areas were selected for the present study.

The findings show that within urban areas, the slum dwellers suffered higher morbidity than non-slum dwellers in each age group, income group and education group. Not only the slum dwellers are likely to suffer from higher morbidity, they are also less likely to receive professional care during sickness.

Among the slum households, about a tenth (9.2 per cent) of the illnesses did not receive any treatment from any source whatsoever. Of those who received some kind of care, only about a fourth (23.8 per cent) consulted qualified doctors, while the largest proportion-three out of every five sick people (61.3 per cent) received lay care provided by drug sellers/ pharmacy owners/ traditional healers, herbalists, unqualified allopath/ road side 'quacks', among others, without any professional training, while another 14 per cent managed with self-care.

But the pattern of health seeking behaviour was quite different in the case of the non-slum households. About three-fourths of the illnesses (72.4 per cent) in the non-slum area received treatment from qualified physicians, while a fifth of the illnesses (20 per cent) received lay care, and another 7.5 per cent managed their illnesses at home (through self-treatment/self-care).

The findings imply that patients from non-slum area were 3.06 times more likely to resort to lay care compared to non-slum households, while patients from non-slum area were 3.04 times more likely to resort to professional care. Thus, an overall shift in health-seeking behaviour of the study population was observed for households in non-slum area. Slum residence reduced the odds of seeking any professional care and increased the odds of choosing self-care/lay care.

Nutrition and health care is a constant worry for the slum people. And for the vast majority of slum dwellers who live in poverty, attaining the purchasing power to actually buy the food items and consult qualified doctors in case of illness is a far off dream.

CHAPTER 1

INTRODUCTION, OBJECTIVES AND METHODOLOGY

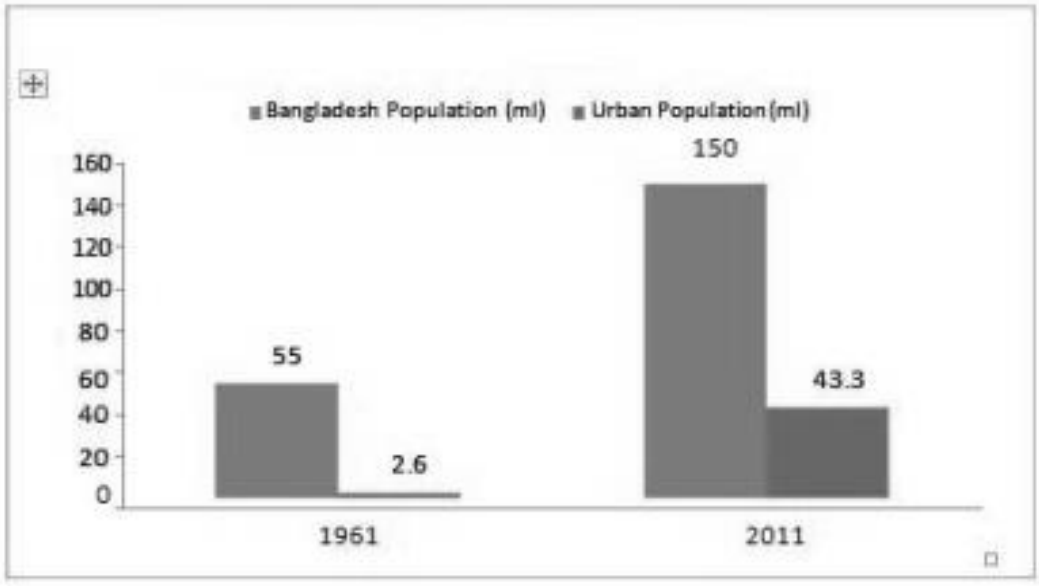
1.1. Background

1.1.1 Urbanisation Experience in Bangladesh

Bangladesh, as the rest of the developing world, is urbanising rapidly; around one-third of the country's population, comprising 50 million people, live in urban areas. In recent years, urban population is growing at an increasing rate (at an annual rate of between five and six percent). Urban population has grown from 5 million in 1970 to 22 million in 1990, to about 43.3 million in 2011. Even though level of urbanisation is low in Bangladesh, the magnitude of urban population (more than 40 million) is larger than the national population of many countries in the world (e.g. Australia, Canada). It has been projected that the share of urban population will be 40 per cent of total population by 2020, and more than 50 per cent of the population will live in urban areas by 2050.

There were 41 urban areas in present day Bangladesh recorded in the census of 1901 and 1911, which increased to 51 in the census of 1921, 59 in 1931, 60 in 1941, 64 in 1951, 78 in 1961 and about 500 in 2011. Over the 40 years, 1961-2011, the Bangladeshi population nearly tripled in size, growing from 55 million to 150 million (Figure 1.1). The urban population increased by nearly twenty-fold, galloping from less than 3 million in 1961 to over 43 million in 2011 (Figure 1.1). Owing to these population dynamics, the share of urban population grew from around 5 per cent in 1961 to 29 per cent in 2011. It is projected to reach 40 per cent by 2020.

Figure 1.1: Urbanisation in Bangladesh



1.1.2 Implications of Rapid Growth of Urban Population

The rapid urbanisation of Bangladesh is likely to have profound implications for the health profile of its population. Accompanying this rapid pace of urbanisation, there has been a faster growth in the population residing in slums and squatters. It is estimated that slums represent the fastest growing segments of the urban population, which is almost double the growth of overall urban population.

Slums and squatters are characterised by crowded living conditions, unhygienic surroundings and lack of basic amenities, such as garbage disposal facilities, water and sanitation. The near total absence of civic amenities, coupled with lack of primary health care services in most of the urban poor settlements, has an adverse impact on the health status of its residents. The health of the urban poor is significantly worse off than the rest of the urban population and is even worse than the health conditions in rural areas.

Slum residents are especially vulnerable to health risks. "Vulnerability" can be defined as a situation where the people are more prone to face negative situations and when there is a higher likelihood of succumbing to the adverse situations. With reference to health, it implies a situation leading to increased morbidity and mortality.

1.1.3 The Four Largest Cities and the Primacy of Capital City Dhaka

In Bangladesh, uneven distribution of urban population by city size and their problems calls for special attention of researchers and policy makers. The four largest cities, Dhaka, Chittagong, Rajshahi and Khulna, accommodate 47 per cent of the country's urban population. Again, Dhaka city alone contains one-third (33.8 per cent) of the total urban population, which is a matter of great concern. Thus, Bangladesh's urbanisation is more biased in favour of big cities. In future, the increasing number of such cities and growing concentration of urban population in these cities will certainly raise many serious problems and deteriorate urban quality of life.

In 2011, a total of 19.6 million people lived in the above-mentioned four cities of the country, and as many as 14.1 million people resided in Dhaka city alone. By contrast, only 5.4 million people lived in other three largest cities. This implies that the population of Dhaka city constituted 72 per cent of the total population of the four largest cities. Besides, in this primate city, most of the headquarters of important government offices, trade bodies and other metropolitan facilities are located and that is why most of the migrants move towards this capital city in far more numbers than the other destinations.

1.1.4 Primacy of the Capital City Dhaka

A major factor underlying urbanization in Bangladesh is the heavy concentration of urban population in the capital city of Dhaka. Another parameter for analysing urbanization is urban primacy, which focuses on the degree of concentration of the population in one city. Primacy is normally measured with the four-city index.[1] In large

[1]The four-city primacy index is computed by dividing the population of the largest city by a combined population of the second, third and fourth largest cities in the country. If the calculated

countries such as India and China, primacy does not exist, as no urban centre is exceptionally larger than the second, third and fourth largest cities. In Bangladesh, Dhaka city has been identified as the primate city, with an index of 2.60[2] in 2011. It is a high primacy index that has been gradually increasing; the index for 2001 was 2.01. Such a trend was observed during the golden period of economic prosperity in Japan, with the highest primacy recorded in 1960, as well as during the economic take-off of Thailand, the highest primacy of Bangkok observed in 1975. Bangkok reached a maximum of 60 per cent of the total urban population, being 50 times bigger than the second largest city, Chiang Mai.

With a population about 16.4 million, Dhaka is the largest city in Bangladesh. The total urban area of Dhaka spans about 1530 sq. kilometers. Dhaka's population grew from 3.26 million in 1980 to a staggering 9.6 million in 2001. In 2005, its population surpassed 12.5 million, and in 2011 its population had swollen to 14 million. Dhaka is also the fastest growing megacity in the world. Most of Dhaka's growth is due to migration from rural areas; rapid migration is causing Dhaka's population to grow much faster than the rest of the country. During the decade from 1985 to 1995, the city's population growth rate averaged more than 7 per cent a year, much higher than any other South Asian megacity and substantially higher than Bangladesh's growth rate. Although the city's population growth rate has slowed down in recent years, it is still projected to grow at around 3.2 per cent per annum, as compared with 1.4 per cent for the country as a whole. Dhaka was the 18th largest city in the world in 2012 but it is projected to be the 6th largest in the world by 2020.

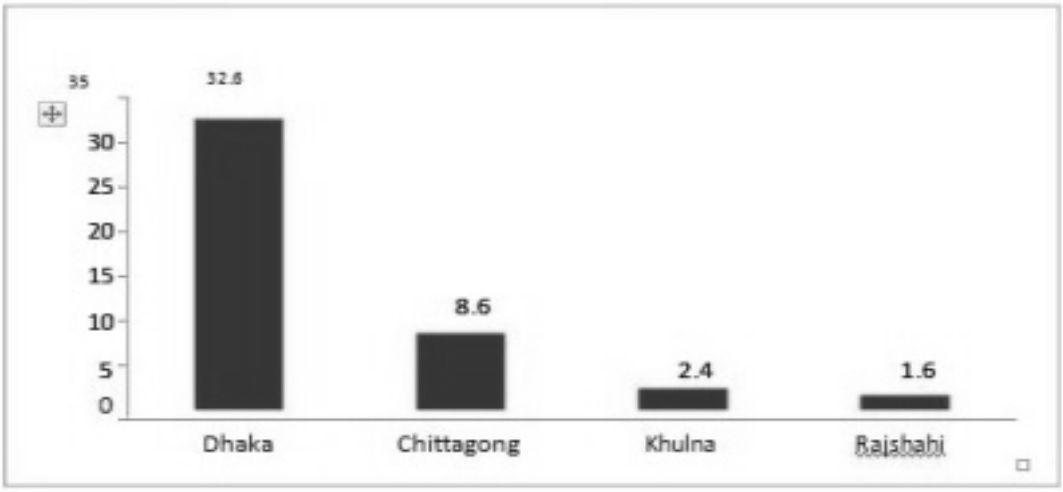
The growing list of urbanization problems in terms of traffic congestion, water and air pollution and inadequate basic urban services has lowered the quality of city life, especially in Dhaka (Ahmed *et al*. 2007). Some international agencies do systematic surveys on an annual cycle to provide an indication of the quality of life in these cities. The indicators differ by source of the survey and they are perception based and as such are subject to perception biases. Nevertheless, they provide a useful benchmark to compare the livability of cities. According to Mercer city livability index rankings (2012), Dhaka has been ranked the most unlivable megacity in the world (out of 221 megacities). When comparing the largest metropolitan cities, Dhaka is also the most densely populated mega city in the world. Dhaka's density stands at an astounding 44,500 persons per square kilometre, while Mumbai has the second highest density with 32, 400 persons per sq. km.

---

index value is one or more, the first city is considered a primate city; the higher the value, the higher the level of primacy.

[2]The four-city primacy index for Bangladesh is calculated by dividing the population of the largest city (Dhaka) by the combined population of the second, third and fourth largest cities (Chittagong, Khulna, and Rajshahi).

Figure 1.2: Primacy of Dhaka (Share of Urban Population %)



1.1.5 Urban Environment and Major Health Problems

Urbanisation is influenced by the pull forces of economic opportunity in the cities and towns, and the push factors of rural poverty and unemployment. As such, urbanisation can be perceived as a positive phenomenon, when it leads to the resettlement of workers in urban areas, where non-agricultural opportunities are available, creating productive and gainful employment. In reality, however, it tends to be more a transfer of rural poverty to the urban environment.

The link between urbanisation, a degraded environment, inaccessibility to health care and a deteriorating quality of life is particularly significant. Large-scale unplanned rural-urban migration and the continuous growth of towns and cities have resulted in overloaded public services, scarcity of housing, inaccessible health care facilities and a negative impact on the environment. Some characteristics of urban areas are overcrowding, squatter settlements, pavement dwellers and slums.

Unplanned growth of urban areas has resulted in the deterioration of the urban environment. Major problems that arise in such a context are unhygienic accommodation, inadequate water supply, sanitation and solid waste disposal, rights over land tenure, inadequate food supplies and the increasing demand for employment, health care and social services.

The rhetoric of urban bias in development and better conditions in urban areas vis-à-vis rural areas has masked the real picture of the health conditions of the urban poor. A desegregation of data by economic status reveals the sharp disparities which exist between the urban poor and the better-off sections in urban areas (Bangladesh Urban Health Survey 2007). In fact, slum dwellers in cities suffer from adverse health conditions which are sometimes worse than those living in rural areas.

There is a need to redefine health in the context of the urban poor. Rossi-Espagnet (1984) summarises the condition of health in the urban poor areas of developing countries as follows:

"The urban poor are at the interface between underdevelopment and industrialization and their disease pattern reflects the problems of both. From the first, they carry a heavy burden of infectious diseases and malnutrition, while from the second they suffer the typical spectrum of chronic and social diseases."

Health problems amongst the urban poor are determined by three main groups of factors which act synergistically (Harpham, Lusty and Vaughan 1988).

- Direct problems of poverty: unemployment, low income, limited education, inadequate diet, malnutrition, etc.
- Environmental problems leading to communicable and infectious diseases (air-borne and water-borne), accidents, etc.
- Psychosocial problems: stress, alienation, instability and insecurity, leading to depression, smoking, drug addiction, alcoholism, child labour, abandoned children, etc.

In an urban slum environment, over-crowding and poor basic amenities coupled with inadequate water availability and poor sanitation result in higher sickness and mortality. An overwhelming majority of slum people live in substandard housing, lacking in space, ventilation, sunlight and proper sanitation. Squatters in Dhaka city are seen in public and private lands. Tenure of the squatters is of mixed type: some have occupied the land and built houses themselves, others pay rent, but both are illegal occupants. The rent payers probably pay rent to the first occupier, the proxy owner (without the knowledge of the real owner).

Housing in the slums has both the anticipated problems of extreme congestion and poor (impermanent) structure. Most of the households have to share toilets with other households. The vast majority have serious problem in getting drinking water- most households share with others or depend upon common municipal sources. Such conditions vitiate the environment for healthy living and tend to increase the incidence of air-borne and water-borne diseases. However, slum dwellers are not a homogeneous group–some of them (pavement dwellers) live in greater poverty and harsher living environment compared to other households living in slums.

1.1.6 Poor Quality of Urban Life

Secure shelter is a major challenge for the urban poor. As migrants continue to arrive, they often end up in illegal settlements on precarious lands with major environmental concerns. The slums are located throughout the major cities with few services offered at high prices through middlemen, also called musclemen or *mastaans*, using illegal methods. Slum evictions take place periodically, with no resettlement plans. The constant threat of eviction adds to the stresses of everyday life for the urban poor (World Bank 2012). People who are residing in the slum and squatter settlements of Dhaka city are basically migrant populations from the landless and marginal landholding households in rural areas.

Urban population growth in Bangladesh is fuelled by a shortage of land and other means of earning a livelihood in the rural areas, particularly during periods of

impoverishment and landlessness brought about by natural calamities. Forty to 70 per cent of urban population growth in Bangladesh has been attributed to rural-to-urban migration, while the remainder is due to the natural increases in the urban population and the territorial expansion of urban areas into contiguous areas that were previously considered rural.

Three-fourths of these urban poor live in flimsy shacks, most of which are located in slum areas characterised by extremely high population densities and by an absence of sanitary latrines, municipal garbage disposal and electricity. Around one-quarter of all urban households in Bangladesh are located in slums, and another one-tenth of urban families are squatters (living at a site temporarily or in a small cluster of 5-10 households) or are homeless.

For slum households, water sources are often distant, and access to them is only possible by waiting in line for hours and by paying informal private sources or intermediary brokers for access, even though the water sources are usually public. Slums are generally located in low-lying areas that are otherwise unsuitable for housing. By far, the most common cause for a "crisis event" for a slum household (in which a major unanticipated expense occurs or a financial reversal occurs such as loss of employment, theft, or damage to the home due to a disaster) is illness within the household.

Owing to housing scarcity, a huge slum population has grown in Dhaka city, where quality of life is unbearably low. During the 19th century England witnessed a rapid growth in urban localities characterised by overcrowding, congestion and unsanitary conditions. As towns sprang up, the problems became one of packing as many people as possible, as fast as possible, somewhere, somehow, anyhow. The scenario is more or less the same in the slum areas of Dhaka city, where overcrowding and poor basic amenities coupled with the possibility of inadequate water availabiliy result in higher sickness and death rates.

Basic urban services are grossly inadequate in slum areas.

- Adequacy of basic services such as water and sanitation is a serious problem. For example, according to 2010 *Household Income and Expenditure Survey* (HIES) only 35 per cent of the population had access to tap water.
- Most slum areas face problems with the collection and disposal of solid wastes, where a significant percentage of the total solid waste remains uncollected.
- The combination of water and air pollution, coupled with poor sanitation practices, contributes to serious health hazards in slum areas.

1.2 Rationale

In Dhaka city, out of an estimated population of 16.4 million in 2017, about a third of the population are slum dwellers. They are in a vicious circle: too little or inadequate food, poor nutrition, polluted water and air, lack of education, poor sanitation and overall low levels of living. Conditions such as these do not only lead to ill-health, they amount in themselves to the lack of social well-being referred to in the WHO's definition of

health. In reality, a slum is a swamp of mud, excrement, garbage, mosquitoes and disease. Although slum people in general suffer from ill-health, the conditions of pavement dwellers are much worse than those living in slums/squatters.

Improving the health of individuals, particularly those belonging to socially and economically disadvantaged groups, is a key objective of the Bangladesh government. Moreover, the Bangladesh government has, at various points in time, embraced the objective of promoting the health of the poor and disadvantaged in its policy statements.

The concern for health improvements, especially among the poor and the disadvantaged, whether espoused in government policies or elsewhere, stems from several considerations. One is the increasing recognition that improvements in health translate into substantial gains in economic performance and overall well-being of society. Second, good health may be considered an end in itself, irrespective of any contribution it can potentially make to enhance economic growth. Third, poor health has significant adverse implications for the economic well-being of affected households and individuals, particularly for poor households.

Bangladesh is committed to achieving the Sustainable Development Goals (SDGs) which includes, among others, the pledge to reduce the proportion of people living on less than one US dollar a day in line with international commitment. Enhancing disadvantaged populations' ability to access quality healthcare at low cost has a potential poverty-alleviating effect. It acts through mitigation of the income-erosion consequences of ill-health. For achieving the health related SDGs also, improving health system's ability to reach the poor effectively is essential. In view of this, health interventions need to be designed according to their needs and priorities. Knowledge and understanding about their current health-seeking behaviour including its differentials and determinants is required for this to happen. There is a lack of disaggregated information in this respect for different disadvantaged population groups, especially in urban areas.

There are very few studies in Bangladesh on morbidity and health care utilisation by the urban poor, and we know very little about their health seeking behaviour and the disease burden on low-income households. The available evidence may therefore be of limited use in the context of the urban poor. The focus on the urban poor is especially important in the context of their large share (about one-third) of the total population living in urban areas. The urban poor are disadvantaged in accessing quality health care due to their marginalised position in the society. In order to make the urban health care delivery system more pro-poor, knowledge of their morbidity pattern and health-seeking behaviour is important. The present study is an attempt to examine the pattern of morbidity and health care utilisation by the urban poor, living in the slums of Dhaka city.

Morbidity in general and utilisation of health services in particular (i.e. the type of treatment received, self-care, professional care) would serve as valuable information to the health planners and policy makers for designing appropriate policies for the provision of health care, especially for the urban poor. It will also enable the planners and administrators to allocate resources for the urban poor–in health facilities such as hospitals, physicians, medicines, etc. and provide health infrastructure, such as sanitation, drinking water and the like, for the vulnerable segments of the urban population.

In the present research, our goal is to analyse the health seeking behaviour of slum dwellers in Dhaka city, i.e., the broad contours of the overall health seeking behaviour in its key dimensions (e.g. morbidity prevalence, care-seeking, costs of care, and the means of financing). This is justifiable on grounds of vulnerability of the urban poor to quality health care (when they fall sick). Detailed evidence on the pattern of morbidity among the slum population, choice of provider, extent of out-of-pocket (OOP) costs, and sources of financing these costs is crucial for appropriate policy formulation. An attempt has been made to estimate self-reported morbidity, the proportion of individuals seeking care given the reported morbidity, and level and determinants of the utilization of professional healthcare.

1.3 Review of Literature

The weakest link in the path to effective health care in a country like Bangladesh appears to be the lack of access to formal health care providers, both in physical and monetary terms. Improving access to quality healthcare and, at the same time, reducing the out-of-pocket (OOP) payments are major challenges in the health sector in Bangladesh (Ahsan, Mahmud, Hamid and Barua 2012).

Poverty is one of the significant factors affecting health-seeking behaviour, and for members belonging to poorer households, pecuniary condition acts as a strong deterrent in their health expenditure behaviour. Poverty is the "biggest barrier" in health care that the slum community faces. Evidence exists about the two way causal relationship between poverty and health: *poverty breeds ill-health, and ill-health keeps poor people poor* (WB 1993, Subramanian, Belli and Kawachi 2002, Wagstaff 2002). In every society, morbidity and mortality are higher among the poor (World Bank 1993, Wagstaff 2002). Poverty affects health through poor nutrition, environmental degradation, illiteracy, harmful lifestyle, social exclusion, and lack of access to healthcare (Dahlgren and Whitehead 1992). Empirical data have shown that chronic poverty is more harmful for health than episodic poverty, long-term income is more important for health than current income, and income reductions appear to have greater effect on health than income increases (Benzeval and Judge 2001).

The other side of the coin is the fact that the cost of healthcare can be a strong determinant of its use as well as a cause of poverty. Studies done in India (Krishna 2004, Noponen and Kantor 2004), Vietnam (Segall *et al.* 2002), Tajikistan (Falkingham 2004) and elsewhere (Russell 2004) have shown that, of all risks facing poor households, health risks probably pose the greatest threat to their lives and livelihoods. In 127 case studies in Voices of the Poor (Narayan, Chambers, Shah and Petesch 2000), which examined why families have fallen into poverty, ill-health emerged as the single most common trigger for the downward slide into poverty, and ill-health is perceived by the poor both as a cause of increased poverty and as an obstacle to escaping from poverty. Income erosion effect of ill health for the poor households in Bangladesh, especially the extreme poor, is also well documented (Hulme 2003, Sen 2003, Kabir, Rahman, Salway and Pryer 2000, BIDS 2012, Mannan 2013).

Cost burdens of healthcare may deter or delay healthcare utilisation or promote use of less effective healthcare sources or practices, particularly by the poor (Bloom *et al.*

2000). It has been found that the poor and disadvantaged households with only a few assets are likely to struggle to meet even small extra-budgetary expenses (Van, Doorslaer *et al*. 2006, 2007).

Potentially irreversible crisis coping mechanisms like selling of productive assets, mortgaging land, or borrowing from money-lenders at high interest rates push these households into a poverty trap from which they rarely recover. This process of household impoverishment is set into motion due to direct (e.g. medical costs like purchase of drugs, fees for doctors, consultation fee, etc. and non- medical costs like transport, food, etc.) and in-direct (e.g., opportunity costs for patient and care-givers) costs of illness resulting from interaction with poorly performing health system and coping mechanisms of households living in slum areas. The triad of poverty, health-service requiring payments, and the failure of social mechanisms to pool financial risks combine to cause "catastrophic health expenditure" for the poor (Xu. *et al.* 2003, Xu. *et al.* 2007).

Moreover, costs of hospitalisation and the growth of out-of-pocket expenses for private services constitute a major "poverty trap." This phenomenon of poverty induced by medicine (i.e., encounter with health system) is called "iatrogenic poverty," and is a matter of great concern in international public health (Meesen *et al.* 2003).

Poverty subjects its victims to various health risks. For a poor person, it is difficult to access health care, nutrition, sanitation or other elements. The effect of poverty on the health of the poor is deep-rooted and multi-dimensional. For example, at the time of epidemic the members of the poor households are more vulnerable to the incidence of diseases. They have limited access to treatment and suffer fatal consequences. It is reflected in higher morbidity and mortality that take place among the poor at the time of outbreak of infectious diseases on epidemic level. The varying effect of poverty on the health parameters of the poor has been captured in different studies. There is evidence of inverse relationship between the socio-economic status, morbidity, nutritional level and the disease prevalence (Bhuiya and Chowdhury 2002, WHO 2002, 2003).

From an economic perspective, healthcare utilisation decisions depend on the relative magnitude of costs and benefits involved from the standpoint of persons who make these decisions to use healthcare for themselves or for others. The costs of seeking care typically include financial expenses and income losses that may be incurred in the process. Income losses can be high if considerable time is spent in commuting or standing in queues to obtain medical care.

For the same reason, the amounts paid for healthcare services, such as consultancy fees and hospital charges, are also likely to be an important determinant of health care utilisation. There are other factors that influence healthcare utilisation behaviour. For people with higher education, the perceived benefits from effective treatment and/or preventive care may be higher than for the rest of the population. Benefits could be higher for individuals whose health is considered intrinsically more important in certain cultural settings, as for people belonging to higher socio-economic classes and for males. The findings from the BIDS/HEU study (2003) show that economic status of the household plays an important role in the health seeking behaviour. The perceived need

for medical care would depend both on the availability of healthcare facilities and the capacity to pay for health services.

The cost of health care can be a strong determining factor of health care utilization, as well as a cause of poverty. Ability to pay is a particularly important determinant of access when a high proportion of health care is financed privately, and without any type of financial risk protection from health insurance. In Bangladesh, 60 per cent of total health expenditure in 2000 was in the form of out-of-pocket payments by individuals, so that households' ability to pay for care is important (WHO 2002, Sen 2003). There is essentially no social security or private health insurance, although public hospitals are intended to provide a form of insurance in the case of serious illness.

Illness requiring treatment has significant adverse implications for the economic well-being of affected households and individuals, particularly for poor households. One way by which these occur is in the form of out-of-pocket health expenditures for diseases that are relatively expensive to treat. Another way in which adverse health can influence the economic well-being of affected households arises from incomes foregone on account of the morbidity (or mortality) of affected members, or taking time off from work to care for the sick. Krishna (2004) points out that a single episode of hospitalisation can account for between 20 and 60 per cent of annual per capita income, with the proportion being even higher for poorer groups. This can lead to tremendous financial burden on poor households and indebtedness, sometimes resulting in liquidation of their assets.

Different studies conducted in Bangladesh also show that the poor bear a disproportionate share of the burden of ill health and suffering. Poverty is a significant constraint to health care access and utilisation. Expenditure incurred for health care has some adverse impact on household consumption. Findings from different studies (BIDS/ HEU 2003, BIDS 2012, Mannan 2013) show that expenditure on health resulted in withholding of other subsistence resources (reduced food consumption, less expenditure on children's education, etc). Thus, illness requiring treatment and hospitalisation has significant adverse implications for the economic well-being of affected households, particularly for poor households.

One way by which this occurs is in the form of out-of-pocket health expenditures for diseases that are relatively expensive to treat or require hospitalization. Another way in which illness can influence the economic well-being of affected households arises from incomes foregone on account of the morbidity of affected members, or taking time off from work to care for the sick. The findings from BIDS/ HEU study (2003) show that, overall, 8.8 per cent of monthly household income was spent on illness treatment. But the poorest households had to spend about 38 per cent of household income to meet the treatment cost of illness episodes, which is a heavy burden by any reckoning. On the other hand, the richest households spent only 3.4 per cent of household income for treatment of illness episode. Again, the poorest households spent much less in absolute sense for treatment purposes compared to the richest households (Tk 283 vs Tk 572). Similar findings are also available from Mannan (2013) which clearly shows that members from the poorer households have less access to resources available for health care, and that they undergo a lot of economic pressure to finance their treatment

cost/medical needs. Thus, for low-income households, there is a real risk of indebtedness in times of illness requiring treatment. The various sources utilised for meeting treatment costs include drawing from savings, borrowing from friends/moneylenders, and distress sale of assets/household articles.

Recent evidence suggests that health is the dominant category of shocks experienced by the poor in Bangladesh and annually households spend about five per cent of total expenditure to meet out-of-pocket (OOP) health care expenses (Ahsan *et al*. 2012, Hamid and Ahsan 2013). There is also evidence that OOP payments push over three per cent of the rural households into poverty annually (Hamid and Ahsan 2013). Poor people and residents of slums are likely to be especially vulnerable to illness because of the generally unhygienic conditions in which they live, and their low levels of awareness of preventive care.

In a study of cost of healthcare in India, Duggal and Sucheta (1989) observed that within urban areas, the slum population had a higher morbidity. Similarly, Kundu (1993) contends that slum dwellers suffered higher morbidity than non-slum dwellers in each age group, gender group and occupation group. Lack of awareness about preventive care and health facilities may be particularly acute for slum residents who are new migrants to the cities from distant districts and rural areas. Low-income households living in slums and/or pavements are also susceptible to the economic shocks associated with serious disease, given their high dependence on labour income, and their having low levels of savings so that there is a real risk of indebtedness in times of ill health. But, no such study on the disease burden on urban poor households is available for Bangladesh.

1.4 Objectives

The main purpose of the present study is to explore morbidity pattern and health-seeking behaviour of the urban poor living in the slum areas of Dhaka city.

The specific objectives are:

- To assess the levels and patterns of morbidity of slum dwellers in Dhaka city by age, gender, and socio-economic characteristics;
- To compare the morbidity and health-seeking behaviour of slum dwellers with that of non-slum groups;
- To study whether and what type of health care (professional/lay care) is sought when the member of a slum household becomes ill, and how it differs from other members of non-slum households;
- To examine the access to and burden of treatment cost borne by the urban poor households;
- To examine the individual and household level factors associated with utilisation of professional care.

In the present study, an attempt has been made to analyse the relationship between socio-economic, demographic and illness factors and the type of health care (self-care or professional care) used to resolve health problems by the urban poor living in slums. An

attempt has also been made to explore morbidity patterns and health-seeking behaviour of the urban poor in Dhaka city, with the hypothesis that the slum dwellers are likely to suffer from higher morbidity (incidence of sickness). They are also more likely to depend on self-care and traditional treatment compared to their counterparts living in non-slums areas.

1.5 Conceptual Framework

The study is based on field work amongst two categories of population living in Dhaka city. The first category includes those households living in slums/squatters and the second category includes non-slum dwellers. People respond to illness in diverse modalities. In general, the ways of responding to illness may be grouped into five broad categories: the first category includes those provided by the sick individuals themselves or by their closest social and family network (self care); the second category consists of faith healing and traditional medicine-homeopath, *kabiraj/hekim* (traditional healers**)**; the third category includes qualified allopathic treatment provided by MBBS doctors and trained specialists, both public and private (qualified medical care**)**; the fourth category involves medical assistants/trained paramedics/community health workers with some training in diagnosing and treating common ailment (para professional**);** and the fifth category consists of drug sellers/ pharmacy owners/road side "quacks" without any professional training **(**unqualified allopath/quack**)**. However, for analytical purposes, these treatment types can be grouped under three broad categories: those related to seeking attention among specialised agents, medical professionals and paramedics/para-professionals (professional care); those provided by the sick individuals themselves or instances in which common home remedies are employed (self-care); and traditional healers, herbalists, unqualified allopaths/quacks, among others (lay care). In this paper, we have primarily classified the health care providers following some earlier studies (Nanda 1999, BBS 2007, Hamid and Ahsan 2013).

According to Hausmann-Muela, Riberia and Nyamongo (2003), action regarding health-seeking is guided by: (i) beliefs about the impact of illness and its consequences (threat perception); (ii) health motivation i.e., readiness to be concerned about health matters; (iii) beliefs about the consequences of health practices (behavioural evaluation); (iv) clues to action, which include internal and external factors; and (v) conditions such as socio- demographic and psychological characteristics of the person. These factors are considered to be transformable through health education/health promotion campaigns, in contrast to structural or cultural factors like poverty, gender, religious norms, etc.

In this conceptual model, we have used the modified version of the behavioural model following a number of studies in developing countries (Subedi 1989, Amin, Becker and Shah 2010). This model hypothesises that three categories of factors influence health care seeking behaviour: (a) ''predisposing factors'' (age, sex, education, marital status, household size, previous experience, and so on), (b) ''enabling factors'' (e.g., factors that are amenable to policy changes such as household income and out-of-pocket expenditure for healthcare), and (c) "health system factors" (e.g., prevailing healthcare services available in the study community in the popular/folk, private and public sectors). These factors influence perceived illness/need which converts individual's subjective

perception of her/his state of health and the need for care into demand for medical care and taking steps to get treatment.

One can use either logit or probit model to regress the binary outcomes. However, in this paper, we have used logistic regression models to identify the determinants of morbidity and professional care (*e.g.*utilisation of professional vs. lay care). An illustration of model specification and structure of independent variables used in the model for each outcome has been provided in the respective sections.

1.6 Methodology

1.6.1 Issues in Methodology

To identify slums in the study locations, one must have a working definition of a slum community. In Bangladesh, there is no clear definition of a slum. However, when we refer to India, the definition of slum is given statutorily under the Slum Area (Improvement and Clearance) Act of 1956, which says: "areas where buildings are unfit for human habitation: or are by reason of dilapidation, overcrowding, design of buildings, narrowness of streets, lack of ventilation, light or sanitary facilities or any combination of these factors, are detrimental to safety, health or morals."

The definition used by Bangladesh Urban Health Survey (NIPORT, USAID ICDDR,B and MEASURE Evaluation 2008) has four criteria to identify slums. These include:

- Poor housing conditions;
- High overall density;
- Poor environmental services; and
- High prevalence (over 75 per cent) of people with income below the poverty level.

If an urban area was comprised of at least 10 households or was a mess unit with at least 25 members and appeared to satisfy these criteria, then this category was also considered as slum area in the *2006 Urban Health Survey of Bangladesh*.

1.6.2 Data and Sample Design

The study is based on a household survey conducted in slum and non-slum locations of Dhaka city. A sample of 800 households living in the slum clusters, and another 400 households from non-slum areas were selected for the present study.

Sample sites were selected through a two-stage cluster sampling design. The first stage of selection (primary sampling unit) was at the slum level and the second stage at household level. Slum households have been selected from three different categories of slum spread over the entire city: large slum (having concentration of more than 300 households), medium slum (with 30 to 300 households), and small slum (having concentration of less than 30 households). At the first stage, 20 slum locations were selected purposively spread over the entire city as follows: 4 locations from large

category, 6 from medium category and 10 belonging to small category slums. At the second stage, 100 households were selected at random from each of the large category slum, 50 households were selected from each medium category, while 10 households were selected from each small category. Thus, a total of 800 households were selected-400 from large category, 300 from medium, and 100 from small category, as shown in Table 1.1. For comparison purposes, four non-slum neighbouring localities have been selected (spread over different locations/parts of Dhaka city). From each location, 100 households have been selected, yielding a total of 400 non-slum households. Thus, a total of 1,200 households have been covered-800 from slum and 400 from non-slum locations.

Table 1.1

Sample Selection from Slum Areas: by Slum Category

Slum Category	No. of Slums	No. of Households
Large	4	4 x 100 =400 (100 from each slum)
Medium	6	6 x50 =300 (50 from each slum)
Small	10	10 x 10 =100 (10 from each slum)
All	20 slums	800 households

1.6.3 Quantitative and Qualitative Data

The study used both qualitative and quantitative data. For quantitative data, detailed information was collected on background characteristics including education, occupation, and monthly income of household head. In addition, information was obtained on whether anybody in the household experienced some sort of health problems (symptoms, sickness, illness or accidents) and the type of treatment sought.

1.6.4 Data Collection

With a view to achieving the study objectives, the study focus was directed towards the following aspects:

i) Socio-economic characteristics of the household
   - Education of household head
   - Housing condition
   - Monthly household income

ii) Household composition and morbidity
   - Incidence of sickness and description of the illness (during last one month)
   - Whether received any treatment
   - Reasons for non-treatment

iii) Source of financing health expenditures

- savings
- sale of property/asset
- cash revenue
- mortgage of land/asset
- borrowing

iv) Cost of treatment

- purchase of drugs
- consultation/fee
- transportation
- accommodation, food (in case of hospitalisation)
- pathology/clinical investigation
- other costs

Information on type of health care received was obtained by asking the respondents about the nature of treatment measures undertaken at home or outside the home. These treatments were subsequently grouped into three broad categories, as mentioned above.

In addition to the questionnaire survey, focus group discussions (FGDs) were conducted with women/men living in slum and non-slum areas. It is well known that a structured survey, when complemented with the alternative approaches such as focus group discussions, can provide many useful insights into the motivations, beliefs and values, which influence health seeking behaviour (Campbell, Ronald and Buetow 2000). The FGDs were useful in developing a better understanding of the respondents' perceptions about health seeking behaviour, and the underlying motivations guiding their choice of healthcare provider.

1.6.5 Limitations of the Study

The study has been carried out based on a household survey conducted in slum and non-slum locations of Dhaka city. The methodological approaches and data used in this study have some limitations. As a sample survey, it necessarily has a margin of sampling error. However, every effort has been made to minimise these and make the sample representative.

The sample locations have been selected in such a manner so that it yields a representative sample of the different categories of slum (large, medium and small) in the city. Information collected covers a wide range of issues including patterns of morbidity, type of treatment received during sickness (professional versus lay care), including costs incurred in accessing services.

Morbidity can be measured either by clinical (observed) or self-perceived reporting. In the present study, data were collected (by non-medical personnel) from household

head/other members of the household. Perceived illness, as reported by the respondent in lay terms, is used to categorise illness, instead of diagnostic classification.

One important limitation of the data is that the measurement of health-seeking behaviour is based on reported illness and treatment action, and not on observation as the illness process unfolds. By limiting the recall period to the past 30 days, and focusing on the major morbid experiences, attempts were made to minimise problems of inaccurate recall. It is likely that in our study under-reporting of minor illnesses occurred (especially for common conditions that go untreated or are routinely dealt with by means of self-care). A second limitation relates to the correlation of illness stage and treatment choice. More advanced illnesses may be treated differently than early stage diseases where home and folk remedies may initially suffice. Fortunately, the cross-sectional nature of the study, and the inclusion of all reported illnesses occurring in the previous one month, irrespective of severity, helps obviate the potential confounding influence of illness stage in analysis.

The estimates obtained from the survey are likely to provide an approximate, but valuable profile of health status of slum dwellers. The validity of the data rests on the fact that the respondents interviewed come from different category of slums (large, medium, and small), who were geographically dispersed across Dhaka city.

1.6.6 Organisation of the Report

The report is organised into five chapters. Chapter one begins with an introduction and background of the study provides with a brief literature review and state of affairs regarding worsening health status of the urban poor, specifies the objectives and conceptual issues, and describes the methodology and sample design. Chapter two outlines background characteristics and socio-economic profile of respondents and analyses the differentials in access to water, sanitation and hygienic practices in the slum and non-slum area, while Chapter three presents the findings regarding morbidity patterns and differentials by household characteristics. The determinants of health seeking benhaviour and disease burden on the urban poor is analysed in Chapter four. Major issues and the underlying factors in health-seeking behaviour are discussed in Chapter five with a set of recommendations

CHAPTER 2

SOCIO-ECONOMIC CHARACTERISTICS OF THE STUDY POPULATION

2.1 Socio-demographic Factors

The present study is based on primary data collection and interviews in slum and non-slum location of Dhaka city. As already mentioned, information was obtained from 800 slum and 400 non-slum households. This section mainly deals with 1,200 households covered by the field survey. The respondents from slum locations were overwhelmingly poor and illiterate, most of them having little awareness regarding health and hygienic practices and without access to tap water and hygienic toilet facilities.

Table 2.1 presents the salient characteristics of respondents using selected parameters. The findings suggest that both the slum and non-slum respondents have similar demographic characteristics in terms of age composition and household size. The average age of the slum household head was 35 years compared to 37 years for the non-slum category. The average household size was 4.42 for the slum, compared to 4.11 for the non-slum households.

However, there were major differences in monthly income, literacy rate and access to hygienic toilet facility of two categories of households. Around one-half (47.5 per cent) of the households in the slum area were without any formal education, compared to only 2.8 per cent in the non-slum area. The monthly household income was 3.76 times more in the non-slum area compared to slum area.

Lack of hygienic defecation system is a major problem in slum area. Only a fifth of the slum households (19.7 per cent) have access to safe latrine. A vast majority use *either pucca* latrine without water sealed (38.4 per cent) *or kutcha/*hanging latrine (38.4 per cent). To make matters worse, 3.5 per cent of the sample households defecate in open places. This clearly shows how much the entire slum environment is polluted with human excreta.

Table 2.1

Salient Characteristics of Slum and Non-Slum Households

Category	Slum Households	Non-slum Households
Averages		
Age of respondents	35	37
Household size	4.42	4.11
% of household heads without any formal education (i.e. illiterate)	47.5	2.8
Monthly household income	8,502	31,996
% of households with monthly income not exceeding Tk. 7,500	48.2	1.5
% of households with access to sanitary toilet facility	19.7	100.0

2.1.1 Age of Household Head

The distribution of households by socio-economic characteristics is presented in Table 2.2.

Among the slum households, about a fourth (28.9 per cent) of the heads were aged below 30 years, around a fourth (25.4 per cent) of them belonged to age group 30-34 years, about a sixth (15.8 per cent) was in the age group 35-39 years, about a fifth (21.6 per cent) was in the age range 40-49 years, while less than a tenth of the respondents (8.5 per cent) were aged 50 years and over. By contrast, only a sixth of the non-slum household heads were aged less than 30 years, a fourth (26 per cent) of them belonged to age group 30-34 years, another quarter (25.5 per cent) was in the age group 35-39 years, again another quarter belonged to age group 40-49 years.

The findings from the table show that 63.2 per cent of the slum households have no land at all, not even homestead land, and only a third of the slum households (36.8 per cent) own some land in the village. The situation is quite different in the case of non-slum households, as they have much better land ownership pattern. About 21 per cent of the non-slum households do not have any land, while a vast majority of them (around 79 per cent) have land in their respective villages. The average landholding size was much lower for the slum households 7.88 decimals, compared to 65.77 decimals for the non-slum households. Similarly, the average monthly income of non-slum households (Tk. 31,9916) was 3.76 times higher than that of slum households (Tk. 8,502), while the per capita monthly income was Tk. 1,923 and Tk. 7,785 for slum and non-slum households respectively.

Table 2.2

Distribution of Households by Selected Socio-economic Characteristics: by Area

Characteristics	Slum Area		Non-Slum Area		All	
	n	%	n	%	N	%
Age of household head (in years)						
Below 24 years	44	5.5	4	1	48	4
25-29 years	187	23.4	59	14.8	246	20.5
30-34 years	203	25.4	104	26.0	307	25.6
35-39 years	126	15.8	102	25.5	228	19.0
40-44 years	102	12.8	68	17.0	170	14.2
45-49 years	70	8.8	32	8.0	102	8.5
50+ years	68	8.5	31	7.8	99	8.2
Education of household head (years of schooling)						
Illiterate	380	47.5	11	2.8	391	32.6
Can read and write	106	13.3	13	3.3	119	9.9
Primary (1-5)	198	24.8	42	10.5	240	20.0
Class 6-9 completed	85	10.6	63	15.8	148	12.3

(Contd. Table 2.2)

Characteristics	Slum Area		Non-Slum Area		All	
	n	%	n	%	N	%
Secondary & Higher Secondary completed	28	3.5	128	32	156	13
Graduation completed	3	0.4	68	17	71	5.9
Post Graduation completed	0	0.0	75	18.8	75	6.3
Education of Spouse (of head)						
Illiterate	422	52.8	20	5	442	36.8
Can read and write	91	11.4	6	1.5	97	8.1
Primary (1-5)	199	24.9	69	17.2	268	22.3
Class 6-9 completed	79	9.9	105	26.2	184	15.3
Secondary & Higher Secondary completed	9	1.1	127	31.8	136	11.3
Graduation completed	0	0.0	32	8	32	2.7
Post Graduation completed	0	0.0	41	10.2	41	3.4
Occupation of household head						
Service/salaried job	72	9.0	189	47.3	238	19.8
Business	0	0.0	161	40.3	104	8.7
Small business/petty trading	142	17.8				
Wage labour	129	16.1	0	0.0	129	10.8
Professional/self-employed	62	7.8	29	7.3	91	7.6
Rickshaw puller/van driver	220	27.5	0	0.0	220	18.3
Transport worker (driver/helper/conductor)	79	9.9				
Garment worker	53	6.6	12	3.0	65	5.4
Housewife	4	0.5	2	0.5	6	0.5
Maid servant/domestic help	14	1.8	0	0.0	14	1.2
Sick/disabled	8	1.0	2	0.5	10	0.8
Unemployed/ retired	5	0.6	0	0.0	4	0.3
Others	12	1.5	1	0.3	7	0.6
Monthly household income (in taka)						
Up to 2,000	5	0.6	0	0.0	5	0.4
2,001-3,000	9	1.1	0	0.0	9	0.8

(Contd. Table 2.2)

Characteristics	Slum Area		Non-Slum Area		All	
	n	%	n	%	N	%
3,001-5,000	87	10.9	0	0.0	87	7.3
5,001-7,500	285	35.6	6	1.5	291	24.3
7,501-10,000	245	30.6	15	3.8	260	21.7
10,001-12,500	90	11.3	20	5.0	110	9.2
12,501-15,000	33	4.1	50	12.5	83	6.9
15,001-20,000	31	3.9	65	16.3	96	8.0
20,001-30,000	15	1.9	101	25.3	116	9.7
30,001-50,000	0	0.0	95	23.8	95	7.9
50,000+	0	0.0	48	12.0	48	4.0
Mean Income (Tk.)		8,502		31,996		16,333
All	800	100.0	400	100.0	1,200	100.0

Source: Unless otherwise stated, the data is from the survey of Slum and Non-Slum Households in Dhaka city.

2.1.2 Education

Level of education is negatively correlated with the level of poverty. Table 2.2 provides distribution of the respondents by educational level. From the table it is seen that there are major differences in the literacy level of the slum and non-slum group. About a half (47.5 per cent) of the slum household heads were illiterate, without any formal education; the corresponding figure for the non-slum group was only 2.8 per cent. Again, only an insignificant proportion (3.9 per cent) of the slum household heads had education beyond high school level. By contrast, more than two-thirds (68.5 per cent) of the household heads in the non-slum area had education beyond secondary level. Similar differences were also observed in the educational level of the spouse of the household head among the two categories. More than half of the spouses (52.8 per cent) in the slum area were without any formal education, the corresponding figure was only 5 per cent for the non-slum group.

In terms of literacy and education, a vast majority of the household heads living in slum areas are either illiterate, without any formal schooling, or have completed elementary education with less than 5 years of schooling, while only an insignificant proportion have education beyond 10^{th} grade. Similar picture also emerges regarding education of spouse of the household heads.

2.1.3 Occupation of Household Head

The data show that there are major differences in the occupational structure of the slum and non-slum households. The slum dwellers mostly have low-paid jobs in the informal sectors of the urban economy. There is a predominance of day labouring and rickshaw pulling among this poor group of city dwellers, while females are mostly found in such occupations as maidservants, housewives and garment workers.

The highest proportion of slum households are working in the transport sector, with more than a quarter of the respondents (27.5 per cent) being rickshaw/van pullers, and another one-tenth (9.9 per cent) is engaged as transport workers (driver/helper of bus/truck, etc.). About a third of the slum household heads (33.9 per cent) are engaged in either petty trading/small business (17.8 per cent) or are working as wage labour (16.1 per cent), while only 9 per cent of the slum heads are found to be engaged as salaried employees (either with the government or in the private sector). By contrast, about one-half (47.3 per cent) of the household heads in the non-slum area are in the salaried job (either with the government or in the private sector), and another two-fifths (40.3 per cent) being engaged in business/trading.

The findings show that poor households have wage labour as major source of earning. This is particularly true for slum-dwellers. The distribution of respondents by main occupation of household head shows that day labouring/wage labour, van/rickshaw pulling, and petty trading together constitute as the principal occupation for 61.4 per cent of the slum households. The predominant occupation is indeed casual or wage labour. Self-employment (*i.e*. tailoring, carpenter, mason, etc.) and work in the transport sector (driver/helper/conductor) constitute other two major occupations of the household heads residing in the urban slum. By contrast, more than four-fifths of the household heads in the non-slum area are either engaged in salaried jobs (47.5 per cent) or in business (40.3 per cent).

2.1.4 *Household Income*

Monthly income is considered to be an important indicator of poverty. It is evident from Table 2.2 that average monthly income of the slum households was no more than a quarter (26.6 per cent) of the monthly income of non-slum households (Tk. 8,502 vs. Tk. 31,996). The findings show that 12.6 per cent of slum households live on a monthly income, which does not exceed Tk. 5,000. About a third of the slum households (35.6 percent) live on a monthly income ranging between Tk. 5,001 Tk. 7,500. On the other hand, only 5.8 per cent of the households belong to the monthly income group exceeding Tk.15,000. The data indicate that a vast majority representing two-thirds of the slum-households (66.2 per cent) fall in the monthly income bracket of Tk. 5,001-10,000. The average monthly income of sample households in the slum area was Tk. 8,502.

As is expected, the situation is quite different in the case of the non-slum households. With regard to monthly household income, the findings show that not a single household from non-slum category lives on a monthly income below Tk. 5,000, while only 5.3 per cent of the households live on a monthly income, ranging between Tk. 5001 and 10,000. About a sixth (17.5 per cent) of households live on a monthly income between Tk. 10,001 and 15,000; another sixth of the households (16.3 per cent) fall in the income bracket of Tk. 15,001 and 20,000. Again, one-quarter (25.3 per cent) of the households have monthly income ranging between Tk. 20,001-30,000, while another quarter of the households (23.8 per cent) live on a monthly income ranging between Tk. 30,001 and Tk. 50,000. It is evident from these figures that about half of the non-slum households (49.1 per cent) belong to the income group ranging between Tk. 20,001 and 50,000. Moreover, about a tenth of the households (12 per cent) have monthly income exceeding Tk. 50,000.

The mean monthly income of non-slum households was Tk. 31,996, which is 3.76 times higher than that of slum households.

Per capita monthly income of slum households was Tk. 1,924, the corresponding figure for non-slum category was Tk. 7,785. This implies that per capita income of non-slum households was four times higher compared to slum households. This highly skewed distribution of income, as is evident, aggravates the situation of widespread poverty, malnutrition and disease in the slum area. Because a vast majority of the slum households are under extreme poverty and they mainly depend on casual/wage labour for their survival.

Slum households are more likely to be in poverty at any point of time compared to their non-slum counterparts. The economic condition of a slum household varies considerably depending on such factors as occupational status, education, income and other resources. Frequently, slum households have a high dependency ratio and limited access to employment and basic services and consequently, all too often, they fall below the poverty line, and are disproportionately represented amongst the poorest of the poor.

Since poverty is a condition characterised by hunger and malnutrition, lack of education, unemployment and underemployment, inadequate health care and overall low levels of living, a significant proportion of slum population (especially mothers and children) suffer from severe malnutrition. The situation with respect to nutrition and hygienic practices in the slum area presents a dismal picture, which will be clear from the following section.

2.2 Health, Nutrition and Hygienic Practices

Hygiene refers to the importance of cleanliness in maintaining health. Encouraging children's personal hygiene habits is a day to day issue that parents and care givers need to reinforce and practice so that they and their children can stay healthy and avoid illnesses and infections. In general, health programmes, particularly targeted at under-five children, adolescent girls and pregnant and/or lactating women, are expected to have a major impact on their nutritional status. In this chapter attempt was made to provide some information on respondents' knowledge and awareness regarding common ailments, health and hygienic practices and life style of the surveyed population.

2.2.1 Access to Water

Sources of Water for Everyday Use

Polluted or contaminated water is a reason for many diseases. Sources of water can represent the health status of the household members. Safe drinking water is very essential for maintaining health. Table 2.3 reveals that an overwhelming majority (100 per cent of non-slum households) use tap/supply water as a source of drinking water. However, only a quarter (24.9 per cent) of the slum households have ready availability of tap/supply water inside their own house for drinking purposes, while about one-half (52.9 per cent) of the households depend on public or community tap/supply water (outside the household) for drinking, and another one-fifth (22 per cent) of the slum households depend on tube-well for drinking purposes. From the perspective of pure

drinking water, an overwhelming proportion of the slum households do have access to safe water, although debate has always been there on the quality of supply/tap water being consumed by urban people, especially slum dwellers, because of contamination of water due to leakage in the pipe line or other problems. During the field survey it was observed that a vast majority of slum dwellers do not boil the tap water for making it germ-free for drinking purposes.

Table 2.3

Distribution of Respondents by Source of Water for Drinking, Washing and Cooking: by Area

Water Source	Slum Area		Non-Slum Area	
	For drinking	For washing and cooking	For drinking	For washing and cooking
Tap/supply water (inside the house)	24.9	24.4	100.0	100.0
Public Tap/supply water (outside the house)	52.9	46.4		
Tube well (jointly with others)	18.9	19.9		
Dug well/ Pond/canal, etc	3.3	9.4		

In the case of washing and cooking, 100 per cent of non-slum households have access to tap water. However, only a quarter (24.4 per cent) of the slum households have ready availability of supply/tap water inside their own households, less than one-half (46.4 per cent) depends on public or community tap/supply water (outside the household), and another one-fifth (19.9 per cent) depends on tube-well for cooking/washing purposes. Unfortunately, 9.4 per cent of the slum households still use water collected from pond/well or canal for washing/cooking purposes.

WASA is the government authority that provides drinking water and sanitation to the inhabitants of Dhaka city and to those of the second largest city, Chittagong. It has been observed during fieldwork that most of the slum dwellers obtain water from WASA through an intermediary elite group or with the help of an individual living beside the slum or so-called volunteers/the slum welfare committee. This intermediary group supplies water to the slum poor at a rate much higher than the actual price. However, in the study areas, the sources of water included tube-wells/WASA pumps, municipal piped water, water vendors and water collected from some other specific places, such as mosques. Of these sources, hand pump/tube-wells connected to the WASA line were found to be the primary source of water. It emerged during FGDs and field observation that the distance of the water sources from the dwellings varies from 20 to 300 feet, while the time taken to reach them was from 2 to 15 minutes.

Despite the existence of various sources of water, there is acute shortage of water in the slum area. Our field observation and FGD findings show that from 5 to over 10 families in the study area shared one tap/tube-well. In a good number of cases, one tube-well/tap was shared by over 15 families. In one slum, it was found that people mostly

used water from the nearby pond/canal for bathing, washing dishes and clothes, and other daily activities, as it was free.

Access to Toilet Facilities

Water and sanitation system has been liable for epidemic diseases like cholera, diarrhea, etc. which used to claim innumerable lives over the years in Bangladesh. Unplanned defecation or lack of hygienic defecation system still is a problem in Bangladesh, particularly in rural and urban slum areas. Even if people are conscious about the necessity of hygienic latrine system, very often due to lack of resources and support from the city corporation or the government, they cannot afford hygienic sanitation system.

Table 2.4 presents the distribution of sample households by type of latrine used for defecation purposes. As is expected, all the households in the non-slum area have access to sanitary toilet facilities. In contrast, the use of safe latrine (sanitary, slab/*pucca* latrine) is very discouraging in the slum area (as shows in Table 2.4). Only a fifth of the slum households (19.7 per cent) have access to safe latrine either sanitary toilet with water sealed linked to sewerage (11.1 per cent) or *pucca* latrine/ring slab with water seal (8.6 per cent). However, a vast majority of slum households use *either pucca* latrine without water sealed (38.4 per cent) *or kutcha/*hanging latrine (38.4 per cent). To make matters worse, 3.5 per cent of the sample households in the slum area defecate in holes and open places which easily help agents that contaminate water, air and environment. This clearly shows how much the entire slum environment is polluted with human excreta. This is probably the worst health threat the slum population is exposed to and the worst possible unhygienic practice the people are accustomed with, especially in this modern age of the twenty-first century.

Based on our field observation and FGD findings it can be said that most of these toilets do not have water-sealed or are not linked to septic tanks. It has also been observed that for the maintenance of the toilets, people have to pay a fixed amount. Due to the cost and lack of awareness, these latrines are not much preferred by the slum dwellers. Moreover, as the space for constructing toilets in slums is limited, they are also limited in number.

Table 2.4

Type of Latrine Used by Household Members: by Area

Type of Latrine	Slum Area		Non-Slum Area	
	Number	Per cent (%)	Number	Per cent (%)
Sanitary Latrine	89	11.1	400	100.0
Pucca with water seal	69	8.6		
Pucca without water seal	307	38.4		
Kutcha/hanging toilet	307	38.4		
Open place/park/road side, etc	28	3.5		
All	**800**	**100.0**	**400**	**100.0**

In the slum areas, two types of *pucca* latrines were found: water-sealed latrines linked to sewerage or septic tanks and *pucca* latrines without water seal. However, a significant proportion of slum dwellers around three-fourths used either pucca latrine (38.4 per cent) or hanging latrines (38.4 per cent). Hanging latrines are precarious bamboo platforms raised a few feet above the water and screened by rags or polythene. The sludge from these latrines is discharged straight into the pond/canal below, causing a highly contaminated environment. Open fields and railway tracks are also used off and on, especially by children.

Table 2.4 shows that only a fifth (19.7 per cent) of the slum households have access to hygienic latrines, while the rest use hanging latrines, which are unhygienic. Again, latrines are not always very near to the households. The distance of the toilet from the house may range from 50 feet to 300 feet.

Pattern of Latrine Sharing

In the vast majority of cases, the latrines were shared by many households. Out of 800 households, only 12 households (1.5 per cent) do not have to share toilets with others, while an overwhelming majority, 98.5 per cent of the households, share toilets with others. Table 2.5 shows the latrine-sharing pattern in the selected slums, where an average of 12 and a maximum of 25 households shared one latrine. The findings from Table 2.6 show that in the case of 9.2 per cent of households, up to four families shared one latrine, while in 48 per cent cases the latrine was shared by 5-10 families; 18.5 per cent of the households shared latrines with 10-15 families. However, about a quarter of the families (24.2 per cent) had to share latrines with at least 16 households. The findings imply that 43 per cent of the slum households were sharing latrines with more than 10 other families, while the rest 57 per cent had to share latrine with up to a maximum of 10 families.

Table: 2.5

Whether Share Latrine with Other Households: by Area

Whether share toilet with other households	Slum Area	Non-Slum Area
Yes	98.5	0
No	1.5	100
If yes, then mean no. of additional families		
Mean	12	
Minimum	1	
Maximum	25	

Table 2.6

Pattern of Latrine Sharing in the Slum Area

Number of additional families sharing the latrine	Number of households	% of households
One	9	1.1
Two	12	1.5
Three	24	3.0
Four	28	3.6
5-7	141	17.9
8-10	237	30.1
11-15	146	18.5
16+	191	24.2
Overall	**788**	**100.0**

Source: Calculations based on survey data.

Use of Shoes while using Toilet

The situation with regard to wearing footwear is found to be highly discouraging among slum dwellers. The findings imply that a vast majority of members from slum households do not follow hygienic practices before going to the toilet or after coming from the toilet.

Wearing shoes/ footwear, when going to the toilet, is necessary from hygienic point of view because germs and dirt will not stick to feet with probability of causing health damage. Table 2.7 shows that 100 per cent of the respondents from non-slum area always use footwear while using toilet, as against only 18 per cent of slum households. On the other hand, around two-fifths (40.6 per cent) of slum residents occasionally use shoes when going to toilet, while a similar proportion (41 per cent) of slum residents never use shoes when using toilet (i.e. they are not aware of using footwear while using toilet).

Table 2.7

Distribution of Respondents by use of Shoes while Going to Latrine: by Area

Whether use footwear/ shoes	Slum Area		Non-Slum Area	
	No.	%	No.	%
Yes, Always	144	18	400	100.0
Yes, Often	325	40.6	-	
Never	331	41.3	-	

Hand Washing Practice after Defecation

Studies show that washing hands with soap is one of the most effective and inexpensive ways of preventing diseases. It can reduce fatalities from diarrhea by almost half and that from acute respiratory infections by a quarter. Since the life style of a vast majority of slum population is characterised by hunger and malnutrition, lack of

education, unemployment, poor sanitation and overall low levels of living; respondents' knowledge and awareness regarding health and hygienic practices is expected to be at a minimum. Table 2.8 presents the relevant information with regard to the practice of hand washing after defecation.

The respondents were also asked how they wash their hands after defecation (with soap/soil/ash or water only), or while cleaning the anus of their children after defecation (with soap/soil/ash or water only). Washing hand with mud/ash or water only was the most common practice 85 per cent of respondents did so after their own defecation, while 95 per cent followed the same practice after cleaning anus of their children (Table 2.8). The picture is really discouraging for slum households, where only an insignificant proportion washed hands with soap after own defecation or while cleaning their children. Again, more respondents used soap when cleaning them (15 per cent), compared to when cleaning their children (5 per cent). This gives a firsthand impression that respondents attach less precaution during clean-up of their children after defecation, probably from the general notion that child's feces is not harmful! This, however, needs to be changed through health education and awareness raising activities for developing healthy defecation practices.

Table 2.8

Distribution of Slum Respondents by Hand Washing Practice after Defecation: Slum Area

Hand washing with	Slum Area			
	After own defecation		After child defecation	
	(Number)	%	(Number)	%
Soap	122	15.3	41	5.1
Ash/soil	195	24.4	177	22.1
Only water	483	60.4	582	72.8

Importance of Water and Sanitation

Safe water, sanitation, and hygiene have potentially life-changing social impacts, as cleanliness and avoidance of disease can raise the social standing of the poor and influence the security of girls and women in marriage.

About three-fourths of the slum households have access to tap water, while another 22 per cent have access to tube-well water for drinking purposes. But only a fifth of the slum-households have access to latrines with functioning water seals or a similar or better level of hygiene. Flooding and excessive rains make many latrines unusable, and they are often not designed for hygienic emptying and sludge disposal. The use of latrines by children is minimal and hygienic awareness is lowest among the slum dwellers.

The findings imply that a significant proportion of slum respondents do not have the awareness about the importance of washing hands with soap after defecation. Thus, improper hand washing practices and non-use of footwear while going to toilet can lead to contamination of drinking water for the slum residents and in this way they run the risk of falling sick anytime.

Along with food intake, the health status of an individual is affected by access to safe water and sanitation facilities. An individual must be free from infections and all kinds of diseases to ensure proper food absorption, biological utilisation and its metabolism. In general, health programmes, particularly targeted at under-five children, adolescent girls and pregnant and/or lactating women, are expected to have a major impact on their nutritional status.

Safe water, sanitation and hygienic practices are essential for preventing disease and other problems related to water and sanitation. Effective hand-washing practices are least common among the slum residents. Even when latrines are available, they are often not used, or not used consistently by all household members. Improper water handling and storage practices can lead to contamination of drinking water. In addition, when sanitation facilities are appropriately designed in hygienic way and privately owned, they provide women and girls with greater convenience and dignity.

In a context of extreme poverty and high illiteracy resulting in poor sanitation and personal hygiene, water related diseases continue to be leading killers of infants and children. A safe source of drinking water along with hygienic practices is intimately related to any plan for disease prevention and health promotion.

Access to Public Health Services

As a concept, public health refers to the broader and comprehensive view of health, as a means of promotion and protection of the health of the general public. Public health services are those that are provided to the general public by the government or municipality/city corporation to help them live a healthy life. A pure water supply, hygienic sanitation, waste disposal and food safety are significant among these services. The urban slums are the worst victims of the inadequate provision of these services, mainly due to the refusal of the authorities to install infrastructures in their informal settlements and also because of very high population density in a limited space.

Though Bangladesh has achieved reasonably well in ensuring people's access to drinking water and sanitation, the reality on the ground apparently differs significantly in terms of sustainable functioning of these facilities. Urban WASH remains a major challenge in the context of rapidly growing urbanisation in Bangladesh. Slum areas in Dhaka city are large settlements of poor people which are often not considered as part of overall urban development plans. They are often characterised by poor infrastructural development such as poor road network, limited access to water supply, poor electricity supply and inadequate access to improved sanitation facilities, among others. The areas are usually densely populated, thereby worsening the already dilapidated or non-existing infrastructural facilities.

The government is providing WASH services to the people living in the city with less attention to slum dwellers. Water supplies only cover between 75 and 85 per cent. There are huge debates about the quality. Water quality at the end users level is so poor and contains with microbiological contamination. On the other hand, only 20-25 per cent inhabitants get proper sewerage facilities and remaining 75-80 per cent have to cope with their own traditional way e.g. septic tanks, pits, drain-out directly to the drain or open

canal. Available information shows a very rapid rate of urbanisation in the country occasioned by high rate of rural to urban migration. A significant percentage of those migrating from rural to urban areas end up in urban slum areas due to their inability to afford the high cost of living associated with urban cities.

As these slums are known as illegal settlement, therefore, relevant government department does not provide them with basic services including WASH. Slum dwellers are used to collect/buy water from distance, getting illegal water connection which is often disconnected by relevant department officials. Slum dwellers construct and use hanging open latrines and dispose their all kinds of waste within their slums or nearby water bodies, drain, etc. Due to impure water supply and poor environmental sanitation, the whole environment is polluted.

Inadequate access to improved Water Supply, Sanitation and Hygiene (WASH) facilities is one of the recurring problems of urban areas. However, very little is known about the situation in urban slum areas, which makes it difficult to plan for appropriate interventions. The WASH situations for urban slum areas are most likely to be worse than other part of the urban areas. Addressing the rights of people to safe water sources and adequate sanitation in urban areas is very difficult due to inadequate information for effective programme planning and implementation.

2.3 Discussion

The health status of the individual is one of the two immediate determinants of nutritional status. An individual must be free from infections and all kinds of diseases to ensure proper food absorption, biological utilisation and its metabolism. Respondents' knowledge and awareness regarding common ailments, their prevention and treatment of such diseases is crucial for undertaking any efforts to provide basic health services to the population at risk.

Staggering poverty and food insecurity are the main characteristics of a vast majority of the slum population. A large number of people of urban areas, especially in slum areas, have no access to adequate food for an effective life (because of insufficient income). They are so poor that they literally have no access or very limited access to the market to buy food. Every day they experience the poverty of food security, the poverty of shelter, the poverty of health, the poverty of education and the poverty of income.

Poverty is a multidimensional concept. It refers to being denied not only of adequate income but also the opportunity to improve one's standard of living. But for majority of the slum dwellers, insufficient income is the most important factor contributing to their food insecurity, nutritional deficiency; and increasing the income earning opportunity is the key element in their poverty reduction and food security.

The overall health situation of the slum population is far below any acceptable standard. This is particularly true for mothers and children with the worst possible health statistics in terms of both morbidity and mortality.

Needless to say, a major factor contributing to this poor state of health of mothers and children is lack of education, knowledge, awareness and motivation about proper

behaviour on health, hygiene and nutrition. In many cases, lack of awareness coupled with access barriers is yet another factor for poor health status of slum dwellers.

Various environmental conditions promote the transmission of disease. For example, an inadequate water supply is accompanied by inadequate human waste disposal: overcrowding with poor ventilation. Contaminated water is the major source of gastrointestinal diseases mainly cholera, bacillary dysentery and typhoid. These diseases are also spread through food and dairy products which may become contaminated by unclean water, improper washing techniques, infected food handlers or insects. So, it is difficult to predict accurately the specific contribution of unhygienic practices and unsafe water supply on health. Skin diseases and eye diseases (for example, trachoma), as they relate to personal bathing, have also been attributed to water or insufficiency of clean water.

In examining water supply, it is important to consider the distance between the source of supply and the point of use. Every factor which increases this distance offers opportunities for contamination. Most of the slum-residents use tap/tube well water where the sources of water (tap/tube wells) are owned by other households located at a distance ranging from a few meters to a few hundred meters. Piped water within the house minimises the opportunities for contamination prior to use for drinking, cooking or bathing. A safe water supply within the immediate confines of the family property or yard, all other things being equal, is superior to a distant single tap or tube well for the entire community or for several households.

In addition to the quality of water, the quantity of the water supply is important. Inadequate supplies tend to force people to resort to unsafe sources to supplement their needs. Associated in importance with safe water is a properly protected human waste disposal system. As is clear from the preceding analysis, disposal of human waste in slum areas ranges from indiscriminate disposal in or near open fields/road side to use of latrines within the house, outside the house or common toilet in public places. The possibility of water contamination is high with all of these methods. A rightly constructed water sealed latrine, appropriately designed and located close to the house, is a basic necessity for ensuring environmental sanitation, which most of the slum households cannot afford.

Clean water supply, environmental control and sanitation are essential for reducing the high incidence of mortality and morbidity among children. Unfortunately, unhygienic living conditions, impure water supply, poverty, ignorance, filth, flies, etc. are the characteristic features for a vast majority of slum population.

CHAPTER 3

MORBIDITY PREVALENCE AND SOCIO-ECONOMIC VARIATION

3.1 Importance of Morbidity

The morbidity picture of a population provides a more realistic picture of health status than only the mortality pattern. Mortality rate captures only a part of the burden of illness. Some diseases like diarrhea, jaundice cause substantial morbidity but little mortality.

Morbidity means incidence of sickness/injury/pain affecting a person in the household. It can be measured either by clinical (observed) or self-perceived reporting. No clinical reporting would allow us to measure the pain and suffering of an individual except through self-reporting.

Morbidity is expressed as its proportional extent in the population in some specified time period. The incidence of morbidity or morbidity prevalence rate measures the proportion of the total population who regard themselves as having become sick or diagnosed as sick during the reference period.

Data were collected (by non-medical personnel) from household head/other members of the household. Therefore, the responses to questions on morbidity can only be taken as an approximation while estimating the burden of morbidity since some of the respondents might have little knowledge about what constitutes sickness, and in the process there is a tendency to ignore minor ailments and health problems.

Before presenting the morbidity estimates, a brief discussion of the data base is in order. Table 3.1 presents the details of the number of sample households, sicknesses/illness cases and treated and untreated ailment cases by slum and non-slum area. There were 1,345 and 525 illness/sickness cases in the slum and non-slum area respectively during the one month reference period. The reported ailment cases which received some type of treatment in slum and non-slum area are 1,221 and 521 respectively. The survey collected information on all cases reporting any ailment during the reference period.

Table 3.1

Sample Characteristics: by Slum and Non-Slum Category

Indicators/characteristics	Slum Area	Non-Slum Area	Overall
	No.	No.	No.
Sample Households	800	400	1,200
Sample Population	3,538	1,646	5,184
No. of Sick persons/illnesses	1,345	525	1,870
No. who received treatment	1,221	521	1,742
No. of untreated cases	124	4	128
Overall morbidity (%)	38.01	31.90	36.07

3.2 Morbidity Prevalence

In order to have an idea about the type of diseases suffered by household members in the sample area, the respondents were asked whether any member of the household suffered from any sickness during the one month prior to the survey. Information was also collected on the type of disease/sickness suffered by household member and the nature of treatment received.

The findings from Table 3.2 show that out of the 800 slum-households covered by the survey, 95.4 per cent (763) households had an episode of illness at the time of the survey or during one month preceding the survey, while the remaining 4.6 per cent of households did not experience any illness during the reference period. However, there were some differences in morbidity pattern of non-slum households compared to slum-households. In general, probability of being sick was lower for members living in non-slum area compared to their counterparts from slum area. It is evident from the table that out of the 400 non-slum households covered by the survey, 87 per cent of the households (348 households) had an episode of illness at the time of the survey or during one month preceding the survey, while the remaining 13 per cent did not experience any illness during the reference period.

The distribution of households by number of patients/sickness episodes is presented in Table 3.3. Among 763 slum-households reporting illness, some of the households had more than one sick member/illness episode. Overall, there were 1,345 illness episodes suffered by the 763 households (Table 3.3). This implies that for slum-households having incidence of sickness during the last month, there were 1.76 illness episodes per household on an average. Of them, 43 per cent had one sick member, 37.5 per cent had two, 19.3 per cent had three and another 0.2 per cent had four or more sicknesses.

Similarly, among 348 non-slum households reporting illness, some of the households had more than one sick member/illness episode. Overall, there were 525 illness episodes among the 348 households. This implies that on the average there were 1.51 illness episodes per household in the non-slum area. Of them, 57.5 per cent had one sick member, 36.2 per cent had two, and another 6.3 per cent had three sicknesses (Table 3.3).

Table 3.2

Distribution of Households by Incidence of Sickness during Last One Month: by Area

Whether Any Sickness	Slum Area (n=800)		Non-Slum Area (n=400)		Overall (N=1200)	
	No.	%	No.	%	No.	%
Yes	763	95.4	348	87.0	1,111	92.6
No	37	4.6	52	13.0	89	7.4
All	800	100.0	400	100.0	1,200	100.0

Table 3.3

Distribution of Households by No. of Patients/Sickness Episodes: by Area

No. of patients/ Sickness episodes	Slum Area (n=763)		Non-Slum Area(n=348)	
	No. of Households	% of Households	No. of Households	% of Households
One	328	43.0	200	57.5
Two	286	37.5	126	36.2
Three	147	19.3	22	6.3
Four and more	2	0.2	0	0.0
Total no. of patients/ sickness episodes	1,345		525	
Mean no. of patients/sicknesses	1.76		1.51	

3.3 Morbidity by Individual and Socio-economic Characteristics

The estimates of morbidity in the slum and non-slum areas of Dhaka city are reported in Table 3.4. The overall morbidity was 38 percent in slum area compared to 31.9 per cent in non-slum area (Table 3.4). However, there were some variations in morbidity by gender of household members. The distribution of patients by gender shows that morbidity of females was higher compared to their male counterparts in both slum and non-slum areas. In the slum area, out of 1,795 female members in the sample households, 39.7 per cent of them were sick during one month preceding the survey, the corresponding figure was 36.3 per cent for males. Similarly, in the non-slum area, out 799 female members, 32.8 per cent of them were sick, while the corresponding proportion for males was 31.1 per cent.

The distribution of patients by gender shows that of the total **1**,345 patients in the slum area, 52.9 per cent were females and the rest 47.1 per cent were males (Table 3.5). However, in the non-slum area, the share of male and female patients was almost the same; out of 525 patients, the proportion of female patients was 49.9 per cent compared to 51.1 per cent for males.

Table 3.4

Morbidity Prevalence by Gender of Household Members: by Area

Gender	Slum Area			Non-Slum Area		
	No. of persons	No. of sick persons	% with sickness	No. of persons	No. of sick persons	% with sickness
Male	1,743	633	36.3	847	263	31.1
Female	1,795	712	39.7	799	262	32.8
All	3,538	1,345	38.0	1,646	525	31.9

Table 3.5

Distribution of Patients by Gender: by Area

Gender of patients	Slum Area		Non-Slum Area		All	
	n	%	n	%	N	%
Male	633	47.1	263	50.1	896	47.9
Female	712	52.9	262	49.9	974	52.1
Total	1,345	100.0	525	100.0	1,870	100.0

3.3.1 Disease Pattern of Morbidity

Based on the survey data it is revealed that during the last one month prior to the survey, about 95 per cent of slum and 87 per cent of non-slum households had at least one person sick, suffering from any kind of illness. Data were collected on 23 health conditions (disease/symptoms). However, certain illnesses were found to be common like fever/headache, diarrhea/dysentery, respiratory diseases (including pneumonia), eye/ear/dental problems, skin diseases, gynecological/reproductive problems, etc. The illness reported in this study, however, was based on the respondents' replies (or by showing the lay symptoms); but this may not necessarily constitute clinically confirmed cases. Thus, the sickness, as reported in the survey, may not correspond precisely to the medically or clinically defined exact disease, since many of the respondents may have vague idea/wrong impression about the type of disease occurred in their respective households. But as long as diseases are grouped under major heads, the broad picture that emerges will more or less reflect the disease pattern prevailing in the study area.

When disease pattern is examined by type of illness in the slum area, it is found that in the slum area fever (all types, including common cold), diarrhea including dysentery, and gastro-intestinal problems top the list, accounting for 52.8, 19.6, and 5.8 per cent of total illness episodes respectively. Prevalence of fever is very high (52.8 per cent) when unspecified neurological manifestations (including common cold and headache) and all types of fever are added together. Diarrhea prevalence is also quite high at 19.3 per cent, including considerable prevalence of gastro-intestinal problems (5.8 percent). Taken together, these three diseases account for nearly three-fourths (78.2 per cent) of the total illness episodes suffered by the slum households (Table 3.6).

In the non-slum area also, the disease pattern is more or less similar. Fever (of all types) accounts for the highest proportion (49.9 per cent) of illness episodes, followed by diarrhea/dysentery (13.5 per cent) and other gastro-intestinal problems (5.9 per cent). These three diseases together account for more than two-thirds (69.3 per cent) of total morbidity in the non-slum area.

Table 3.6

Type of Diseases Suffered by Household Members during Last Month: by Area

Type of Disease	Disease prevalence			
	Slum Area		Non-Slum Area	
	No.	%	No.	%
Fever/Common Cold	710	52.8	262	49.9
Diarrhea/Dysentery	263	19.6	71	13.5
Gastrointestinal problems	78	5.8	32	5.9
Respiratory problems/pneumonia	55	4.1	15	2.9
Jaundice/Hepatitis	44	3.3	10	1.9
Eye/ear/dental problem	27	2.0	28	5.3
Diabetes	20	1.5	8	1.5
TB	4	0.3		
Malaria/typhoid	24	1.8	16	3.0
Accident/Injury	37	2.8	6	1.1
High Blood Pressure/Heart related problem	16	1.2	25	4.6
Skin Disease	35	2.6	12	2.3
Rheumatic fever	23	1.7	12	2.3
Female Disease/Reproductive health problem	30	2.2	14	2.6
Others	11	0.8	9	1.7
All	1,345	100.0	525	100.0

Bangladesh's disease burden continues to be enormous, much more than in many other developing countries with similar economies, and, of course, significantly higher than that in the developed nations of the world. The most unfortunate aspect of this burden is the fact that a large number of illnesses and compromised health situations that people find themselves in are because of infections that can be prevented simply and effectively. Acute respiratory infections, diarrhea and dysentery, besides tuberculosis and malaria, are major challenges to health in Bangladesh, and all these are diseases that have proven preventive techniques. The course that modern medicine worldwide has taken, of offering curative care more efficiently and with much easier accessibility than basic preventive methods, has been accepted in Bangladesh with a totality that is almost frightening, and the evidence of this is in the figures of morbidity and mortality from these preventable infectious diseases.

While environmental problems and poor sanitation are the root causes of several diseases, poverty, ignorance and nutrition related factors lead to easy contraction and transmission. Impure drinking water, unsanitary living conditions, poor personal hygiene, and food cleanliness all contribute to diseases like diarrhea/dysentery and gastro-intestinal problems. It is evident that a higher proportion of slum dwellers suffer from diarrheal diseases compared to their non-slum counterparts (19.6 per cent vs 13.5 per cent respectively).

The data show that fever (all types), diarrheal disease including dysentery, other gastrointestinal problems, lung and respiratory problems are common in both the slum and non-slum area. However, a higher proportion of slum people suffer from these diseases including, rheumatism, scabies, etc. The scientific means of preventing and treating all these are time-tested wisdom; they are inexpensive and available. Yet, these illnesses recur, interfering considerably with daily activity. Though malnutrition does not appear to be a major cause of sickness, indirectly, it contributes to many other diseases, and prolonged malnutrition in most cases aggravates the condition of the patient. Malnutrition, along with diarrheal diseases, is the major illnesses in the slum community, especially affecting the two most vulnerable groups- mothers and children.

Preventable communicable and poverty-related diseases still dominate the top 5 causes of morbidity. The use of tap/tube well water for drinking is almost universal, but it is marred by contamination since it is not properly boiled or stored. Environmental degradation due to air, water and industrial pollution, deteriorating living conditions in the urban slums poses significant adverse outcomes for public health. The overall health service consumption (from any source) is low in urban slums.

3.3.2 Morbidity by Age

The prevalence of morbidity by age shows that this is high in the 0-4 age group, declines with age up to about 50 years, and then starts to increase thereafter displaying the commonly reported 'U' shaped relationship. In the present survey, the young (children aged 0-4 years) and the aged (older persons aged 60 years and above) had the highest prevalence of morbidity in both the study locations (Table 3.7). In the slum area, the youngest age group (0-4 years) had the highest morbidity prevalence rate of 70 per cent, followed by the elderly population aged 60 years and above (51.9 per cent). Morbidity prevalence was lowest (25.6 per cent) for the adult population belonging to age group 15-49 years, with slightly higher prevalence of young children in the age group 5-14 years (29.1 per cent). The higher morbidity during childhood and at older ages is in the expected direction, the risk of being sick is higher during early years and at later stage of life cycle.

Similar age pattern of morbidity was also observed in the non-slum area. Morbidity prevalence rate was highest (63.3 per cent) for children under five years of age, followed by second highest morbidity (51.2 per cent) of the oldest age bracket (60 years and above). It is evident from the table that for each age group, morbidity rate was higher for slum dwellers compared to their counterparts in the non-slum area.

Table 3.7

Morbidity during Last One Month by Broad Age Group: by Area

Age group (years)	Slum Area			Non-Slum Area			Total		
	No. of persons	No. of sick persons	% who are sick	No. of persons	No. of sick persons	% who are sick	No. of persons	No. of sick persons	% who are sick
0-4	890	623	70.0	422	267	63.3	1,312	890	67.8
5-14	718	209	29.1	253	70	27.7	971	279	28.4
15-49	1,791	458	25.6	892	155	17.4	2,683	613	21.5
50-59	85	27	31.8	38	12	31.6	123	39	31.7
60+	54	28	51.9	41	21	51.2	95	49	51.6
Overall	3,538	1,345	38.0	1,646	525	31.9	5,184	1,870	35.0

Table 3.8

Proportion of Sick Persons by Broad Age Group: by Area

Age group	Slum Area		Non-Slum Area	
	No. of sick persons	% share of total patients	No. of sick persons	% share of total patients
0-4 yrs	623	46.3	267	50.8
5-14 yrs	209	15.5	70	13.3
15-49 yrs	458	34	155	29.5
50-59 yrs	27	2	12	2.3
60+ yrs	28	2.1	21	4
All	1,345	100.0	525	100.0

The proportional share of patients by broad age groups among total patients is shown in Table 3.8. Out of 1,345 total patients in the slum area, more than two-fifths (46.3 per cent) were children under 5 years of age, 15.5 per cent were children between 5 and 14 years of age, while about a third of the patients (34 per cent) were adults belonging to age group 15-49 years. Similar age pattern of morbidity was also observed in the non-slum area. Of the 525 patients in the non-slum area, about one-half (50.8 per cent) were children under 5 years of age, 13.3 per cent of the patients were children between 5 and 14 years of age, while more than a quarter of the patients (29.5 per cent) were adults belonging to age group 15-49 years.

It needs to be emphasised here that the demographic characteristics of persons–children under five years, pregnant women, lactating mothers, and aged persons over 60 years–are especially vulnerable to diseases and illnesses because of their physiological condition. The largest proportion of patients was pre-school children, which can be explained by the fact that prevalence of illness is higher among children aged 0-4 years compared to any other age groups everywhere in the world both developing and developed countries. The second highest proportion of patients represented by adult population may be explained by the fact that the age bracket is quite large (spanning 30 years and accounting for more than half of total population). Again, women belonging to age group 15-49 years are more likely to suffer from illness in connection with problems related to pregnancy and child birth (including antenatal, delivery, and postnatal care).

Figure 3.1: Morbidity Prevalence Rate by Age Group: Slum Area

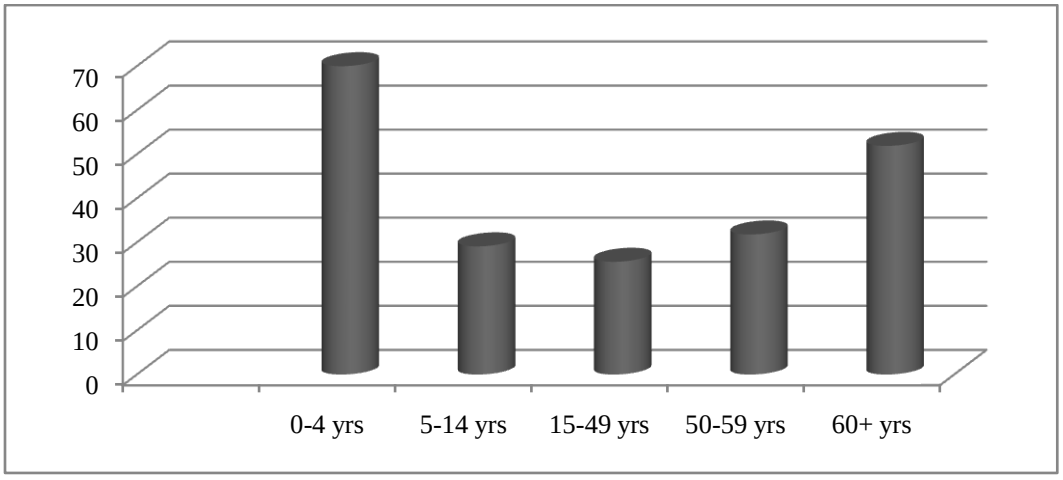
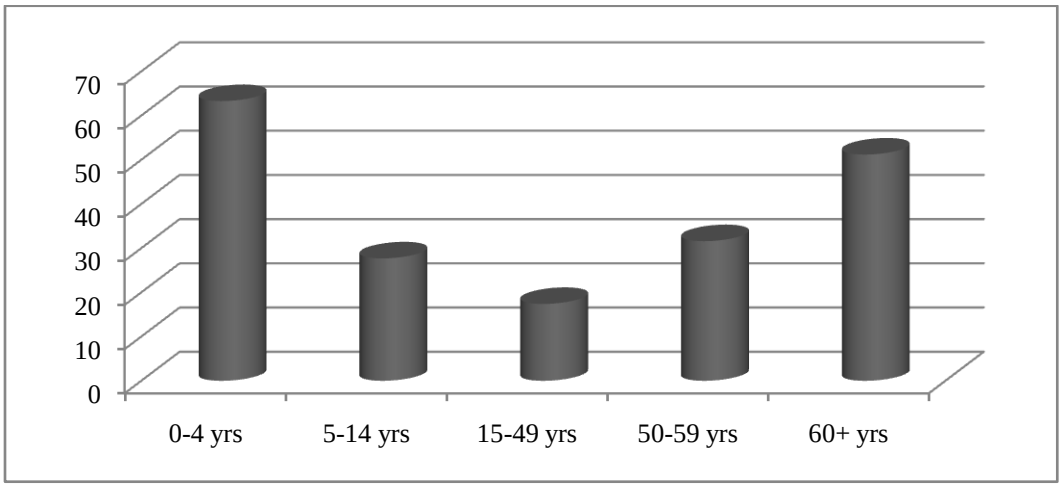


Figure 3.2: Morbidity Prevalence Rate by Age: Non-Slum Area



3.4 Gender Differences in Morbidity

The gender specific difference in morbidity is an interesting issue to be examined. Tables 3.9 and 3.10 report the gender specific morbidity prevalence rates by slum and non-slum area. In slum area, the overall morbidity prevalence rate was higher among females (39.7 per cent) compared to males (36.3 per cent), which implies that morbidity prevalence among females was 3.6 percentage points higher compared to their male counterparts. However, in the non-slum area, no tangible difference in morbidity was correlated with gender, morbidity prevalence was 1.7 percentage points higher among females compared to males (32.8 per cent vs 31.1 per cent).

3.4.1 Morbidity by Age and Gender

The data in Tables 3.9 and 3.10 show the distribution of patients by broad age group and gender. There is evidence of gender difference in morbidity by age in both slum and

non-slum area. The gender differential in morbidity rate was much more pronounced for younger children (5-14 years) with morbidity prevalence rate for boys being 4 percentage points higher than that of girls (31.2 per cent vs. 27.1 per cent). The highest male-female disparity was observed for the oldest age group (60+ years), with morbidity prevalence rate for males being 15 percentage points higher compared to females (58.1 per cent vs. 43.5 per cent).These findings indicate that the illness of male children/older males is better perceived and reported than their female counterparts, which is an indirect indication of gender bias in health-seeking.

In general, the prevalence of morbidity was higher for males compared to females for all age groups except the reproductive age span (15-49 years) and older age group (50-59 years). The female morbidity rate was higher compared to males in the reproductive age, particularly between 15 and 59 years. The higher morbidity prevalence rate among females in the age bracket 15-59 years may be explained by the fact that women in the reproductive age groups are more likely to suffer from illness/diseases due to the following reasons:

- Women assume most of the responsibility of contraception;
- Women face the risk of child bearing;
- Women suffer from complications associated with pregnancy and delivery;
- Women are biologically and socially more vulnerable to sexually transmitted diseases including HIV/AIDS and cancers;
- Women are exposed to gender-based violence and abuse;
- Women can suffer from complications of unsafe abortions.

3.4.2 Female Children and Old Women are the Most Disadvantaged

The findings show that the gender differential in morbidity prevalence rate was particularly striking for boys in the age group 5-14 years and also for men in the age group 60 years and above.

- The differential in morbidity prevalence rate between boys and girls increases with the increase in the age of children. For example, in the slum area, among children aged 5-14 years, morbidity prevalence was 31.2 per cent for boys compared to 27.1 per cent for girls. Similar differential was also found in the non-slum area, with morbidity prevalence rate of 28.8 per cent for boys compared to 26.1 per cent for girls (in the age group 5-14 years).

- While less is known about the incidence of diseases by gender, findings from Matlab (ICDDR, B) data do not show any sex differential up to 14 years of age in terms of exposure to infections (D'Souza, Lincoln and Chen 1980, Chen, Huq and D'Souza 1981). Thus, one can assume that the probability of being sick is more or less the same for male and female children. But in the present survey morbidity prevalence of girls was lower compared to boys. In the slum area reported prevalence of morbidity for children (5-14 years) was much higher for boys than girls (31.2 per cent vs. 27.1 per cent), which clearly indicates that there

is gender bias in reporting illness of young children. This also indicates that with the increase in the age of the child, the disparity in the reporting of illness among boys and girls also increases, which may be attributed to parental son preference, leading to more concern and better reporting of diseases affecting boys than girls. That is, illness of male child is better perceived and reported than the female child, which is a clear indication of gender bias in parental attitude.

- For older persons aged 60 years and above, male morbidity rate was 15 percentage points higher than that of females (58.1 per cent vs 43.5 per cent) in the slum area. Similar gender differential was also observed in the non-slum area (though to a smaller extent) male morbidity prevalence rate being 2.4 percentage points higher than females (52.4 per cent vs 50 per cent).

These findings imply that despite nearly equal probability of suffering from diseases by males and females, morbidity of boys was reported far more frequently than girls. Similarly, morbidity of older males was reported more frequently than that of older females. This indicates that in terms of reporting illness and receiving treatment during childhood and at older ages, females are much more disadvantaged compared to their male counterparts.

Table 3.9

Distribution of Sick Persons by Broad Age Group and Gender: Slum Area

Age group	Male			Female			Both		
	Total No. of males	No. of males who were sick	% of male who were sick	Total No. of females	No. of females who were sick	% of female who were sick	Total No. of persons	No. of persons who were sick	% of persons who were sick
0-4 yrs	456	317	69.5	434	306	70.5	890	623	70.0
5-14 yrs	353	110	31.2	365	99	27.1	718	209	29.1
15-49 yrs	859	178	20.7	932	280	30.0	1,791	458	25.6
50-59 yrs	44	10	22.7	41	17	41.5	85	27	31.8
60+ yrs	31	18	58.1	23	10	43.5	54	28	51.9
All	1,743	633	36.3	1,795	712	39.7	3,538	1,345	38.0

Table 3.10

Distribution of Sick Persons by Broad Age Group and Gender: Non-slum Area

Age group	Male			Female			Both		
	Total No. of males	No. of males who were sick	% of male who were sick	Total No. of females	No. of females who were sick	% of female who were sick	Total No. of persons	No. of persons who were sick	% of persons who were sick
0-4 yrs	230	146	63.5	192	121	63.0	422	267	63.3
5-14 yrs	139	40	28.8	114	30	26.3	253	70	27.7
15-49 yrs	441	62	14.1	451	93	20.6	892	155	17.4
50-59 yrs	16	4	25.0	22	8	36.4	38	12	31.6
60+ yrs	21	11	52.4	20	10	50.0	41	21	51.2
All	847	263	31.1	799	262	32.8	1,646	525	31.9

3.4.3 Morbidity Prevalence by Education of Head

The morbidity prevalence rates by the socio-economic characteristics of the household are computed and reported in Tables 3.11 and 3.12 (also shown in Figures 3.3 and 3.4). It is generally believed that there is an inverse relationship between education and the morbidity prevalence rates. That is, persons without any education or having only elementary education experience higher rate of morbidity than persons with more education. However, in the present research the reported morbidity rate among households headed by illiterate persons was lower than those headed by persons with elementary education.

As can be seen from Table 3.11, the prevalence of morbidity increases moderately with the increase in educational level of household head and then it starts falling primary level schooling and forms an inverted 'U'-shaped curve. The data show that, in both the study locations, there is an increase in the reporting of morbidity as we move from households where the head is illiterate to those households where the head has elementary education up to primary level. The prevalence of morbidity declines as the level of education increases beyond primary level for both slum and non-slum area, but faster decline is observed in the case of slum area.

In the slum area, morbidity was lower for households headed by illiterate persons (37 per cent) compared to households headed by persons having primary level education (42.3 per cent). Similarly, in the non-slum area, morbidity rate was 33.3 per cent for household members where the head was illiterate or without any formal education compared to 35.8 per cent for households where the head was with some elementary education. However, in both the study areas, the lowest prevalence of morbidity was found in households with household heads having the highest level of education (graduation/bachelor degree). It is evident that there is a threshold level of education (at least high school level) when morbidity rate shows a declining trend.

It is evident from Table 3.11 that morbidity prevalence increases initially with the increase in the educational level of household head. This goes against the popular notion that persons belonging to households headed by illiterate persons are likely to experience higher rate of morbidity. This might be explained by the fact that perception of being sick and the probability of reporting about illness is likely to be worse for the illiterate segment of the population because of their lack of awareness regarding illness that affects health status and well-being.

Table 3.11

Distribution of Population Who were Sick during Last Month: by Education of Head

Education of head	Slum Area				Non-Slum Area			
	No. of households	Total no. of persons	No. of sick persons	% with sickness	No. of house holds	Total no. of persons	No. of sick persons	% with sickness
Illiterate	486	2,224	823	37.0	24	123	41	33.3
Primary (1-5 years)	198	834	353	42.3	42	165	59	35.8
6-9 years	85	352	127	36.1	63	239	86	36.0
SSC/HSC	28	116	39	33.6	128	552	170	30.8
Bachelor degree	3	12	3	25.0	68	272	82	30.1
Masters	0	0	0	0.0	75	295	87	29.5
Total	800	3,538	1,345	38.0	400	1,646	525	31.9

Figure 3.3: Morbidity Prevalence Rate by Education of Household Head: Slum Area

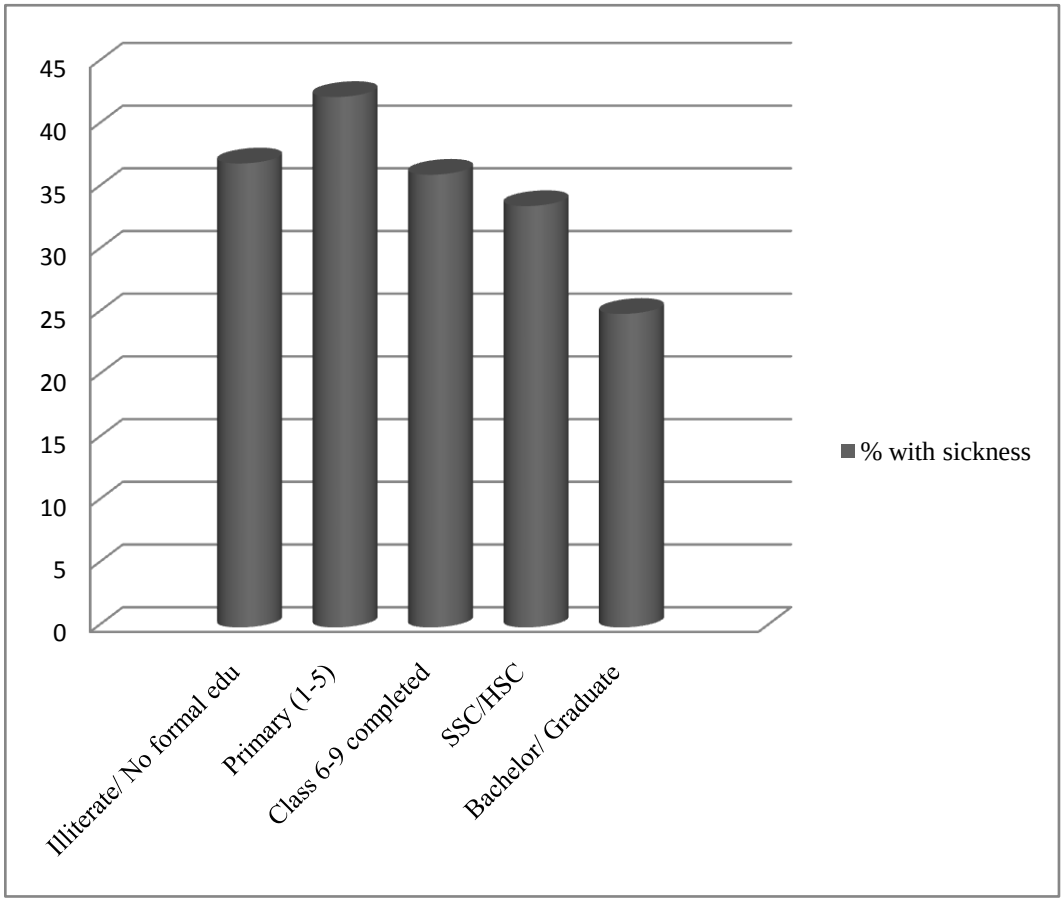
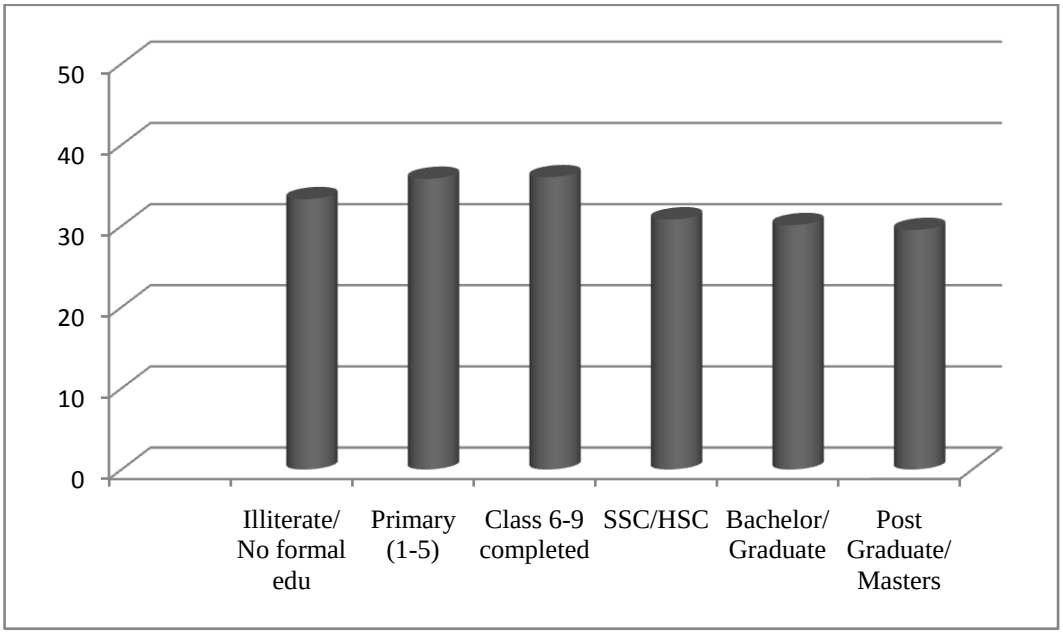


Figure 3.4: Morbidity Prevalence Rate by Education of Household Head: Non-Slum Area



3.4.4 Morbidity Prevalence by Household Income

In general, there is an inverse relationship between household income and the prevalence of morbidity. That is, members of poorer households experience higher rate of morbidity compared to members of richer households. The prevalence of morbidity declines monotonically as household income increases and shows an inverse association with morbidity. In the present research, reported morbidity rate was lowest among households belonging to the highest income group. In general, it is believed that households with lower income experience higher incidence of poverty and this could be a reason for the high prevalence of morbidity among poorer households.

As can be seen from Table 3.12, monthly household income is an important determinant of sickness of household members. Proportion of sick persons in the poorest group was substantially higher than the corresponding proportion in the richest group in both slum and non-slum area. The prevalence of morbidity declined as the economic condition of the household increased. The decline was most spectacular for households belonging to the highest income group.

In the present survey, prevalence of morbidity was inversely proportional with economic status of the households as reflected by monthly income. The members of the poorest income group had a higher rate of morbidity compared to their well-off counterparts for both slum and non-slum households (Table 3.12). In the slum area, morbidity rate was highest at 40 per cent for the poorest income group (up to Tk. 5,000 per month), the corresponding figure for the richest income group was 24.7 per cent. Similar declining trend of morbidity by household income was also observed in case of non-slum households. Morbidity rate was the highest (48.6 per cent) for the poorest

income group (Tk. 5,000-10,000 per month), and the lowest (23.2 per cent) for the richest income group (Tk. 50,000+ per month). Widespread poverty, malnutrition and ignorance about personal hygiene coupled with poor environmental sanitation may be considered as the main reasons for having higher rate of morbidity among this group.

Table 3.12

Distribution of Population who were Sick during Last Month: by Monthly Income

Distribution of household by income group	Slum Area				Non-Slum Area			
	Number of house-holds	No. of persons	No. of sick persons	% with sickness	No. of house-holds	No. of persons	No. of sick persons	% with sickness
Up to 5000	101	400	160	40.0	0	0	0	0
5001-10000	530	2,222	895	40.3	21	70	34	48.6
10001-15000	123	650	221	34.0	70	254	110	43.3
15001-20000	31	169	45	26.6	65	259	87	33.6
20001-30000	15	97	24	24.7	101	429	126	29.4
30001-50000	0	0	0	0	95	401	114	28.4
50000+	0	0	0	0	48	233	54	23.2
Overall	800	3,538	1,345	38.0	400	1,646	525	31.9

Figure 3.5: Morbidity Prevalence Rate by Monthly Household Income: Slum Area

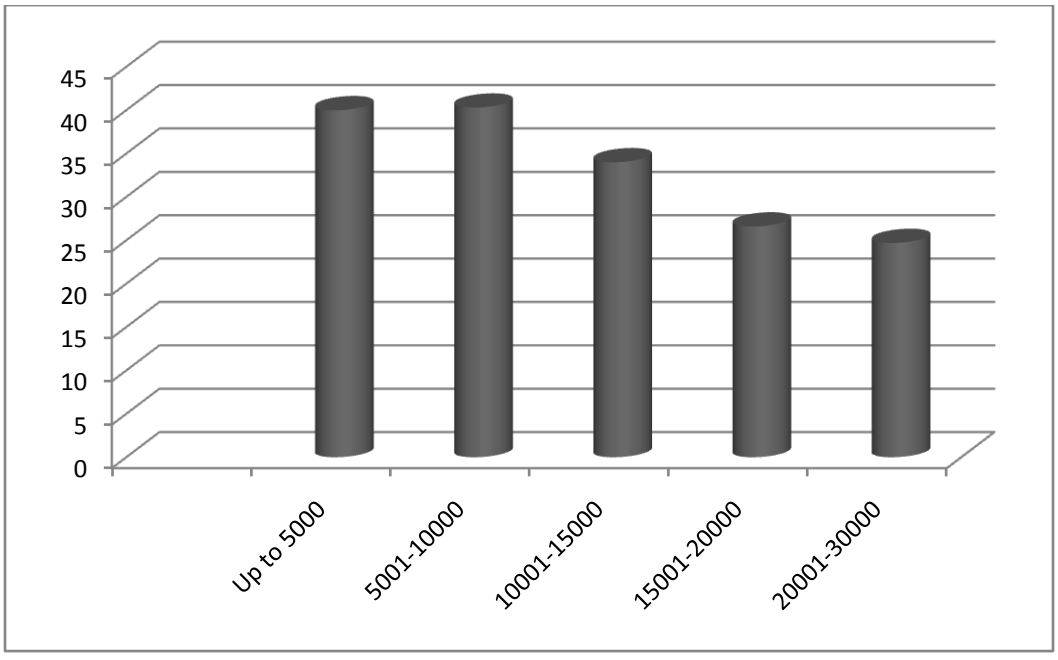
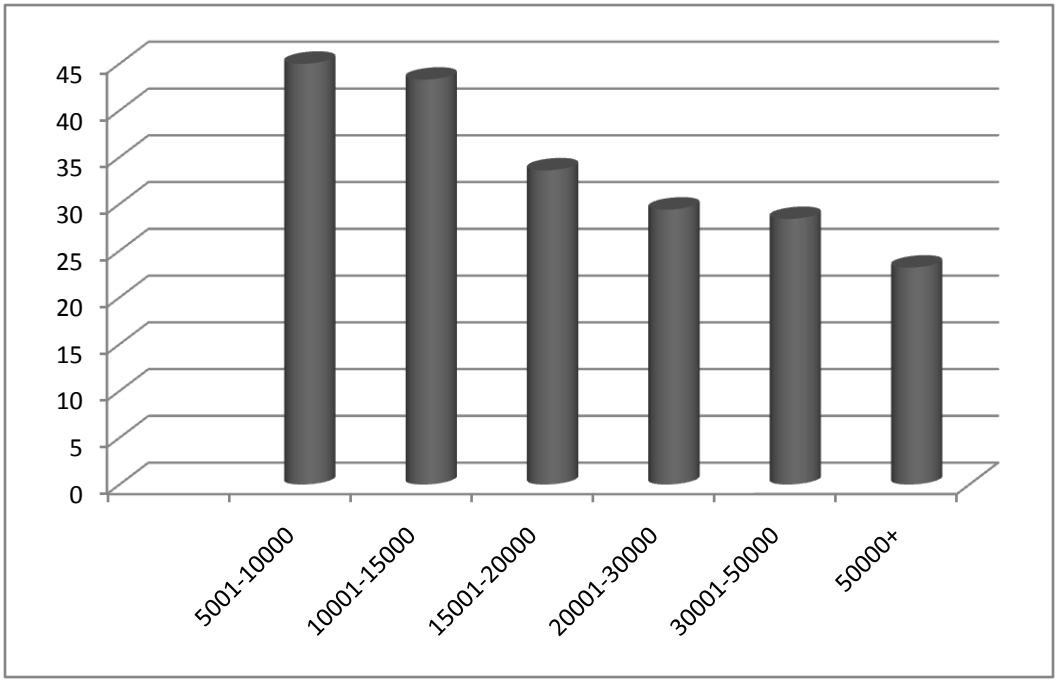


Figure 3.6: Morbidity Prevalence Rate by Monthly Household Income: Non-slum Area



3.5 Differentials in Morbidity Prevalence by Household Characteristics

While analysing the trend in morbidity prevalence by socio-economic status, one has to take into account a number of factors. First, these estimates are based on self-reporting of morbidity. In general, the poor and/or uneducated people do not perceive themselves to be ill until and unless they face serious health problems. During FGDs, conducted among men and women living in slum area, many of the participants pointed out that they did not bother about "minor ailments" which were quite common. Second, with the increase in economic status, morbidity reporting may increase since people can afford to purchase healthcare. Also, with improvement in the economic status and level of education, the health consciousness of people may improve, which may in turn influence morbidity reporting. On the other hand, with the increase in income, the nutritional status may improve resulting in lower morbidity, especially infectious diseases. Since a number of actors operate, it is rather difficult to explain the trend. For instance, in India the NSS (52^{nd} round) estimates clearly reveal a positive association between morbidity reporting and the level of living, i.e. morbidity reporting improves with the improvement in the level of living. On the other hand, an inverse relation between illness prevalence rate and income has been observed in some other surveys.

3.5.1 Determinants of Morbidity

The cross-classification of morbidity by individual and household characteristics shown above indicates that morbidity varies considerably by age, sex, education and household income. Tabulation method, however, is of limited usefulness when the variables under consideration are several because it is not possible to identify the separate

impact of each factor while holding others constant. Besides the magnitude, we also need to know the strength or the importance of each factor in its effect on morbidity. Logistic regression analysis provides an alternative method of studying the effect of the various characteristics on morbidity. The influence of the individual characteristics and household socio-economic factors on morbidity prevalence or risk of being sick (in the 30 days reference period) of an individual is examined using logistic regression models.

In this section, we present logistic regression models to identify the determinants of morbidity. Since we have dichotomous data, we construct logistic regression models for morbidity prevalence.

3.5.2 Variables used in the Analysis

As already discussed, morbidity prevalence is the number of persons who had fallen ill during the reference period of 30 days preceding the survey. The dependent variable is measured as a dichotomous variable taking the value one, if it is reported that an individual in the sample household was sick in the reference period and zero otherwise. The explanatory variables include a set of individual characteristics such as age, sex, etc. and household variables such as education of household head, household income, gender of head, etc. The dependent variable being dichotomous, the appropriate method, namely, logistic regression method is employed and the results are reported in Table 3.13.

The variables used in the analysis of morbidity determinants are place of residence (slum/non-slum), age and gender of patient, educational level (both head of household and spouse of head), monthly household income, and gender of head. Here we present the significant factors in the probability of a person falling ill (morbidity). The final model for testing is as follows:

Prob. (morbidity prevalence) = (Residence status, Education, Income, Gender of Head, Gender of patient, Age group).

That is, residence status (slum/non-slum), education, monthly income, gender and age are the statistically significant predictors of morbidity.

The monthly income is significantly related to morbidity prevalence in Dhaka city. As we go up the monthly income category, morbidity also decreases for those with monthly income exceeding Tk. 10,000. Taking monthly income of Tk. 5,000 as the reference category, the chance of affecting morbidity consistently declines with increase in the household income (also statistically significant). For instance, the chance of affecting morbidity is 20 per cent, 45 per cent, 49 per cent, and 60 per cent less for the monthly income groups Tk. 10,001-15,000, TK. 15,001-20,000, Tk. 20,001-30,000, and Tk. 30,000+ group, which shows that as monthly income increases, morbidity prevalence consistently and significantly decreases.

Compared to the adults, the under five children have six times higher chance of affecting morbidity (and highly significant statistically) and it is 1.3 times 1.9 times, and 2.6 times higher for the 5-14 years, 50-59 years, and 60+ years age groups respectively (also statistically significant). Young children (under five) and the ageing population are more vulnerable to disease and illness because probability of falling sick is higher during

early and later years of life.

The dummy variable to represent the educational attainment of household head/spouse does not show any significant influence on morbidity. Taking illiterate as the reference category, the chance of morbidity is 23 per cent higher for the primary education group (also statistically significant). The effect of the education level dummy variables on morbidity is positive and statistically significant in the equation for education of head up to primary level. This suggests that the higher the level of education, the higher is the probability of being ill up to primary level. A plausible explanation is that education increases awareness about diseases and any literate person, even with elementary education, is more likely to report incidences of illness which in turn increases the rate of morbidity prevalence.

The chance of affecting morbidity declines with increase in years of schooling of household head at the high school (6-9 years) and secondary/higher secondary level. The effect of the education level dummy variables on morbidity is negative in the equation for education of household head with 6-9 years of schooling, and up to higher secondary (HSC) level. However, the chance of falling sick is increased again with education of head (and also of spouse) beyond HSC level. This suggests that at higher level of education (of household head/spouse) the probability of being sick becomes higher. This seems to be a paradox. The only plausible explanation (as mentioned earlier) is that education increases the awareness regarding illness/diseases and the better educated persons perhaps take the necessary precautions against illness, which in turn leads to better reporting of morbidity/illness. One important finding is that the effect of education of both the household head and spouse of head on morbidity prevalence is not much dissimilar. There is no tangible difference in morbidity prevalence by education of household head/spouse of head, that is, no significant difference in the morbidity pattern by education of household head/spouse of head.

Compared to females, the chance of morbidity is approximately 16.5 per cent less for males. The probability of illness is significantly lower for the males compared to the females. The gender of head is positively related to illness. Compared to female–headed households, the chance of morbidity is approximately 27 per cent higher for male–headed households. This implies that the reported morbidity is higher for male headed households. Even though female-headed households are likely to be poorer than male-headed households, the probable explanation is that the lower the income of a person relative to the cost of treatment, the higher it is likely to be the threshold of pain and suffering which he or she is likely to put up with, and hence the lower the probability of the person reporting the illness. Evidence also shows that the morbidity rates are higher in the high income than in the low–income countries. Hence, it is possible to have a positive relationship between reported morbidity and male-headship.

The area of residence is significantly related to illness reporting in Dhaka city. The data show that the probability of being sick is 31 per cent higher in the non-slum area. This seems to be a paradox. The probable explanation is that non-slum residents are likely to have higher income with higher level of education and they are also more likely to have the awareness regarding diseases affecting the status of health. Non-slum

residents are expected to take necessary precautions against illness, which in turn leads to better reporting of morbidity. On the other hand, a person living in slum area is more likely to have lower incomes, with inadequate access to food and nutrition and hence the lower the probability of the person reporting the illness. Evidence also shows that the morbidity rates are higher in the high income than in the low–income countries. Hence, it is logical to have a positive relationship between reported morbidity and non-slum residence.

Simultaneous observation of the models of morbidity reveals that significant predictors of morbidity prevalence are residence (slum/non-slum), monthly income, age and gender. One important finding is that education is not a crucial determinant of morbidity. It reveals that morbidity distribution, in general, is independent of educational status of both household head and spouse.

Table 3.13

Determinants of Incidence of Sickness within One Month

(1 if Sick and 0 if no Sick)

Variables	Beta Co-efficient	Odds Ratio
Study Area		
Slum Area(R)		1
Non-slum Area	0.267	1.306**
Gender of head		
Female(R)		1
Male	0.240	1.271
Gender of Patient		
Female (R)		1
Male	-.179	.836***
Education of head		
Illiterate(R)		1
Primary (1-5)	.209	1.233**
Class 6-9 Completed	-.028	.973
Secondary & Higher Secondary Completed	-.059	.943
Graduation Completed	.046	1.047
Post Graduation Completed	.071	1.073
Education of spouse of head		
Illiterate(R)		1
Primary (1-5)	.055	1.056
Class 6-9 Completed	-.021	.979
Secondary & Higher Secondary Completed	.076	1.079

(Contd. Table 3.13)

Variables	Beta Co-efficient	Odds Ratio
Graduation Completed	.030	1.031
Post Graduation Completed	-.007	.993
Age of Patient		
15-49 yrs$^{(R)}$		1
0-4 yrs	1.845	6.329***
5-14 yrs	.258	1.295***
50-59 yrs	.647	1.910***
60+ yrs	.966	2.628***
Monthly Household Income		
Up to 5000$^{(R)}$		1
5001-10000	.026	1.027
10001-15000	-.220	.803
15001-20000	-.601	.548***
20001-30000	-.665	.514***
30000+	-.916	.400***
Constant	-1.206	0.299

Notes: (R) Reference category.
*** denotes significance at 0.99 confidence level;
** denotes significance at 0.95 confidence level;
* denotes significance at 0.90 confidence level.

CHAPTER 4

PATTERNS AND DETERMINANTS OF HEALTH-SEEKING BEHAVIOUR

4.1 Health-seeking Behaviour

An understanding of the health-seeking behaviour is important if we want to know what people do when they have symptom of a disease or when they fall sick. Health-seeking behaviour can be defined as any activity undertaken by individuals who perceive themselves to have a health problem or to be ill, for the purpose of finding an appropriate remedy.

Delays in symptom recognition and seeking care can increase the severity of disease. In contrast, reducing the time between onset of disease and treatment, through timely utilisation (for example, increased accessibility of services and education about symptom recognition), could play an important part in disease control and cure.

4.1.1 Type of Treatment Received

The respondents were asked about the type of treatments received during last month's sickness. The findings (Table 4.1) show that among the slum households who were ill during one month prior to the survey, around 9 per cent (124 patients) did not receive any type of treatment whatsoever. Of the remaining 1,221 cases who received some kind of care, only about 15 per cent of the sicknesses were treated at a government facility (at the medical college hospital or specialised hospital/clinic), and another 8.8 percent received treatment from private hospital/clinic or they consulted qualified doctors. However, the largest proportion of patients–more than two-thirds (68.6 per cent) were treated by unqualified practitioners, consisting of drug sellers/ pharmacy owners/ road side "quacks" without any professional training. Again, it appears from Table 4.1 that around 6 per cent of the patients received treatment from traditional practitioners like homeopath (2.2 per cent), *kabiraj/hekim* (3.1 per cent) or spiritual healers (1.1 per cent).Though services at the government facilities are supposed to be free of cost, their utilisation was not up to the desired level, most people prefer not to visit these facilities.

The pattern of health-seeking behaviour of non-slum households was quite different. Out of the 525 illness episodes during 30 days before the survey, only 4 cases (i.e. 0.8 per cent) did not receive any treatment. Of the 521 cases who received treatment, a vast majority of them (72.4 per cent) were treated by qualified physicians, either at the government hospital (22.5 per cent) or at the private hospital/clinic (49.9 per cent). However, a quarter of the illnesses (24.4 per cent) in the non-slum area were treated by unqualified practitioners/drug sellers having no formal training, while another 3.1 per cent consulted traditional healers (homeopath/*kabiraj/hekim*/spiritual healers).

It is evident that there were major variations in the type of treatments received by slum/non-slum residence. In general, a higher proportion of sicknesses in the slum area received treatment from drug sellers/unqualified doctors including homeopath/*kabiraj* or spiritual healer. By contrast, a much higher proportion of the sicknesses in the non-slum area received treatment from qualified practitioners.

Table 4.1

Type of Treatment Received during Last Month's Sickness: by Area

Type of Treatment	Slum Area		Non-Slum Area		All	
	n	%	n	%	N	%
Medical college/specialised hospital/public facility	184	15.1	117	22.5	301	17.3
Private clinic/NGO facility/MBBS doctor	107	8.8	260	49.9	367	21.1
Unqualified allopath/Drug seller	837	68.6	127	24.4	964	55.3
Homeopath	27	2.2	10	1.9	37	2.1
Kabiraj/hekim	38	3.1	4	0.8	42	2.4
Spiritual healers	13	1.1	1	0.2	14	0.8
Self medication/buying medicine without consultation	15	1.2	2	0.4	17	1.0
Overall	1,221	100	521	100	1,742	100
No treatment received	124	9.2	4	0.8	128	6.8

4.1.2 Non-treatment of Illness

As already mentioned, the proportion of cases who received no treatment was much higher for slum dwellers compared to their non-slum counterparts (9.2 per cent vs 0.8 per cent). The data clearly show that the members of the slum households have higher risk of being sick at any point in time; and once they fall sick, they are more likely to receive care from unqualified providers only/ or no treatment from any source compared to their counterparts from non-slum area.

The reasons for not seeking treatment are reported in Table 4.2. A majority of the untreated cases, 68 per cent in the slum and 75 per cent in non-slum area, indicate that the ailment was not considered serious enough for seeking treatment. The second important reason for untreated illness is lack of finance (64 per cent in slum area). About 38 per cent in the slum area report adverse impact on family consumption as the reason for not taking any treatment.

Table 4.2

Reasons for Non- treatment of Illness: by Slum/Non-slum Category (multiple response)

Reasons for no treatment	Slum Area (n=105)		Non-Slum Are(n=4)		All (N=109)	
	n	%	n	%	N	%
Disease not so serious	71	67.6	3	75.0	74	67.9
Not enough money	67	63.8	1	25.0	68	62.4
Time consuming/lengthy treatment	8	7.6	1	25.0	9	8.3
No need of treatment/automatic cure	15	14.3	1	25.0	16	14.7
No members to accompany	2	1.9	0	0.0	2	1.8
Adverse impact on family consumption	40	38.1	0	0.0	40	36.7

The impact of ill health on well-being and health outcomes depends not only on whether people are sick, but also on whether they obtain appropriate preventative, or curative care. Timely preventive care can ameliorate adverse health outcomes and financial consequences in the future. Effective treatment for sick persons can reduce the length of time they are ill and the income losses associated with morbidity and premature mortality.

4.1.3 Cost Incurred for Treatment

Households are generally required to pay for healthcare related services obtained from private sources such as consultation fees and purchase of drugs. In addition, households frequently must also pay for diagnostic charges and transportation costs. Besides monetary costs, the consumers are faced with a whole set of non- monetary costs such as distance to be covered and travel time involved therein and the waiting time required to get access to the specified health services.

For the present study, information was obtained on costs incurred for treatment of sickness during the last month prior to the date of interview. Table 4.3 presents data on the total costs incurred for treatment related to sickness during last one month. This includes direct cost related to purchase of medicine besides the amount paid for ticket, consultation fees, and diagnostic test/fees including costs associated with transport, food and accommodation. On the average, an amount of Tk. 801 was spent by a slum household in connection with treatment of last month's sickness, compared to Tk. 1,356 spent by a non-slum household for treatment purposes. However, there is some variation in the average cost of treatment incurred by households belonging to different income quintiles in both slum and non-slum area.

Table 4.3

Cost incurred for Treatment during Last One Month: by Area

Cost of treatment (Tk.)	Slum households (n=1221)		Non- Slum households (n=518)	
	n	%	n	%
Up to 20	11	0.8	1	0.2
21-50	90	7.4	9	1.7
51-100	204	16.7	27	5.2
101-500	630	51.6	177	34.2
501-1,000	117	9.6	137	26.4
1,001-5,000	137	11.2	149	28.8
5,001-10,000	17	1.4	10	1.9
10,001-20,000	9	0.7	8	1.5
20,000+	6	0.5	0	0.0
Mean treatment cost	801	100.0	1,356	100.0

Table 4.4

Average Cost of Treatment Incurred by Quintile Group: by Area

Quintile Group	Slum households		Non-slum households		Both	
	No. of patients	Average cost of treatment (Tk.)	No. of patients	Average cost of treatment (Tk.)	No. of patients	Average cost of treatment (Tk.)
Q1 (poorest)	236	643	118	696	354	661
Q2	261	637	114	1,045	375	761
Q3	281	728	93	1,481	374	915
Q4	301	1,045	108	1,382	409	1,134
Q5 (richest)	266	902	92	2,434	358	1,296
Overall	1,345	801	525	1,356	1,870	957

Average cost of treatment incurred by Quintile Group (Table 4.4) reveals that on the average, Tk. 643 was spent by a slum household from the poorest quintile, compared to Tk. 902 spent by a household belonging to the richest quintile. Similar differential between the poorest and richest quintile was also found in the non-slum area, while Tk. 696 was spent by a household from the poorest quintile, the corresponding figure was Tk. 2,434 for the richest quintile. In general, amount incurred for treatment was lower for the poorer quintiles. In the slum area, the average amount spent on treatment by the richest household was 40 per cent higher than that of the poorest household (Tk. 902 vs Tk. 643). Similarly, in the non-slum area, mean expenditure incurred on illness treatment by a household from the richest quintile group was 3.5 times higher compared to the amount spent by a household from the poorest quintile (Tk. 2,434 vs Tk. 696).

4.1.4 Sources of Financing Treatment Cost

The present study also examined the sources used for financing treatment cost. The bulk of the treatment costs are financed either from regular income or from household savings, followed by borrowing from friends/relatives or moneylenders. However, there are major differences in the sources of financing between slum and non-slum households (Table 4.5).

The data suggest that resources at the household level available for medical care are limited for slum households. Due to poverty, an overwhelming proportion of household income is spent on food, leaving very little scope for spending on health care. In the slum area, about 18 per cent of the households utilised past savings to meet the cost, while 41 per cent utilised cash revenue/income. However, most of the slum households (about 50 per cent) had to either borrow from friends/relatives (39.6 per cent) or money lenders (9.9 per cent) or through distress sale/mortgage of property/asset (3.6 per cent) to meet the treatment cost.

By contrast, about four-fifths (79.5 per cent) of non-slum households utilised past savings and 71.5 per cent utilised cash revenue or income to finance treatment cost. The main reason for this differential is the fact that the income level of the non-slum

households is much higher resulting in higher savings potential, whereas due to very low income base of the slum households, most of their income is spent on buying daily necessities of life (mainly food items). This implies that in the case of sickness requiring treatment, a significant proportion of slum residents are forced to borrow money to meet the emergency. Table 4.5 makes it amply clear as to how the sample households are using different sources to finance treatment cost.

Table 4.5

Sources of Financing Treatment Cost: by Area

Source of treatment cost	Slum Area (n=738)		Non-Slum Area (n=347)	
	N	%	n	%
Cash income	303	41.1	276	79.5
Past savings	133	18.0	248	71.5
Loan from relatives/friends (without interest)	292	39.6	8	2.3
Loan from money lender (with high interest)	73	9.9	0	0.0
Sale of asset/property/ornaments	19	2.6		
Others	6	0.8	1	0.3

4.1.5 Impact of Treatment Cost on Household Consumption

Expenditure incurred for health care has some adverse impact on household consumption. The type of problems arising from health care expenditure may appear in the form of insufficient food for the family, children's education being affected or reduction in essential purchases. The data in Table 4.6 speak about the kind of inconvenience the households face in meeting their heath care needs. Treatment costs have had adverse effect on other household consumptions for a vast majority (89 per cent) of slum households, as compared to only 15.6 per cent of non-slum households. Expenditure on health resulted in withholding of other subsistence resources for 70 per cent of slum households, food consumption was reduced or there was inadequate food or expenditure had to be curtailed on other essential household items for another 78 per cent households, while 23 per cent households had problems in financing their children's education. It may be pointed out that, as mentioned earlier, a vast majority of the respondents in the slum area belong to households who fall below the poverty line and food expenditure alone accounts for a very large proportion of household budget for these households.

Table 4.6

Whether Any Adverse Impact on Household Consumption due to Cost Incurred for Treatment: by Area

Whether any adverse effect on consumption	Slum Area (n=738)		Non-Slum Area (n=347)		All (N=1085)	
	No.	%	No.	%	No.	%
Yes	657	89.0	54	15.6	781	72.0
No	81	11.0	293	84.4	304	28.0
If yes, then type of impact						
Insufficient food for the family	460	70.0	31	57.4	511	65.4
Essential purchases affected	512	77.9	25	46.3	625	80.0
Children's education interrupted	152	23.1	5	9.3	47	6.0
Treatment of other members hampered	68	10.4	16	12.9	84	10.8
Asset/property loss	13	2.0			14	1.8
Loan dependency	32	4.9	1	1.8	5	0.6

Most of our FGD participants mentioned that illness requiring treatment and hospitalisation has significant adverse implications for the economic well-being of affected households and individuals, particularly for poor households. One way by which this occurs is in the form of out-of-pocket health expenditures for diseases that are relatively expensive to treat or require hospitalisation. Another way in which illness can influence the economic well-being of affected households arises from incomes foregone on account of the morbidity of affected members, or taking time off from work to care for the sick. A single episode of hospitalisation can account for 30 to 50 per cent of annual per capita income, with the proportion being even higher for poorer groups. This can lead to tremendous financial burden on poor households leading to indebtedness, sometimes resulting in liquidation of their asset/property. This would certainly indicate that episodes of illness affect the economic position of the slum households rather badly.

Any hospitalisation involves a lot of expenditure so it is but obvious that the households belonging to lower income category would rely on different sources to finance their health care needs. The various sources utilised for meeting treatment costs include drawing from savings, borrowings from friends/moneylenders, distress sale of assets/household articles. Even that may not be sufficient to buy the medicine in full. Hospitalisation that requires surgical interventions or prolonged stay in the facility ruins the families both economically and physically. They have to spend money on medication and they also lose their incomes-in some cases for months together, particularly in cases where the patient himself/herself is the earning member. The consensus that emerged during FGDs is that: *"While the diseases mercilessly weaken the people, both physically and financially, the burden of treatment makes them more helpless, accelerating the process of pauperization."*

4.1.6 Disease Burden on the Poor

The distribution of households by average monthly income and by quintile group is presented in Table 4.7. The mean monthly income of slum households was Tk. 8,502. The proportion of monthly income spent for treatment purposes is shown in Table 4.8. On the whole, 9.4 per cent of monthly household income was spent on illness treatment in the slum area, as compared to 4.2 per cent of monthly income spent in the non-slum area (Table 4.8). However, there were wide variations between households in the richest and the poorest quintile with regard to the proportion of household income spent for treatment purposes.

In the slum area, households from the poorest quintile had to spend about 13.2 per cent of their income to meet the treatment cost of illness episodes (Table 4.8), which is a heavy burden by any reckoning. On the other hand, slum households from the richest quintile spent only 6.3 per cent of their household income for treatment of illness. However, the poorest households spent much less in absolute sense for treatment purposes compared to the richest households (Tk. 643 vs Tk. 902). This is primarily because of the fact that due to very low income of the poorest group, most of their income is spent on purchasing food and other daily necessities of life leaving very little scope for spending on health care. The findings clearly indicate that members from the poorer households have less access to resources available for health care and that they undergo a lot of economic pressure to finance their treatment cost/medical needs. Thus, for low-income households, there is a real risk of indebtedness in times of illness requiring treatment.

By contrast, the non-slum households spent much less proportion of their household income for treatment purposes compared to the slum households. Households belonging to the poorest quintile had to spend 5.7 per cent of monthly income on illness treatment, compared to 3.6 per cent spent by the richest households for treatment purpose. Thus, slum households are much more disadvantaged compared to their non-slum counterparts with regard to their health-seeking behaviour.

Table 4.7

Monthly Household Income by Quintile Group: by Area

Quintile Group	Slum Area		Non-Slum Area		All	
	No. of households	Mean Income	No. of households	Mean Income	No. of households	Mean Income
Q1 (poorest)	160	4,883	80	12,199	240	8,541
Q2	160	6,406	80	18,138	240	12,272
Q3	160	7,660	80	26,461	240	17,061
Q4	160	9,288	80	35,994	240	22,641
Q5 (richest)	160	14,274	80	67,188	240	40,731
Overall	800	8,502	400	31,996	1,200	20,249

Table 4.8

Cost of Treatment Incurred by Quintile Group: Slum and Non-slum Area

Quintile Group	Slum Area			Non-slum Area		
	Average monthly income	Average cost of treatment	% of income spent on treatment	Average monthly income	Average cost of treatment	% of income spent on treatment
Q1 (poorest)	4,883	643	13.2	12,199	696	5.7
Q2	6,406	637	9.9	18,138	1,045	5.8
Q3	7,660	728	9.5	26,461	1,481	5.6
Q4	9,288	1,045	11.3	35,994	1,382	3.8
Q5(Richest)	14,274	902	6.3	67,188	2,434	3.6
Total	8,502	801	9.4	31,996	1,356	4.2

4.1.7 Catastrophic Payment

An out-of-pocket payment for health care is considered catastrophic when the payment exceeds some threshold defined as a fraction of total household consumption or non-food consumption. Catastrophic payments (Berki 1986) are defined as a scenario in which households report in excess of a given threshold of medical expenditure during a year. The threshold could take cut-off point such as 5 per cent, 10 per cent, 15 per cent, 20 per cent and 25 per cent of households' overall spending (Merlis 2002, Xu *et al*. 2003 and 2007, Wagstaff and Van Doorslaer 2003, Van Doorslaer *et al*. 2007). However, in view of the widespread poverty and low levels of income of the slum residents, 7.5 per cent of total expenditure spent on health care may be considered as the standard cut-off point when the household is forced to cut down on subsistence needs, sell productive assets, incur debts, or be impoverished (as emerged during FGDs). If we take 7.5 per cent as the cut-off point for catastrophic payment, then according to the present study all the sample households in the slum area fall under this category of "catastrophic payments." To make matters worse, prolong treatment or any hospitalisation in the household involves huge expenditure, both medical and non-medical expenses, and this can very badly affect the household budget.

According to most of our FGD participants, the situation becomes really precarious for patients who need hospitalisation, especially in a private clinic/hospital. Even in the case of inpatient treatment in a government facility, when surgical intervention is required, the households have to incur a huge amount as out-of-pocket expenditures on medicines, diagnostic tests and other related items. To meet the hospitalisation expenses many households have to borrow money and even liquidate their asset.

It emerged during FGDs that any hospitalisation in the household involves huge expenditure, both medical and non-medical expenses, and this can very badly affect the household budget. This brings us to the question of providing financial protection to the poor households against such contingencies. Insurance scheme to cover the poor/or low-income households who are mostly in the informal or unorganised sector, can be devised. Also, even if the government hospitals want to levy user charges, people below a certain

income level should be exempt from paying such charges, and this could be achieved through proper targeting.

4.1.8 Professional versus Lay Care

People respond to illness in diverse modalities. However, for analytical purposes, these treatment types can be grouped under three broad categories: (i) the first category includes qualified allopath treatment (professional care) provided by MBBS doctors and trained specialists **(**qualified medical care/qualified allopath**)**, and those provided by medical assistants/trained paramedics/health workers/nurses with some training in diagnosing and treating common ailment; (ii) the second category includes those provided by drug sellers/pharmacy owners/traditional healers, herbalists, unqualified allopath/road side 'quacks' among others, without any professional training **(**lay care**)**; and (iii) the third category includes those provided by the sick individuals themselves or by their closest social and family network or instances in which common home remedies are employed **(**self care**)**.

Distribution of patients by type of care received during last month's sickness is presented in Table 4.9. As expected, reported professional care was found to be highest among the non-slum households and lowest among the slum dwellers. Of those persons who received treatment, a little less than a quarter (23.8 per cent) of the slum dwellers received professional care, 14.2 per cent managed with self care, while the most frequently used treatment type was unqualified practitioners of allopathic medicine (i.e. drug sellers/pharmacy salesmen/road side 'quacks'. Three out of every five sick persons (61.3 per cent) received lay care. However, the proportion receiving professional care was much higher in the non-slum area. Around three-fourths (72.4 per cent) of the non-slum patients received professional care, one fifth (20 per cent) received lay care, while only 7.5 per cent received self-care (Table 4.9). The location of the household (slum/non-slum) was significant in predicting health-seeking behaviour in general and professional care in particular.

Table 4.9

Type of Treatment Received: by Area

Type of Treatment	Slum Area		Non-Slum Area	
	No.	%	No.	%
Professional Care	291	23.8	377	72.4
Self-care	173	14.2	39	7.5
Lay Care	748	61.3	104	20.0
Others	9	0.7	1	0.2
Overall	1,221	100.0	521	100.0

4.1.9 Professional Care Received by Age and Gender

With regard to age of patient and professional care, major difference in health-seeking behaviour was observed between the aged (≥ 60 years) compared to other age groups (children below 15 years and adults 15-59 years) both in slum and non-slum area.

Elderly people were less likely to receive self-care/lay care and more likely to receive professional care. However, self care had only a marginal role in the health-seeking behaviour of the study population. Significant difference in professional care between the aged (≥ 60 years) compared to children below 15 years and adults 15-59 years was observed in slum area (53 per cent versus less than 25 per cent). Elderly people reported receiving significantly more use of health care from qualified professional during last month's sickness than did the children and younger adults both in slum and non-slum area (Table 4.10A).

With regard to age of patient and professional care for the non-slum households, the probability of receiving "professional care" was slightly more for children below 5 years compared to children 5-14 years and adults 15-49 years, with the highest probability for the oldest age group i.e. 60+ years) at 95.2 per cent, followed by 91.7 per cent for the 50-59 year age group.

Table 4.10A

Type of Treatment Received by Age of Patient: by Area (%)

Age group (years)	Slum Area					Non-Slum Area				
	Professional care	Self care	Lay care	Others	All	Professional care	Self care	Lay care	Others	All
0-4	22.5	11.0	65.7	0.8	100.0	73.1	8.3	18.2	0.4	100.0
5-14	21.8	17.0	61.2	0.0	100.0	68.6	8.6	22.9	0.0	100.0
15-49	25.6	17.9	56.0	0.5	100.0	68.8	5.8	25.3	0.0	100.0
50-59	20.8	16.7	54.2	8.3	100.0	91.7	8.3	0.0	0.0	100.0
60+	52.9	5.9	41.2	0.0	100.0	95.2	4.8	0.0	0.0	100.0
Overall	23.8	14.2	61.3	0.7	100.0	72.4	7.5	20.0	0.2	100.0

Table 4.10B

Type of Treatment Received by Gender of Patient: by Area (%)

Gender	Slum Area					Non-Slum Area				
	Professional care	Self care	Lay care	Others	All	Professional care	Self care	Lay care	Others	All
Male	22.5	13.7	63.1	0.7	100.0	73.0	8.4	18.3	0.4	100.0
Female	24.8	14.6	59.8	0.8	100.0	72.1	6.6	21.3	0.0	100.0
Overall	23.8	14.2	61.3	0.7	100.0	72.4	7.5	20.0	0.2	100.0

Distribution of patients by gender and type of care received during last month's sickness is presented in Table 4.10B. There was no major difference in health-seeking behaviour by gender of patient. In the slum area, the proportion receiving professional care was 22.5 per cent for males compared to 24.8 per cent for females. By contrast, in the non-slum area, the corresponding proportion who received professional care was 73.0 per cent for males compared to 72.1 per cent for females.

There were some variations in the probability of accessing qualified allopathic care for males compared to females depending on age of the patient (Tables 4.11A and 4.11B) in both the study locations. In the slum area, the probability of receiving professional

care was found to be greater for males than females both during childhood (under-five children) and later years of life (50+ years). On the other hand, the probability of receiving qualified allopathic care/professional care was found to be greater for females compared to males for the age bracket 15-49 years (i.e. during reproductive years).

However, this pattern was somewhat different in the non-slum area. The probability of receiving professional care was higher for male children (0-4 years) and also for male adults (15-49 years) compared to their female counterparts. By contrast, reported professional care was higher for oldest females (60+ years) than males of the same age group. Also, for children in the age bracket 5-14 years a higher proportion of girls than boys received professional care.

Table 4.11A

Type of Treatment Received by Age and Gender of Patient: Slum Area (%)

Age group (years)	Male					Female				
	Professional care	Self care	Lay care	Others	All	Professional care	Self care	Lay care	Others	All
0-4	23.2	12.3	63.9	0.6	100.0	21.6	9.6	67.7	1.0	100.0
5-14	20.6	14.4	64.9	0.0	100.0	23.1	19.8	57.1	0.0	100.0
15-49	20.6	17.4	61.3	0.6	100.0	28.8	18.2	52.5	0.4	100.0
50-59	25.0	0.0	62.5	12.5	100.0	18.8	25.0	50.0	6.3	100.0
60+	57.1	0.0	42.9	0.0	100.0	50.0	10.0	40.0	0.0	100.0
Overall	22.5	13.7	63.1	0.7	100.0	24.8	14.6	59.8	0.8	100.0

Table 4.11B

Type of Treatment Received by Age and Gender of Patient: Non-Slum Area (%)

Age group (years)	Male					Female				
	Professional care	Self care	Lay care	Others	All	Professional care	Self care	Lay care	Others	All
0-4	74.0	8.2	17.1	0.7	100.0	72.0	8.5	19.5	0.0	100.0
5-14	65.0	10.0	25.0	0.0	100.0	73.3	6.7	20.0	0.0	100.0
15-49	71.0	8.1	21.0	0.0	100.0	67.4	4.3	28.3	0.0	100.0
50-59	100.0	0.0	0.0	0.0	100.0	87.5	12.5	0.0	0.0	100.0
60+	90.9	9.1	0.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0
Overall	73.0	8.4	18.3	0.4	100.0	72.1	6.6	21.3	0.0	100.0

4.1.10 Professional Care Received by Education of Household Head

It is evident from Table 4.12 that educational level of the household head is an important determinant of receiving professional care. Patients receiving professional care was directly proportional with educational level of the household head in both slum and non-slum areas. Among the slum dwellers, the proportion who received professional care was lowest (21.8 per cent) if the household head was illiterate and highest (66.7 per cent) where the household head had college level education (bachelor degree and above). The findings show that patients from slum areas with household heads having the highest

grade of education was three times more likely to receive professional care compared to households where the head was illiterate (66.7 per cent vs 21.8 per cent).

Similarly, in the non-slum area proportion of sick persons receiving professional care was substantially lower at 53.8 per cent for members with the household head having no education at all. The proportion receiving professional care increased monotonically with the increase in the educational level of the household head beyond primary level. And the increase was most spectacular for household heads having graduation/bachelor degree level education. Patients from households with the head having the highest grade of education was 1.6 times more likely to receive professional care compared to their counterparts from households headed by illiterate persons (86.2 per cent vs 53.8 per cent).

Table 4.12

Type of Treatment Received by Education of Head: by Area (%)

Education Group	Slum Area					Non-slum Area				
	Professional care	Self care	Lay care	Others	All	Professional care	Self care	Lay care	Others	All
Illiterate/no formal education	21.8	13.8	63.5	0.9	100.0	53..8	10.3	35.9	0.0	100.0
Primary (1-5 years of schooling)	23.1	15.0	61.4	0.6	100.0	50.0	12.1	37.9	0.0	100.0
Class 6-9 completed	30.0	15.8	54.2	0.0	100.0	63.5	10.6	25.9	0.0	100.0
Secondary & Higher Secondary completed	44.7	10.5	44.7	0.0	100.0	75.9	5.9	18.2	0.0	100.0
Graduation completed	66.7	0.0	33.3	0.0	100.0	85.4	1.2	12.2	1.2	100.0
Post Graduation completed	0.0	0.0	0.0	0.0	0.0	86.2	9.2	4.6	0.0	100.0
Overall	23.8	14.2	61.3	0.7	100.0	72.4	7.5	20.0	0.2	100.0

4.1.11 Household Income and Professional Care

Proportion of patients who received professional care also varied depending on household income. It can be seen from Table 4.13 that in the slum area, the proportion of patients receiving professional care consistently increased as the level of household income increased, with the highest income group (Tk. 200,001+) also having the highest proportion receiving professional care. The findings imply that in the slum area patients belonging to households having highest income were 2.9 times more likely to receive professional care compared to their counterparts from the lowest income group (55.5 per cent vs 19.4 per cent). Similar trend was also observed in the non-slum area where patients from the richest households were 2.6 times more likely to receive professional care as compared to patients from the lowest income group (79.6 per cent vs 30.3 per cent).

Table 4.13

Type of Treatment Received by Monthly Household Income: by Area (%)

Income Group (Tk.)	Slum Area					Non-slum Area				
	Professional care	Self care	Lay care	Others	All	Professional care	Self care	Lay care	Others	All
Up to 5,000	19.4	14.6	66.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
5,001-10,000	22.2	13.0	64.1	0.7	100.0	30.3	15.2	54.5	0.0	100.0
10,001-15,000	28.3	18.2	52.0	1.5	100.0	59.8	12.1	28.0	0.0	100.0
15,001-20,000	36.4	11.4	52.3	0.0	100.0	69.0	5.7	24.1	1.1	100.0
20,001-30,000	55..5	8.3	36.2	0.0	100.0	81.0	7.1	11.9	0.0	100.0
30,001-50,000	0.0	0.0	0.0	0.0	0.0	86.8	5.3	7.9	0.0	100.0
50,000+	0.0	0.0	0.0	0.0	0.0	79.6	1.9	18.5	0.0	100.0
Total	23.8	14.2	61.3	0.7	100.0	72.4	7.5	20.0	0.2	100.0

4.1.12 Socio-economic Characteristics Affecting Professional Care

The probability of receiving "professional care" was to some extent predicted by education of household head (probability more if literate), and household income (probability more if household income > Tk. 10,000).

Poor socioeconomic condition (as proxied by education of household head and household income) was mostly associated with lower utilisation of professional care in both slum and non-slum areas. Literacy of the household head had a significant role in seeking healthcare in general, and health-seeking from qualified professionals in particular.

Area of residence (slum/non-slum), level of education and household income emerged as the three most significant determinants of health-seeking behaviour in this study population. Those with some education, better income and non-slum residence were found to be less likely to choose self-care/self-treatment or treatment from a drugstore/salesman, and more likely to seek care from a formally qualified allopathic practitioner. On the other hand, poor income and slum residence reduced the odds of seeking any formal allopathic care and increased the odds of choosing self-care/lay care.

Lay-care was used more frequently by the poorest group than any other group. For example, in the slum area, only one-third (36 per cent) of the patients from the highest income group sought care from the "unqualified" allopath-drug retailers/vendors (lay care), the corresponding figure for the poorest group was 66 per cent. Concomitant with the increase in household income or education of household head, there is a generalised decline in treatment-seeking from inefficient sources such as lay care/self-treatment.

Area of residence, age, gender, literacy of household head and income emerged as important determinants of treatment choice (professional versus lay care) among the surveyed households. There was no major difference in health-seeking behaviour by gender of patient and gender of head.

4.1.13 The Odds of Practicing Lay-care

Households living in the slum area were 3.06 times more likely to resort to lay care compared to non-slum households in the case of illness, while those located outside the slum area were 3.04 times more likely to resort to professional care. Thus, an overall shift in health-seeking behaviour of the whole study population was observed for households in non-slum area.

In summary, age and gender had a limited influence on use of professional care when compared with household income and education of household head. Area of residence poverty level of households was the key determinant shaping their health-seeking behaviour. The increase in education of head and household income was observed to increase the use of professional care, presumably through increase in the needed material and informational resources.

This study showed the importance of an emerging cadre of para-professionals as the main provider of health care to the disadvantaged groups. Self-care and lay care emerged as the pre-dominant therapeutic activity pursued by slum households.

4.2 Determinants of Professional Care

In this section, we present logistic regression models to identify the determinants of professional care. Since we have dichotomous data we construct separate logistic regression models for professional care received.

4.2.1 Variables Used in the Analysis

The variables used in the analysis of professional care determinants are area of residence, gender of household head, gender of patient, educational level (both head of household and spouse of head), monthly income, and age of patient. Here we present the significant factors in the probability of a person receiving professional care. The final model for testing is as follows:

Prob. (receiving professional care) = (Residence status, Education, Income, Gender of Head, Gender of patient, and Age of patient).

That is, residence status (slum/non-slum), education, monthly income, gender and age are the statistically significant predictors of professional care.

The area of residence is significantly related to receiving professional care in Dhaka city. Slum residence exerts a negative and statistically significant effect on professional care. The data show that the probability of receiving professional care is 2.3 times higher in non-slum area compared to slum area. The probable reason is that a person living in non-slum area is more likely to have higher incomes, with adequate funds to access quality treatment during illness and consequently the higher the probability of the person receiving professional care. Hence, it is logical to have positive relationship between receiving professional care and non-slum residence.

The effect of the education level dummy variables on receiving professional care is positive and statistically significant in the case of education of head beyond ninth grade.

Taking illiterate as the reference category, the chance of receiving professional care increases consistently with increase in the education of household head starting from SSC level and beyond (also statistically significant). For instance, the chance of receiving professional care is 1.8 times, 3.97 times and 4.99 times higher for the education groups SSC/HSC, graduates, and post-graduates respectively. A plausible explanation is that education increases the awareness regarding the need for treatment by qualified physicians and the better educated perhaps take the necessary steps to consult better qualified doctors while receiving treatment.

One important finding is that the effect of education of spouse on receiving professional care is somewhat dissimilar to that of education of head. The dummy variable to represent the educational attainment of spouse does show positive influence on chances of receiving professional care at all levels of education except the highest grade (post-graduation), but statistically significant only for primary and high school level (6-9 years of schooling). Taking illiterate as the reference category, the chance of receiving professional care is 1.97 times higher for the primary education group and 1.78 times higher for the high school education (6-9 years) group (and also statistically significant). Even though the chance of receiving professional care increases with the increase in years of schooling at the secondary/higher secondary and graduation level (being 54 per cent and 23 per cent higher respectively), but are not statistically significant. Surprisingly, the chance of receiving professional care declines at the highest grade, the reason for which is difficult to explain.

The effect of the educational level dummy variables on receiving professional care is positive and statistically significant in the case of education of head beyond ninth grade. By contrast, the effect of the education of spouse on receiving professional care is positive for all categories of education except the highest grade and statistically significant only in the case of primary and high school education.

The dummy variable to represent the income groups does not show any significant influence on receiving professional care for household income below Tk. 10,000.Taking Tk. 5,000 as the reference category, the chance of receiving professional care declines marginally for household income between Tk. 5,000 and 10,000, which indicates that there is no significant difference on the chances of receiving professional care between the lowest income group (Tk. 5,000 per month) and those having incomes between Tk. 5,001 and 10,000. But the chances of receiving professional care consistently increase for those with monthly income exceeding Tk. 10,000.

For instance, the chance of receiving professional care is 44 per cent and 56 per cent higher for the monthly income groups, Tk. 10,001-15,000 and TK. 15,001-20,000 respectively. This increasing trend continues further and also becomes statistically significantly for income group exceeding Tk. 20,000. For instance, the chance of receiving professional care is 2.8 times and 3.6 times higher for the monthly income groups of Tk. 20,001-30,000, and Tk. 30,000 + respectively (and also statistically significant).

Compared to females, the chance of receiving professional care is 17 per cent less for

males. Similarly, compared to the adults, the under five children have almost 2.5 times higher chance of receiving professional care, while it is 3.45 times higher for the 60+ years age groups (and also highly significant statistically). Similarly, the chance of receiving professional care is 19 per cent and 27 per cent higher for the 5-14 years and 50-59 years age groups respectively (but not statistically significant).

Simultaneous observation of the models of professional care reveals that significant predictors of professional care are residence (slum/non-slum), education of head and spouse, monthly income, and age of patient. One important finding is that gender is not a crucial determinant of professional care. It reveals that professional care, in general, is independent of gender of both the household head and the patient.

One important finding is that the major determinants of both morbidity (already shown on the earlier chapter, Table 3.13) and professional care (Table 4.14) are not much dissimilar. Simultaneous observation of the two models reveals that the socio-economic status is a crucial determinant of morbidity and professional care.

Table 4.14

Determinants of Type of Treatment Received

(1 if Professional Care and 0 if others).

Variables	Beta Co efficient	Odds Ratio
Study Area		
Slum Area$^{(R)}$		1
Non-slum Area	.839	2.315***
Gender of head		
Female$^{(R)}$		1
Male	-.191	.826
Gender of Patient		
Female$^{(R)}$		
Male	-.172	.842
Education of head		
Illiterate$^{(R)}$		1
Primary (1-5)	-.263	.769
Class 6-9 Completed	-.020	.980
Secondary & Higher Secondary Completed	.590	1.805**
Graduation Completed	1.378	3.969***
Post Graduation Completed	1.607	4.989***
Education of spouse of head		
Illiterate$^{(R)}$		1
Primary (1-5)	.678	1.969***

(Contd. Table 4.14)

Variables	Beta Co efficient	Odds Ratio
Class 6-9 Completed	.578	1.783***
Secondary & Higher Secondary Completed	.433	1.542
Graduation Completed	.208	1.232
Post Graduation Completed	-.536	.585
Age of Patient		
15-49 yrs$^{(R)}$		1
0-4 yrs	.901	2.463***
5-14 yrs	.173	1.189
50-59 yrs	.239	1.270
60+ yrs	1.238	3.450***
Monthly Household Income		
Up to 5,000$^{(R)}$		1
5,001-10,000	-.005	.995
10,001-15,000	.362	1.436
15,001-20,000	.444	1.559
20,001-30,000	1.031	2.805***
30,000+	1.280	3.598***
Constant	-2.126	.119

Notes: (R) Reference category.

*** denotes significance at 0.99 confidence level;

** denotes significance at 0.95 confidence level;

* denotes significance at 0.90 confidence level.

CHAPTER 5

MAJOR ISSUES IN HEALTH-SEEKING BEHAVIOUR, CONCLUDING REMARKS AND RECOMMENDATIONS

5.1 Access to and Utilisation of Health Services

Availability of health facilities and services is an essential prerequisite for access to health care. To be effective, health services should be available, accessible and affordable. But mere availability of health facilities does not result in their utilisation. Accessibility has a number of key dimensions including physical, information and economic accessibility:

(i) Physical accessibility (distance, travel time and travel costs);

(ii) Economic accessibility (cost of medicine, cost of consultation, cost of hospitalisation, cost incurred with respect to various tests/investigations);

(iii) Social and cultural context (gender/poverty) affecting accessibility;

(iv) Perceived quality of services:

- availability of doctors/nurses
- availability of medicine/MSR
- attitude of service providers (doctors/nurses).

Accessibility is an important factor and often a determining factor in fighting episodes of illness. Along with physical inaccessibility, financial inaccessibility is also very important. Costs of health care, especially cost of medicine, cost of diagnostic test including consultation fees, are beyond the reach of poor people.

Accessibility is determined by the availability and affordability of services. Although the urban poor can manage most of the basic human services informally by themselves, to survive, however, health services are the one area that is beyond their control. Even though some services are provided by public facilities, but these services are quite limited. On the other hand, their earnings are so low that expenditures for health care constitute a negligible amount. The general tendency of the urban poor is to spend a higher proportion of their income on food and housing, while lower priority is given to health and education because of costs.

Economic accessibility' means that health facilities, goods and services (drugs and other treatment related items) must be affordable by all. But the findings from the present study suggest that out of pocket expenses have major consequences in the process of seeking care. Government facilities are the last resort for the hapless poor who cannot afford to consult a private qualified doctor. But the evidence shows that doctors do not pay adequate attention to the patients who visit hospitals for obtaining services, that doctors/nurses are not available in the facilities, that patients are required to make informal payments to access services. There are a number of problems in the public health service provision, which contribute to poor quality of services. The poor quality of

services is indicated by non-availability of medicines and supplies, informal payments, staff absenteeism, inadequate attention given by doctors, etc.

5.2 The Urban Poor and Access to Services

As people migrate to urban areas for security and a better life, the urbanisation process in Bangladesh constitutes a major demographic issue of the 21st century. A direct result of this urban population explosion has been a tremendous increase in the urban slum population with inadequate access to basic amenities, especially health and sanitation facilities.

Out of an estimated population of 16.4 million in Dhaka city, about a third of the population are slum dwellers. In Dhaka city, there are over 3,500 slums, having a population of more than 5 million. They are in a vicious circle: too little or inadequate food, poor nutrition, polluted water and air, lack of education, poor sanitation and overall low levels of living–a violent environment breeding suspicion and violence. Conditions such as these do not only lead to ill-health, they amount in themselves to the lack of social well-being referred to in WHO's definition of health. In reality, a slum is a swamp of mud, excrement, garbage, mosquitoes and disease.

It is difficult to estimate the poor and slum population living in urban areas. Of the total number of slum population in the divisional cities of the country, more than 50 per cent live in Dhaka. The slum population in Dhaka increased from 1.5 million to 3.4 million between 1996 and 2005, and to a staggering 5 million in 2017. The actual facts about the urban poor, especially relating to their health and nutritional status remain hidden. Although slum peopale in general suffer from ill-health, the conditions of slum women and children are much worse than those of males and adults.

Bangladesh is urbanising rapidly, and so is urban poverty, since urbanisation is taking place without the desired level of development. The rapid growth of urbanisation is not commensurate with a high level of economic development; rather, it causes massive poverty in urban areas since adequate job opportunities are not created. Nearly one-third of the urban population is living in poverty, while one quarter is extremely poor.

Almost two-thirds of the employment in manufacturing, trade, transportation and commerce is concentrated in the urban areas. However, the benefits of the urban growth are not shared by all those living in the urban areas. This manifests itself as large numbers of urban poor are being "left behind." There is a continuum of the urban extreme poor extending from the most vulnerable poor, with least security of tenure, from the pavement dwellers to the squatter/slum dwellers. The urban poor often are unskilled and poorly paid as the poor lack the education and skills for higher paid formal sector employment. Many slum dwellers remain marginally employed in unproductive work or are unemployed. Such persons are considered a burden from the economic point of view and are vulnerable from the health point of view.

Hundreds of thousands of homeless people live in the slum areas or on pavements and streets of Dhaka city. Most of them have lost their lands, homes and livelihoods in the villages (due to flood, cyclone, river erosion and other natural calamities) and have come to the city in search of work. Some of them have been driven away from their

villages by social/political (local) unrest or unemployment. Many women who are widowed, divorced or abandoned by their husbands have taken to the streets. Others, lured by expectation of better job prospect and similar temptations, eventually end up homeless in the city pavements trapped in the vicious cycle of poverty.

Once in the city, they suffer from insecurity of shelter and livelihoods. They work as waste collectors, construction labourers, domestic help, vegetable vendors, rickshaw or van pullers, porters at transport centres (bus/rail stations) and labourers who unload trucks/lorries in the market centres. Major problems that arise in such contexts are unhygienic accommodation, inadequate water supply, sanitation and solid waste disposal, inadequate food supplies and increasing demand for health care and social services. An operational definition of the term "slum" agreed upon by experts at a 2002 meeting of the United Nations Human Settlements Programme (UN-Habitat 2003:12) is:

"A contiguous settlement where the inhabitants are characterised as having inadequate housing and basic services" (i.e. access to water, sanitation, security of tenure, durability of housing and sufficient living area.

Over the last few decades, Bangladesh has witnessed a rapid growth in urban localities characterised by overcrowding, congestion and unsanitary conditions. In Dhaka city, the problems became one of *"packing as many people as possible, as fast as possible, somewhere, somehow, anyhow."* The pollution, congestion, the lack of clean water and the problem people have in accessing even rudimentary health care mean that morbidity and mortality is much higher but access to qualified practitioner/professional care is poor and inadequate. Thus, in an urban slum environment, overcrowding and poor basic amenities coupled with the possibility of inadequate water availabiliy result in higher sickness and death rates. Access to safe and adequate water supplies, along with proper sanitation facilities, is urgently needed for combating various infectious diseases.

Slum residents face a higher prevalence of diseases which has devastating effects for the family, for example, when an adult member gets seriously ill and cannot work for days together the family members are likely to face adverse situation with regard to food and other essential commodities. Not only morbidity is high for the slum dwellers, they are also characterised by poor health-seeking behaviour, unable to access free healthcare and consume an inadequate/unhealthy diet, resulting in high levels of malnutrition, leading especially to underweight babies and stunting in children with associated long-term detrimental impacts.

One of the current challenges in the field of public health is how health services can reach the poor and other disadvantaged groups so as to overcome the "inverse care law" which stipulates that availability of good health services tend to vary inversely with the need for it (Yazbeck and Gwatkin 2005, Hart 2004). Empirical evidence from countries across Asia also reiterates the importance of health systems design, over and above economic growth, for the protection of poor against catastrophic expenditure (Rannan-Eliya and Somanathan 2005).

Encouraging evidence from around the world shows that this is possible through a variety of policies and approaches such as demand-side subsidies, community-based micro health insurance involving the community in participatory health planning and management, etc. (Yazbeck and Gwatkin 2005).

However, health system is one of the many determinants of health, the others being socio-economic (including entitlement to food, education, social capital), biological, environmental (including water and sanitation) and behavioural (including gender and cultural) factors (Mackenbach and Howden-Chapman 2003, Diderichsen, Evans and Whitehead 2001, Szeter 1999, Baum 1995). Given these, it is also important how health system is organised to provide "access according to need" and "equal access for equal need" (Gillström 2001, Bunker 2001).

5.3 Slum Residence and Health-seeking Behaviour

Poor people and residents of slums are likely to be especially vulnerable to illness because of the generally unhygienic conditions in which they live, and their low levels of awareness of preventive care. In the present study it has been observed that within urban areas, the slum dwellers suffered higher morbidity than non-slum dwellers in each age group, gender group, education, and income group.

The findings clearly show that the members of the slum households have higher risk of being sick at any point in time; and once they fall sick, they are more likely to receive treatment from unqualified practitioners, compared to their counterparts from non-slum area, who are more likely to receive treatment from qualified practitioners.

It has been found that among the slum households about a tenth (9.2 per cent) of the illnesses did not receive any treatment from any source whatsoever. Of those who received some kind of care, only about a fourth (23.8 per cent) consulted qualified doctors, while the largest proportion three out of every five sick people (61.3 per cent) were treated by unqualified providers/drug sellers, having no formal training, and another 14 per cent managed with self-care.

But the pattern of health seeking behaviour was quite different in the case of the non-slum households. About three-fourths of the illnesses (72.4 per cent) in the non-slum area received treatment from qualified physicians, while a fifth of the illnesses (20 per cent) were treated by unqualified practitioners/drug sellers, and another 7.5 per cent managed their illnesses at home (through self-treatment/self-care). The findings imply that patients from non-slum area were at least three times more likely to receive professional care as compared to their counterparts from slum area (72.4 per cent vs 23.8 per cent).

Thus, for the poor living in urban slums, unqualified providers-be they unqualified allopath (quacks), pharmacist/drug sellers, traditional healers (homeopath, *kabiraj/hekim)* or faith healers–play a vital role in the provision of health services to the population.

This is a depressing scenario where there is a network of public health facilities–medical college hospitals, specialised hospitals, clinics/health centres, dispensaries, and training centres in Dhaka city, including hospitals of other organised sectors, and voluntary and private hospitals. However, by its very design, urban health care is biased in favour of public sector employees, workers in the organised sector, and persons in the higher income categories. As a result, large segments of the slum population have limited or no access to the effective health services at all, and for many of the rest, the care they receive is inadequate. The long waiting time, high cost of medicine, and the un-helping/indifferent attitude of doctors/nurses are some of the factors which discourage the poor from using public health facilities.

It is evident that despite the large expenditures on health, and the technical feasibility of dealing with many of the most common health problems, efforts to improve health have had modest impact on the health of the vast majority of the slum population in Dhaka city. This is commonly attributed to two main reasons. First, health activities have typically over emphasized sophisticated, hospital based care, while neglecting preventive public health programme and simple primary care provided at conveniently located facilities. Second, even where health facilities have been geographically and economically accessible to the poor, deficiencies in logistics, inadequate training of staff, poor supervision, inappropriate services, indifferent attitude of doctors, nurses and other hospital staff, and lack of social acceptability have often compromised the quality of the care they offer and limited their usefulness.

5.4 Where do Slum Dwellers Go for Treatment?

The findings show that the most preferred category of physicians availed of by slum households was unqualified allopath practitioners/drug sellers. When asked about their first point of contact during an illness, almost two-thirds of the FGD participants cited drug sellers/chemist shops/unqualified allopath as their preferred provider, making them the most popular choice for the treatment of diseases. The other popular facilities, reported by FGD participants, include getting services from the government facilities/health centres. NGO services are also popular among the poor, the NGO clinics are preferred over private hospitals mainly because of cost considerations. Some respondents also consulted qualified doctors at their private chambers. In the case of minor illnesses (e.g. fever, cough and cold, stomach pain and diarrhoea), people usually opt for self-treatment by procuring medicine directly from a dispensary or go to unqualified practitioners/traditional healers. NGO facilities or private not-for-profit/low-cost hospitals were also visited for minor illnesses, but these facilities are usually visited when diseases are not cured/successfully treated by the initially consulted sources.

It may be mentioned here that unqualified allopath/drug sellers/quacks consist of those having dubious qualifications and degree or having no qualifications at all, such as those who have worked as helpers, compounders or assistants for other doctors or have worked in a government health facility/centre as assistants for a period of time and have picked up the skill in the process.

Among the various factors, proximity to home is the most dominant one influencing the choice of providers. A facility within walking distance was the first point of contact in most cases of minor illness. The second key factor was low cost. Some respondents mentioned more than one reason for choosing their providers. For instance, many respondents said that proximity, low cost and simplicity (no waiting time) were the main reasons for preferring their provider. These factors were influential, particularly in cases where lay care was sought including traditional healers and chemist shops. NGO facilities were also preferred because of cost-free treatment.

It emerged during FGDs that the treatment-seeking pattern of the urban poor depends on the severity of the illness. In the case of minor illnesses, they do not consult any doctor at all. Only in the case of major illnesses, do they opt for medically trained providers. Multiple sources of treatment are found to be utilised in the study areas,

including dispensaries/chemist shops, private for-profit and not-for-profit clinics, public hospitals, NGOs and traditional/or spiritual healers.

The FGD evidence suggests that a high proportion of patients prefer to use private for profit providers despite higher fees/charges in the private sector. The reasons for this pattern of utilisation are many and have been attributed mostly to issues of acceptability, including greater ease of access, shorter waiting periods, longer or more flexible opening hours, availability of adequate staff and drugs, more sensitive health worker, i.e. client friendly attitudes, and greater confidentiality in dealing with diseases.

Underutilisation of existing public health facilities seems to be a common phenomenon in the slum area. People consult unqualified allopath or traditional healers more frequently rather than going to government hospitals/health facilities mainly because they derive more satisfaction from the former compared to the latter. The quality of services at the government health facilities is perceived to be "poor" as emerged during FGDs. In the opinion of majority of FGD participants:

> *"Diagnoses are made, in most cases, on the basis of the first words uttered by the patient and are at the simplest possible level. Each takes one or two minutes. Patients have very little scope to talk to the doctor about the disease, its causes and possible preventions."*

5.5 Why Public Facilities are not Utilised?

A wide range of health care facilities are available in Dhaka city-from those provided by untrained practitioners to those provided by highly qualified practitioners of modern medicine. Persons in need of health care have the choice of using either modern or traditional health care provided by untrained practitioners. The modern sector consists of government services and services provided by quasi-public agencies such as non-governmental organisations (NGOs), private clinic/hospitals, while the lay care sector consists of private providers like unqualified allopath doctors/drug sellers, homeopaths, *kabiraj, hekim* and spiritual healers.

The choice of care is determined by various factors, which include proximity to the home, low cost, the reputation/good will of the facility, referrals, less time required for care and personal beliefs. During FGDs, the respondents mentioned more than one reason.

Although most of the public facilities are supposed to provide free services, the slum dwellers do not prefer them for minor illnesses, as the service hours (most often from 9 a.m. to 1 p.m.) conflicted with their working hours. Again, even if services are supposed to be free of cost at government health facilities, there are other costs involved. Most households find that waiting times are too long at these facilities. Besides, doctors' apathy towards patients, non-availability or inadequate supply of medicine including other logistics, and unofficial payments demanded by physicians and supporting staff act as strong deterrents to the use of government health facilities.

The main feature of health-seeking behaviour in Dhaka city as well as in Bangladesh is that dependence on private health care is quite high even among the lower income groups, especially in slum areas. The low utilisation of public health facilities/centers is

mainly due to lack of medicines and other supplies, absenteeism of doctors, and indifferent attitude of service providers in government hospitals.

The major points as emerged from FGDs was that quality of public health services is substandard and patients must pay for transport, consultation, medicine and bribes to receive even the so-called "free services." Corruption was found to be pervasive in the public hospitals. Several participants mentioned: "*Doctors and nurses are unaccountable, lower level hospital staffs are thoroughly corrupt and not challenged for their dishonest acts."*

Doctors in general and nurses in particular are not at all sincere in their duties towards the poor patients. Even after repeated calls, nurses do not attend to the needs of the inpatients. Sometimes, they are found to waste their time gossiping with friends/colleagues, when patients' needs are neglected, or done without giving proper care and attention. Most of the FGD participants said, *"Staffs at the lower rung of the hospitals consist of insincere and dishonest people who are stealing whatever they can, including charging extra fees, or bribes from the patients*."

A group of poor slum patients telling the same account when asked why then they go to the hospital. They said: *"They go to the public hospital for the bed and diagnosis. The prescribed medicine has to be bought on the open market, even injections, and the food is so sub-standard that it cannot be eaten."*

A number of FGD participants stated that doctors work lesser hours than the scheduled working hour in public facilities. Though it is recorded as "present" on paper, in reality, they remain outside for few hours during usual office hours.

One respondent said:

> *"It is common for many doctors to come late in the facility and leave early. During their short working hours, they have to treat a huge number of patients, and therefore they cannot give enough time to a single patient."*

Whether reflecting actual or only perceptions, our FGD findings show that there is a large majority of participants who find that doctors are not available, that support staff is showing a hostile attitude, that nurses and ward boys are not available, and that they behave unkindly. These observations leave one with a picture of a public health system which is incapable of managing its staff's behaviour or ensure quality of services. The combination of this poor governance and absence of managerial reaction, and strong economical interests in the present extortion of patients makes it next to impossible to manage human resources. There is no doubt that this state of affairs negatively affects the quality of services rendered to patients.

Most of the FGD participants maintain that when they need medical attention, they receive deficient treatment at the hands of public doctors and staff at the hospital. The consensus from FGDs with patients is that:

> *"Going to the hospital costs money but does not necessarily result in service. Doctors behave badly with poor people and show reluctance to talk to them."*

Bangladesh government spends substantial amounts of money on health services; nonetheless, dissatisfaction is frequently expressed over the performance and quality

of these services. Staff absenteeism, charging of unofficial fees and lack of MSR supply have long been discussed as impediments to effective public health services. Lack of medicines and charging of unofficial fees is a major concern for government health facilities in Dhaka city, voiced by both in-and outpatients and in focus group discussions.

Health care provision involves a complex series of transactions between health service providers and consumers. In the case of the health sector, good governance and management of these transactions are essential to ensure that the right services are delivered to the right people at the right time and at the lowest possible price. It follows, therefore, that poor governance negatively impacts service delivery. Essentially, it is the poor and vulnerable members of society who are particularly prone to the largest burden of cost and deficient service delivery. The symptoms are staff absenteeism, pilferage of drugs and other supplies, and unauthorised or informal payments collected from patients visiting the public health facility.

The findings (as revealed from the field survey and FGDs) show that government efforts to improve health service delivery have not yet produced the desired results. Interaction between service providers and patients is not always direct and the latter are often required to go through intermediaries to get access. These intermediaries are very influential and are able to accelerate access to services by circumventing the system, in return for a fee. They facilitate "illegal" connections to essential services like getting admitted into a hospital or obtaining other services from the hospital. Once having access, patients encounter numerous problems getting the required medicine, care and attention by the service providers. In addition, they have to pay unofficial charges for various tests/investigations required to be done while at the hospital.

5.6 Cost of Treatment and the Urban Poor

Hard socio-economic reality (poverty, landlessness, river erosion, floods, droughts, etc.) has pushed the rural people to migrate to urban areas for better income. But once in the city, they have to live a very measurable life characterised by air and water pollution, inadequate food and insufficient income. They are not only living in an unhealthy environment but also they have limited access to quality health care during sickness due to financial constraints.

From an economic perspective, healthcare utilisation decisions depend on the relative magnitude of costs and benefits involved from the standpoint of persons who make these decisions to use healthcare for themselves or for others. The costs of seeking care typically include financial expenses and income losses that may be incurred as a result. Income losses can be high if considerable time is spent in commuting or standing in queues to obtain medical care. For the same reasons, the amounts paid for healthcare services, such as consultation fees, cost of medicine and hospital charges, are also likely to be an important determinant of health care utilisation.

The findings from the present study show that overall, 9.4 per cent of monthly household income was spent on illness treatment by slum residents. But the poorest households (poorest quintile) had to spend about 13.2 per cent of their household income to meet the cost of illness episodes, which is a heavy burden. On the other hand, the

richest quintile spent only 6.3 per cent of monthly income for treatment purposes. However, in absolute sense, the poorest quintile spent much less for treatment purposes compared to their richest counterparts (Tk. 643 vs Tk. 902)

It has been found that the non-slum households spent a lesser proportion of their income for treatment purposes. On the average, the non-slum households spent 4.2 per cent of their monthly income on illness treatment. While the poorest quintile spent 5.7 per cent of their income for treatment of illness episode, the richest households spent only 3.6 per cent of their income.

The data suggest that resources available at the household level for medical care are limited for the (poor) slum dwellers, where an overwhelming proportion of household income is spent on food, leaving very little scope for spending on health care. Any hospitalisation involves a lot of expenditure so it is but obvious that the households belonging to lower income category would rely on different sources to finance their health care needs. The various sources utilised for meeting treatment costs include drawing from savings, borrowings from friends/moneylenders, distress sale of asset/household articles. Even that may not be sufficient to buy the medicine in full. Hospitalisation that requires surgical interventions or prolonged stay in the facility ruins the families, both economically and physically. They have to spend money on medication and they also lose their incomes–in some cases for months together, particularly so where the patient himself/herself is the earning member.

It has been found that 89 per cent of slum households were adversely affected because of expenses incurred on health grounds. Thus, illness requiring treatment and hospitalisation has significant adverse implications for the economic well-being of affected households and individuals, particularly for poor households. The consensus that emerged during FGDs is that:

> *"While the diseases mercilessly weaken the people, both physically and financially, the burden of treatment makes them more helpless, accelerating the process of pauperisation."*

The impact of ill health on well-being and health outcomes depends not only on whether people are sick, but also on whether they obtain appropriate preventative, or curative care. Timely preventive care can ameliorate adverse health outcomes and financial consequences in the future. Effective treatment for sick persons can reduce the length of time they are ill and the income losses associated with morbidity and premature mortality.

There are other factors that influence healthcare utilisation behaviour. For people living in non-slum area with higher income and better education, the perceived benefits from effective treatment and/or preventive care may be higher than those living in slum areas. Benefits could be higher for individuals in non-slum area, whose health is considered intrinsically more important, compared to people living in slum areas.

Finally, economic status is important. The perceived need for medical care would depend both on the availability of healthcare facilities and the capacity to pay for health services. Analysis based on our survey reveals that the percentage of untreated illnesses decreases with an increase in the economic status of the household, indicating that economic reasons do play an important role in the decision to seek treatment, and the

perceived need for treatment depends largely on the ability of the person to seek treatment. The present study shows that within the sample households, members from slum households have less access to resources available for healthcare, a problem that may be especially acute for older persons or children at younger ages.

5.7 Poverty Affecting Health-seeking Behaviour

Poverty is the "biggest barrier" in health care that the slum community faces due to the two way causal relationship between poverty and health: *poverty breeds ill-health, and ill-health keeps poor people poor*. Poverty affects health through poor nutrition, environmental degradation, illiteracy, harmful lifestyle, social exclusion, and lack of access to healthcare.

The other side of the coin is the fact that the cost of healthcare can be a strong determinant of its use as well as a cause of poverty. The income erosion effect of ill health for the poor households in Bangladesh, especially the extreme poor, has been well documented (, Sen 1997, Hulme 2003, Sen 2003, Kabir *et al.* 2000, Mannan 2013). The burden of income loss is estimated to represent "about a tenth of extreme poor's income" and health related shocks "explain 16 per cent of all cases of downward movement along the poverty spiral."

The findings of the present study also show that of all risks facing poor households, health risks probably pose the greatest threat to their lives and livelihoods. During FGDs, ill-health emerged as the single most common trigger for the downward slide into poverty, and ill-health is perceived by the poor both "as a cause of increased poverty and as an obstacle to escaping from poverty."

Underlying the adverse impact on households are crisis coping mechanisms like selling of productive assets, mortgaging land, or borrowing from moneylenders at high interest rates. All these factors push these households into a poverty trap from which they rarely recover. Thus, good targeted health interventions have potential poverty-alleviating effect for the poor.

Cost burdens of healthcare may deter or delay healthcare utilisation or promote use of less effective healthcare sources or practices, particularly by the poor. It has been found during fieldwork and FGDs that the poor and disadvantaged households with only a few assets are likely to struggle to meet even small extra-budgetary expenses. The burden of OOP payment depends not only on the size of catastrophic expenses but also on the strategies adopted for financing health expenses. Households usually adopt different strategies (such as regular income, accumulated savings, borrowing, asset depletion and so on) for meeting the healthcare expenses. Economically some strategies, such as borrowing and asset depletion prove burdensome than using up income and accumulated savings.

The triad of poverty, health-service requiring payments, and the failure of social mechanisms to pool financial risks combine to cause "catastrophic health expenditure" for households living in slum areas. Moreover, costs of hospitalisation and out-of-pocket expenses for private services constitute a major "poverty trap" and is a matter of great concern for the slum dwellers.

Poverty affects both preventive and curative aspects of health. At the preventive level, the poor have inadequate ability to acquire a nutritious diet, better living and working conditions and other attendant factors that would prevent ill-health. The result is endemic occurrence of communicable diseases and diseases related to deficient nutrition. At the same time, health care services available to the poor in terms of physical accessibility, monetary cost and effectiveness are minimal. The negative effect of poverty on women's health is even more acute because of the existing gender bias against women.

5.8 Concluding Remarks

In Bangladesh, an increasing proportion of the population now live in urban slums, and it is in the urban slums of Dhaka that about five million people reside. These slums are characterised by overcrowding, poor housing, unsanitary conditions, or absence of basic facilities or amenities (including access to pure drinking water), all of which endanger their health. Every known rule of sanitation is disregarded in the slum areas (which have the largest population per square kilometre of any city in the world) and consequently a vast majority of slum dwellers suffer from high rates of morbidity and mortality. Economically affected, socially excluded, and environmentally displaced people are joining urban areas as day labourers, construction workers, porters, hotel boys, rickshaw/van pullers, petty traders, domestic workers, etc. with inadequate access to health services.

Slum residents often find themselves enveloped in a battle for survival against disease, inadequate shelter, a lack of basic services and poor nutrition. Every aspect of a slum resident's life is adversely affected: their emotional well-being, physical security, mental development and overall health. It deprives them of the right to live in a hygienic environment, exposing them to a world of violence, abuse and exploitation. Slum children, whose rights to safety and dignity are denied, are the worst sufferers. They become victims of exploitation, violence and abuse, which rob them of their childhood, preventing them from fulfilling anything close to their full potential. Without any support from the society and the government, slum dwellers struggle constantly for their survival working tirelessly to eke out an existence.

The present study is an attempt to examine the pattern of morbidity and health care utilisation by the urban poor, living in the slums of Dhaka city. More specifically, the study focus has been directed to the following three questions with regard to disease burden on the poor. First, what is the morbidity pattern among the slum-dwellers in Dhaka city? Second, what do the slum-dwellers do in case of illness and which category of health practitioners (qualified/unqualified) do they consult/visit? Third, how much money do they spend on health care and what are the sources?

Moreover, an attempt has been made to estimate self-reported morbidity, the proportion of individuals seeking care given the reported morbidity, determinants of morbidity, and the utilisation of professional care during sickness. It has been found that poor people and residents of slums are especially vulnerable to illness because of the generally unhygienic conditions in which they live, and their low levels of awareness of preventive care. The findings from the present study show that within urban areas, the slum dwellers suffered higher morbidity than non-slum dwellers in each age group,

income group and education group. Not only the slum dwellers are likely to suffer from higher morbidity, they are also less likely to receive professional care during sickness.

Households living in the slum area were 3.06 times more likely to resort to lay care in case of illness compared to non-slum households. On the other hand, non-slum households were 3.04 times more likely compared to slum households to resort to professional care. Thus, an overall shift in health-seeking behaviour of the whole study population was observed for households in non-slum area. In this paper, we have used logistic regression models to identify the determinants of morbidity and professional care (e.g. utilisation of professional vs lay care).

Simultaneous observation of the models of morbidity reveals that significant predictors of morbidity are residence (slum/non-slum), monthly income, age and gender. One important finding is that education is not a crucial determinant of morbidity prevalence.

Similarly, with regard to determinants of professional care, simultaneous observation of the models of professional care reveals that significant predictors of professional care are residence (slum/non-slum), education of head and spouse, monthly income, and age of patient. One important finding is that gender is not a crucial determinant of professional care. It reveals that professional care is, in general, independent of gender of both the household head and patient.

Lack of awareness regarding preventive health care and available facilities may be particularly acute for slum residents who are new migrants to the cities. Low income households living in slums are also susceptible to the economic shocks associated with serious diseases, given their high dependence on labour income, and their having low levels of savings so that there is a real risk of indebtedness in times illness (requiring hospitalisation or prolonged treatment). Nutrition and health care is a constant worry for the slum people. And for the vast majority of slum dwellers who live in abject poverty, attaining the purchasing power to buy the essential food items and to consult qualified doctors in case of illness is a far off dream.

As people stream into the city in search of jobs, the obvious questions arise: How will they be housed? How do they dispose of wastes? Can they escape avoidable illness? Do they have access to modern health care? With the increase of urban population, environmental concerns such as adequate housing and sanitation, clean air to breathe, potable water, and access to health services are increasingly being expressed.

Health is now universally regarded as an important index of human development. Better health is both an objective of and an instrument for development. And it is very important to realise this when we look at development at large. Whenever the health component is forgotten, we forget, at the same time, the vital factor in development, namely the human being–his creative energy, his physical energy. Ill health is both the cause and effect of poverty, illiteracy and ignorance. Policies of human development not only raise the income of the people but also improve other components of their standard of living, such as life expectancy, health, literacy, knowledge and control over their destiny. Health is both a major pathway to human development and an end product of it. Health and development converge and contribute to each other. While it is true that health is not everything, it is also true that without health, everything else is nothing.

Poor health tends to increase poverty in two ways: (a) indirectly, through its negative impact on growth and development; and (b) directly, through the vicious circle of poverty, i.e. malnutrition, disease, unemployment or underemployment, low income, poor housing, low level of education, low productivity, inadequate access to clean drinking water and health care services. In addition, the poor are more likely to suffer as a result of degradation of the environment and discrimination.

There are reasons to believe that adequate health services can contribute to wellbeing in various forms. For example, health intervention is likely to reduce workday loss caused by illnesses which invariably raises income, particularly among the poor. Primary health care can reduce the incidence of disease that, in turn, can reduce treatment cost. Thus, investment for health is considered an important component of poverty reduction because the adverse effects of ill health are greatest for the poor. The reasons for this are twofold: first, poor people are more susceptible to illness, die younger and suffer more from disability than others; second, their income depends exclusively on physical labour.

Health has importance in three distinct ways: (a) intrinsic importance, (b) instrumental importance at personal and social levels, and (c) empowerment importance. In intrinsic sense, health is important, because it is a direct measure of human well-being. It is fulfillment of life and a valuable achievement in itself. In the instrumental sense, better health is important in many ways. For example, good health has an economic rationale. Better health reduces medical costs, both of the government and of the households. In the case of children, better health leads to better attendance in school and higher levels of knowledge attainment. Better education and knowledge leads to better paid jobs and larger benefits to the future generation. For women, better health status is achieved through empowerment. But, it also empowers them to participate in economic and public life.

While considering the factors which exert an impact on the health status of the population, it is possible to delineate three factors: I) heatlh care factors which include medical intervention for cure and treatment, (ii) health-promoting factors such as housing, water supply, sanitation and hygiene, and (iii) non-health factors which include social and economic factors. It is conventionally believed that health promoting factors such as housing conditions, availability of drinking water, sanitary facilities, etc. could contribute to health improvement among the population sometimes even more significantly than health services.

The provision of basic health services is a constitutional obligation of the Government of Bangladesh. It is the fundamental responsibility of the State to ensure the provision of the basic necessities of life, including food, clothing, shelter, education and medical care. The National Health Policy of Bangladesh was first adopted in 2000 with emphasis on health services for people of all strata (Article 15) and improving the level of nutrition and public health (Article 18). The principle of the policy is to ensure health services for every citizen and the equal distribution of available resources to solve urgent health-related problems, with a specific focus on the disadvantaged, the poor and the unemployed. To ensure the effective provision of health services to all, the priorities of the policy include the following:

- Providing health services for all, particularly the poor and disadvantaged.

- Improving maternal and child health services.
- Ensuring adequate nutrition for mothers and children through targeted programmes.
- Preventing and controlling communicable diseases.

To support the execution of these policy statements, legislation has been promulgated from time to time, but there is no specific legal provision relating to urban health care. Various City Corporation and pourasava Ordinances deal with urban health issues. The pourasava (Municipality) Ordinance of 1977, the city corporation Ordinances of 1982 and 1983 and the recently revised local government (city corporation and pourasava) Ordinances of 2008 have all clearly assigned urban local government institutions with responsibilities regarding the provision of health services for their residents (GoB 2008). As per the 2008 ordinance (schedules II and III), the city corporations and the pourasavas will remain responsible for the provision of a wide range of primary and public health services, including the removal, collection and management of garbage; the prevention of infectious diseases; the establishment of health centres, maternity hospitals and dispensaries, and water supply, drainage and sanitation.

In spite of the concentration of health facilities in the urban areas as compared to the rural areas, and the relative proximity of hospitals and other medical facilities, the standard of health care falls far below reasonable minimum levels for the slum residents. The actual implementation of primary health care in the urban areas poses special problems. Some of these are:

- The heterogeneity of urban populations has proved to be a major obstacle to urban health care development. The sense of collective responsibility is low as compared to the rural areas.
- Voluntary efforts are less common because of the lack of collective responsibility.
- A multiplicity of agencies are involved–government, private and voluntary/non-governmental organisations–in health care provision, making coordination difficult.

The urban poor are in special need of three things: (i) shelter (ii) access to services, and (ii) opportunities for personal growth and development. The slum residents' access to basic amenities like primary education, health care and legal protection is largely excluded under the present system. Public health refers to the broader and comprehensive view of health, as means of the promotion and protection of the health of the general public by the government to help them live a healthy life.

There exists a big gap between the services provided by different organisations and the actual need of the slum residents. The slum dwellers are the worst victims of the inadequate provision of public health services. Pure water supply, hygienic sanitation, waste disposal and food safety are significant among these services. The government agencies and the NGOs can play a crucial and significant role in this regard.

The recourses for urban health care should be related to specific short, medium and long-term objectives, so that the value of money can be demonstrated and the intended

changes within the health system can be achieved (*i.e.* the poor and disadvantaged slum dwellers get an acceptable level of health care).

5.9 Recommendations

(i) A comprehensive urban health care strategy, if it is to succeed, requires fundamental changes of attitude and approach in city health system and government policies. Urban health cannot simply be "added on" to the existing services. Priorities should be set on the basis of the most important causes of morbidity, prevailing epidemiological and socio-economic conditions, etc.

(ii) The urban primary health care needs to be revitalised. Innovative approaches like establishment of Health Posts in slum areas are required for providing basic health care services for the slum population as well as the marginal poor living near the slum areas (with referral linkage).

(iii) Although the responsibility of comprehensive health care lies with government agencies, there is a need for collaborative efforts between governmental and non-governmental organisations. It is essential to have inter-sectoral coordination between relevant departments/agencies of the government, including those dealing with water and sanitation, education, nutrition, housing, public works, transport, industry, income generation, control of pollution, and mental and physical health.

(iv) In order to ensure that health services are optimally utilised by the urban poor, comprehensive health education programmes should be integrated with health and medical care programmes with emphasis on:

- Environmental health
- Personal hygiene
- Nutrition education
- Healthy habits

(v) Poverty is one of the significant factors affecting health-seeking behaviour, and for members belonging to poorer households, pecuniary condition acts as a strong deterrent in their health expenditure behaviour. This brings us to the question of providing financial protection to the poor households against such contingencies, like:

- Insurance scheme to cover the poor/or low-income households who are mostly in the informal or unorganised sector can be devised.
- Even if government hospitals want to levy user charges, people below a certain income level should be exempt from paying such charges, and this could be achieved through proper targeting.

(vi) Substantial restructuring in the organisation of the public health care delivery system and improvements in its quality are necessary to make it more sensitive to the needs of the urban poor.

- Strategies for increasing access to health care should focus on improving the quality of services, developing/strengthening community-based health outreach, and health care delivery system with referral networks.
- Referral system and linkage between primary, secondary and tertiary levels of health care institutions should be streamlined.
- A crucial element here is access to quality services. Problems related to the poor coverage and quality of services need to be addressed.

(vii) Emphasis should be given on strategically positioned health care where slum residents will have access to services like health care, legal support, awareness raising programmes, etc. There is need to develop a system to ensure the easy and sustained availability of pure water supply to the people, especially communities in urban slum areas, to help them live a healthy life**.**

(viii) The City Corporation or the Ministry of Local Government can take the initiative to provide free health cards to the urban extreme poor, which will entitle them to free medical care for simple ailments, including free/subsidised hospitalisation.

A large part (around one-third) of the population of Dhaka city–the slum dwellers–live their lives underfed, illiterate, malnourished, anaemic, and with high prevalence of morbidity. The highly unhygienic sanitation practice of the slum households has a strong bearing on their health and well-being. Only pro-poor multi-pronged health interventional programmes may help them recover from this human scourge, and "the sooner the better."

REFERENCES

Ahmed, S. M., A. M. Adams, M. Chowdhury and A. Bhuiya..2003. "Changing Health-seeking Behaviour in Matlab, Bangladesh: Do Development Interventions Matter?" *Health Policy Planning*, 18(3):306-15.

Ahmed, Sadiq *et al.*2007. *Making Dhaka Livable.* Dhaka: University Press Limited.

Ahsan, S. M., M. Mahmud, S. A. Hamid and S. Barua. 2012. ''Financing Health Care: An Evaluation of the NGO-led Micro Health Insurance.'' Chapter 5 in *Bangladesh Health Watch*, James P. Grant School of Public Health, 77-99.

Ahsan, S. M., S. A. Hamid and S. Barua. 2012. *Utilization of Formal Health Care and Out-of-Pocket Payments in Rural Bangladesh.* Working Paper No. 13. Institute of Microfinance, Dhaka,

Amin, R., S. Becker and N. M. Shah. 2010. "Socioeconomic Factors Differentiating Maternal and Child Health-seeking Behaviour in Rural Bangladesh: A Cross-sectional Analysis." *International Journal for Equity in Health*, 9(9).

Basu, Salil. 1992. *Urban Slums of Delhi*. Sage Publications.

Baum, F. 1995. "Researching Public Health: Behind the Qualitative-Quantitative Methodological Debate." *Social Science and Medicine*, 40: 459-68.

BBS (Bangladesh Bureau of Statistics). 2007. *Report of the Household Income & Expenditure Survey 2005*. Dhaka: Bangladesh Bureau of Statistics, Ministry of Planning, Government of Bangladesh.

Benzeval, M. and K. Judge. 2001. "Income and Health: The Time Dimension." *Social Science and Medicine*, 52: 1371-1390.

Berki, S. E. 1986. "A Look at Catastrophic Medical Expenses and the Poor." *Health Affairs*, 5: 138-45.

Bhuiya, A. and M. Chowdhury. 2002. "Beneficial Effects of a Woman-focused Development Program on Child Survival: Evidence from Rural Bangladesh." *Social Science and Medicine*, 55: 1553-60

BIDS.2012. *Public Services Delivery System in Bangladesh: Governance Issues in the Health Sector.* Report prepared for the Asia Foundation

BIDS/HEU. 2003. *Public Health Services Utilization Study*. Final Report, Submitted to HEU (Health Economics Unit), Ministry of Health and Family Welfare.

Bloom, G. and H. Standing. 2001. *Pluralism and Marketisation in the Health Sector: Meeting Health Needs in contexts of Social Change in Low and Middle-income Countries*. IDS Working Paper 136.Brighton, Sussex: Institute of Development Studies.

Bloom, G., H. Lucas, A. Eddun, M. Lenneiye and J. Milimo. 2000. *Health and Poverty in sub-Saharan Africa*. Working Paper No. 103. Brighton, Sussex: Institute of Development Studies, University of Sussex.

Bunker, J. B. 2001. "The Role of Medical Care in Contributing to Health Improvements within Societies.*" International Journal of Epidemiology*, 30: 1260-1263.

Campbell, S. M., M.O. Ronald and S. A. Buetow. 2000. "Defining Quality of Care." *Social Science and Medicine*, 51: 1611-1625.

Chen, Lincoln C., E. Huq and S. D'Souza. 1981. "Sex Bias in the Family Allocation of Food and Health Care." *Population and Development Review,* 7(1)

Chowdhury, Ashraf A. et al. 1982. "Health, Disease and Health-seeking Behaviour in Rural Bangladesh." *Social Science and Medicine,* 16:2041-54.

Christakis, N. A., N. C. Ware and A. Kleinman. 1994. *Illness Behavior and the Health Transition in the Developing World.* Harvard Series on Population and International Health.

Commission on the Social Determinants of Health. 2005. "Action on the Social Determinants of Health: Learning from Previous Experience." A Background paper prepared for the Commission on Social Determinants of Health. Available from: http// www.who.int/social_determinants/en/ (accessed 20 July 2016).

D'Souza, S. and Lincoln C. Chen. 1980. "Sex Differential in Mortality in Rural Bangladesh." *Population and Development Review,* 6(2)

Dahlgren, G. and M.Whitehead.1992. *Policies and Strategies to Promote Equity in Health*. Copenhagen: WHO Regional Office for Europe.

Diderichsen, F., T. Evans and M. Whitehead. 2001. "The Social Basis of Disparities in Health." In: T. Evans, M. Whitehead, F. Diderichsen, A. Bhuiya and M. Wirth. (eds). *Challenging Inequities in Health: From Ethics to Action.* NY: Oxford University Press.

Duggal, Rabi and Sucheta Amin. 1989. "Cost of Health Care- A Household Survey in an Indian District, Mumbai." Foundation for Research in Community Health.

Falkingham, J. 2004. "Poverty, Out-of-pocket Payment and Access to Health Care: Evidence from Tajikistan." *Social Science and Medicine,* 58: 247-258.

Flores, G., J.Krishnakumar, O. O'donnell, and E. V. Doorslaer. 2008. "Coping with Health-care Costs: Implications for the Measurement of Catastrophic Expenditures and Poverty." *Health Economics*, 17*(*12): 1393–1412.

Gestler, M. W. 1984. *Health Care in Developing Countries*. State College PA: Association of American Geographers.

Gillström, P. 2001. *Fair Care*. Thesis (PhD). Stockholm University, Swedish Institute for Social Research dissertation series 50.

Hamid, S. A., and S. M. Ahsan. 2013. *Effects of Out-of-pocket Payments on Poverty in Rural Bangladesh*. Institute of Microfinance, Dhaka.

Harpham, T., T. Lusty and P. Vaughan. 1988. *In Shadow of the City*. Oxford University Press.

Hart, J. T. 2004. "Inverse and Positive Care Laws." *British Journal of General Practice*, 54: 509: 890.

Hausmann-Muela, S., J. M. Riberia and I. Nyamongo. 2003. *Health-seeking Behaviour and the Health System Response.* Working Paper No. 14. London: Health Economics and Financing Programme, London School of Hygiene and Tropical Medicine.

Helman, C. 1995. *Culture, Health and Illness* (3rd Ed). Oxford: Butterworth-Heinemann, 101-145.

Hulme, D. 2003. *Thinking 'Small' and the Understanding of Poverty: Maymana and Mofizul's Story*. Working Paper No. 22. Chronic Poverty Research Centre. Manchester: Institute of Development Policy and Management, University of Manchester.

Kabir, M. A., A Rahman, S.Salway and J. Pryer. 2000. "Sickness among Urban Poor: A Barrier to Livelihood Security." *Journal of International Development*, 12: 707-722.

Kleinman, A. 1980. *Patients and Healers in the Context of Culture*. Berkley: University of California Press.

Kleinman, A. and J. L. Gale. 1982. "Patients Treated by Physicians and Folk Healers: A Comparative Outcomes Study in Taiwan." *Culture, Medicine and Psychiatry*, 6: 405-423.

Krishna, A. 2004. "Escaping Poverty and Becoming Poor: Who Gains, Who Loses, and Why?" *World Development*, 32: 121-136.

Kundu, Amitav. 1993. *In the Name of the Urban Poor: Access to Basic Amenities*. New Delhi: Sage Publications.

Mackenbach, J. P. and P. Howden-Chapman. 2003. "New Perspectives on Socio-economic Inequalities in Health." *Perspectives in Biology and Medicine*, 46: 428-444.

Mannan, M. A. 2013. "Access to Public Health Facilities in Bangladesh: Study of Facility Utilization and Burden of Treatment." *The Bangladesh Development Studies (BDS)*, XXXVI (4).

Meesen, B., Z. Zhenzhong, W. V. Damme. N. Devdasan, B.Criel and G. Bloom. 2003. Iatrogenic Poverty [editorial]. *Tropical Medicine and International Health*, 8: 581-584.

Merlis, M. 2002. *Family Out-of-Pocket Spending for Health Services: A Continuing Source of Financial Insecurity*. Commonwealth Fund: New York.

Nanda, P. 1999. "Women's Participation in Rural Credit Programmes in Bangladesh and their Demand for Formal Health Care: Is there a Positive Impact?" *Health Economics*, 8(5): 415-428.

Narayan, D., R. Chambers, M. K. Shah and P. Petesch. 2000. *Voices of the Poor: Crying Out for Change.* New York, N.Y: Oxford University Press.

NIPORT (National Institute of Population Research and Training), USAID, ICDDR, B, and MEASURE Evaluation. 2008. *Bangladesh Urban Health Survey 2006*. Dhaka and Carolina Population Center.

NIPORT (National Institute of Population Research and Training), Mitra and Associates, and ORC Macro. 2005. *Bangladesh Demographic and Health Survey 2004*. Dhaka and Claverton

Noponen, H. and P. Antor. 2004. "Crises, Setbacks and Chronic Problems-the Determinants of Economic Stress Events among Poor Households in India." *Journal of International Development*, 16: 529-545.

Rannan-Eliya, R. and A. Somanathan. 2005. "Access of the Very Poor to Health Services in Asia: Evidence on the Role of Health Systems." DFID Health Systems Resource Centre.

Rossi-Espagnet, A. 1984. *Primary Health Care in Urban Areas: Reaching the Urban Poor in Developing Countries:* A State of the Art Report by UNICEF and WHO. Geneva: World Health Organisation.

Segall, M., G. Tipping,., H. Lucas, T. V. Dung, N. T. Tam,., D. X. Vinh and D. L. Huong. 2002. "Economic Transition should come with a Health Warning: The Case of Vietnam." *Journal of Epidemiology and Community Health*, 56: 497-505.

Sen, B. 1997. *Health and Poverty in the context of Country Development Strategy: A Case Study on Bangladesh*. Technical Paper No. 27.Geneva: World Health Organization.

Sen, B. 2001. *The Health Divide: Analysis of Inequality in Health in Bangladesh*. Dhaka: Bangladesh Institute of Development Studies.

Sen, B. 2003. "Drivers of Escape and Descent: Changing Household Fortunes in Rural Bangladesh." *World Development*, 31: 513-534.

Subedi, J. 1989. "Modern Health Services and Health Care Behavior: A Survey in Kathmandu, Nepal." *Journal of Health and Social Behaviour*, 30(4): 412-420.

Subramanian, S.V., P. Belli and I. Kawachi. 2002. "The Macro-economic Determinants of Health." *Annual Review of Public Health*, 23: 287-302.

Szeter, S. 1999. "Rapid Economic Growth and the "the four Ds" of Disruption, Deprivation, Disease and Death: Public Health Lessons from Nineteenth-Century Britain forTwenty-first Century China." *Tropical Medicine and International Health*, 4: 146-152.

United Nations Human Settlements Programme (UN-Habitat). 2003. *The Challenge of Slums: Global Report on Human Settlements 2003*. London and Sterling, VA, Earthscan Publications Ltd.

Van, Doorslaer E., O. O'Donnell, R. P. Rannan-Eliya and A. Somanathan et al. 2006. "Effect of Payments for Healthcare on Poverty Estimates in 11 Countries in Asia: An Analysis of Household Survey Data." *Lancet*, 368(9544): 1357-64.

Van, Doorslaer E, O. O'Donnell, R. P. Rannan-Eliya, A. Somanathan, S. R. Adhikari and C. C. Garg. 2007 "Catastrophic Payments for Healthcare in Asia." *Health Economics*, 16(11): 1159-84.

Wagstaff, A. and E. V. Doorslaer. 2003. "Catastrophe and Impoverishment in Paying for Health Care: With Applications to Vietnam1993—1998." *Health Economics*, 12(11): 921–934.

Wagstaff, A. 2002. "Poverty and Health Sector Inequalities." *Bulletin of the World Health Organization*, 80: 97-105.

Ward, H., T. E. Mertens and C. Thomas. 1996. "Health-seeking Behaviour and the Control of Sexually Transmitted Disease." *Health Policy and Planning*, 12: 19-28.

World Bank. 2004. *World Development Report: Making Services Work for Poor People*. Washington DC: World Bank.

World Bank. 2012. *Bangladesh: Towards Accelerated, Inclusive and Sustainable Growth-Opportunities and Challenges*. Report No. 67991. Dhaka: World Bank.

World Bank.1993. *World Development Report: Investing in Health*. Washington DC: World Bank.

WHO (World Health Organization). 2003. "Study on Improving Access to health Care for the Poor and Vulnerable in Bangladesh." (mimeo.) Dhaka: World Health Organization.

WHO.2002. *Dying for Change: Poor People's Experience of Health and Ill Health. (WHO/NMH/MSD/WHA/01.3*), Geneva and Washington DC: World Health Organisation and World Bank.

WHO. 2005. "Sustainable Health Financing, Universal Coverage and Social Health Insurance." In: *115th World Health Assembly Resolution* EB 115.R15, Geneva.

WHO.2010. *Health Systems Financing: The Path to Universal Coverage.* Geneva, Switzerland: WHO.

Xu, K., D. B. Evans, G. Carrin, A. M. Aguilar, P. Musgrove and T. Evans. 2007. "Protecting Households from Catastrophic Health Spending." *Health Affairs*; 26(4): 972-83.

Xu, K., D. B. Evans, K. Kawabata, R. Zeramdini, J. Klavus, and C. J. L. Murray. 2003. "Household Catastrophic Health Expenditure: A Multi-country Analysis." *The Lancet*, 362(9378): 111-17.

Yardim, M. S., N. Cilingiroglu and N. Yardim. 2010. "Catastrophic Health Expenditure and Impoverishment in Turkey." *Health Policy*, 94(1): 26– 33.

Yazbeck, A. S. and D. R. Gwatkin. 2005. "Health Services and the Poor: Vigilance, Hope and Hard Work." *Development Outreach.*

The Authors

Dr. M. A. Mannan is a former Senior Research Fellow of BIDS. During his long research career he has undertaken extensive research and consultancy works focusing primarily on gender issues, social safety net programmes, maternal and child health, and governance issues in the health sector. He has a number of publications including three books.