Communication and Change in Health Behavior in Bangladesh

Realities at the Grassroots

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Mohammad Mainul Islam

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Author
Mohammad Mainul Islam

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Dedicated to
my beloved parents-
Rokeya Begum
Momtaz Uddin Rikabder
&
Late Professor Dr. M. Asaduzzaman

Preface

The idea for this book arose over the afternoon tea table in Fuller Road in 2009 when I visited the residence of Professor Dr. Aka Firowz Ahmad, former Chairman, Department of Public Administration of the University of Dhaka. During our scholarly talk, I was asked to publish my Masters dissertation. After a long discussion, I was convinced to publish my thesis although the data of the study came out at the end of 2001and several articles out of it had already been published in peer reviewed journals and conference proceedings. During that time I suddenly got an e-mail invitation from the Lap Lambert Academic Publishing GmbH & Co. KG to publish my thesis with them. Later I submitted my manuscript to Lap Lambert. After several months on October 18, 2011 this book came out as a publication in the form of a monograph but it was not locally available. Two years after this publication Professor Dr. Aka Firowz Ahmad who is also the publisher/proprietor of OSDER publications showed interest in re-publishing my dissertation, which is a sociological study based on primary data at grassroots level, as a book. Professor Ahmad convinced me to republish this book considering the historical representation of the sociological facts of the past which could be helpful to compare the present scenario on health communication in Bangladesh, with that of the past, covered in my dissertation. Special thanks to him for his insightful valuable advice and frequent inquiries regarding this publication.

This book is my Masters dissertation as I mentioned above submitted to the Department of Sociology, University of Dhaka, Bangladesh that examines the health care practices, awareness, changes and the role of communication in improving grassroots people's health and disease control, health education, health promotion and empowerment of families and communities on health issues in Bangladesh. It is understood that the prevention of diseases and the promotion of health depends on social conditions in which people live and decisions made by policy planners, politicians, families and individuals. This study undertakes to assess communication activities and programs on health and their impact from a sociological perspective, which may be advanced for future evaluation. It shows that over time modernization and increasing communication has led to significant behavioral change. This study has used the paradigm of Behavior Change Communication (BCC) to understand the way communication has affected health behavior among social groups at

grassroots level, which reflects different types of communication regarding health promotion and its constraints. In addition, this study also reviews the development of health policy in Bangladesh identifying its impediments and explores the theoretical aspects of communication models. For this publication, I did not edit the whole content of the thesis.

In carrying out this study, I owe thanks to a number of persons and institutions who have contributed to the research and writing of the manuscript. First, I would like to express my deep gratitude to my honorable supervisor, Professor S. Aminul Islam, Department of Sociology, University of Dhaka for his insightful and meticulous guidance, encouragement, cooperation, help, frequent advice and support, provided to this research. Here I also wish to express my gratitude to Professor Dr. Mahbub Uddin Ahmed of the Department of Sociology, University of Dhaka for his valuable suggestions.

To carry out this study I received assistance from a large number of officials of Ministry of Health and Family Welfare, Government of Bangladesh and NGO personnel. I am indebted to all of them. Special thanks are due to Dr. M. Bodiuzzaman of Project Coordination Cell of Ministry of Health and Family Welfare, Ms. Saleha Islam, Monitoring Officer of Bangladesh Centre for Communication Programmes and Md. Fazlul Hoque, Population Communication Officer of BCC Unit, Directorate of Family Planning.

I cordially thank my few friends and junior fellows for their sincere efforts and active participation in data collection period of this study. In particular, I am grateful to my friends- Mr. Mohammad Jamal Hossain, Mr. Md. Enamul Haque, Mr. Md. Shahidul Islam, Mr. Farid Uzzaman. Also I am grateful to my junior friends- Mr. Moshiur Rahman Tipu and Mr. Yeadul Islam. I am Grateful to my brother-in-law Mr. Abdul Khaleque. My thanks to data entry personnel and computer operator for their cordial support and cooperation. Special thanks are due to Mr. Niord Chandra Saha of International Centre for Diarrhoeal Disease Research, Bangladesh (icddr'b) for cordial support during data analysis.

I am also grateful to the Department of Sociology for giving me an opportunity to do such a job. Special thanks are also due to the respondents of my study who gave me the valuable information and data wasting their valuable time and energy.

My sincere thanks to Lap Lambert Academic Publishing GmbH & Co. KG for taking their earlier initiative to publish this book. Special thanks to Mr. Vitalie Rotaru of Lap Lambert for all necessary supports.

No book of this sort could be produced without the help and assistance of many other people. Mr. Md. Shamsul Hoque and Mr. Sarfaraz Reaz (Mithu) of the Osder Publications deserve special thanks for their help in the entire process of the publication of this book. Also my sincere thanks to Mr. Golam Gaus Al-Quaderi, Associate Professor, Dept. of English of the University of Dhaka for his frequent inquiry and suggestions to publish my thesis.

My thanks to my senior friends and colleagues- Dr. Mohammad Musfequs Salehin, Mr. Md. Humayun Kabir, Mr. Md. Bellal Hossain for their inspiration to conduct such a study.

My sincere thanks to Dr. Sayema Haque Bidisha, my beloved wife for her kind support to complete this project.

I name only a few here but my sincere thanks to all who have contributed indirectly or helped me in my task.

And at last, but not the least my gratitude and thanks to late Professor M. Asaduzzaman, former Chairman, University Grants Commission of Bangladesh, to whom I am grateful most. Professor Asaduzzaman was my all time mentor, a true friend-philosopher-guide who taught me the importance of being a good human being.

Dr. Mohammad Mainul Islam
Associate Professor
Department of Population Sciences
University of Dhaka
Dhaka- 1000, Bangladesh
E-mail: mainul@du.ac.bd

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Chapter- I

Introduction

Statement of the problem

Health is defined as "a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity". The Alma-ata Declaration affirms that health is a human right and that health care should be accessible, affordable and socially relevant (WHO and UNICEF, 1978). The Alma-ata Declaration also asserted that primary health care (PHC)

> addresses the main health problems in the community, providing promotive, preventive, curative and rehabilitative services accordingly and includes at least: education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition, on adequate supply[of] safe water and basic sanitation; maternal and child health care, including family planning; immunization against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs (WHO and UNICEF, 1978).

Health is a dynamic ever-changing state that is difficult to define and to measure. The state of a person's health lies on a continuum between death and complete health in every aspect possible (Scott, lan *et al* 1995). Individual and public health is highly influenced by our knowledge and acts. Health and illness are social phenomena as they are socially patterned and an individual's social position may have an important bearing on their experience. Illness behavior of an individual varies by social group whether it is influenced by class, gender, age or ethnicity. Individuals are inevitably shaped in the social relationships that constitute our everyday lives and the wider society (Bury, 1997). Culture is a system of interrelated values which are much active to influence and condition perception, judgment, communication and behavior in a society (Airhihenbuwa, 1995).

Health, disease and illness are highly subjective phenomena which are affected by a multitude of individual and social factors (Moon and Gillespie, 1995). Rather than biological and medical aspects of health

care, sociological perspectives of health and illness emphasizes the aspects of health care as prevention of illness, social management of illness and rehabilitation. It depicts how social processes work to define illness, understand the causes of illness and promotion of health or to interpret the organizational structures within the health care system (Bond and Bond, 1994).

Understanding of both the individual and society in which they live is the central concern for social science. It helps us to look critically into some of the things which we frequently take for granted (Moon and Gillespie, 1995). Now it has become common practice in the field of public health and in the social and behavioral sciences to give more importance to culture for understanding health behavior. But Culture has to be given the priority for health promotion and disease prevention programs in such a manner that legitimates public health praxis (Airhihenbuwa, 1995). Public health care can be understood in a social context. Using the health care services or working in a health care setting relates social transactions between different types of health professionals and patients/clients. These transactions take place in situations which are closely constrained by political decisions about resources, service management and service innovation (Moon and Gillespie, 1995). In this regard sociology of health care provides an understanding of the social processes involved in the delivery of health care. The practice of health care is now considered as a social action and the health care system is now developing a sociological understanding of health providers and their practices. It refers to using sociological insights to policy and planning of the health services and the education of the workforce. Therefore, sociology offers various ways of viewing and explaining health care and health problems (Bond and Bond, 1994). So, it is now important to understand people's culture, social structure, health beliefs and practices and how this diversity can be addressed in terms of health policy (Helman, 2000).

Communication has been increasingly recognized, as the core of sociology as is evident in the works of Habermas (Habermas, 1976). Thus, communication and behavior change are primarily sociological issues. Sociology has increasingly been studying the flow of communication within a social group or society. It has also underscored the importance of mass media in behavior change. The paradigm of behavior change communication has emerged as a key area in sociology of communication and health sociology. This study has used this paradigm to understand the way communication has affected health behavior over time and among social groups.

In Bangladesh many people have harmful health behavior still at present. Here majority of the people suffer from poverty, hunger, malnutrition, illiteracy, ignorance and superstition. Here traditional native or indigenous methods of healing have been exercised, especially in rural areas from ancient times. After the half of 19th century modern scientific medicine has begun to spread in rural areas. During Pakistan period the situation regarding health problems and services were very poor. After independence, the situation has improved, but not to the desired extent (Mahbullah, 1981). Here socio-economic and cultural obstructions including insufficient information act as an obstacle to awareness towards positive change in health behavior. Communication as a process of supplying information can play a vital role in health promotion. Access of people to health services and its different programs are inadequate. Clients and providers are to be impelled to modify their attitude and behavior for efficaciousness of the program. This will promote healthier lives through emphasis on following actions-

- To take preventive action at the household level,
- To build effective community support for health seeking behavior, and
- To change the attitudes and behavior of providers in ways which do not reinforce the expected healthy behavior of their clients (GoB, 1997).

Information, Education and Communication (IEC) on various health issues and family planning has been a key area of intervention by agencies in the health sector for more than last two decades in Bangladesh. As a result, awareness and greater use of health and family planning services have increased. For example, it can be mentioned that the proportion of even once married women aware of family planning methods rose from 82% in 1975 to 99.9% in 2000 (GoB, 1999; BDHS, 1999-2000). Information Education and Communication (IEC) activities increased the use of contraceptive methods from 7.7% in 1975 to 53.8% in 2000 (BFS, 1975; BDHS, 1999-2000). The knowledge about home management of diarrhoeal disease had increased sharply too. The percentage of ORT use rate in 1990-98 was 61 (UNICEF, 2000). The expanded programe on immunization (EPI) - communication campaigns were very effective for motivating people to take services from outreach centers and satellite clinics. This caused a significant increase in the proportion of fully immunized child from below 10% in 1984 to 68.7% in 1999

(BBS 1999a). Percentage of people with access to improved or safe water source was 40 in 1982-85, which went up to 84 in 1990-96 (World Bank, 2000). The last figure is the highest among the South Asian Countries. According to a UNICEF study the figure was as high as 95 in 1990-98 (UNICEF, 2000). In the case of access to sanitation, World Development Report 2000/2001 reports that it was only 4% in 1982-85 and 35% in 1990-96 (World Bank, 2000) but UNICEF study (2001) shows the average figure in 1990-98 was 43%.

In terms of broader demographic indicators, there was a reduction in the total fertility rates from 6.3 to 3.1 and a drop in the crude death rate from 19 per thousand population to 8 (UNICEF, 1000; World Bank, 2000). There has also been a declining tendency in childhood mortality. Under five mortality declined from 247 deaths per 1000 births in 1960 to 106 in 1998 (GoB, 1999; World Bank, 2000). The infant mortality rate also declined from 132 in 1980 to 73 in 1998 (World Bank, 2000). Now there is high optimism that Bangladesh will be able to improve child survival quite significantly. Bangladesh reduced infant and under 5 mortality rates by about 25% between 1990 and 1998.

Thus, we see that a remarkable positive change has happened regarding immunization, National awareness campaigns on the treatment of diarrhea, special programs to reduce pneumonia related deaths, better sanitation and better access to safe water strategies are working (IMF, UN & WB, 2000). These significant changes have been made possible by an amalgamation of social and economic changes and the improved accessibility of health and population education and related services.

In fact, there is large and sufficient indication of increasing mass awareness and community involvement in health activities in general and a growing number of success stories with communication interventions, such as immunization, control of diarrheal diseases, promotion of water and sanitation and other programs to control emerging and re-emerging diseases in the country (GoB, 1999). This study also reflects on different types of communication regarding health promotion and its constraints .

Traditional, native or indigenous methods of healing are exercised in Bangladesh, especially in rural areas from ancient times. After the first half of 19th century modern scientific medicine began to spread to rural areas. In Pakistan period, the situation regarding health problems and services did not change significantly. After independence the

situation improved; but not to the desired extent (Mahbullah, 1981). Despite these impressive and positive changes, important health indicators, such as, child and maternal mortality and morbidity are still unacceptably high.

The main challenge in health and family planning sector is to expand access to basic services and promoting the quality services in both the public and private sectors. The government has already approved Health and Population Sector Strategy (HPSS) which was developed through a wide participatory process involving various stakeholders and started implementing the Health and Population Sector Programme (HPSP 1998-2003) under the Health and Population Sector Strategy from July 1998 (the Daily Star, 2001). The main objectives of Health and Population Sector Program are reduction of infant mortality and morbidity, reduction of maternal mortality and morbidity, improvement of nutritional intake and reduction of fertility. The goal of the population strategy is to reach the replacement level by the year 2005 by ensuring universal access to essential health care services of acceptable quality. The HPSP (1998-2003) uses a sector wide management approach and has introduced the Essential Service Package (ESP) which comprises five major areas: Reproductive Health Care, Child Health Care, Communicable Disease Control, Limited Curative Care and Behavior Change Communication (BCC). The ESP has its main focus on the needs of clients, strengthening service delivery and improving system management.

In this respect, this study has used the paradigm of Behavior Change Communication (BCC) to understand the way communication has affected health behavior over time and among social groups at grassroots level in Shibpur Upazila of Narsingdi District as a case in Bangladesh. This study also reflects different types of communication regarding health promotion and its constraints on the ways. This study undertakes to study the BCC activities and programs their impact from a sociological point of view or perspective, which may be advanced for future evaluation. It is being comprehended that the prevention of disease and the promotion of health depends on the social conditions in which people live and decision made by policy planners, politicians, families and individuals. This study studies the health care practices, awareness and role of communication in improving people’s health and diseases, health education, health promotion and empowerment of families and communities to take action on health issues. Therefore, it has become important to carry out systematic and scientific research on sociological aspects of health communication in a wide range of

settings including the individual, family, community, schools, health services and the mass media.

Objectives of the study

The overall objective of the study is to examine the changes in health behavior for communication. The specific objectives are to:

i. identify the communication strategies for changing health behavior which are being undertaken by GoB and other agencies.
ii. identify the specific communication programs.
iii. analyze the knowledge, perception and attitude regarding health behavior in Shibpur thana.
iv. analyze the impact of behavior change communication in Shibpur thana.

Organization of the study

This study consists of seven chapters. The first chapter includes a brief discussion on the research problem, objectives of the study, propositions or hypotheses of the study, methodology, scope and limitations of the study. The second chapter deals with the perspectives and issues on health policy and health communication. The third chapter includes problems and issues in health policy and health communication in Bangladesh. In chapter four, socio-economic and demographic characteristics of the respondents which are determining factors for the prevailing values and practices of the sample population regarding their health situation, disease pattern and type of treatment are stated. In chapter five people's knowledge, perception and attitudes regarding health behavior and health communication in Shibpur thana are discussed. In chapter six health practices, health promotion and policy strategies for behavior change communication which are viewed from the grassroots are provided. Chapter seven, the last chapter of this study presents conclusion of this study.

Propositions or hypothesis of the study

The major propositions or hypotheses of this study are:

i. behavior change communication (BCC) increase the knowledge, attitudes and practices of health behavior.
ii. health values, beliefs and practices of the target population varies significantly with the level of education.
iii. local cultural practices are associated with health behavior.

Methodology

Study design

A mix of quantitative and qualitative techniques that permits a more comprehensive analysis of the complex relationship between health promoting strategies and health behavior has been used for this study. Interview-schedule has been used to collect household level data. For household level, the samples (385) were selected from 10 villages of Masimpur Union of Shibpur Upazila, Narsingdi District at the end of 2001 by systematic sampling procedure. A mix of quantitative and qualitative techniques that permits a more comprehensive analysis of the complex relationship between health promoting strategies and health behavior has been used for this study. Interview-schedule has been used to collect household level data. For household level, the samples (385) are selected from 10 villages of Masimpur Union of Shibpur Upazila, Narsingdi District at the end of 2001 by systematic sampling procedure.

Focus group discussions (FGDs), in-depth interviews and case studies have been conducted to collect qualitative information about human behavior. Every focus group discussion typically contained between about 6 to 12 participants. For FGDs the investigator used several unstructured guide (topic/question list) to stimulate guide discussion that lasted between about one and two hours), a conformable environment was provided with refreshment. Information weas also collected from few case studies of elderly and young people's understanding of health and illness and policy options. So, multiple research methods were employed in order to investigate fully complex situations and to validate the findings.

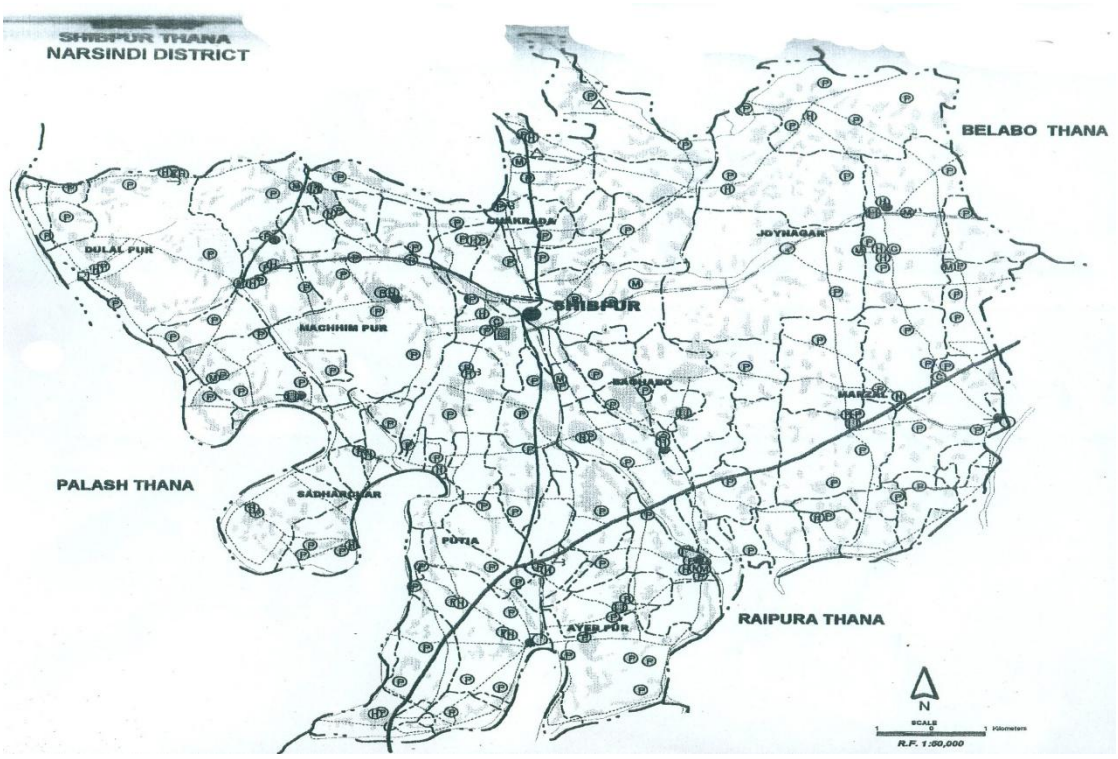
Study area profile

The present Narsingdi district was one of the sub-divisions of former Dhaka district. In Narsingdi, Shibput is the third biggest thana with respect to both area and population. It was predominantly a Hindu populated area before the British rule. There is a hearsay that this place was once a famous centre for the worship of Shiva, a hero/god of Hindu mythology. It is believed that the upazila might have originated its name-from the name 'Shib/shiv'.

The upazila occupies on area of 206 sq. km. including 1.09 sq. km. river area. It is located between 23°55′ and 24°07′ north latitudes and between 90°38′ and 90°50′ east longitudes. The thana is bounded on

the north by Monohardi thana, on the east by Raipura and Belabo thanas, on the south by Narsingdi Sadar, Raipura and Palash upazilas and on the west by Palash thana, Kapasia and Kaligonj thanas of Gazipur district. The upazila consists of 9 unions, 125 mauzas and 196 villages. The total population of the thana is 237,246 with sex ratio of 103:100 and the number of households is 44369. The average population of each union, mauza and village are 26,361; 1,898 and 1,210 respectively. The average household size is 5.3 persons (BBS, 1995).

In the thana, 88.91% of the dwelling households use tube-well, 0.13% use tap, 10.22% use dug-well, 0.47% use pond and 0.26% use canal/river as their main source of drinking water. In Shipbur, 10.52% of dwelling households have sanitary latrine, 9.41% of them are in rural area and 39.12% in urban area. A total of 33.30% of the households have non-sanitary latrines; 33.61% of them in rural area and 25.35% in urban area. In this thana, 56.18% of the households have no toilet facility (BBS, 1995).



Sample size and sampling technique

For this study 385 respondents have been selected as sample size from Masimpur union which comprises 10 villages. Among the villages, 03 mauzas (Baniadi, Dhanua, Sunandi/Saidergoan) are in urban in mauzas as located in Thana Headquater. In view of constraints of resources and time the sample size could not be increased more than this.

This study employed systematic sampling technique. The usual technique requires a list of all sampling units. Having decided on the size of one required sample, the investigator has calculated the sampling ration, expressed as '1 in 13.53', rounds 13.53 off to the nearest whole number, and used this figure (14) as a sampling interval. Investigator then has selected every 14th item in the list, starting with an item (from the first to the 14th) selected at random. This technique is often easier than simple random sampling (Abramson, 1990).

Table 1.1: Upazila and union GEO-code List

Upazila	UC* Code	Union	No. of total households
76- Shibpur	10	Ayubpur	4551
	21	Baghaba	4174
	31	Chakrada	5726
	42	Dulalpur	5359
	52	Josar	4079
	63	Joynagar	4912
	73	Masimpur	5211
	84	Putia	6518
	94	Sadaharchar	3384
		Total	43914

** UC means Union Council*

Source: *BBS, 1995.*

Table 1.2: Localities and selected house holdings of Masimput union.

Localities/Villages	Total Number of Households (According to 1991 Census)	Number of Surveyed Households (Calculated)
Abdul Khana	20	1
Bandardia	583	43
Baniadi	105	8
Dattargaon	2331	172
Dhanua	683	51
Khasia	883	65
Masimpur	199	15
Miargaon	255	17
Paikardia	61	5
Sunandi (saidargaon)	121	8
Total	5211	385

Operationalisation of variables

This study has been conducted with the use of some concepts having the specific meaning in the study context. The specific meanings of each of the concepts are given below:

Communication

The process of establishing meaning, found in all social situations. It occurs through certain modes: interpersonal, group and mass

communication. It means exchange of information-verbal or nonverbal between a sender (senders) and receiver (receivers).

Health

A state of complete physical, mental and social wellbeing of an individual and not mere absence of disease and infirmity.

Disease

Disease is usually understood as the presence of some pathology or abnormality in a part of the body (Aggleton, 1990). It includes a set of objective and identifiable symptoms of malfunctioning of an organism.

Health communication

Health communication is the systematic attempt to influence positively the health practices of a large population.

Behavior change communication

A paradigm that aims at achieving changes in the behavior of people, which will enable them to improve their health status through informed choice.

Beliefs

Beliefs are ideas, which are either untested or untestable.

Extended family

A nuclear family extended through an inclusion of near relatives.

Joint family

Members of two or more generations who are related by blood and marriage and operate as a household.

Nuclear family

The nuclear family consists of a married couple and their children.

Knowledge

This means ideas for which there are some empirical supports.

Illness

This is defined as a set of unpleasant feelings that may or may not accompany disease. It is something, which is experienced.

Illness behavior

Social phenomena, which influence the way people, perceive signs and symptoms of an illness and take action to deal with them.

Illness lceberg

A situation in which a much larger number of people do not seek medical care because their illness remain undiagnosed or by are not motivated or cannot afford to under take medical care.

Healthcare

Services provided to individuals, families and communities by doctors, hospitals, nurses and other professionals to promote, restore, maintain and monitor health of all people in a society.

Community

A human population within a definite territory with interlocking network of relationships and common feelings.

Class

A large group of people with similar command over economic resources and almost common life-styles.

Practices

The concept of 'practice' is meant to denote individual action in reality in the concrete situation covering its latent and manifest meaning.

Traditional or Folk treatment

It refers to the unscientific methods, indigenously evolved and practiced for diagnosing and treatment of diseases.

Modern medicine

It refers to the scientific methods evolved and developed for diagnosing and treatment of diseases.

Yearly income

Yearly earning from all sources of cash and kind. It includes only the gross income and not the net income.

Occupation

It means respondent's involvement with an act by and from which his maximum earning for livelihood is derived.

Years of schooling/education

It refers to the number of years the respondent has attended an educational institution.

Data collection instrument

An interview-schedule has been developed for data collection for this study. The schedule is divided into two major sections: Section one deals with the questions on socio-economic background of the respondents, section two includes the questions on disease, treatment and health behavior or health care within periodical settings; section three deals with the sources of information on health and health promoting programs within the services and their impact. The schedule

used in this study has been constructed on the basis of the major objectives of the study. The draft schedule has been pre-tested in study area and necessary alterations and changes, made. The final schedule has been constructed with some modifications. It can be added that the interviewers were quite aware of the fact that pre-coded questions may lead to bias as both the interviewer and the respondents in selecting and recording responses and as such interviewer have been advised not to lead the pre-coded questions before the respondents during interviewing. Data were collected through face to face interview with the respondents. Information have also been collected from focus group discussion, in-depth interview and case studies. Every focus group typically contained between about six to twelve participants. Here the investigator used several unstructured guide (topic/question list on health promotion) to stimulate and guide discussion. Discussions usually lasted between about one and two hours, conformable environments have been provided with refreshments. Focus groups are unstructured interviews with small groups of people who interact with each other and the group leader. They have the advantage of making use of group dynamics to stimulate discussion, gain insights and generate ideas in order to pursue a topic in greater depth (Bowling, 1997). Information were also collected from few case studies of elderly and young people's understanding of health and illness, analysis of official statistics and policy analysis and from document research. Multiple research methods have been employed in order to investigate fully complex situations and to validate the findings.

Analysis of data

Interview schedule has first been edited manually. Every individual schedule has been checked for consistency and then high-level statistical computation has been done for the analysis and interpretation of data. Statistical analyses have been carried out at two levels. One is univariate level, which include data form socio-economic to health service awareness. The other is bivariate or multivariate analysis of regression between two or more variables; mainly correlation, regression, Chi Square test, t-test, liner-by-liner association and ANOVA. Cross tables are presented to measure the extent of relationship between independent and dependent variables in accordance with the objectives of the study.

Rationale and scope of the study

The socio-economic development of the country depends on building effective plans and policy measures and their implementation on the basis of the needs of the people. It is often taken into consideration that if people of the country specially the rural people could be made aware

of their health status and health, then automatically health scenery of the people and the country could be promoted.

The issues covered in this research are very broad, available but resources were extremely limited. Therefore many aspects of the complex relationships between health and communication have not been studied.

Limitation of the study

Behavior Change Communication (BCC) is a recent approach, specially in health research of Bangladesh, which lacks a clear concepttual framework. For this reason this study has not made much attempt at providing a theoretical framework in this study but this has made an attempt to comprehend the existing health communication theories and models to apply in practice.

As this is a Master's dissertation, the sample size of the study is not so large which may permit any strong generalization.

During interviewing the respondents, a few problems were encountered. These are:

i. many respondents could not tell their exact age;
ii. people were either reluctant to provide data on income or could not recall details of their income and expenditure. Problem of enumeration of yearly income of the respondents from their stated sources of earning including cash and kind occurred, as most respondents failed to provide their monthly income accurately, and a few denied to provide information on their income. Female respondents failed to provide any information about their families' yearly income due to their unawareness about it;
iii. suspicion of the respondents and the villagers with regard to the purpose of interviewing. For this reason, a few respondents intentionally avoided responding to the interview; and
iv. respondents could not provide information due to lack of awareness. Moreover, the illiterate and less educated people gave their opinion without much thinking and understanding.

Chapter- II

The Perspectives and Issues in Health Policy and Health Communication

Prevention of diseases and promotion of health depend on the social conditions in which people live and decisions made by policy planners, politicians, families and individuals. Thus to promote or communicate health effectively we have to understand, analyze and influence social and health policy as its puts health on the agenda of policy makers in all sectors and at all levels. It requires active participation of a wide range of settings including at national and local level.

Health Policy

The health policy is a transparent articulation of firm convictions or principles and values, which will form future public action in the health arena. Understanding or beliefs in the determination of health play a vital role in setting policies in health. Theoretically, its goal is to promote the quality of life of people and to minimize possible differences in health status among social groups in society. In this respect all countries are doing their best to achieve better managed and more adequate health care systems (Blane, Bruner and Wilkinson, 1996). The conceptual framework for healthy public policy came from the WHO Assembly's determination on health. Here it was uttered that health is the main social goal of government including 'Health for All' by the year 2000. WHO conference on health public policy held in Adelaide (1980) gave birth to the following definition: "Health Public Policy is characterized by an explicit concern for health and equity in all areas of policy and by an accountability for health impact."

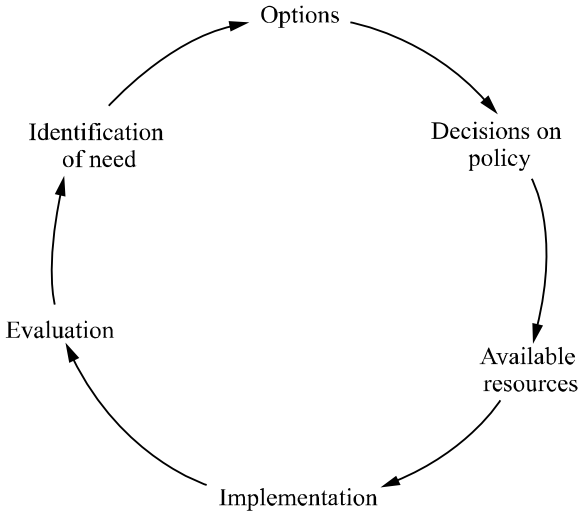
There is a distinction between health public policy and public health policy. Public health policy refers to a narrower set of policies. More specifically, it aims at the system of caring for ill people. In contrast to public health policy, health public policy aim to go beyond the health care system self-consciously. Its attention is on more traditional hospital and physician-based care. Definitions of later health policy that is health public policy incorporate very broad visions of health crossing traditional disciplinary, organizational and governmental categories (Burton, 1992). Modern health policy explores the

complexities that remain behind the past events. It focuses on the following aspects (Aggleton, 1990):

- Processes as diverse as the impact of political ideologies on the policy-making process
- The outcome of particular alliances between individuals, organizations, and interest groups
- The interplay between central government, local authorities, and the voluntary sector
- The impact of the economy on decision-making
- The role of the medical profession in determining policy priorities

For functioning of a health system, four main patterns of activities are needed. These are policy formation, financing, service provision and regulation. Generally, the State has different types and levels of roles within these in different countries. But the first potential role for government is to set health and health care policy. Accepting health or access to health-care as right of a government can take a lead role in setting health policy (Green, 1999). This policy refers to the guidelines for practice which set broad goals and the framework for action (Naidoo and Wills, 2000). McCarthy's model for rational health planning are shown in the following figure:

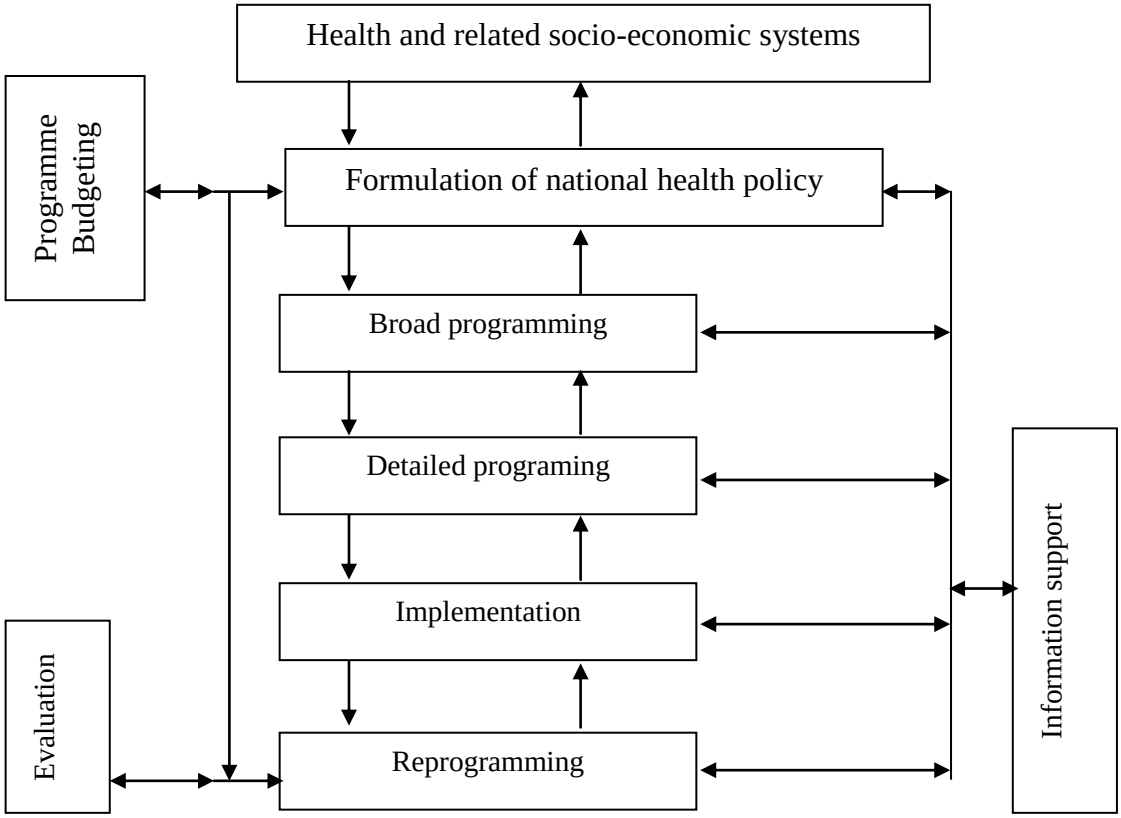
Figure 2.1: Plan: how to get from one's starting point to one's end point and what to achieve



The links between formation of health policy and planning are very close. The terms planning, management and policy setting are interlinked and interchangeable. The term policy will be used to denote statements of broad intent by an organization. It can be used at various levels within an organization. However, health policy does not arise

from a vacuum, but as the result of analysis with value judgments. Thus the planning process, and particularly the situational analysis, has a critical role to play in formation of policy (Green, 1999). Improvement of health policy depends on the accuracy and timeliness of the information regarding current circumstances in the health sector and the impact of interventions.

Figure 2.2 : Managerial process for national health development



Source: *Green, 1999 (P.77)*

Present health policy issues may be classified categories of disease or category of people like children, women or the elderly with health problems. Health policy issues may be divided into eight different categories (Gertler, Rose and Glewwe, 2000):

- Assessment of health problems and associated behavior
- Equality in health status and in access to health services
- Provision of public health programs and services
- Pricing policies for health services
- Maintenance and improvement of the quality of health services
- Regulation of privately provided health services
- Health insurance policies
- The impact of health on other socio-economic outcomes

Tatble 2.1: Some characteristics of major health-care providers

Characteristics		**Sate**	**Non-State**			
		Health ministry	NGOs	Occupational health-care providers	Private for profit	Traditional practitioners
Motivation		Welfare of citizen	Welfare Promotion Evangelism Promotion of Members interest (e.g. trade unions)	Contribution to profits through health of working	Profit maximization	Profit welfare of community
Types of activity	Policy formation	√				
	Public health services	√	√			
	Personal preventive services	√	√			
	Curative services	√	√	√		
	Advocacy		√	√	√	√
Location of services		Throughout	Throughout	Urban, mines estates	Urban	Rural

Source: *Green, 1999 (P.77)*

However, the health policy gives importance on the preventative, promotive, public health and rehabilitation aspects of health care. It also refers to the requirements of implementing comprehensive primary health care services to people. The emphasis is also on decentralized system of health care delivery with maximum community/individual self-reliance and participation recognizing health and human development as a vital component of overall integrated socio-economic development (Park, 1995).

Health communication goes beyond healthcare. It puts health on the agenda of policy makers in all sectors and at all levels. It directs policy makers to be aware of the health consequences of their decisions and to accept their responsibilities for health (Hubley, 1993). Health communication requires the active participation of a wide range of agencies both at national and local level. Multisectoral co-operation is the only way of effectively ensuring the prerequisites for health, promoting health policies and reducing the risks in the physical, economic and social environment. In this regard new targets of WHO for the current century comprise a specific target of mobilizing partners for health (Naidoo and Wills, 2000). Building health policy is one of the five means of health promotion to achieve ‘Health for All’ by the

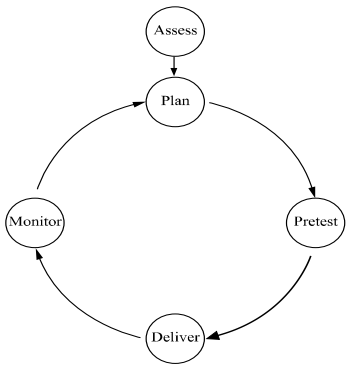
year 2000. Creating supportive environments, strengthening community action, developing personal skills and reorientation health services are associated in this regard. To communicate or to promote health effectively we have to understand, analyze and influence social and health policy. Health promotion has developed along with and in response to a social and political context of the late twentieth century (Bunton, 1992). It provides important self-awareness and better understanding of constraints for developing health public policy.

The Conceptual Framework of Health Communication

Health communication is the methodical effort to influence positively the health practices of large population. It is a process of supplying information to the target population for bringing positive changes in their health behavior. The primary goal of health communication is to bring about improvement in health related practices and in turn, health status (Graeff, Elder and Booth, 1993).

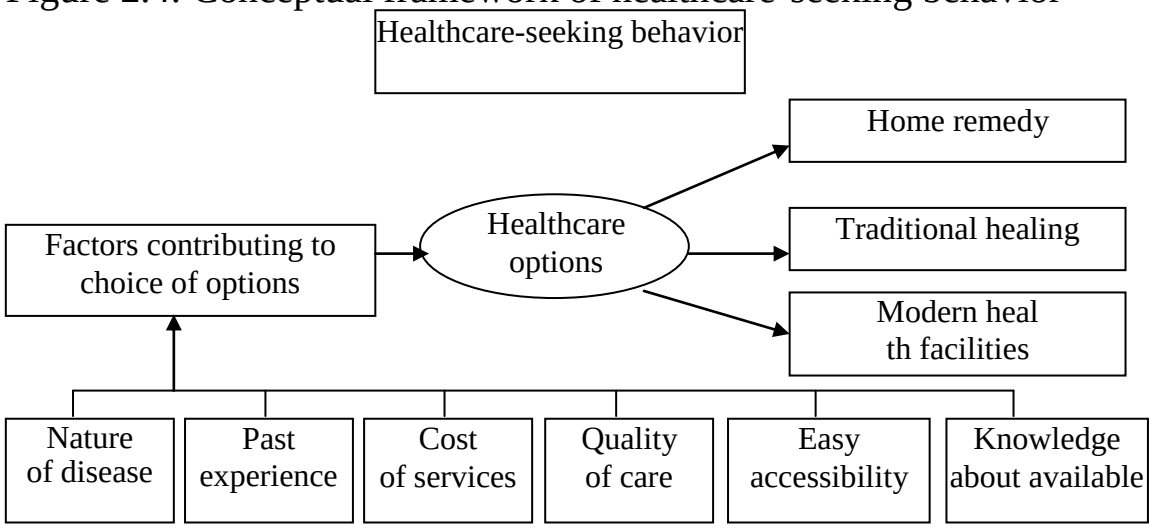
Such a goal brings on as an inevitable consequence, the stress focusing upon behavior and its social and physical environment. The paradigm gives secondary emphasis to knowledge and attitude changes (Islam et al, 2000). Many professionals working in the health sector like to make a distinction among the terms like health education, health communication, health promotion, and information education, and communication (IEC) but there is a great deal of overlap in actual practice. The approach to health communication is obtained from various disciplines, including sociology, anthropology, behavioral analysis, social marketing, advertising, communication, education and other social services. These disciplines assist in comprehending the cultural characteristics, including the beliefs and practices of a population, in order to offer programs consistent with the values and language of the target audience. Complementing each other and sharing common principles and techniques, each of them makes a unique contribution to the health communication methodology (Figure 2.3) which includes five steps: assesment, planning, pretesting, delivering, and monitoring (Graeff, Elder and Booth, 1993).

Figure 2.3: A five-step methodology



The healthcare seeking behavior of people (Figure 2.4) rest on existing health systems as well as how people perceive them (Alam, Khanam and Hossain, 2000). Therefore, communication interventions have to be designed and implemented to affect the level of perceptions beliefs and values as well as practices or behavior (GoB, 1999).

Figure 2.4: Conceptual framework of healthcare-seeking behavior



Source: Alam, Khanam and Hossain, 2000

Communication is a process of transforming an idea from a source to a receiver with aims to change behavior. It is a process of changing knowledge and norms regarding practices and behavior. It relates to the openness of local cultures to new ideas, hopes and new health behavior. It identifies specific pathways to change behavior. These are:

- Knowledge
- Approval
- Intention
- Practice and
- Advocacy

In the knowledge stage education is a primary requirements while drawing attention, clarity, consistency are important. Persuasion is more important in the approval stage. In the intention stage people are going to decide whether to change or not to change their behavior. Here communication needs to transmit the individual benefits. Behavior change happens in the stage of practice and definite action is needed here to provide information. Last stage of communication to change behavior is advocacy where effective messages and program activities can create the level of confidence and empower people to use programs and services. Communication can be classified into three broad channels:

Interpersonal : Family, friends, healthcare providers

Group : Communication through NGOs and CBOs (community-based organizations)

Mass Media : Print and electronic: Radio. TV, Cable Network, Internet, Video.

A well-planned communication strategy uses multi-channels and mutually reinforcing approach to the audience. Therefore, communication at all levels- personal, family, community and mass media plays a major role in decision-making (Piotrow et al, 1997). Effectiveness of communication programs or interventions depend on appropriate design and implementation of communication strategies. The Task Force for developing on integrating BCC(Behavior Change Communication) strategy for Health and Population Sector (GoB, 1999) has identified the following elements of strategic communication:

- Identifies critical issues and challenges of communication interventions
- Builds on conceptual models in behavioral science, social learning, persuasion/advocacy and social marketing
- Emphasis on audience involvement and participation throughout project planning, implementation and evaluation
- Recognizes that behavior change is as much a social process as it is an individual decision making process
- Addresses the priority needs by target audiences both segmentally and in an integrated manner
- Uses mass media and multi-media channels to raise awareness, cues to action for individual behavior, and legitimation/validation
- Appreciates the crucial role of entertainment through mass media.

Communication to change behavior is important. For effectiveness of the communication interventions like oral dehydration, immunization, family planning and safe motherhood it is required to influence clients and providers to modify their behavior which will promote healthier lives.

In this respect, Cabaneso-Verzosa (1996) argued :

> In particular, programs must work to influence individuals to take preventive action at the household level, to build effective community support for health-seeking behavior, and to change the attitudes and behavior of providers in ways that reinforce the desired healthy behavior of their clients.

Behavior analysis has provided a useful approach, tools, and techniques to introduce new behavior and technologies. It helps to identify positive consequences with adoption of new behavior avoiding negative outcomes (GoB, 1999). In this regard Graeff, Elder and Booth (1993) offered four principles of behavior analysis. These principles are relevant to health communication:

- Most behavior is learned within a cultural, socio-economic, and individual context and therefore can be relearned or unlearned, or new behavior can be introduced
- Behavior, including health-related behavior, is shaped by events and reactions (antecedents and consequences) in the social and physical environment
- Environmental conditions necessary for learning new behavior are not necessarily the same as those necessary for maintaining the behavior over time
- The existence of inner states, such as beliefs and knowledge, can only be inferred from observations of what people do or say they do.

Backer, Rogers and Sopery (1992) uphold that health communication campaigns have seven potential levels of effect on their audiences and each of them needs a certain evaluative strategy for measurement of effect. Table 2.2 indicates the levels and sample measures of effects.

Table 2.2: Hierarchy of effects of communication campaign and sample measures of effects (Backer, Rogers and Sopery, 1992)

No.	Level of Effect	Sample Measures of Effects
1.	Audience exposure to message(s)	TV ratings
2.	Audience awareness of message(s)	audience survey
3.	Audience's is being informed by message	audience survey
4.	Audience's is being persuaded by message(s)	audience survey
5.	Audience expression of intent to change behavior	audience survey
6.	Actual change in audience's behavior	point-of-referral monitoring for health source
7.	Maintenance of audience behavior change	point-of-referral monitoring for health source

Backer, Rogers and Sopory (1992) also hold that most communication campaigns make an effort to persuade individuals for adopting a specific innovation. An innovation is an idea perceived as new by an individual or as a community or an organization. It requires the

individual or organization to change. There are two types of innovations relating to health communication campaigns:

- incremental and
- preventive

Individual takes decision in incremental innovation to adopt new idea of present time (t_1) for achieving an increment in a desired outcome at near future time 2 (t_2). In contrast to incremental innovation, preventive innovations are comparatively more difficult to diffuse fast. A person can take an action now, at t_1 for reducing the occurrence of futures event at t_2 (Figure 2.5). But here it can be added that reward is distant in time, and may not happen even of the preventive action is taken.

Figure 2.5: Preventive innovations are more difficult to diffuse than are incremental innovations

1. Incremental innovation

Adopt the innovation (short time lapse) Beneficial consequences

t1 t2

2. Preventive innovation:

Adopt the innovation (longtime lapse) Beneficial consequences

t2 t2

Backer, Rogers and Sopory (1992) identified 27 generalizations about what makes for effective health communication campaign through extensive literature review and interviewed with campaign designers. These generalizations are stated below:

1. More effective campaigns use multiple media (television, radio, print, and so on).
2. More effective campaigns combine mass media with community, small group, and individual activities, supported by an existing community structure (this involves using a ‘systems approach’ to campaigns).
3. More effective campaigns carefully target or segment the audience that the campaign is intended to reach.
4. Celebrities can attract public attention to a campaign issue. Public attention can be achieved by embedding a campaign’s message in an entertainment program.

5. Repetition of a single message makes for a more effective campaign.
6. Campaigns for preventive behavior are more effective if they emphasize positive behavior change rather than the negative consequences of current behavior. Arousing fear is rarely successful as a campaign strategy.
7. Campaigns are more effective if they emphasize current rewards rather than the avoidance of distant negative **consequences**.
8. More effective campaigns involve in their design and operation key power figures and groups in mass media organizations and in government bodies.
9. The timing of a campaign (When it is introduced, what else is happening during its operation, and the like) helps to determine campaign effectiveness.
10. More effective campaigns utilize formative evaluation techniques to apprise and improve the campaigns during planning and while they are in operation.
11. More effective campaigns set fairly modest, obtainable goals in terms of behavioralchange.
12. The use of commercial marketing and social marketing strategies has potential for increasing the effectiveness of campaigns.
13. More effective campaigns utilize education and message in entertainment contexts (This is called the education-entertainment strategy).
14. More effective campaigns make deliberate efforts to resolve potential conflicts between evaluation researchers and message creators.
15. More effective campaigns address the larger social-structural and environmental factors impinging on the health problems the campaigns are attempting to influence (e.g. poverty and tack of economic opportunity are related to substance abuse).
16. More effective campaign are coordinated with direct service delivery components (e.g. hot line members for information of counseling), so that immediate follow-through can take place of behavior change begins to occur.

17. Segmentation of campaign audiences by demographics is often the relatively ineffective, compared with segmentation by psychographic variables based upon attitudes, values and beliefs.
18. More effective campaigns direct message to people linked to target individuals, especially individuals with direct interpersonal influence, such as peers and parents.
19. More effective campaigns choose their positive role models for social learning carefully, as these individuals may become negative role models through their personal actions (e.g. celebrities involved in substance abuse campaigns who later are discovered to have substance abuse problems themselves).
20. If fear appeals are used in campaign messages, they should be coupled with mechanisms for reducing the anxiety that is created.
21. Public service announcements alone generally do not effectively bring about behavior change PSAs should be combined with other campaign activities.
22. More effective campaigns use the news media as a means of increasing their visibility.
23. The role of the government in campaigns is mainly to provide (a) funding for campaign activities and (b) appropriate leadership on controversial issues.
24. More effective campaigns address the existing knowledge and beliefs of target audiences that are impeding adoption of desired behavior.
25. More effective campaign communicate incentives or benefits for adopting desired behavior that build on the existing motives needs and values of target audiences.
26. More effective campaign focus target audiences' attention on immediate, high-probability consequences of healthy behavior.
27. More effective campaign use pre-testing to ensure that campaign messages have the expected effects on target audiences.

These generalizations are originated from both empirical and analytic works. These have a common construction and no assumption is made that one is more important than the other or any other is essential for success in health communication.

Models and Theories of Health communication

Social scientists have developed various theories and models on health communication to change human behavior during the last 50 years. The theories and models of health behavior that currently predominate in the field of health communication are- Health belief model, Communication/persuasion model. Theory of reasoned Action, Trans theoretical Model, Precede/proceed Model, Diffusion of innovations model, Social learning theory, and Applied behavior analysis.

Health Belief Model

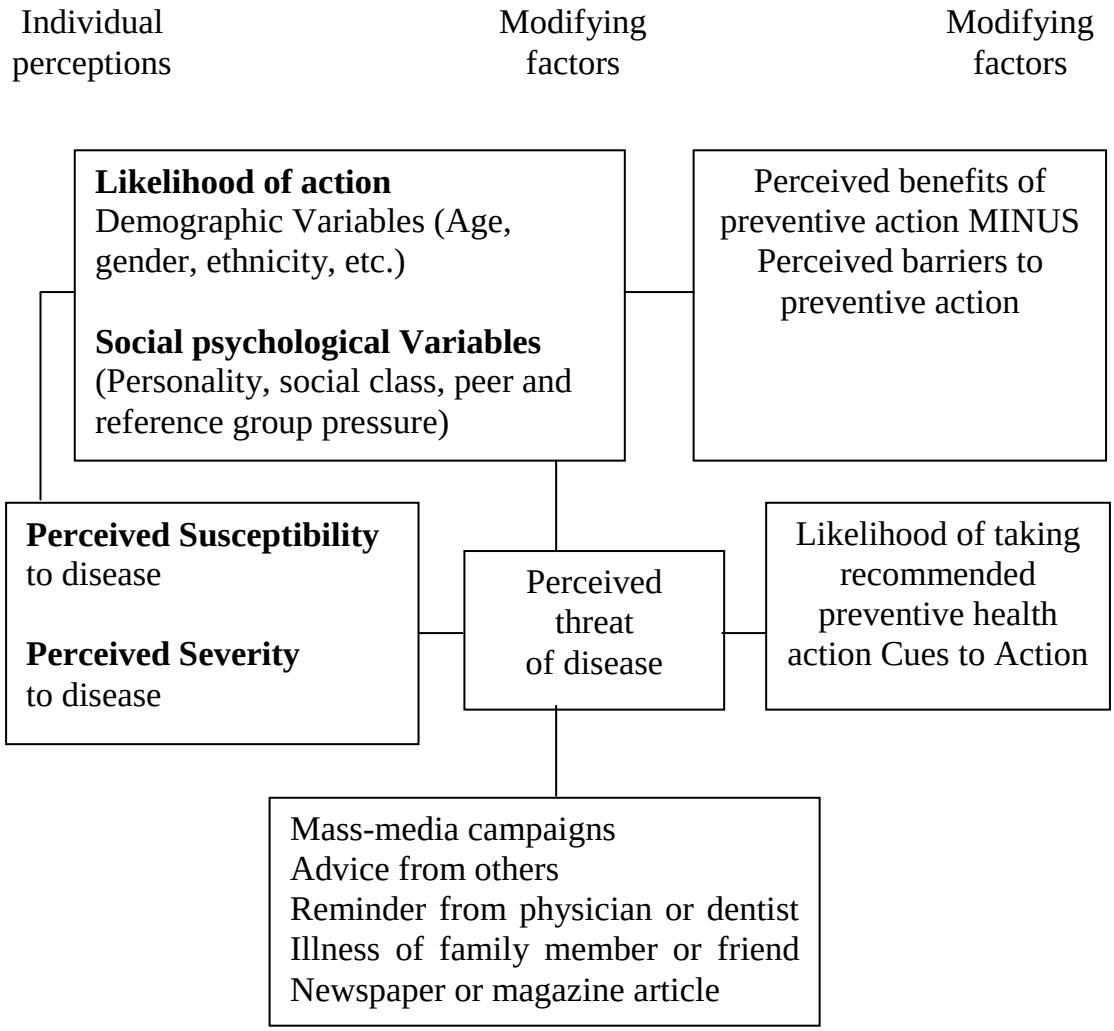
The Health Belief Model may be a useful tool in analysing the assessment and understanding of people's health behavior in relation to other health beliers (Kendall, Sally, 1998). This model may be the called a theoretical model highlighting the function of beliefs in the decision-making (Naidoo and Wills, 2000).

This model (Figure 2.6) addresses the relationship between a person's belief and behavior. It provides a way of understanding and predicting how patients/clients will behave in relation to their health and how they will seek healthcare therapies (Health, 1995). As Gillespie (1995) assert, "The theoretical underpinning of health belief model is the idea that those with the appropriate combination of motives and beliers will engage in behavior designed to prevent illness, or help restore health."

This model was first proposed by Rosen Stock (1966) and modified by Becker (1974). The Health Belief Model is closely identified with the field of health education. It maintains health behavior as a function of both knowledge and attitudes. Specially, this model emphasizes that one's perception of vulnerability to an illness and of the efficacy of treatment will influence one's decisions, about health behavior (Graeff, Elder and Both, 1993). This means that Health Belief Model stresses on a person's perception of illness, efficacy of treatment, medical cost, etc. which will influence his decisions about seeking therapy or a particular form of therapy and compliance to it. (Islam et al, 2000). There are three components of this model, these are:

1. Individual's perception of susceptibility to an illness
2. Individual's perception of the seriousness of the illness
3. Likelihood that a person will take preventive action

Figure 2.6: Health belief model (From Beckers, 1974)



According to Health Belief Model behavior is determined by whether individuals-

1. believe that they are susceptible to a particular health problem;
2. regard this problem as serious;
3. are convinced that treatment or prevention activities are effective;
4. at the same time inexpensive; and
5. receive a prompt to take health action.

Graeff, Elder and Booth (1993) argued that the various elements of the Health Belief Model can be shown statistically related to health behavior but the model has a variety of weaknesses. First, health beliefs competed with a person's, other beliefs and attitudes, which also may influence behavior. Second, decades of social psychological research have shown that belief formation may actually follow rather than precede behavior change.

As Naidoo and Wills (2000) assert:

> The model may not be particularly helpful in predicting behavior or identifying those elements that are important in influencing people to change, but it does highlight the range and complexity of factors involved.

Communication/Persusation Model

The Communication/Persuasion Model by W.J.M Guire (1964) explores that communication can be used to change health attitudes and behavior and these are directly connected in the some causal chain (Graeff, Elder and Booth, 1993). This model forms an appropriate communication strategy to bring about positive changes in people's knowledge, attitudes and perceptions of health and illness through persuasion (Islam *et a*l, 2000). This model indicates that changes in knowledge and attitudes are preconditions for health behavioral changes. The effectiveness of this model rest on varied input (or stimuli) and outputs (or responses to the stimuli). Here the input variables are the source of a massage, the message itself, the channel of sending message, receiver characteristics, and destination whereas output variables mean changes in specific cognitive factors like knowledge, attitudes, and decision making along with observable behavior.

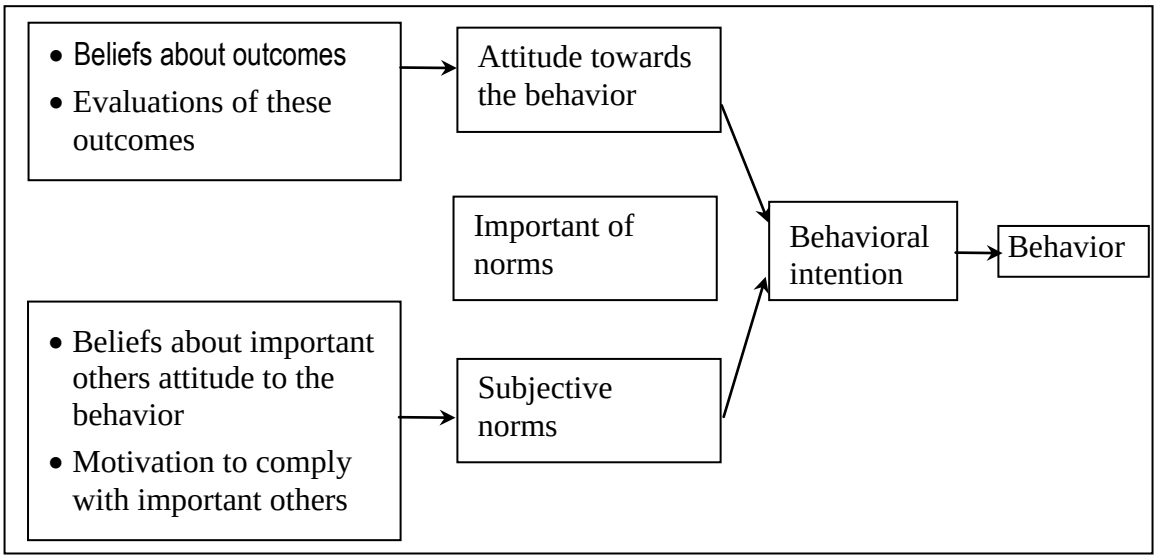
Piotrow, Phyllis, Tilson et al (1997) referred about this model that this emphasizes the hierarchy of communication effects and considers how various aspects of communication, such as message design, source, and channel, as well as audience characteristics, influence the behavioral outcome of communication.

Closely related to health communication, the theory of Reasoned Action (M. Fishbein & S. Ajzen, 1975, 1980) emphasizes the role of personal intention in determining whether a behavior will occur. This theory refers that behavior generally follows intention and will not occur without it. This theory gives emphasis to people's "normative" beliefs that is what they think other people-specifically influential people like peer or reference groups would do in a similar situation (Graeff, Elder and Booth, 1993; Islam *et al* 2000). Piotrow, phyllis Tilson et al (1997) show that this theory

> Specifies that adoption of a behavior is a function of intent, which is determined by a person's attitude (beliefs and expected values) toward performing the behavior and by perceived social norms (importance and perception that others expect the behavior)

According to the Theory of Reasoned Action (Ajzen & Fishbeir, 1980) behavior is dependent on two variables-attitudes and subjective norms. Here attitudes means beliefs about the effect of the behavior and an appraisal of the positive and negative aspects of making a change and subjective norms refer to what is significant to others' and the degrees by which the person wants to conform with others. These two influences combine to form an intention. This theory is different from the Health Belief Model by giving importance to social norms as a major model in that it places importance on social norms as a major influence on behavior (Naidoo and Wills, 2000). Figure 2.7 shows the importance of this factor in the Theory of Reasoned Action.

Figure 2.7: Theory of reasoned action (From Aizen & Fishbein, 1980)



Bowling, Ann (1997) summarized the theory in words:

The theory of reasoned action is a general psychological theory of behavior which assumes that the intention to undertake a behavior is determined by the person's attitude towards it, which is determined by his or her beliefs about the consequences of the behavior, and by subject norms (e.g. important others' expectations about the person's behavior).

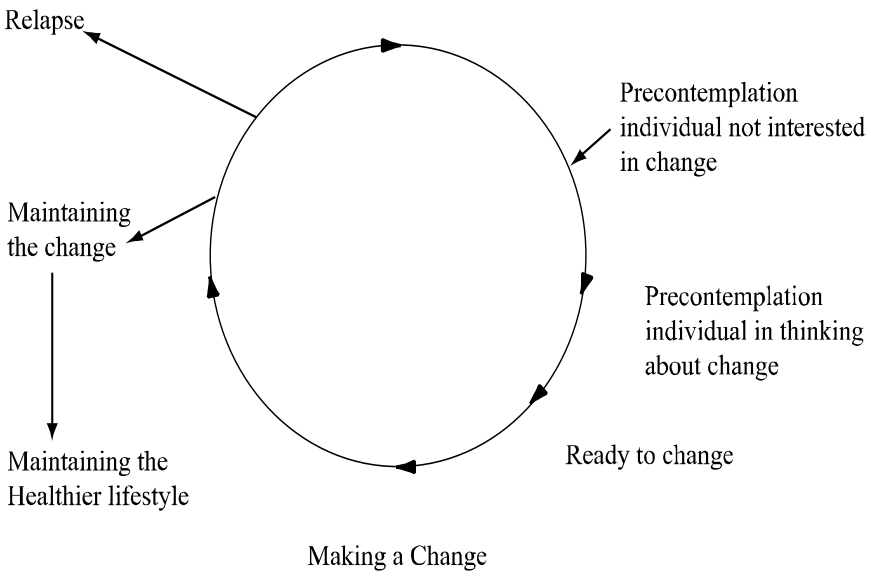
Transtheoretical Model/The Stages of Change Model

Currently the 'Transtheoretical Model' is more commonly known as the 'Stages of Change' model and has become widely used. This model is developed by Prochaska and Diclemente in the 1970s and 1980s and draws on theories from psychotherapy to explain variations in people's response to advice about changing behavior. This model is also built up to set out a framework for tailoring advice to individuals (Blenkinsopp, Alison et al, 2000). In developing a stage model of behavior acquisition is important in showing that any change which is

made by individual is not final but part of an on-going cycle of change (Naidoo and Wills, 2000). The work of Prochaska & Diclemente (1984, 1986) has focused on encouraging change in addictive behavior, although the model can be used to show that most people go through a number of stages when trying to change or acquire behavior (Blenkinsopp et al, 2000). Figure 2.8 illustrates this process and presents five stages (Naidoo and Wills, 2000):

- *Pre-contemplation:* In pre-contemplation stage individuals have no intention of changing or not considered changing their life style. They may have awareness about any potential risk in their health behavior. But when they become aware of a problem, they may progress to the next stage.
- *Contemplation:* Here the person is thinking about the possibility of changing but has made no plans to change. The person may be seeking information or help to reach decision. The contemplation stage may last a short while or several years.
- *Preparing to change:* In this stage, the decision has been made to change and the person is getting ready to make the change (Blenkinsopp, Alison *et a*l. 2000). When the perceived benefits seem to outweigh the costs and when the change seems possible as well as worthwhile, the individual may be ready to change, perhaps seeking some extra support
- *Making the change action:* Here the change is implemented. The early days of change require positive decisions by the individual to do things differently. The features of this stage are a clear goal, a realistic plan, support and rewards.

Figure 2.8: Scope of change model (after Prochaska & Diclemente, 1984)



- *Maintenance***:** In the maintenance stage an individual works to prevent relapse to the previous behavior. That means new behavior is sustained and the person moves into a healthier lifestyle. But the new behavior is difficult to maintain for some people and they may revert or 'relapse' back to any of the previous stages.

Though analysing the stages of change Blenkinsopp, Alison *et al* (2000) assert:

> The principle of 'Stages of Change' is that for intervention to be successful, it must match the stage the person is currently at. The sequence of stages is not linear and is best viewed as a cycle. The person can, at any stage, loop back to an earlier stage and go through the cycle again.

This model has been examined or tested most widely in the treatment of addiction and dependence in studies, for example of smoking cessation and alcohol dependence. Currently it is the subject of many public health research efforts in both chronic and infectious disease control (Graeff, Elder and Booth, 1993).

Precede/Proceed Model

Precede/Proceed Model was developed by Lawrence Green and his colleagues over a decade ago and this model is currently famous for planning health education programmes. Based upon the Health Belief Model and other conceptual systems, Precede is a true 'model' though it is based in Health Belief Model and other conceptual systems. This is a pragmatic effort to change health behavior rather than for theory development (Graeff, Elder and Booth, 1993). In the context of behavioral perspective, the educational diagnosis phase of precede emphasizes three factors: predisposing, enabling and reinforcing. The predisposing factors are those factors which put pressure towards changing attitudes or behavior among people. The enabling factors provide resources, skills or social environment for change of behavior. The reinforcing factors are events which reward the new pattern of behavior (Islam *et al*, 2000). The former two factors are related to previous situation of a behavior and the skills necessary for its performance. But reinforcing factors are synonymous with the term consequences used in behavior analysis (Graeff, Elder and Booth, 1993).

Diffusion of Innovations

The diffusion of innovations theory was developed by B. Ryan and N. Gross (1943). This theory emphasizes the process by which new idea

or practice is communicated though certain channels over time among members of the society. This model explores the factors those influence people's thoughts and actions and the process of adopting new technology or idea (Piotrow, Phyllis Tilson et al, 1997).

Diffusion is the process by which an innovation is communicated. An innovation is an idea or practice or object perceived as new by an individual. Innovation requires communication. The diffusion is communicated by a variety of channels over a period of time within a social system or community. Diffusion is concerned with social change (Macdonald, Gordon, 1992).

This model (Rogers & Shoemaker, 1971; Rogers, 1973) emphasizes the role of change agents in the social environment. The relative, neighbor, health worker, or other change agent can help in changing behavior in a variety of ways. This may be made possible by developing a need for change, establishing the necessary interpersonal relationship, identifying the problem and its causes, specifying goals and potential solutions, motivating someone to attempt and maintain action, and terminating the change relationship (Graeff, Elder and Booth, 1993). This model gives emphasis to the adoption of new and innovative health practices which take in sequence of stages (Islam et al, 2000).

Diffusion of Innovation theory is not out of limitations as Macdonald, Gordon (1992) asserts:

> One of the principal problems associated with the communication of innovation is time. In studying a process like diffusion time is a key ingredient but also a methodological nightmare. Diffusion of innovations takes time and as such either requires well-constructed longitudinal research which pays close attention to process elements within the diffusion or relies heavily or participant call.

Social Learning Theory

Social Learning Theory was provided by A. Bondura (1977). This theory represents that learning represents that learning occurs through on interactive processes in which person, behavior and environment are mutually supportive to each other (Islam et al, 2000). It stresses the triadic relationship among 'person' (That is one's cognitive processes), Behavior, and environment through a 'reciprocal determinism' (or 'reciprocal causality') process. Bandura (1977) suggests that people's health choices are related to:

- Outcome expectancies (whether an action is to ead to a particular outcome)
- Self-efficacy (whether people believe they can change)

Thus social learning theory views behavior as a function of a person's 'self-efficacy'(self-confidence) and outcome expectations. A. Bundura, specifies that audience members identify with attractive characters in the mass media who demonstrate behavior, engage motions and facilitate mental rehearsal and modeling of new behavior (Piotrow, phyllis, Tilson et al, 1997). Vicarious (observational) learning is a central theme of social learning theory. Bondura divides vicarious learning into four steps:

i. attention to the model,

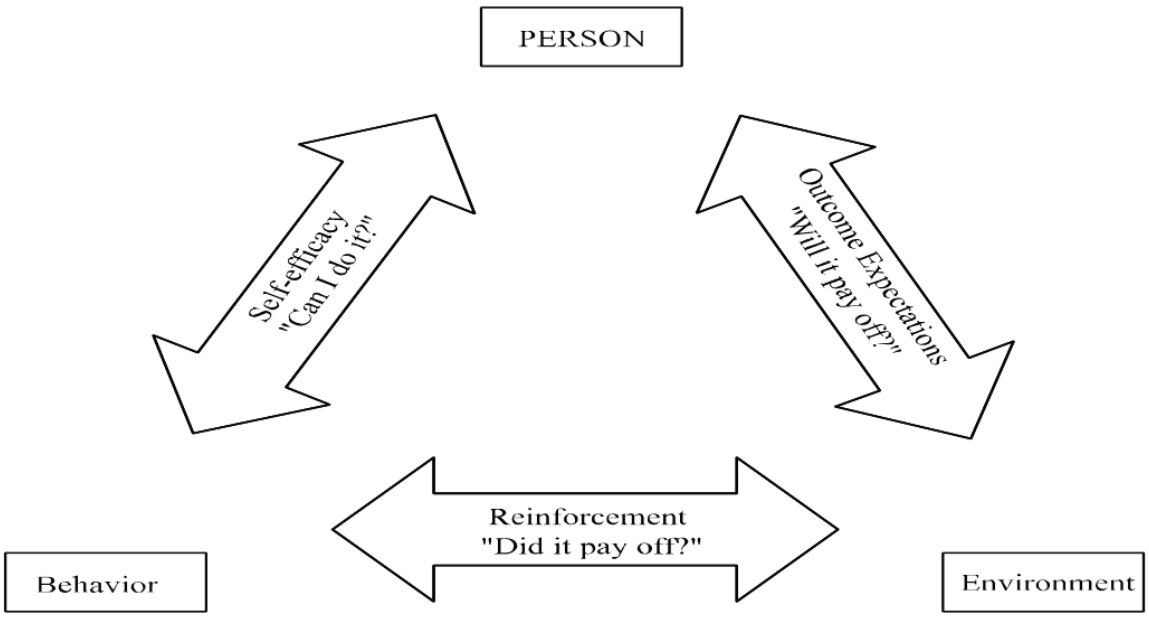
ii. retention of what was observed,

iii. reproduction of the behavior, and

iv. reinforcement of the behavior.

The concepts highlighted in social learning theory are depicted in Figure 2.9.

Figure 2.9: Interactive influences on behavior as viewed by social learning theorists (Graeff, Elder and Booth, 1993)



Social learning theory has its origin in the 'learning theory' that is a branch of psychology. Primary difference exists between learning and social learning theory. The former focuses on environment-behavior relationships, whereas social learning theory emphasizes cogitative interpretations of these relationships. As a result, interventions and

measurement derived from social learning theory are comparatively complex in character (Graeff, Elder and Both, 1993).

There are also some theories of communication impacts on behavior. These are referred by Piotrow, Phyllis Tilson et al (1997) in *Health Communication: Lessons from Family Planning and Reproductive Health*.

- ***Social influence, social comparison, and convergence theories:*** These theories explore that individual's perception and behavior rest on the perception and behavior of the people in which he belongs. These theories are known as social process theories.
- ***Theories of emotional response:*** These theories indicate that highly emotional messages in entertainment will more influence the behavior than messages low in emotional entertainment.
- ***Cultivation theory of mass media:*** This theory depicts that repeated, intense exposure to deviant definitions of "reality" in the mass media contributes to the perception of that "reality" as normal. Here the outcome is a social legitimization of the "reality" explored in the mass media.

The diversity in concepts of health, influences on health and ways of measuring health lead to a number of different approaches to health promotion. Medical or preventive, behavior change, educational, empowerment and social change are these approaches report by Naidoo and Wills (2000). These approaches have different objectives and these reflect different ways of working (Table 2.3).

Table 2.3: Approaches to health promotion (Naidoo and Wills (2000)

Approach	Aims	Methods	Worker/client relationship
Medical	To identify those at risk from disease	Primary health care consultant, e.g. measurement of body mass index	Expert led passive, conforming client
Behavior Change	To increase age individuals to take responsibility for their own health and choose healthier lifestyles	Persuasion through one-to-one advice information, mass campaigns, e.g. 'Cook after your heart' dietary messages	Expert led dependent client victimblaming ideology
Educational	To increase knowledge and skills about health lifestyles	Information Exploration of attitudes through small group work development of skills, e.g women's health group	May be expert led May also involve client in negotiation of issue for discussion

Approach	Aims	Methods	Worker/client relationship
Empowerment	To work with clients or communities to meet their perceived needs	Advocacy Negotiation Networking facilitation e.g. food co-op, fat women's group	Health promoter is facilitator client becomes empowered
Social Change	To address inequalities in health based on class, race, gender geography	Development of organizational policy. e.g. Hospital catering policy public health legislation, e.g. food labeling lobbying, Fiscal controls, e.g. subsidy to farmers to produce seas meat	Entails social regulation and is top down

Box 2.1: Steps to behavior change

Knowledge

1. Recall family planning messages.
2. Understands what family planning means.
3. Can name family planning method(s) and/or source of supply.

Approval

4. Responds favorably to health planning messages.
5. Discusses family planning with personal networks (family, friend).
6. thinks family, friends, and community approve of family planning.
7. Approves of family planning.

Intention

8. Recognizes that family planning can meet a personal need.
9. Intends to consult a provider.
10. Intends to practice family planning at sometime.

Practice

11. Goes to a provider of information/supplies/services.
12. Chooses a method and begins family planning use.
13. Continues family planning use.

Advocacy

14. Experiences and acknowledges personal benefits of family planning.
15. Advocates practice to others.
16. Supports programms in the community

Among the approaches, Behavior Change approach aims to stimulate individuals to adopt healthy behavior, as the people can promote their health by selecting their way of life change. There is also an assumption that people do not take responsible action to look after themselves. Therefore, they are blamed for the consequences.For

designing strategic communication interventions to Behavior Change Communication, a theoretical framework named 'Steps to Behavior Change' has developed. This framework is an adoption of diffusion of innovations theory and the input/output persuasion model. The steps to behavior change is improved by social marketing experience and flexible enough to use other theories within each of the steps or stages (Piotrow, Phyllis Tilson et al, 1997). Consists of five major stages of change and these are knowledge, approval, intention, practice, and advocacy. These five stages and sixteen steps are shown in the Box 2.1.

Graeff, Elder Booth (1993) has provided few steps in Behavior change model. These are assessing behavior, planning for behavior change, skill training, monitoring behavior change and maintaining health practices.

- ***Assessing behavior:*** Assessment is the first stage of the communication process. In this stage, communicators collect information in order to plan communication strategies based on the needs, cultural context, practice of the target audience. Here they gather knowledge by introducing a dialogue with the community through research with target audience.
- ***Planning for behavior change:*** Communication plan for behavior change focuses on communication intervention through exploring the relationships between the environment and the expected behavior. At the time of choosing target behavior planning communication strategies and determining the role of communication channels- These relationships are taken into consideration.
- ***Skill training:*** Skill training is an important component in most health communication programs. It is important for workers in the health system along with primary target audience. By direct observing the skills covered in training the trainers can learn the performance levels of trainees through observing the skills provided in training directly. Therefore the trainers are able to plan and evaluate training, Skill training consists of five steps instructions, demonstration of the target skill, practice, feedback, and homework with feedback.
- ***Monitoring behavior change:*** Communication programs that have set behavior change goals must monitor the programs being made toward those goals. This stage has three steps: collecting behavioral data, compiling and graphing the results, and using the data as

feedback to participants, communicators only measure behavior change through performing but also use these three steps and the obtaining results can be used as constructive feedback to strengthen the behavior measured.

- ***Maintaining health practices:*** Generally, communication programs begin by emphasizing the introduction of a new behavior. After that emphasis is given on the maintenance of those behavior as achieving maintenance is a long-term effort. However, programs focusing on behavior maintenance requires chance to produce data and feedback to planner participants in view of long-term effects of a particular approach which can be evaluated.

Health communication has had a significant role in changing behavior of a target population in coordination with communities and healthcare delivery systems. In this regard, behavior change communication paradigm (BCC) aims at providing demand oriented and integrated health delivery services to vulnerable social groups through multi-facet communication strategies for promoting health behavior among target population (Islam et al, 2000). But there are two main constraints to identify health behavior changed after the intervention or program of services. Change may only be apparent over a long period in one hand and in contrast, it may be difficult to isolate any change as attributable to health promotion intervention (Naidoo and Wills, 2000).

In conclusion of this chapter, it can be argued that health communication is no more a mere theoretical concept but an applied science which is very much closely related to the basic issues upon which the survival of human species depends. It explores the study and use of communication strategies to inform and influence individual and community decision regarding health. The practice of health communication related to all aspects of health promotion and disease prevention which focuses on promoting the life of individual and groups and better health of the people. By improving communication– interpersonal, mass media and group interactions and disseminating health messages its aim to change social scenery to create awareness, change attitudes, motives and behavior of the people to adopt recommended prescribed behavior. Thus health communication has had a significant role in changing behavior of a target population in coordination with communities and healthcare delivery system. Building supportive environments, strengthening community action, developing personal skills and reforming health services are crucial to achieve *'Health for All'* in this regard.

Chapter- III

Problems and Issues of Health Policy and Health Communication in Bangladesh

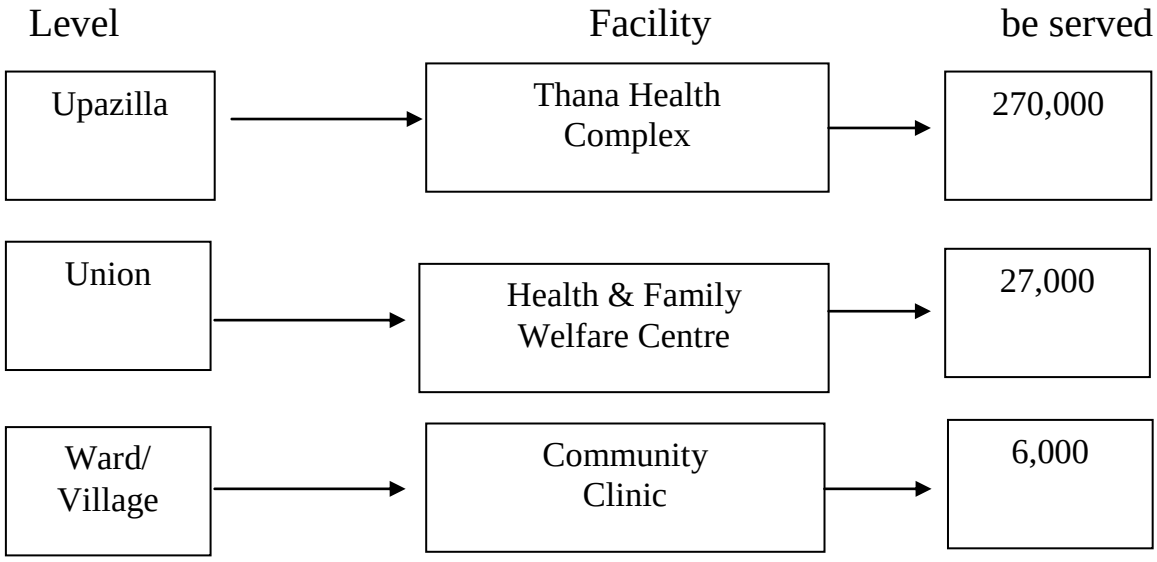
Health is one the basic needs of the people. Thus stressing on health and health care services the constitution of Bangladesh states, "It shall be a fundamental responsibility of the state to attain, through planned economic growth, a constant increase of productive forces and a steady improvement in the material and cultural standards of living of the people, with a view to securing for its citizens- the provision of basic necessities of life, including food, clothing, shelter, education and medical care" (GoB, 1996; Article 15a,p.12). Promotion of nutritional level of people and public health will also be treated as primary duties (GoB, 1996,Article 18 (1), p.14; GoB, 2000). Following the World Health Organization (WHO), the Govt. of Bangladesh (GoB) has accepted the Primary Health Care (PHC) approach as a strategy to obtain the goal of "*Health for all*". Bangladesh also accepts the Alma-Ata Declaration on Primary Health Care (PHC). The health policy of Bangladesh is based on primary health care whereas its key goal is to provide health care to the masses (Khan, 1988).

Since the independence of Bangladesh, the government had taken different programs, plans, seminar, discussion etc. to formulate a health policy but it had not led to a meaningful and practical health policy until 2000. Moreover, crisis and complex situation have emerged. Health situation of the country are quite alarming. Lack of required machinery materials, unskilled persons for using them, inadequate number of doctor/nurse/technician, disorder, unhealthy dirty environment, low quality services to patients, crisis of water-electricity, smuggling (medicine), lower quality food, corruption, absence of responsibility and accountability, above all weak management make the hospital environment depressed. The prime reason for this appalling situation is the failure to build up the service providing institutions timely in accordance with increasing population, patients and diseases. Moreover, unplanned steps were taken politically and for provisional needs, which led the whole system into imbalance. But we have to remove all of these crises for the betterment of the people.

A Review of the Health Problems, Plans and Programs in Bangladesh

The First Population Project (1975-80) put into operation for renovation the physical infrastructure for health and family planning service delivery had been highly affected during the War of Independence. The Second Population and family health project (1980-1986) provided, fund for the further development of the national family planning program. The third Population and Family Welfare Project (1986- 1991) gave importance for supporting for child survival services and home-based delivery care along with family planning services. The last and Fourth Population and Health Project (1992-1998) provided further support for Mother and Child Health Care and disease control activities along with existing family planning services. This project ended in mid- 1998 and its review shows concerns about the lack of program in reducing maternal mortality and morbidity as well as low utilization cost-effectiveness, financial sustainability, and quality of Government Health Services. After that Government of Bangladesh (GoB) formed health and population sector strategy (HPSS), which is now made operational in its current wealth and (1998-2003) which leads to ensure universal access to essential health care services of acceptable quality. This will contribute to further reducing infant mortality and morbidity and reductions fertility so that replacement level of fertility will be reached by the year 2005 (Perry, 2000). Already 54 issues in the health sector were identified for the formulation of HPSP and now those issues should be promoted for action at grass-root people by ensuring their sustainability. An important component for achieving the goal would be the participation of stakeholders, specially the users in all phases of the project cycle to build a proper, women-friendly, sustainable, cost-effective, accountable and transparent health system in Bangladesh (The Daily Star, 2000). For HPSP Essential Service Package (ESP) was developed by giving disgust priority to the interventions of health and family planning services which are responsive to clients' needs, especially women, children and the poor. The ESP of HPSP is planned to be delivered following a three-tired model (Figure 1) with the Thana Health complex (THC) at the Upazilla level (Sub-district) level, and Community clinic at the ward/village level. The design of ESP delivery warrants an integrated approach by the health and family planning service providers and managers within or unified management system at Upazilla level and below (Shariar et al, 1999).

Figure 3.1: Tiers of ESP delivery in rural areas level



But we can find inconstancy in health management system in any level where is no integration exists. Promotion of knowledge on nutrition and nutrition scheme are not effectively formed. Integrated Nutrition Program have been recently under taken for implementation. *A*lthough wide Population control activities are present from field level to the centre but here also exists conflict too and no integration with health management in upazila level. As a result, desired outcomes are not come into light. Besides the problems in health care system, few successes came in last years. Child mortality has already decreased from 144 per thousand to 57 but still the rate is high (BBS, 1999). Great success has come from Expanded Immunization Program (EPI) recently. But even then, maternal mortality rate is also high in the country. Diarrhea is a common disease from which a significant number of child under the age of five die in every year. Moreover, tuberculosis, leprosy and other communicable diseases lead thousands of people to die. Along with these problems recently HIV/AIDS, Arsenicosis in water and Dengue fever are spell threading us. We want to get remedy from this situation. In this respect, Health and Family Welfare sector will have to face the challenge of next century with proper consideration, courage and efficiency to design and implement - the programs and the policies. Government and other related organizations will have to come forward together. All requires more needs for cordial services. Modern, scientific and time based health policy and its implementation provide people's expected health services. It is promising that a health policy in this area for the first time in Bangladesh has developed. The main features of this health policy are stated below.

National Health Policy (2000)

The Goal and Objectives of National Health Policy

The goals and objectives of National Health Policy are-

1. To make necessary basic medical utilities reach people of all strata as per Section 15(A) of the Bangladesh constitution and develop the health and nutrition status of the people as per Section 18(1) of the Bangladesh Constitution;
2. To develop system to ensure easy and sustained availability of health services for the people, especially the poor communities in both rural and urban areas;
3. To ensure optimum quality, acceptance and availability of primary health care and governmental medical services at upazila and union levels;
4. To reduce the intensity of malnutrition among people, especially children and mothers; and implement effective and integrated programs for improving nutrition status of all segments of the population;
5. To undertake programs for reducing the rates of child and maternal mortality within the next five years and reduce these rates to an acceptable level;
6. To adopt satisfactory measures for ensuring improved maternal and child health at the union level, and install facilities for safe and hygienic child delivery in each village;
7. To improve overall reproductive health resources and services;
8. To ensure the presence of full-time doctors, nurses and other officers/ staff, provide and maintain necessary equipment and supplies at each of the upazila health complexes and union health and family welfare centres(UHFWCs);
9. To devise necessary ways and means for the people to make optimum usage of the available opportunities in government hospitals and the health services system, and to ensure satisfactory quality management, cleanliness of service delivery of the hospitals;
10. To formulate specific policies for medical colleges and private clinics, and to introduce laws and regulations for the control and management of such institutions including maintenance of service quality;

11. To strengthen and expedite the family planning program with the objective of obtaining the target of Replacement Level of Fertility;
12. To explore ways to make the family planning program more acceptable, easily available and effective among the extremely poor and low-income communities;
13. To arrange special health service for the mentally retarded, the physically disabled and elderly populations;
14. To determine ways to make family planning and health management more accountable and cost-effective equipping it with more skilled manpower;
15. To introduce systems for treatment of all types of complicated diseases in the country, and minimize the need for foreign travel for medical treatment abroad.

Policy Principles of National Health Policy

The following policy principles have been adopted in order to attain the foregoing goals and objectives:

1. To create awareness among and enable every citizen of Bangladesh irrespective of caste, creed , religion, income and gender, and especially children and women, in any geographical region of the country, through media publicity, to obtain health, nutrition and reproductive health services on the basis of social justice and equality through ensuring everyone's constitutional rights;
2. To make the essential primary health care services reach every citizen in all geographical regions within Bangladesh;
3. To ensure equal distribution and optimum usage of available resources to solve urgent health-related problems with focus on the disadvantages, poor and unemployed persons;
4. To involve the people in various processes like planning, management, local fund raising, spending, monitoring and review of the procedure of health service delivery etc. with the aim of decentralizing the health management system and establishing people's rights and responsibilities in this system;
5. To facilitate and assist in the collaborative efforts between the government and the non-government agencies to ensure effective provision of health services to all;
6. To ensure availability of birth control supplies through integration, expansion and strengthening of the family planning activities;

7. To carry out appropriate administrative restructuring, decentralization of the service delivery procedure and the supply system, and to adopt strategies for priority-based human resource development aimed at overall improvement and quality-enhancement of health service, and to create access of all citizens to such services;
8. To encourage adoption and application of effective and efficient technology, operational development and research activities in order to ensure further strengthening and usage of health, nutrition and reproductive health services;
9. To provide legal support with regard to the rights, opportunities, responsibilities, obligations and restrictions of the service providers, service receivers and other citizens, in connection with matters related to health service; and
10. To establish self-reliance and self-sufficiency in the health sector by implementing the primary health care and essential services programs, in order to fulfil the aspirations of the people for their overall sound health and access to reproductive health care.

Policy strategies in Health Policy

The numbers of policy strategies are thirty-two in numbers in health policy in Bangladesh. Based on the goals, objectives and principles the major strategies related to health communication or health promotion are:

- An appropriate implementation of the Health Policy needs mass-scale consensus and commitment that will facilitate socio-economic, social and political development.
- Prevention of diseases and health promotion will be emphasized to achieve the basic objective of ‘‘Health for All”. The Health Policy focuses on provision of the best possible health facilities to as many people as possible using cost-effective methods, and will thus ensure effective application of the available curative and rehabilitative services.
- As primary health care is the universally recognized methodology to provide health services, this will be adopted as the major component of the National Health Policy in order to ensure delivery of cost-effective health services.
- The Drug Policy will be liberalized and improved in keeping with the Health Policy to fulfil the overall needs for health services.

There is need to ensure smooth availability of essential medicines focusing on the current needs for such medicines and their efficacy, including their affordability by all people. Necessary steps will be taken to maintain quality standards of the marketed medicines. In this line, the required number of skilled manpower will be acquired in the drug administration of the country.

The health policy will ensure distribution of birth control supplies and make improvements in the management of the domestic sources of the same, including encouragement of the domestic entrepreneurs for production of such commodities.

- Epidemiological surveillance method will be integrated with the disease control programs. A specific institution will be entrusted with the responsibility of such surveillance.
- The basic principles for ensuring quality standards in health acre at various health centres will be adhered to. Standard quality assurance guideline including monitoring and evaluation will be provided to every health centre.
- A Health Services Reform Body will be formed based on the Health and Population Sector Strategy (HPSS) aiming at meeting the current demand. The role of the Health Services Reform Body will be to render the services like, infrastructure reforms, acquision of human resources, planning and implementation of programs for development human resources related to the health sector, career planning of the staff, inspection of supplies and logistics, and consultations on how to effect overall development of health service including its management styles etc.

  Recommendations will be implemented in phases based on the availability of necessary resources.
- An appropriate and need-based approach to develop human resources will be designed in order to maximize the utilization of the knowledge and skills of health-related personnel. A number of posts will be created with a view to promoting the eligible staff at the grassroots level on the basis of their seniority and skills acquired. Special care will be taken to ensure that no staff's promotion is heald up.

  While a staff is sent for training outside his or her own organization, necessary replacement will be put in place for the term of that training, that is, no training leave may be allowed without replacement.

- The people and the local government will be integrated with the health service system at all levels.
- An Integrated Management Information System (IMIS) and a computerized communication system will be installed countrywide, to facilitate implementation, action planning and monitoring.

  The existing information management system will be further strengthened by recruiting more efficient and eligible incumbents. To this purpose, extensive and appropriate training will be arranged, and the available manpower will be expanded and their skills enhanced.
- The Bangladesh Medical and Dental council (BMDC) and the Bangladesh Nursing Council (BNC) will be restricted and strengthened in order to ensure strict supervision of medical practitioners' registration, their quality of skills, and related ethical issues.

  With a view to maintain the required quality standards of the performance, education and training of the pharmacists, medical technologists and other paramedics, the Pharmacy Council and the State Medical Faculty will be restricted and organized.
- Various professional organizations, such as, Bangladesh Medical Association (BMA), Bangladesh Private Medical Practitioners Association (BPMPA), and the country's health service system.
- Need-based medical education and training will be made more people-oriented and updated.
- Arrangements will be made for institutional training, on such issues as management and administration, for improving the doctor's management capabilities.
- Regular training will be provided to the medical practitioners, teachers, nurses, paramedics and other staff at all levels in both public and private sectors through a specific institution. Reorientation course, continuing medical education program, administrative and management courses, etc. will be offered from there.

  In order to create the required facilities for offering such training, a National Training Institute will be established.

- To ensure efficient health services, the management of the medical colleges/institutions and related hospitals will be improved., and higher levels of financial and administrative power will be delegated to them.
- Nutrition and health education will be on health education will be emphasized, as these are the major driving forces of health and family planning activities. There will be one nutrition education unit and one health education unit in each upazilla, so that they can reach every village of Bangladesh.

  Information and health education will be disseminated to the people through incorporating the community leaders and other departments or organizations of the government in the health service system. One of the goals of health service system will be to improve the nutrition status of the people.
- The government hospitals and clinics will charge a minimum fee from the patients, but there will also be provision for cost-free medical treatment to the poor and the disabled.
- NGOs and other private organizations will be encouraged to perform a role complementary to those of the government in the light of the governmental rules and policy.
- Infrastructure and transportation will be developed to minimize the disparity in access to health services between rural and urban populations. In order to ensure presence of every officer and staff of the health service system at their respective workplaces and their efficient services, development of education facilities and improvement of the social environment in those neighborhoods will be made.
- Arrangements will be made to pay non-practicing allowances to those government doctors/trainee doctors who act as full-time and resident doctors, thus making them refrain from private medical practice.

  Doctors working at a government medical college, hospital or health center opting for private medical practice using the facilities at the medical college, hospital or health center, will be allowed to do so only under a clear policy.
- Accountability of all concerned in the health service system will be ensured. An adequate procedure will soon be designed to strengthen accountability and ensure quick and strict legal disposal of cases relating to negligence of duties.

- A national level health and population council will be formed under the leadership of the Head of the Government. This council will provide support and advice on the implementation of the National Health Policy and will ensure effectiveness and accountability of the health service system. The local and regional councils will monitor the health-related activities in their respective areas, including review of composition, application and supervision of he primary health care provided to the people.
- Inter-sectoral coordination and linkages will be strengthened by way of utilizing the resources at the disposal of concerned sectors for quick solution of the health-related problems.
- Research on various management styles and their effectiveness, clinical services, approach to diagnoses, social and behavioral aspects of human beings, epidemics etc. will be encouraged by the government. Information dissemination system will be strengthened, especially by involving the private organizations, in order to make IEC (information, education and communication) reach the grassroots level.

  A sound referral system will be designed and installed, and its usage will be strictly supervised, so that a linkage can be established among primary health care activities at various tiers ultimately increasing the efficacy of this system.
- Duplication of activities from different projects, programs and activities will be avoided. In this connection, a policy-planning cell will be established in the Ministry of Health and Family Welfare, through which effective and sustainable coordination may be ensured.
- The goal of the Health Policy will be to provide personal or client-centered health and reproductive health service, so that an individual can have the opportunity to select services according to his/her personal needs. This pattern of service-delivery will be considered an important approach of the National Health Policy and will contribute to a reduction in the rate of unwanted pregnancies.
- Governmental allocation of expenditure budget for health centre from the districts to the community level may be redistributed within reasonable flexibility. This redistribution of expenditure budget will provide increased benefits to the poor and destitute communities. As a result, expenses will be optimized and health services will be easily available.

- Alternative health service systems, such as auyrvhedic, unani and homeopathic practices will be incorporated into the National Policy. Encouragement will be given to the principle of making these three disciplines of medical science more scientific and time-worthy towards enabling the practitioners in these disciplines to contribute to the country's health service. Government will provide appropriate support to these systems through enhancing grants and arranging proper training in these areas, and ensure monitoring of the quality of services rendered through these systems.
- The arrangement for delivery of Essential Services Package (ESP) among the people from a single one-stop health service centre will be considered the appropriate strategy for provision of primary health care. This will be introduced throughout the country. For this purpose, well-planned and useful training will also be arranged at the upazila health complexes.
- All development activities in the health sector will be conducted through a sector-wide management system.
- In order to bring every citizen of the country under coverage of this health service system, one community clinic will be established to serve every 6,000 persons. An M.B.B.S- doctor will be deployed in each Union Health and Family Welfare Centre, and each of these centres will be equipped with residence facilities for the doctor.

Evaluation of Health Policy in Bangladesh

Multi-dimensional problems are existed in current health policy and at various tiers of the physical and technical infrastructures of the health service system. Therefore, this policy is not out of criticism. This policy does not provide any historical background. Therefore, it is difficult to understand whether it is the first national health policy on health or not. There is also no baseline information on the current health condition of the people. As a result, it is problematic to comprehend the basic context and premises upon which this policy has been formulated. This policy does not cover the approach to empower communities to deal with their health problems where as majority of the people are living in the poverty. Moreover, politicization of health services is clearly shown in Bangladesh. Here professional bodies like various associations are politically motivated and are not involved in enhancing the quality of health services. In current health policy, private clinics and NGO services have been mentioned as important

health providers of the people. But no evaluation of the users of private clinics is provided. Here it can be added that most of the private clinics are based upon the expertise of professionals working in public hospitals. But this is not highlighted in the health policy. Utmost service with least effort is frequently emphasized in health policy. There is no strong command to enhance budgetary allocation in health sector. According to budgetary allocation to health, Bangladesh is the lowest (3.1% of GDP) among other South Asian countries (Shasthya Andolon, 2002:105). It's positive that total allocation of Taka 2797 core in the revised budget for FY2002-03 and Taka 2922 for the FY 2003-04(*The Daily Star*, 13 June 2003:5). Local governments committees comprising of elected and nominated persons at union, thana and district level are mentioned in health policy. But there is no cope for these committees to prioritize their own aims and objectives for their local health centres; or for them to hold accountable the quality of service of health providers; or bring allegations of malpractice to higher bodies (Khan, 2000). The Alma Ata Declaration - "*Health For All by the Year 2000*" -this people-orientated slogan has been diluted in Bangladesh by the year 2000. There is no criticism in current health policy regarding the failure of this important declaration is made. Khan (1997) identified major problems in health policies and programs in Bangladesh. These are centralized system of decision-making and lack of accountability; lack of long term health plans-financial and otherwise; poor management and epidemiological information system; nurses, technicians and other supportive services per physician are extremely low; lack of appropriate health education for nutrition, safe delivery, pre and postnatal care of mother and child, and for operation of EPI, ORS etc; too much emphasis on construction of health centres without giving more attention to their utilization and health delivery services and a small proportion of household has access to government health care services those who do not get satisfactory services at all.

Thus national health policy must have to be people centered as possible, as other policy should be. These enormous problems accumulated over a long period of time, which are not solvable in a short period of time. Timely modification, reform and correction of the health service system through adoption and implementation of a transparent health policy could bring the success in this respect.

Health Communication in Bangladesh

The new strategy of health and population sector reflects a separation from the traditional delivery of services through domiciliary visits

health communication or promotional activities within BCC (Behavior Change Communication)represents as key element of the national sector program (GoB, 1999). The fundamental aim of this approach is to facilitate the shift of health and family planning services provision from a provider-based system to a client-oriented system emphasizing community involvement (Shahriar et al, 1999). The main objective of this paradigm is to change the behavior of people of Bangladesh to improve their health status through informed choice. It focuses on the aims of changing attitudes and increasing individual use of services to change behavior in the community within the service delivery system. The framework of this approach provides information, education and communication (IEC) for behavior change (GoB, 1999). In brief, the aims of BCC components are:

i. Changing attitudes and behavior of people to improve their health status;

ii. Building effective community support for health seeking behavior/ changing community norms and standards to improve health;

iii. Changing attitudes and behavior of services providers to provide client-centered services;

iv. Promoting men's understanding and support for health needs of women and girl children;

v. Creating demand for preventive and selected curative services.

Strategic Communication Activities in Bangladesh

Before independence health communication activities were conducted through clinic-based counseling by physicians, paramedics, and through campaigns by NGOs, social workers and special projects, After independence major change occurred in mid 1970s. To raise awareness about family planning and providing contraceptives at domiciliary level one full-time government fieldworkers per ward were appointed. NGOs and private sector involvement in communication activities increased during the most of the eighties. Information, Education and Motivation (IEM) unit developed at that time and provided large quantities of media and communication support materials. This unit mainly emphasized on community mobilization and functional integration as Maternal and Child Health (MCH) based family planning.

Figure 3.2: Major IEC activities in Bangladesh

Up to 1980

Mass Media (Radio-Majider Maa)

Print media (Poster and pamphlets)

Visual materials (Slides, Cinema spots)

Clinic bases counseling

Field based campaign

Mass media-Newspaper

Other materials as-bill board

Communication media-Television, Films, Folk songs program,

Mass motivational meetings in rural hat-bazar and market

places, Flash cards, Flip charts, Booklets, Short-film.

1980-1992

Mass motivational meeting in rural Hat-bazar

Prototype media: puppet show, folk songs program

Radio: Newsreels, cartoons, questions-answer session,

Listeners program, local community needs interviews and discussions, drama, one act play and songs.

TV: Drama, discussion (doctors), magazine program and Songs Films, Flip chart, Flash card, Wall chart, Notebook, Articles, Stories and Features on FP-MCH linking from the feature bureau, booklets linking FP and religions and contraception.

Intensive orientation programs for opinion leaders (e.g. teachers, youth and religious leaders) and special groups (e.g. landless farmers, members of women cooperatives)

Nationwide training programs on interpersonal communication to improve the motivational and counseling skill of the field workers.

1993-1998

Inter-educate films and TV magazine programs.

Targeted programs for low performance areas with folk song performers.

Programs with mobile film units.

Strengthen the capacity of the IEM press unit to increase in-house production capacity.

Distribution of posters and audiovisual material on Family Planning and MCH to all clinics and service centers.

Source: GoB, 1999, p.14

GO and NGOs field workers home visitation is the main strategy. During their visits, field workers distribute contraceptive and others commodities and promote services. Another major strategy to raise awareness and strengthen coverage of services has been the observance of various events like National Immunization Days and National Population Day. Current communication activities are mainly focused on raising awareness and increasing the use of family planning, pregnancy care immunization, breast-feeding, vitamin-A supplementation and management of childhood illness such as ARI (Acquite Respiratory Infection) and diarrhea, communication activities conducted by the Health and Population Sector have included: mass community meetings, motivation of local and religious leaders, village group interventions(e.g. cluster meetings, Jiggasha), multi-media campaign on specific programmatic areas (Green Umbrella for Population Services, Family Planning Fort Night, Oral Rehydration Therapy Campaign, Nutrition Weeks, Vitamin A weeks, National Immunization Days), production of job aids for field worker (Mathkormi Sholaeeka, IEC (lip charts, emergency obstetric care pictorial cards), production of leaflets and posters on health and family planning issues, involvement of community volunteers and dept holders, audience specific programs(school children, newlyweds), special promotion days on issues such as population, world health, women's right), enter-educate radio and television program (Sabuj Shathi, Meena).

Evaluation of Communication Activities in Bangladesh

Current communication activities have promoted awareness and increased utilization of health and family planning services and programs. These activities were run separately and mainly based on interpersonal communication by staff form the separate directorates at fixed level. The barriers to effective communication activities and programs identified by Government of Bangladesh (GoB,1999) are-absence of formative research, especially qualitative studies; inadequate pre-testing of media and messages and overall absence of specific communication intervention. But communication activities will be involved through multimedia, multi-channel and intersectional approaches to raise effective community support and motivate providers. All of the strategies will be needed to support by evidence and information from appropriate research, monitoring and evaluation. Communication program should be effective and efficient to achieve and maintain positives behavior changes. Its good to note that Health and Population Sector (GoB,1999) envisages a time period extending

up to ten years and phased into three broad operational segments: institutionalization (1999-2002), decentralization (2002-2006) and sustainability (2006-2009). Here communication programs will be conducted through the above stated phases, like institutionalization (media message, manpower skill development, establish organizational linkages), decentralization and dissemination (development/ production, distribution, stakeholders participation, implementation, local involvement, supervision/monitoring), sustainability and ownership (resource mobilization, community ownership, partnership with local agencies). But it should be taken into consideration that here communication providers (managers, policy makers, designers, etc.) are needed to be aware of the distinct characteristics of these phases.

In conclusion, it can be noted that communicating health is a complex, diverse and may be contradictory activity. It is not only everybody's business but also a big business of the state, society and the people. This discourse advocates has its and adversaries to empower individuals and communities and promoting equity. In this respect-formulated health policy and communication activities bin Bangladesh works simultaneously although these are guided by economic, social, and legislative constraints. Here this paper provides a critical understanding of the process involved in the delivery of care and health policy in contemporary Bangladesh. However, it must be taken into consider that multifaceted problems leads to make constraints in health services. All of these cumulative problems leads will be introduced for further action following necessary needs through priority basis. Forming timely specific plan, policy and their implementation along with required changes, reform and edition can only make sustainable, cost effective, accountable and transparent health system in Bangladesh.

Chapter- IV

Socio-Economic and Demographic Characteristics of the Respondents

Socio-economic and demographic characteristics or background information of the respondents are very important for this study. Demographic and socio-economic position can affect health behavior and its change through communication. We know illness behavior varies systematically with socio-economic position. More affluent members of the society have higher expectations of health, more medically informed lay referral systems and access to higher quality medical care. In contrast, least affluent people have more physically demanding everyday lives. As a result, all measures of self reported morbidity are influenced by socio-economic position. The meaning of health, sickness and diseases are also shaped by social definition of behavior (Schaefer, 2000). The absence of disease and positive feeling of well-being are more appropriate measures of health. But this type of measures is more vulnerable to socio-economic contamination (Blane, Barley and Smith, 1998). Members of higher socio-economic growth are being able to exert more control over these aspects of their lives (MacLean, 1995).

Sex

The table 4.1 reports the sex distribution of the respondents that 72.7 per cent of them in this study are male and rest of the 27.3 per cent are female.

Table 4.1 : Distribution of respondents by sex

Sex	Frequency	Per cent
Male	280	72.7
Female	105	27.3
Total	385	100.0

Age

The table 4.2 indicates that 3.9 per cent of the respondents belong to less than 20 age group, 7.3 per cent of them belong to 20-24 age group, 12.7 per cent belong to 25-29 age group, 10.9 per cent goes to 30-34 age group, 17.9 per cent belong to 35-39 age group, 10.9 per cent

belong to 40-44 age group, 8.6 per cent goes to 45-49 age group. Again 8.6 per cent of the respondents in the study remain in 50-54 age group and rest 19.2 per cent- a major portion of the respondents categorically in this study belong to 55+ age group.

Table 4.2 : Distribution of respondents by age

Age (in year)	Frequency	Per cent
< 20	15	3.9
20-24	28	7.3
25-29	49	12.7
30-34	42	10.9
35-39	69	17.9
40-44	42	10.9
45-49	33	8.6
50-54	33	8.6
55+	74	19.0
Total	385	100.0

Religion

The table 4.3 presented below shows that 93.5 per cent of the respondent in the study are Muslim and only 6.5 per cent of the total member of respondents are Hindu.

Table 4.3 Distribution of respondents by religion

Religion	Frequency	Per centq
Islam/Muslim	360	93.5
Hindu	25	6.5
Total	385	100.0

Schooling

Table 4.4 gives educational level of the respondents. Educational level of respondents of this study is based on years of academic education or schooling. The table presented below indicates that 33.0 per cent of the respondents have no schooling education. Most of them (33.0 per cent) are illiterate and only few are literate who can read or sign. In this study 25.7 per cent of the respondents have 1-5 years of schooling, 15-3 per cent have 6-9 years of schooling, 15-3 per cent have 6-9 years of schooling, 20.8 per cent of have 10-12 years of schooling. Only 5-2 per cent of the respondents in this study have above 12 years of schooling.

Table 4.4 : Distribution of respondents by years of schooling

Schooling	Frequency	Per cent
0	127	33.0
1-5	99	25.7
6-9	59	15.3
10-12	80	20.8
12+	20	5.2
Total	385	100.0

Occupation

The table 4.5 given below shows that 25.2 per cent of the respondents are involved in household works and 22.9 per cent of them are owner of agricultural farm in which 13.8 per cent give their own labor in agricultural farm and 9.1 per cent no labor. Only 3.1 per cent of the respondents are agricultural labor within the village. The table also shows that no agricultural laborer work outside the village. In this study 8.9 per cent of the respondents are non-agricultural laborer in which 6.0 per cent of them engage their labor outside the villages. 11.9 per cent of the respondents are service holders, 14.8 per cent are involved with trade and commerce and rest 13.2 per cent are related to other occupations.

Table 4.5 : Distribution of respondents by occupation

Occupation	Frequency	Per cent
Owner of agri-farm (having no labor)	35	9.1
Owner of agri-farm (having labor)	53	13.8
Agricultural laborer within villages	12	3.1
Agricultural laborer outside the villages	0	0
Non-agricultural laborer (within the villages	11	2.9
Non-agricultural laborer (outside the villages)	23	6.0
Service	46	11.9
Trade & Commerce	57	14.8
Household works	97	25.2
Others	51	13.2
Total	385	100.0

Marital Status

Table 4.6 indicates marital status of the respondent where majority of respondents (87.5 per cent) are married and 8.4 per cent are unmarried/single. The table also presents that 3.6 per cent of the respondents of the study are widow/er and only 0.5 per cent are divorced.

Table 4.6 : Distribution of respondents by marital status

Marital Status	Frequency	Per cent
Married	337	87.5
Widow/er	14	3.6
Divorce	2	0.5
Unmarried/single	32	8.4
Total	385	100.0

Family Size and Types

Table 4.7 presents that 26.8 per cent of the respondent's family size is small bearing 1-4 members. The table also reflects that 36.6 per cent of the respondent's family size is of 5-6 people and another 36.6 per cent belongs to above 7 people.

Talbe 4.7 : Distribution of respondents by family size

Family Size	Frequency	Per cent
1-2	10	2.6
3-4	93	24.2
5-6	141	36.6
7+	141	36.6
Total	385	100.0

From the Table 4.8, it is known that most of the families (73.8 percent) are nuclear while the extended and joint families are 26 percent only.

Table 4.8: Distribution of respondents by types of family

Family Types	Frequency	Per cent
Nuclear	284	73.8
Extended	38	22.9
Joint	12	3.1
Single	1	0.3
Total	385	100.0

Household Income

Table 4.9 gives information on household yearly income. It is noted that about 34.4 per cent of the respondents family household income upto Tk. 30,000 while 3.1 per cent of the household belongs to the income category of less than Tk. 10,000. 30.9 per cent respondents reported that their household income was Tk. 30.000-50,000 per year. 16.6 per cent of households' income is between Tk. 50,000-70,000 and 10.6 per cent in the households' income is between Tk. 70,000-90,000 and the rest 11.4 per cent of the respondents households' income are more than Tk. 90,000. The respondents' household's yearly mean income is Tk. 55021.56.

Table 4.9 : Distribution of respondents' yearly household income

Income (in Taka)	Frequency	Per cent
< 10,000	12	3.1
10,000-30,000	105	27.3
30,000-50,000	119	30.9
50,000-70,000	64	16.6
70,000-90,000	41	10.6
90,000+	44	11.4
Total	385	100.0

Household Expenditure

Table 4.10 shows that 2.9 per cent of the respondents' yearly expenditure is upto less than Tk. 10000. 30.0 per cent of the household spend Tk. 10,000-30,000, 32.9 per cent of these spend Tk. 30,000-50,000, 14.2 per cent spend Tk. 50,000-70,000, 11.1 per cent spend Tk. 70,000-90,000 and 6.9 per cent spend more than Tk. 90.000. The respondents' household's yearly mean expenditure is Tk. 53,343.95.

Table 4.10: Distribution of respondents by yearly household expenditure

Expenditure (in Taka)	Per cent
<10,000	2.9
10,000-30,000	30.0
30,000-50,000	32.9
50,000-70,000	14.2
70,000-90,000	11.1
90,000+	6.5
Total	100.0

Land

The pattern of distribution of land ownership, cultivable land and barga land of the respondents' households are reported in Table 4.11, 4.12, 4.13, 4.14. Only 44.9 per cent of the household reported that the ownership of land is more than one acre (Table 4.11) whereas 4.7 percent of the household are land less.

Table 4.11 : Distribution of respondents by total land of the household

Land (in acare)	Frequency	Per cent
Landless	18	4.7
< 0.50	113	30.8
0.50-1.00	89	24.3
1.01-1.50	42	11.4
1.51-2.00	58	15.8
2.01-2.50	10	2.7
2.51-3.0	22	6.0
3.00+	33	9.0
Total	385	100.0

50.4 per cent of the household owned only up to one acre of which 30.8 per cent owned less than half an acre. The rest 4.7 per cent of the household are landless or owned no land. In respect of the ownership of cultivable land, it is noted from table 4.12 that 29.4 per cent owned no cultivable land. 37.9 per cent owned upto one acre of land and 32.7 per cent owned more than one acre of cultivable land of which majority of portion (21.3 per cent) exists in the category of 1.01-2.00 acre of land.

Table 4.12 : Distribution of respondents by cultivable land of the household

Cultivable Land (in acare)	Frequency	Per cent
0.00	113	29.4
<0.50	59	15.3
0.50-1.00	87	22.6
1.01-1.50	48	12.5
1.51-2.00	34	8.8
2.01-2.50	11	2.9
2.51-3.0	14	3.6
3.00+	19	4.9
Total	385	100.0

Table 4.13 and 4.14 report that 25.7 per cent of the respondents' household operated barga lands while the 19.2 per cent of the respondents' household provided land for barga-out.

Table 4.13 : Distribution of respondents by household land of *Barga* in-kind

Land (in acare)	Frequency	Per cent
0.00	286	74.3
< 0.50	21	5.5
0.50-1.00	33	8.6
1.01-1.50	14	3.6
1.51-2.00	13	3.4
2.01-2.50	7	1.8
2.51-3.0	4	1.0
3.00+	7	1.8
Total	385	100.0

Table 4.14 : Distribution of respondents by households land of *Barga* out-in kind

Land (in acare)	Frequency	Per cent
0.00	311	80.8
< 0.50	26	7.1
0.50-1.00	31	8.1
1.01-1.50	2	0.5
1.51-2.00	9	2.3
2.01-2.50	1	0.3
2.51-3.0	2	0.5
3.00+	1	0.3
Total	385	100.0

In brief, in this study majority of the respondents (72.7 per cent) are male and remaining female. Among the respondents, 19.2 per cent of them are over the age of 75 followed by age of 35 to 39. The average size of their household (family) is 3.07. The Muslim comprises the majority (93.5 per cent) of the respondents and the remaining are Hindu. The informants of this study have different years of schooling including no education- where large number (33.0) them (17.9 percent) have no years of schooling. 25.7 per cent of the total respondents have

1 to 5 years of schooling that generally refers to primary level of education. In this study respondents are involved in various occupations where 22.9 per cent are owner of agricultural farm, 25.2 per cent and 14.8 per cent of them are involved with household work and trade and commerce, Most of the respondents (87.5 per cent) in this study are married and 8.3 per cent of them are single where the remaining are widow or divorced. Here 73.8 per cent of the household are nuclear and 22.9 per cent are extended type. A large number of the respondents' (30.9 per cent) yearly household income is between Tk. 30,000 to 50,000. Only 3.1 per cent of the total households' income is less than Tk. 10,000 and the mean of the household income is Tk. 55,021.56 whereas 32.9 per cent of the household yearly expenditure is between Tk. 30,000 to 50,000 and the mean is Tk. 53,343.95. A majority of the household (30.6 per cent) has 0.50 to 1.0 acre in land and one-fourth of the total household has 1.01 to 1.50 acre of land (the mean of 1.39 acre). This study also reflects that more than one-fourth of the total households have no cultivable land, whereas 22.6 per cent of the household posses 1.01 to 1.50 acre of cultivable land. The study reports that 74.3 per cent of the households have not taken any borga land where as 12.2 per cent of them provided land to others for borga. These socio-economic and demographic characteristics determine their health practices, health behavior and health promotion regarding communication.

Chapter- V

Respondents' Health Behavioral and Communication Issues: People's Perceptions from Survey Output

Health behavior are the actions that people undertake to keep themselves healthy and prevent diseases. People continue to practice harmful health behavior not for backwardness or traditional beliefs, but for not taking into consider action the underlying influences on health, maintaining irrelevant information, using inappropriate methods etc. (Hubley, 1993). In this respect, communication in health sector can be considered effective in creating an environment conducive to behavior change (Grover, 1999). This can be done through persuasion or providing information, problem solving, decision-making skills, promoting awareness and building confidence.

Disease Pattern

Table 5.1 indicates the disease pattern of morbidity from which the respondents or their household members suffered at three different periods of time. Within last 1-2 years of the survey (2001), the most prevalent diseases from which they suffered are gastric/peptic ulcer (46.2%), dysentery (39.8%), diarrhoea (36.7%), worm (28.3%) and other diseases (41.8%) including common fever, cold and cough etc. Skin diseases, jaundice and blood pressure followed these diseases and each of these reported by 16.4, 14.6 and 14.1 per cent of respondents. Diarrhoea, dysentery and gastric/peptic ulcer were most common diseases before 10-12 years ago and each of these reported by 40.3, 18.2 and 14.8 per cent of respondents. At that time the next important diseases were skin diseases, worm and jaundice. Close to independence of Bangladesh the most common diseases were diarrhoea, dysentery, chicken pox, cholera and typhoid, each reported by 11.7, 11.4, 9.4, 7.3 and 6.0 per cent of respondents. These diseases were followed by others and female special disease like suteka.

Comparing occurrence of diseases at different periods, it can be noted that diarrhoea, cholera, typhoid, special female diseases reduced in the last 1-2 years as evidenced in the survey. In contrast, gastric/peptic ulcer, worm, skin diseases, jaundice, blood pressure etc. increased at the same time. During that period most prevalent disease

was gastric/peptic ulcer from which male respondents (70.8%) suffered mostly than females (29.2%) and among the age groups, 54+ years (21.3%) and 35-39 years (19.7%) age groups suffered mostly (Appendix- table A3). Diarrhoea was also prevalent within the same age groups at the same time (Appendix- Table A21).

Table 5.1: Pattern of Diseases suffered by the respondents/household members at different period of times, survey 2001.

Name of Diseases	During last 1-2yrs		Period of Independence		10- 12 years ago	
	Number	(%)	Number	(%)	Number	(%)
Malaria	13	3.4	3	0.8	3	0.08
Typhoid	21	5.5	23	6.0	14	3.6
Dysentery	153	39.8	44	11.4	70	18.2
Diarrhoea	141	36.7	45	11.7	155	40.3
Cholera .	10	2.6	28	7.3	9	2.3
Chickenpox	44	11.5	36	9.4	19	4.9
Diphtheria	2	0.5	2	0.5	1	0.3
Whooping cough	10	2.6	2	0.5	2	0.5
Polio	3	0.8	-	-	-	-
Measles	10	2.6	3	0.8	7	1.8
Pneumonia	10	2.6	1	0.3	3	0.8
Diabetes	12	3.1	-	-	3	0.8
Jaundice	56	14.6	8	2.1	21	5.5
Anemia	12	3.1	1	0.3	4	1.0
Blood pressure	54	14.1	2	0.5	12	3.1
Asthma	34	8.9	3	0.8	16	4.2
Gragarine/ Iodine deficiency	10	2.6	-		2	0.5
AIDS/HIV			-	-	-	
Worm	109	28.3	4	1.0	25	6.5
Skin diseases	63	16.4	6	1.6	27	7.0
STD	3	0.8	-	-	-	-
Cancer	4	1.0	2	0.5	1	0.3
Turner	25	6.5	2	0.5	2	0.5
Gastritic/peptic ulcer	178	46.2	15	3.9	57	14.8
Night blindness	7	1.8	3	0.8	4	1.0
TB(Tuberculosis)	14	3.6	-	-	5	1.3
Heart diseases	40	10.4	4	1.0	11	2.9
Complex cough	39	10.1	1	0.3	15	3.9

Name of Diseases	During last 1-2yrs		Period of Independence		10- 12 years ago	
	Number	(%)	Number	(%)	Number	(%)
Glaucoma	30	7.8	4	1.0	19	4.9
Myopia/blindness	28	7.3	2	0.5	7	1.8
Cataract	28	7.3	-	-	14	3.6
Hysteria	12	3.1	1	0.3	_	-
Psychiatric disorder	7	1.8	-	-	4	1.0
Arsenicosis	4	1.0	1	0.3	-	-
Suteka(Female diseases)	6	1.6	19	4.9	6	1.6
Others	161	41.8	23	6.0	12	3.1

** Multiple responses*

Types of Treatment

Table 5.2 presents the used pattern of various medicines for treatment. Most of the respondents (67.3 per cent) reported Thana Health Complex (THC) was the source from which they sought medical care in case of illness during last 1-2 years, survey 2001. 53.3 per cent respondents mentioned that they sought homeopathic doctors. 40.5 per cent of the respondents reported to private allopathic practitioners (MBBS) and 39.2 per cent of them reported to *palli* doctor or paramedics. At independence and 10-12 years ago the scenery were not quite good at all. At the time of independence majority of the respondents have gone to homeopathic doctors (16.6%), *kabiraj* (15.1%), paramedic/*palli* doctors (12.5%) and quacks (11.9%). A significant change occurred about a decade ago when 47.4 per cent of the respondents reported to have gone to THC whereas the figure was only 6 per cent at independence. Followed by THC, homeopath (30.4%), paramedics/*palii* doctor (29.9%) and private MBBS doctor (23.4%) were also prevalent at that time. A remarkable feature is that as health healer *kabiraj* was more or less stable around 10-12 years ago. But during the last 1-2 years respondents to have gone to *kabiraj* were comparatively high. From Focus Group Discussion (FGD), it is known that respondents had gone to *kabiraj* specially for child diseases and their perception regarding this type of treatment is quite positive.

Table 5.2 also shown that respondents reported to Dhaka and district based clinic/hospital increased in last 1-2 years than other two periods. This feature was also true in case of specialized doctors. Respondents reported to *pir/fakir* and *zharphuk* were increased too in this modern era. By comparing respondents age with treatment in THC and MBBS

doctors during iast 1-2 years a common trend was found; 20.5% and 19.2% of 54+ age group went to them (Appendix A23 & A24) in respect of sex male respondents more reported to THC than female (Appendix A4 & A5),

Table 5.2: Types of treatment and distribution of the respondents

Sources of Treatment	During last 1-2 years survey 2001		Period of Independence		10-12 years ago survey 2001	
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Clinic/Hospital (Dhaka)	47	12.2	11	2.9	18	4.7
Clinic/Hospital (District)	32	8.3	5	1.3	16	4.7
Thana Health Complex/GO	159	67.3	23	6.0	182	47.4
Specialized Doctor	34	8.8	6	1.6	16	4.2
MBBS Doctor	156	40.5	35	9.1	90	4.2
Paramedic/Palli Doctor	151	39.2	48	12.5	115	23.4
Quack	52	13.5	46	11.9	63	29.9
Homeopath	213	55.3	64	16.6	117	16.4
Kabiraz	94	24.4	58	15.1	60	30.4
Pir/Fakir	17	4.4	15	3.9	13	15.6
Zharphuk	27	7.0	12	3.1	19	4.9
Others	11	2.9	1	0.3	9	2.3

** Multiple responses*

Source of Drinking Water

Table 5.3 shows that tube-wells are the major source of drinking water for people. It has been found that 99.2 per cent of the households obtain their-drinking water from tube-wells. The figure was very low at independence and significantly improved during 10-12 years ago. Well as a source of drinking water was widely prevalent (45.2%) at independence and declined sharply 10-12 years ago. Tap/pipe as source of drinking water was not significantly present. Currently only 0.8 per cent of the household drink water from tap/pipe. Pond/canal/*beel* as source of drinking water is absent, but slightly present during the past periods which is negligible.

According to 1991 census, 20% of the country's households depend on well, pond, and river for their source of drinking water. But communication campaign by different agencies helped to change and improve the situation gradually. Peoples are now more knowledgeable in taking pure water for drinking purpose than before.

Table 5.3: Distribution of respondents by sources of drinking water

Sources	Present (2001)		Period of Independence		10-12 years ago	
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Tap/Pipe	3	0.8	1	0.3	2	0.5
Tube-well	382	99.2	47	12.2	302	78.3
Pond/Canal/ Beel	0	0	1	0.3	1	0.3
Well	0	0	174	45.2	80	20.9
Arsenic mitigation	0	0	0	0	0	-
Inapplicable	0	0	162	42.1	0	-
Total	385	100.0	385	100.0	385	100.0

Source of Water for Domestic Uses

From the table 5.4 given below, it has been found that 98.9 per cent of the total respondents are currently found to be using tube-well water for domestic purposes. Only 0.08 and 0.03 per cent of the household use water from tap/pipe and well at present. Respondents also reported that 10-12 years ago 78.3 per cent of them used water from tube-well and 20.9 per cent from well. But a remarkable change is found comparing these situations to independence. At that time majority of the people (45.2%) used water from well (locally named *Indira).* Only 12.2 per cent of the household used from tube-well and 0.3 per cent of them used water from pond/canal/bell for domestic purposes.

Table 5.4: Distribution of respondents by sources of water for domestic uses

Sources	Present (2001)		Period of Independence		10-12 yeas ago	
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Tap/Pipe	3	0.8	1	- 0.3	2	0.5
Tube-well	380	98.7	41	10.7	303	78.6
Pond/Canal/ Beel	1	0.3	2	0.5	1	0.3
Well	1	0.3	177	45.8	79	20.6
Arsenic Mitigation	-	-	-	-	-	-
Inapplicable	-	-	164	42.7	-	-
Total	385	100.0	385	100.0	385	100.0

Toilet Facility

It is very difficult for people to prevent the spread of germs without proper sanitation. Using hygienic sanitary latrines can prevent many diseases. In the present study table 5.5 shows that 61.1 per cent of the total respondents are currently using sanitary latrines of which 26.3 percent use *pacca* and 44.3 per cent slab. In contrast, 23.7 and 5.2 per cent of the respondents use *katcha* latrine and open bush. But at independence majority of households (55.4%) had non -sanitary

latrines of which 19.5 per cent and 35.9 per cent had to *katcha* and open bushes .respectively. At that time *pacca*, slab and pit type of latrine were used combinedly by only 8.3 per cent of the respondents. But this figure rose up to 27.6 per cent about a decade ago. *Katcha* type of latrine were predominant at that time. From the standpoint of health practices, type of latrine used by people has tremendous impact on their state of health. *Katcha*, open/bush latrine may cause health hazards to people and environmental degradation.

Table 5.5: Distribution of respondents by types of toilet facility

Type of Toilet Facility	Present (2001)		Period of Independence		10-12 years ago	
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Pacca	101	26.3	12	3.1	33	8.6
Slab	170	44.3	11	2.9	64	16.7
Pit/Hole	2	0.5	9	2.3	9	2.3
Katcha	91	23.7	75	19.5	177	45.9
Open/bush	20	5.2	138	35.9	102	26.5
Inapplicable	-	-	139	36.2	-	-
Total	384	100.0	384	100.0	385	100.0

The table 5.6 given below reports the association between respondents' years of schooling and currently using toilet facility. Among the total respondents 5.2 per cent have 12+ years of schooling of which 65.0 per cent use pacca type of latrine. 20.8 per cent of the respondents have 10-12 years of schooling of which 51.3 per cent have *pacca* latrine. It is also noted that 32.8 per cent of the respondents have no years of schooling of whose 54.8 per cent have *katcha* latrine and 65.0 per cent of them use open space or bushes. The chi-square of these two variables is 95.39, which is significant at 0.000 level of significance.

Table 5.6: Distribution of respondents by years of schooling and current toilet facility use

Years of schooling	Currently using Toilet Facility					
	Pacca	Slab	Pit/Whole	Katcha	Open/bush	Total
0	9 7.1 8.9	53 42.1 31.2	1 0.8 50.0	50 39.7 54.9	13 10.3 65.0	126 100.0 32.8
1 -5	21 21.2 20.8	43 43.4 25.3	- - -	29 29.3 31.9	6 6.1 30.0	99 100.0 25.8
6-9	22 37.3 21.8	26 44.1 15.3	1 1.7 50.0	9 15.3 9.9	1 1-[7] 5.0	59 100.0 15.4

Years of schooling	Currently using Toilet Facility					
	Pacca	Slab	Pit/Whole	Katcha	Open/bush	Total
10-12	36 45.0 35.6	41 51.3 24.1	- - -	3 3.8 3.3	- - -	80 100.0 20.8
12+	13 65.0 12.9	7 35.0 4.1	- - -	- - -	- - -	20 100.0 5.2
Total	101 26.3 100.0	170 44.3 100.0	2 0.5 100.0	91 23.7 100.0	20 5.2 100.0	384 100.0 100.0

Person Chi-square = 95.390, p<.000

Note: *In each eel! first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.*

The table given below shows the association between household income and their toilet facility. Among the total respondents' household 11.5 per cent of them posses annual income more than Tk. 90,000 of whose majority of household (70.5 per cent) belong to *pacca* type of latrine. Those income belong to the range between Tk. 30,000-50,000, majority of them (57.1%) have stab sanitary latrine. Among the households, 27.1 per cent of them have income between Tk. 10,000-30,000 of which 48.1 per cent of them belong to the majority of *katcha* latrine. The chi-square value of the two variables is 148.72, which is significant at 0.000 level. The linear association of the two variables is 94.89, which is also significant at 0.000 level.

Table 5.7: Distribution of respondents by their household income and current toilet facility use

Income (in Tk.)	Toilet Facility					
	Pacca	Slab	Pit/Whole	Katcha	Open/bush	Total
<1 0,000	1 8.3 1.0	5 41.7 2.9	- - -	4 33.3 4.4	2 16.7 10.0	12 100.0 3.1
10,000-30,000	6 5.8 5.9	38 36.5 22.4	- - -	50 48.1 54.9	10 9.6 50.0	104 100.0 27.1
30,000-50,000	16 13.4 15.8	68 57.1 40.0	1 0.8 50.0	31 26.1 34.1	3 2.5 15.0	119 100.0 31.0
50,000-70,000	27 42.2 26.7	30 46.9 17.6	- - -	3 4.7 3.3	4 6.3 20.0	64 100.0 16.7

Income (in Tk.)	Toilet Facility					
	Pacca	Slab	Pit/Whole	Katcha	Open/bush	Total
70,000-90,000	20 48.8 19.8	18 43.9 10.6	- - -	2 4.9 2.3	1 2.4 5.0	41 100.0 10.7
90,000+	31 70.5 30.7	11 25.0 6.5	1 2.3 50.0	1 2.3 1.1	- - -	44 100.0 11.5
Total	101 26.3 100.0	170 44.3 100.0	2 0.5 100.0	91 23.7 100.0	20 5.2 100.0	384 100.0 100.0

Chi-square = 148.718, p<.000 ,

Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

Practices of Family Planning Methods

Table 5.8 reports that 54.3 per cent of the respondents are currently using a contraceptive method. This figure is more than national figure which goes to 53.8 per cent (BDHS, 2001). From FGD it is known that the most widely used method is the pill, followed by condom and female sterilization. Among the current respondents, only 3.9 per cent of them used contraceptive method at independence. This figure goes to 17.7 per cent during 10-12 years ago.

Table 5.8: Distribution of respondents/household by uses of contraceptives

Opinion	Present (2001)		Period of Independence		10-12 years ago	
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	209	54.3	15	3.9	68	17.7
No	155	40.3	91	23.6	282	73.2
Inapplicable	21	5.4	279	72.5	35	9.1
Total	385	100.0	385	100.0	385	100.0

From table 5.9 it has been evidenced that there is an association between respondents' years of schooling and use of contraceptive. Among the total number of respondents, 5.2 per cent of the respondents have 12+ years of schooling of whose 65.0 per cent are currently using contraceptive. 15.4 per cent of them have 6 to 9 years of schooling and 64.4 per cent of them use contraceptive.

Table 5.9: Distribution of respondents by their years of schooling and current contraceptives use

Years of schooling	Currently using contraceptive
0	61 48.4 29.3
1 -5	56 57.1 26.9
6-9	38 64.4 18.3
10-12	40 50.0 19.2
12+	13 65.0 6.3
Total	209 54.3 100.0

Note:. In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

Non-users of Contraceptive

From table 5.8 reports 40.3 per cent of the total respondents do not use any contraceptive methods. The main reasons for not using contraceptive as shown in table 5.10 are no knowledge of its utility (29.7%), lack of awareness (17.7%) and religious values (11.4%).

Table 5.10: Distribution of respondents by causes of not using contraceptives

Causes	Frequency	Per cent
No knowledge of Utility	52	29.7
Non-availability of Family Planning services	14	8.0
Methods not available	3	1.7
No knowledge about it/Lack of awareness	31	17.7
For religious values	20	11.4
Unwillingness of spouse	15	8.6
Others	19	10.9
Inapplicable	21	12.0
Total	175	100.0

Sources of Supplying Family Planning Method

There are different types of sources of procuring contraceptives. The major sources reported by respondents are pharmacy, THC, friends/ relatives, GoB workers etc (Table 5.11). The table shows that government facilities from THC (Thana Health Complex) and home delivery by FWA (Family Welfare Assistant) provide contraceptive to 50.5 per cent and 15.4 per cent of the users respectively while majority of the users (60.6%) are supplied through private medical source named pharmacy. Home delivery by GoB workers' is not considered as the major source of procuring contraceptives. In binomial test observed hypothesis for not collecting contraceptive materials from pharmacy is 0.39 and for collecting from; friends/relatives is 0.61 where test hypothesis is 0.50, which is significant at 0.003 level of significance (2-taiied).

Table 5.11: Distribution of respondents' by sources of supplying family planning methods

Sources	Frequency	Per cent
Thana Health Complex (THC)	105	50.5
Pharmacy	126	60.6
Friends / Relatives	36	17.3
Home delivery by FWA	32	15.4
Others	101	48.6

** Multiple responses*

Management of Diarrhoea

Package saline plays an important role in managing diarrhoea today. It has been reported that 90.9 per cent of the respondents used packaged saline during diarrhoea within last 1-2 years. The figure was 63.6 per cent about 10-12 years ago. At that time *lemon-gur* solution was also provided and that percentage was 21.8. This solution was widely prevalent at the independence. At that time a significant portion of the respondents had taken other measures like taking coconut water, juice from grass and leafs. Besides these, other measures were also taken to overcome.

Table 5.12: Distribution of respondents' behavior to manage diarrhoeas within the last two years

Behavior	Present (2001)		Period of Independence		10-12 years ago	
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Given package saline	350	90.9	9	2.3	245	63.6
Given home available fluids	2	0.5	22	5.7	9	2.3

Behavior	Present (2001)		Period of Independence		10-12 years ago	
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Given lemon-gur solution	7	1.8	86	22.4	84	21.8
Went to doctor	11	2.9	31	8.1	7	1.8
Nothing	-	-	14	3.6	-	-
Others	2	0.5	37	9.6	14	3.6
Inapplicable	13	3.4	185	48.2	26	6.8
Total	385	100.0	384	100.0	385	100.0

Safe Delivery

Table 5.13 presented below shows an important fact that majority of the respondents currently seek help from traditional birth attendants-TBA (38.7 per cent, like dais/midwives) and relatives (33.0 per cent). The extent of delivery services of TBA have not declined to any significant extent yet from the past even with the introduction of modern health services and facilities upto the Thana level, where trained nurses are posted for providing delivery services. Only 10.9 per cent of the total respondents have availed the services from trained birth attendants and 8.1 per cent of them from doctors. At the time of independence respondents mostly sought service from relative and then TBAs. Seeking service from doctors and THCs are comparatively increasing but not significantly.

Table 5.13: Distribution of respondents' categories of seeking assistance of the personnel at pregnancy/delivery of care

Categories	Present (2001)		Period of Independence		10-12 years ago	
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Doctor	31	8.1	3	0.8	8	2.1
Thana Health Complex	9	2.3	1	0.3	3	0.8
Traditional Birth Attended	149	38.7	38	9.9	143	37.1
Trained with Attended	42	10.9	13	3.4	25	6.5
Relatives	127	33.0	100	26.0	115	29.9
Others	8	2.1	5	1.3	5	1.3
Inapplicable	19	4.9	225	58.4	86	22.3
Total	385	100.0	385	100.0	385	100.0

Table 5.14 given below shows the association between respondents' household income and seeking help of personnel at pregnancy/delivery care. Among the respondents' household 11.4 per cent of belong to the income more than Tk. 90,000 of which 25.0 per cent - that means majority of them - seek help from doctor. 9.9 per cent of the total respondents' household posses income range between Tk. 70,000-90,000; 50.0 per cent of them sought for help from traditional birth attendants. This is followed by 29.9 per cent of the respondents' household whose income range between Tk. 30,000-50,000. 25.2 per cent of the total household posses income between Tk. 10,000-30,000 of which 40.2 per cent sought help from relatives at time of pregnancy. This is followed by income group of Tk. 30,000-50,000 and Tk. 50,000-70,000. The chi-square value of these two variables is 47.82, which is significant at 0.004 level of significance.

Table 5.14: Distribution of respondents by their income and seeking assistance of the personnel at pregnancy/delivery of care

Income	Frequency of the Personnel						
	Doctor	**THC**	**TBA**	**Trained BA**	**Relatives**	**Others**	**Total**
<10,000	2 16.7 6.5	- 	6 50.0 4.0	_ 	4 33.3 3.1	. 	12 100.0
10,000-30,000	5 5.2 16.1	1 1.0 11.1	43 44.3 28.9	9 9.3 21.4	39 40.2 30.7	- 	97 100.0
30,000-50,000	4 3.5 12.9	2 1.7 22.2	53 46.1 35.6	11 9.6 26.2	43 37.4 33.9	*2* 1.7 25.0	115 100.0
50,000-70,000	6 10.0 19.4	3 5.0 33.3	16 267 10.7 	11 18.3 26.2	22 36.2 17.3	2 3.3 25.0 	60 100.0
70,000-90,000	7.9 9.7 	1 2.6 11.1	19 50.0 12.8 	4 10.5 9.5	10 26.3 7.9	1 2.6 12.5 	33 100.0
90,000+	11 25.0 35.5	2 4.5 22.2	12 27.3 8.1	7 15.9 16.7	9 20.5 7.1	3 6.8 37.5	44 100.0
Total	31 8.5 100.0	9 2.5 100.0	149 40.7 100.0	42 11.5 100.0	127 34.7 100.0	8 2.2 100.0	385 100.0

Chi-square = 47.817, p<.004

Note: *In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.*

Perception of Disease as Curse or *Gajab*

Table 5.15 present below shows that most of the respondents (68.1%) don't think that disease as curse or *gajab.* 20.8 per cent of them think that disease as curse or *gajab.* Only 11.2 per cent of them found it to be a curse.

Table 5.15: Distribution of respondents' opinion on disease as a divine curse or *gajab*

Opinion	Frequency	Per cent
Yes	80	20.8
Certain	43	11.2
No	262	68.1
Total	385	100.0

Beliefs in *Tabiz/ Taweez*

Table 5.16 depicts that majority of the respondents (64.9%) don't believe in using *tabiz/taweez* as a solution for curing diseases. But a significant segment of the total respondents (35.1%), held that tabizman are effective in curing diseases. From focus group discussions, it is known that use of *tabiz/taweez* is declining due to greater awareness and modernity.

Table 5.16: Distribution of respondent's beliefs on getting cure from disease by using *tabiz/taweez*

Opinion	Frequency	Per cent
Yes	135	35.1
No	250	64.9
Total	385	100.0

Immunization

Table 5.17 shows 76.1 per cent of the respondents reported that their kids were vaccinated. Only 3.1 per cent did not immunize their children. 20.8 per cent of the total respondents reported as inapplicable for not having kids, unmarried or any other reasons.

Table 5.17: Distribution of respondents' opinion on child immunization

Immunization of child	Frequency	Per cent
Yes	293	76.1
No	12	3.1
Inapplicable	80	20.8
Total	385	100.0

From the table 5.18 it is evident that the achievement in the field of immunization is not for from desired objectives. More than 95 per cent of the children (0-1 aged year) were immunized successfully against Polio, BCG, Measles, DPT, Whooping Cough, Diphtheria and Tetanus. Among these Polio immunization is mostly successful at different age groups within 1-3 years of child. But here it can be added that a significant number of infants are not brought for the full-course of vaccinations and the respondents could not provide adequate information about the number of vaccines.

Table 5.18: Per cent distribution of immunized children by age pattern

Age of Child	No. of Child	Per cent of Immunized Child					
		BCG	Polio	Measles	Diphtheria	Whopping Cough	Tetanu
0-1	294	96.8	97.8	95.9	95.2	95.2	95.5
1-2	180	96.3	97.2	93.8	93.8	93.3	95.6
2-3	81	93.8	92.0	87.3	87.3	83.5	87.2

Reasons for not Immunization

Table 5.19 reports that only 3.1 per cent of the respondents' kids have not been vaccinated yet. The reasons behind this are lack of knowledge (1.8 per cent), non-availability (1.0 per cent) and others (0.3 percent).

Table 5.19: Distribution of respondent's reasons for not immunizing children

Reasons	Frequency	Per cent
Non availability	4	1.0
Lack of knowledge	7	1.8
Financial Constraint	0	0
Others	1	0.3
Inapplicable	373	96.9
Total	385	100.0

Equality between Son and Daughter

It is found that most of the respondents (91.9 per cent) do not give more food to sons than daughters. They regard their children as equal. Only 8.1 per cent of them give priority to sons.

Table 5.20: Distribution of respondents' views on giving more food to sons than the daughters

Opinion	Frequency	Per cent
Yes	31	8.1
No	354	91.9
Total	385	100.0

Receiving Injection from Male Personnel

Table 5.21 presented below shows only a small segment of the respondents (12.2%) are unwilling to take an injection from male personnel. This reflects that most of the respondents don't have religious or other bias in taking injections form male health personnel.

Table 5.21: Distribution of respondents' opinion on not receiving injection from male personnel

Opinion	Frequency	Per cent
Yes	47	12.2
No	338	87.8
Total	385	100.0

Going out alone by Women for Treatment

Table 5.22 shows that 84.7 per cent respondents have shown positive responses, are willing to go out alone for treatment if necessary, while 15.3 per cent do not think it so.

Table 5.22: Distribution of respondents' views on female mobility for treatment

Opinion	Frequency	Per cent
Yes	59	15.3
No	326	84.7
Total	385	100.0

Taking Decision on Family Planning

Table 5.23 given below reports that near about 90 per cent of the respondents gave their opinion for not taking only male's decision to adopt family planning. They argued that both male and female would take the consideration regarding this. Only 10.1 per cent of them argued for male's decision.

Table 5.23: Distribution of respondents' views on adopting family planning on the decision of male head of the family

Response	Frequency	Per cent
Yes	39	10.1
No	346	89.9
Total	385	100.0

Receiving Treatment from the Male Doctor by the Female Patient

The table 5.24 presented below shows that 85.2 per cent of total respondents have no reservation in getting treatment from male doctors. Only 14.8 per cent of them have shown their negative approach regarding this.

Table 5.24: Distribution of respondents' opinion on not receiving treatment by female from male personnel

Opinion	Frequency	Per cent
Yes	57	14.8
No	328	85.2
Total	385	100.0

Sources of Information on Health and Family Planning

There are various sources of information on issues related to health and family planning. Table 5.25 shows the major sources of information reported by respondents are radio (89.6%), television (82.6%), doctor (73.8%), pharmacy (62.9%), THC (60.8%), GO health worker (36.9%) and NGO health worker (31.2%). Respondents are also significantly informed by folk events (29.6%), friends/relatives (29.4%) and by poster (29.1%).

Table 5.25: Distribution of respondents' sources of information on health and family planning

Sources	Frequency	Per cent
Radio	345	89.6
Television	318	82.6
Newspaper/Magazine	106	27.5
HA/FWA	142	26.9
NGO's HA	120	31.2
Doctor	284	73.8
THC	234	60.8
Pharmacy	242	62.9
Friends/Relatives	113	29.4
Cinema	51	13.2
Poster	112	29.1
Folk events	114	29.6
Mosque	13	3.4
Community meeting	11	2.9
Others	4	1.0

** Multiple responses*

Preference for the Sources of Information

Media plays a vital role in disseminating information to the target audiences. Table 5.26 reflects the same attitudes as majority of the respondents reported first three preferred sources of information: television (42.9%), radio (40.5%) and newspaper/ magazine (21.4%).

Table 5.26: Distribution of respondents' preference for important sources of information on health communication

Sources	1st preference		2nd preference		3rd preference	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
Radio	89	23.1	156	40.5	72	21.1
Television	165	42.9	103	26.8	56	16.4
Newspaper/ Magazine	39	10.1	37	9.6	73	21.4
HA/FWA	21	5.5	14	3.6	21	6.2
NGO's HA	11	2.9	10	2.6	11	3.2
Doctor	19	4.9	30	7.8	48	14.1
THC	12	3.1	15	3.9	25	7.3
Pharmacy	16	4.2	11	2.9	14	4.1
Friends/ Relatives	2	0.5	4	1.0	9	2.6
Cinema	- -	-	-	-	1	0.3
Poster	1	0.3	1	0.3	3	0.9
Folk events	9	2.3	4	1.0	6	1.8
Mosque/ Church	-	-	-	-	1	0.3
Community Meetings	-	-	-	-	-	-
Others	1	0.3	-	-	1	0.3
Total	385	100.0	385	100.0	385	100.0

The table 5.27 given below shows the association between respondents' years of schooling and preference of the sources of information regarding health communication. Most of the respondents having 0-12 years of schooling have given their first preference to television, second to radio and third to newspaper or magazine. Among the respondents 15.3 per cent have 6-9 years of schooling and more than half (52.5%) have given highest preference to television. However, 5.2 per cent of the respondents have more than 12 years of schooling and of them 50.0 per cent have marked TV as the first choice to get information. Chi-square value of the two variables is 68.53, which is significant at 0.010 level.

Table 5.27: Distribution of respondents by year of schooling and their most important preference for health communication

Year of Schooling	Preference on the Sources												Total
	Radio	TV	ews-aper Maga-ne	A/ WA	GO'S	Doctor	HC	har-acy	riend/ ela-ves	oster	oik vents	ther	
0	23	42	13	12	4	7	4	11	2	1	7	1	27
	16.1	33.1	10.2	9.4	3.1	5.5	3.1	8.7	1.6	0.8	5.5	0.8	100.0
	25.8	75.5	33.3	57.1	36.4	36.8	33.3	68.8	100.0	100.0	77.8	100.0	33.0
1-5	20	48	13	4	4	4	3	2	-	-	1	-	99
	20.2	48.5	13.1	4.0	4.0	4.0	3.0	2.0	-	-	1.0	-	25.7
	22.5	29.1	33.3	19.0	36.4	21.1	25.0	12.5	-	-	11.1	-	25.7

Year of Schooling	Preference on the Sources												Total
	Radio	TV	ews-aper Maga-ne	A/ WA	GO'S	Doctor	HC	har-acy	riend/ ela-ves	oster	oik vents	ther	
6-9	15	31	2	2	1	1	1	2	-	-	1	-	59
	25.4	52.5	3.4	3.4	1.7	6.8	1.7	3.4	-	-	1.7	-	15.3
	16.9	18.8	5.1	9.5	9.1	21.1	8.3	6.3		-	11.1	-	15.3
10-12	31	34	6	2	2	1	1	1	-	-	-	-	80
	38.8	42.5	7.5	2.5	-2.5	2.5	2.5	1.3	-	-	-	-	20.8
	34.8	20.6	15.4	9.5	18.2	10.5	16.7	6.3	-	-	-	-	20.8
12+	-	10	5	1	-	2	2	-	-	-	-	-	20
	-	50.0	25.0	5.0	-	10.0	10.0	-	-	-	-	-	3.2
	-	6.1	12.8	4.8	-	10.5	16.7	-	-	-	-	-	5.2
Total	89	165	39	21	11	19	12	16	2	1	9	1	385
	23.1	42.9	10.1	5.5	2.9	4.9	3.1	4.2	0.5	0.3	2.3	0.3	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Person Chi-square = 68.530, p<.010

Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

Places for Access to most Important Sources of Information

Table 5.28 given below shows that majority of the respondents (60%) gets the information on health communication at their home. 18.7 per cent of them from the place of neighbor or friends' house. Only 11.7 per cent of the respondents report to access the information from public place.

Table 5.28: Distribution of respondents' place for easy access to most important sources of information

Places	Frequency	Per cent
At home	234	60.8
Neighbor/Friends' house	72	18.7
Office	17	4.4
Public place (free stali)	45	11.7
Others	27	7.0

** Multiple responses*

Major Issues Heard from Different Sources

The respondents were asked to name some of the issues heard from different sources. 93.8 per cent of the respondents reported for ORsaline/ORT, 89.6 per cent for immunization, 72.7 per cent for family planning, 53.0 per cent for HIV/AIDS, 50.9 per cent for Arsenic, 47.3 per cent for safe motherhood, 46.2 per cent for hygiene and sanitation and 6.5 per cent of the respondents for other health related issues respectively.

Table 5.29: Distribution of respondents' heard/learned major issues from different sources

Major issues	Frequency	Per cent
Family Planning	280	72.7
Diarrhoea (OR saline/ORT)	361	93.8
Immunization	345	89.6
Hygineal Sanitation	178	46.2
Safe motherhood	182	47.3
AIDS	204	53.0
Arsenic	196	50.9
Others	25	6.5

** Multiple responses*

Table 5.30 presented below shows the association between sex and listening of family planning program. Among the total respondents 72.7 per cent are male of which 66.8 per cent listened to and 33.2 per cent didn't. 27.3 per cent of total respondents are female of which 88.6 per cent listened to the program. It indicates that females are more communicative than male on this issue. The chi square value of these two variables is 18.273, which is significant at 0.001 level.

Table 5.30: Distribution of respondents by their sex and listening to family planning program within the last 1 year

Sex	Causes		
	Yes	No	Total
Male	187	93	280
	66.8	33.2	100.0
	65.8	88.6	72.7
Female	93	12	105
	88.6	11.4	100.0
	33.2	11.4	27.3
Total	280	105	385
	72.2	27.3	100.0
	100.0	100.0	100.0

Chi-square= 18.273, p<.000

Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

Table 5.31 given below shows the association between respondents' education and listening to/knowledge of issues on safe motherhood. Among the total respondents 5.2 per cent of them have more than 12 years of schooling majority of whom (80.0%) learned or listened to the issues of safe motherhood. This is followed by 76.3 per cent of the respondents who have 10-12 years of schooling. 15.4 per cent of the respondents have 6-9 years of schooling whose 62.7 per cent have learned the issue, about 33.0 per cent of the respondents have no education whose 17.3 per cent or the lowest number of them learned about safe motherhood. Chi-square value of these two variables is 86.92, which is significant at 0.001 level.

Table 5.31: Distribution of respondents by their years of schooling and learned issues on safe motherhood

Year of Schooling	Learned issues on safe motherhood		**Total**
	Yes	**No**	
0	22 17.3 12.1	105 82.7 51.7	127 100.0
1-5	46 46.5 25.3	53 53.5 20.1	99 100.0
6-9	37 62.7 20.3	22 37.3 10.8	59 100.0
10-12	61 76.3 33.5	19 23.8 9.4	80 100.0
12+	16 80.0 8.8	4 20.0 2.0	20 100.0
Total	182 47.3 100.0	203 52.7 100.0	385 100.0 100.0

Person Chi-square = 86.916, p<.000

Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

The table 5.32 given below shows the association between respondents' education and their knowledge on AIDS/HIV. Among the total respondents 33.0 per cent have no education, 15 per cent of them have knowledge on AIDS/HIV. It has found that knowledge of respondents regarding AIDS/HIV increases with the increase in years of schooling. 5.2 per cent of them have more than 12 years of schooling of whom 85% have knowledge on AIDS/HIV. The chi-square value of these two variables is 127.38, which is significant at 0.001 level.

Table 5.32: Distribution of respondents by years of schooling and their knowledge of AIDS/HIV

Year of Schooling	**Knowledge of AIDS/HIV**		**Total**
	Yes	**No**	
0	19 15.0 9.3	108 85.0 59.7	127 100.0 33.0
1 -5	55 55.6 27.0	44 44.4 24.3	99 100.0 25.7
6-9	46 78.0 22.5	13 22.0 7.2	59 100.0 13.3
10- 12	67 83.8 32.8	13 16.3 7.2	80 100.0 20.8
12+	17 85.0 8.3	3 15.0 1.7	20 100.0 5.2
Total	204 53.0 100.0	181 47.0 100.0	385 100.0 100.0

Person Chi-square = 127.381, p<.000

Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

The table 5.33 given below shows the association between respondents' education (years of schooling) and knowledge of arsenic. Among the total respondent 5.2 per cent of them have more than 12 years of schooling of which majority of the respondents-90.0 per cent

of them have knowledge of arsenic. Among them 33.0 per cent of the respondents, have no years of schooling and who mostly are illiterate posses little knowledge of arsenic (15.7 per cent). Chi-square value of these two variables is 110.57, which is significant at 0.000 level.

Table 5.33: Distribution of respondents by their years of schooling and knowledge of arsenic

Year of Schooling	Knowledge of Arsenic		Total
	Yes	No	
0	20 15.7 10.2	107 84.3 56.6	127 100.0 33.0
1 -5	53 53.5 27.0	46 46.5 24.3	99 100.0 25.7
6-9	41 69.5 20.9	18 30.5 9.5	59 100.0 15.3
10-12	64 80.0 32.7	16 20.0 8.5	80 100.0 20.8
12+	18 90.0 9.2	2 10.0 1.1	20 100.0 3.2
Total	196 50.9 100.0	189 49.1 100.0	385 100.0 100.0

Person Chi-square = 110.569, p<.000

Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

Table 5.34 present below shows the association between sex of the respondents and exposure to the programs of safe motherhood. Among the total respondents, 72.7 per cent are male of which 41.4 per cent listened to the program. On the other hand, among the female respondents (27.3%)- 62.9 per cent learned the program. Chi-square value of these two variables is 14.07 which significant at 0.000 level of significance.

Table 5.34: Distribution of respondents by sex and from where they heard the program of safe motherhood

Sex	Program of safe motherhood		Total
	Yes	No	
Male	116 41.4 63.7	164 58.6 80.8	280 100.0 72.7
Female	66 62.0 36.3	39 37.1 19.2	105 100.0 27.3
Total	182 47.3 100.0	203 52.7 100.0	385 100.0 100.0

Chi-square = 14.068, p<.000

Note: In each cell first one is the number of respondents, second in parenthesis is TOW percentage and third one is column percentage.

Discussions of Health Programs/Issues with Others

Table 5.35 indicates that 74.3 per cent of the total respondents discussed the health issues with others including family members, friends, etc. Only 25.7 per cent of them reported as not discussing with others.

Table 5.35: Distribution of respondent's opinion on discussion of health programs with other

Opinion	Frequency	Per cent
Yes	286	74.3
No	99	25.7
Total	385	100.0

Opinion on Home Visitation by GO's HA/FWA

Home visitation by health assistant (HA)/family welfare assistants (FWA) of Government is one of the important sources of health communication. In this study 76.1 per cent respondents reports that HA/FWA visit their household while 17.1 per cent respondents reports

for not visiting by them. And only 6.8 per cent of them do not know whether they came or not.

Table 5.36: Distribution of Respondents' opinion on home visitation by GO's HA/FWA

Response	Frequency	Per cent
Yes	289	76.1
No	65	17.1
Don't know	26	6.8
Total	380	100.0

Frequency of Visiting Households by GO'S HA/FWA

From table 5.37 it is known that 39.5 per cent of the respondents reported to visiting household by HA/FWA within once in a month or more. 23.1 per cent reported such visiting once in every 15 days and 5.5 per cent of them informed that the visit was limited to at least once in 2 to 6 months. A significant number (23.4 per cent) of the respondent reported the visit as inapplicable because of home the visits were not required for them.

Table 5.37: Distribution of respondents' views on the frequency of home visits by HA/FWA

Categories of Response	Frequency	Per cent
Almost everyday	4	1.0
One to two times a week	13	3.4
Once in every 15 days	89	23.1
Once in a month or more	152	39.5
At least once in two months	16	4.2
At least once in 2 to 6 months	21	5.5
Inapplicable	90	23.4
Total	385	100.0

Frequency of Doctor Visits

Table 5.38 given below shows that 60.8 per cent of the respondents or household members visited the doctor more than three time within the last 6 months. This was followed by 22.8 per cent of them for two times. 10.4 per cent of the total respondents visited doctor for one time and only 6 per cent of them never visited the doctor within that period.

Table 5.38: Distribution of respondents' frequency of visiting doctor within the last 6 months

Frequency of Visits	No. of Respondents	Per cent of Respondents
0	23	6
1	40	10.4
2	87	22.8
3+	235	60.8
Total	385	100.0

Table 5.39 given below shows the association between respondents' years of schooling and their frequency of visit to doctor. Among the total respondents those who are educated, visited the doctor more than three times. Among them 5.2 per cent of the total respondents belong to more than 12 years of schooling of which 60.0 per cent visited the doctor more than three times. But in comparison, 33.0 per cent of the respondents having no years of schooling ever visited the doctor during last 6 months and their figure (7.9 per cent) is highest. The comparison T-value of these two variables is 10.479, which is significant at 0.000 level of significance. Correlation between the two variables also exists and the co-efficient value is 0.10 which indicates a positive correlation between them in which with increase in one variable another also increases.

Table 5.39: Distribution of respondents by their years of schooling and frequency of visiting doctor/health centre within the last 6 months

Years of Schooling	Frequency of Doctor/ Health centers Visits			Total
	0	1-2	3+	
0	10 7.9 43.5	46 36.2 37.4	71 5.1 29.7	127 100.0 33.0
1 -5	6 6.1 26.1	30 30.3 24.4	63 63.6 26.4	99 100.0 25.7
6-9	3 5.1 13.0	16 27.1 13.0	40 67.8 6.7	59 100.0 15.3
10-12	3 3.6 13.0	24 30.0 19.5	53 66.4 22.2	80 100.0 20.8
12+	1 5.0 4.3	7 35.0 5.7	12 60.0 5.0	20 100.0 52.0
Total	23 6.0 100.0	123 31.9 100.0	239 62.1 100.0	385 100.0 100.0

T-value = 10.479, p<.000

Note: *In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.*

However, among the respondents 33.3 percent visited doctor/THC/ health centre at least 3-4 times during the last 6 months of which majority are in the age groups of 30-34, 35-39 and 54+(Table 5.40).

Table 5.40: Distribution of respondents by age and their frequency of visiting doctor/THC/health centre within last 6 months

Frequency ofvisit	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
0	23	6.0	--	--	30.4	4.3	26.1	8.7	4.3	--	26.1
1-2	123	31.9	3.3	7.3	15.4	9.8	13.8	11.4	12.2	8.9	17.9
3-4	128	33.3	5.7	7.3	9.8	16.3	16.3	10.6	8.9	8.9	16.3
5-6	56	14.5	1.8	8.9	14.3	7.1	26.8	14.3	5.4	5.4	16.1
7+	55	14.3	5.5	7.3	5.5	9.1	16.4	9.1	5.5	10.9	30.9

Distances from Home to Medicare Centre (Doctor/THC/ Pharmacy/Others)

Distance to Medicare facility centre (Doctor/THC/ Pharmacy) is an important consideration for clients in their choice of a particular health facility. Table 5.41 shows the distance to treatment centre from respondents' residence. 38 per cent of the respondents reported the distance is less than 2 km; 26.3 per cent of them reported it to be 2-3 km and 16.6 per cent as 4-5 km. Distance to health facility was reported as more than 5 km. by 19.1 per cent of the total respondents.

Table 5.41: Distance from home to medicare centres (Doctor, THC, Pharmacy/others)

Distance (Km.)	Frequency	Per cent
>2.0	146	38.0
2-3	101	26.3
4-5	64	16.6
5+	74	19.1
Total	385	100.0

Road Communication

Table 5.42 given below shows that more than half of the respondents use *pacca* type of road to go to doctor or Thana Health Complex (THC). About 26.5 per cent of them use *katcha-pacca* road and near about 20 per cent of the *katcha* road. During the rainy season 31.7 per cent of the respondents used to face problems visiting a doctor or Thana Health Complex (Table 5.43).

Table 5.42: Distribution of respondents by types of roads for visiting THC/doctor

Type of Roads	Frequency	Per cent
Pacca	207	53.8
Katcha	76	19.7
Katcha-Pacca	100	26.5
Total	384	100.0

Table 5.43: Distribution of respondents who face problem in rainy season for visiting THC/health centre

Response	Frequency	Per cent
Yes	122	31.7
No	263	68.3
Total	385	100.0

Major Health Services by GO at Local Level

Table 5.44 shows that 98.2 per cent of the respondents are aware about Thana Health Complex as government public health service provider. Satellite/outreach clinic is now becoming a major source for providing health services at local level, 54 per cent report on its presence in the locality. About 9.9 per cent of the respondents reported union sub-centre or union health and family welfare centre as a source of government public health services whereas it is evidenced from focus group discussions (FGDs) that any union sub-centre or union health and family welfare centre rarely functions. Nearly 4.0 per cent of the respondents reported others as sources of public health services at local level. One of the base line indicators of the health and population sector this criterion represents behavior change communication (BCC) through building awareness among the target population, especially emphasizing on women.

Table 5.44: Distribution of respondents' opinion on major sources of public health by Government

Sources	Frequency	Per cent
Thana Health Complex (THC)	378	98.2
Union Sub-centre (USC)/Union Health and Family Welfare Centre (UHFWC)	38	9.9
Satellite Clinic	208	54.0
Others	15	3.9

** Multiple responses*

Table 5.45 given below shows the association between respondents' occupation and their conception of satellite clinic as a source of health service in the locality. Among the total respondents' .agricultural

laborer within the villages, non-agricultural laborer within the villages, household worker and others are the occupations, which characterize 3.1, 2.9, 25.2 and 13.2 per cent of the respondents, respectively. Respondents of these occupations are more aware about satellite clinic as a source of health services than the rest of the occupations. The distribution of the respondents is 66.7 (8), 63.6 (7) 60.8 (59). Chi-square value of these two variables is 24.27, which is significant at 0.002 levels.

Table 5.45: Distribution of respondents by their occupation and conception of satellite clinic as a source of health service in the locality

Occupation	Frequency		Total
	Yes	No	
Owner of agr. farm (having no labour)	7 20.0 3.4	28 80.0 15.8	35 100.0 9.1
Owner of agr. farm (having labor)	28 5 2.8 13.5	25 47.2 14.1	53 100.0 13.8
Agr. labor within villages	8 66.7 3.6	4 33.3 2.3	12 100.0 3.1
Non-agr. labor (within the villages)	7 63.6 3.4	4 36.4 2.3	11 100.0 2.9
Non-agr. labor (outside the villages)	12 52.2 5.8	11 47.8 6.2	23 100.0 6.0
Service	23 50.0 11.1	23 50.0 13.0	46 100.0 11.9
Trade & Commerce	29 50.9 13.9	28 49.1 15.8	57 100.0 14.8
Household works	59 60.8 28.4	38 39.2 21.5	97 100.0 25.2
Others	35 68.6 16.8	16 31.4 9.0	51 100.0 13.2
Total	208 54.0 100.0	177 46.0 100.0	385 100.0 100.0

Chi-square = 24.268, p<.002, Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage

Table 5.46 given below shows the association among the sex of the respondents and conception on sources of public health services specifically THC, USC/UHFWC and satellite/outreach clinic. The table indicates that the male respondents are more aware of the sources than female. Among the respondents, 72.7 per cent of them are male of which 97.9 per cent are aware of the services from THC. In contrast, 4.3 per cent of the total respondents are female of which 99.0 per cent are aware of THC. Again, among the male respondents of this study 52.1 per cent of them are aware of the services of satellite/outreach clinic while 59.0 per cent of the total female respondents are aware about this. This is one of the important indicators in health and population sector program.

Table 5.46: Distribution of respondents by their sex and awareness of the sources of public health

Sex	THC			USC/UHFWC			Satellite clinic/ Outreach clinic		
	Yes	No	Total	Yes	No	Total	Yes	No	Total
Male	274 97.9 72.5	6 2.1 85.7	280 100.0 72.7	30 10.7 78.9	250 89.3 72.0	280 100.0 72.7	146 52.1 70.2	134 47.9 75.7	280 100.0 72.7
Female	104 99.0 27.5	1 1.0 14.3	105 100.0 4.3	8 7.6 21.1	97 92.4 28.0	105 100.0 27.3	62 59.0 29.8	43 41.0 24.3	105 100.0 27.3
Total	378 98,2 100.0	7 1.8 100.0	385 100.0 100.0	38 9.9 100.0	347 90.1 100.0	385 100.0 100.0	208 54.0 100.0	177 46.0 100.0	385 100.0 100.0

Table 5.47 reports that 93.5 per cent of the total respondents are aware more or less of the services provided by the government. Only 6.5 per cent of the respondents are not aware of the services.

Table 5.47: Distribution of respondents' awareness of different sources of public health services by Government

Awareness	Frequency	Per cent
Yes	213	55.3
No	25	6.5
Certain	147	38.2
Total	385	100.0

** Multiple responses*

Table 5.48 given below shows the association between respondents' education and awareness about public health services of GO. Among the total respondents 33.0 per cent of them have no years of schooling; 22.8 per cent of such respondents (lowest in figure) are aware about

GO health services. 5.2 per cent of the total respondents belong to more than 12 years of schooling of which 95.0 per cent of the respondents (highest in figure) are aware about GO services. It is noted that awareness increases in accordance with increasing years of schooling. Chi-square value of these two variables is 107.54, which is significant at 0.001 level.

Table 5.48: Distribution of respondents by their years of schooling and awareness about health services of Government

Education	Awareness			Total
	Yes	No	Certain	
0	29 22.8 13.6	18 14.2 72.0	80 63.0 54.5	127 100.0 33.0
1 -5	53 53.5 24.9	5 5.1 20.0	41 41.4 27.9	99 100.0 25.7
6-9	44 74.6 20.7	1 1.7 4.0	14 23.7 9.5	51 100.0 15.3
10- 12	68 85.0 31.9	1 1.3 4.0	11 13.8 7.5	80 100.0 20.8
12+	19 95.0 8.9	_ - -	1 5.0 0.7	20 100.0 5.2
Total	213 55.3 100.0	25 6.5 100.0	147 38.2 100.0	385 100.0 100.0

Person Chi-square = 107.544, p<.000

Note: In each eel! first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

Table 5.49 reports the association between sex of the respondents and awareness of health services. Among the total respondents 72.7 per cent are male of which 50.0 per cent of them are aware about the health services and 44.3 per cent of them are shows certainly aware. The table also that 27.3 per cent of the total respondents are female of which 69.5 per cent are aware and 21.9 per cent of them are certainly aware. This indicates that females are more aware than male. The chi-

square value of these two variables is 16.239, which is significant at 0.000 level.

Table 5.49: Distribution of respondents by their sex and awareness of the health services

Sex	Awareness			Total
	Yes	No	Certain	
Male	140	16	124	280
	50.0	5.7	44.3	100.0
	65.7	64.0	84.4	72.7
Female	73	9	23	105
	69.5	8.6	21.9	100.0
	34.3	36.0	15.6	27.3
Total	213	25	147	385
	55.3	6.5	38.2	100.0
	100.0	100.0	100,0	100.0

Chi-square = 16.239, p<.000

Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

Table 5.50 given below shows the association between respondents' occupation and their awareness about the services of different sources of public health. Among the total respondents, 11.9 per cent of them are engaged in service of which 78.3 per cent are aware about the services of different sources like thana health complex, satellite/outreach clinic, etc. Then it follows by the occupation of trade and commerce; 66.7 per cent of such respondents are aware regarding the services. Among the respondents 2.9 per cent are non-agricultural laborer (within the villages) of which 81.8 per cent are certainly aware of the services. Chi-squire value of respondents' occupation and awareness of the services is 83.62, which is significant at 0.000 level.

Table 5.50: Distribution of respondents by their occupation and their awareness of the sources of health services (e.g. THC, satellite clinic, etc)

Occupation	Awareness			Total
	Yes	No	Certain	
Owner of agr. farm (having no labour)	13	1	21	35
	37.1	2.9	60.0	100.0
	6.1	4.0	14.3	9.1

Occupation	Awareness			Total
	Yes	No	Certain	
Owner of agr. farm (having labor)	18 34.0 8.5	3 5.7 12.0	32 60.4 21.8	53 100.0 13.6
Agr. labor within villages	5 41.7 2.3	1 8.3 4.0	6 50.0 4.1	12 100.0 3.1
Agr. labor outside villages	-	-	-	-
Non-agr. labor (within the villages)	- - -	2 8.2 8.0	9 8 1.8 6.1	11 100.0 2.9
Non-agr. labor (outside the villages)	2 8.7 0.9	4 1 7.4 11.0	17 73.9 11.6	23 100.0 6.0
Service	36 78.3 16.	1 2.2 4.0	9 19.6 6.1	46 100.0 11.9
Trade & Commerce	38 66.7 17.8	1 1.8 4.0	18 31.6 12.2	57 100.0 14.8
Household works	66 31.0 31.0	10 10.3 40,0	21 21.6 14.3	97 100.0 25.2
Others	35 16.4 16.4	2 3.9 8.0	14 27.5 9.5	51 100.0 13.2
Total	213 55.3 100.0	25 6.5 100.0	147 38.2 100.0	385 100.0 100.0

Chi-square = 83.624, p<.000

Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

Doctors Attitude to Patient at THC

From table 5.51 it is found that majority of the respondents have given their opinion on doctors' attitude at THC as good (66.0 per cent). Only 2.3 per cent of them praised as very good. 31.7 per cent of them informed that doctor's attitude was bad.

Table 5.51: Distribution of Respondents' opinion on doctors' attitude to them at THC

Doctors' Attitude	Frequency	Per cent
Very bad	16	4.2
Bad	106	27.5
Good	254	66.0
Very good	9	2.3
Total	385	100.0

The table 5.52 presented below shows the association between respondents' household income and doctors' attitude to them at THC. Among the total respondents 27.5 per cent belong to household income between Tk. 10,000-30,000 of whom 40.0 per cent of the respondents reported doctor's attitude as bad. 10.6 per cent of the respondents are in the income groups of Tk. 70,000-90,000 of which of 82.9 per cent reported doctors' attitude as good at THC. Among the respondents, 11.4 per cent belong to more than Tk. 90,000 of which 6.8 per cent reported it as very good. The chi-square value of these two variables is 46.48, which is significant at 0.000 level. Here liner, by-liner association of these two variables is 22.66, which is also significant at 0.000 level.

Table 5.52; Distribution of respondents by their income and doctors' attitude to them at visiting THC

Income(in Tk.)	Attitude				Total
	Very Bad	Bad	Good	Very good	
<10,000	- - -	3 25.0 2.8	9 75.0 3.5	- - -	12 100.0 3.1
10,000-30,000	12 1.4 75.0	42 40.0 39.6	49 46.7 19.3	2 1.9 22.2	105 100.0 27.3
30,000-50,000	3 2.5 18.8	35 29.4 33.0	79 66.4 31.1	2 1.7 22.2	119 100.0 30.9
50,000-70,000	- - -	11 17.2 10.4	51 79.7 20.1	2 3.1 22.2	64 100.0 16.6
70,000-90,000	- - -	7 17.1 6.6	34 82.9 13.4	- - -	41 100.0 10.6
90,000+	1 2.3 6.3	8 18.2 7.5	32 72.7 12.6	3 6.8 33.3	44 100.0 11.4
Total	16 4.2 100.0	106 27.5 100.0	254 66.0 100.0	9 2.3 100.0	385 100.0 100.0

Chi-square = 46.479, p<.000, Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

Paying Money to Doctor at THC

Though majority of the respondents (66.0 per cent) provided their opinion on doctors' attitude as good (Table 5.51), they (70.6%) also reported instances of taking money by doctors at THC. Only 29.4 per cent did not pay money to them at THC (Table 5.53).

Table 5.53: Distribution of respondents' views on paying money to Doctors at THC

Opinion	Frequency	Per cent
Yes	272	70.6
No	113	29.4
Total	385	100.0

Getting Adequate Medicine from THC

Table 5.54 given below shows that 90.4 per cent of the total respondents do not get adequate medicine from THC. Doctors in THC suggest them to buy medicine from facilities where they practice privately or in which they some kind of ownership. Only 9.4 per cent of the total respondents get adequate medicine from THC.

Table 5.54: Distribution of respondents' opinion on getting adequate medicine from THC

Opinion	Frequency	Per cent
Yes	37	9.6
No	348	90.4
Total	385	100.0

Problems of GO Health Services

The table 5.55 given below shows the major problems of government (GO) health services. Among them receiving money by doctor and inadequacy of medicine are most dominant. 69.9 per cent and 68.1 per cent of the respondents reported these issues. Low quality of medicine (59.7 per cent), corruption (46.8 per cent) and bad attitudes of service providers (29.1per cent) are also regarded as problems.

Table 5.55: Distribution of respondents' opinion on major problems/ constraints of GO health services

Problems	Frequency	Per cent
Lesser quality of medicine	230	39.7
Inadequacy of medicine	262	68.1
Fewer number of doctors and nurses	62	16.1
Corruption	180	46.8
Receiving money by doctors	269	69.9
Bad attitudes of service providers	112	29.1
Others	24	6.2

** Multiple responses*

NGO Health Services

Table 5.56 reports that 54.0 per cent respondents or respondents' family members get the health services from NGO and these health services are comparatively better than GO health services. Table 5.57 indicates that 88.0 per cent of the respondents found for NGO services good while only 2.9 per cent viewed as bad. .

Table 5.56: Distribution of respondents' opinion on access to NGO health services to households

Response	Frequency	Per cent
Yes	208	54.0
No	177	46.0
Total	385	100.0

Table 5.57: Distribution of respondents' opinion on NGO's health services

Opinion	Frequency	Per cent
Very bad	2	1.0
Bad	6	2.9
Good	183	88.0
Very good	13	6.3
Inapplicable	4	1.9
Total	208	100.0

Health Promotion Activities

The table 5.58 given below shows various GO and NGOs health activities or programs at the locality. Among the GO services, immunization and family planning are widely prevalent, which contributes 90.4 and 66.2 per cent of the total respondents respectively. Besides the two, other GO services are health and nutrition, general and communicable disease treatments, ORsaline/ORT are prevalent. On the other hand, among the NGOs services health, nutrition, maternal, and child health care, immunization, family planning, and health education in school are widely prevalent. Among these, health and nutrition and maternal and child health care are very successful according to the grass-roots viewers. Only two NGOs named BRAC and SUS are working in this area.

Table 5.58: Distribution of respondents' opinion on GO/NGOs health promotion activities/programs

Program/Activities	GO		NGO	
	Frequency	Per cent	Frequency	Per cent
EPl/ immunization	348	90.4	106	27.5
Family planning	255	66.2	96	24.9
Health and nutrition	183	47.5	188	48.8
Orsalaine/ORT	137	35.6	26	6.8
Maternal & child care	107	28.3	115	29.9
General/communicable disease treatment	147	38.2	36	9.4
Health education in school	93	24.2	39	10.1
Green umbrella clinic	29	7.5	-	-
Hygiene & Sanitation	9	2.3	6	1.6
Credit in health sector	-	-	3	0.8
Others	2	0.5	6	1.6

** Multiple responses*

Health Expenditure

An individual of a household who is sick may be suffering various diseases and for that person may receive more than one type of treatment. Table 5.59 presented below shows household health medical expenditure in the last 1 year. More than half of the respondents (56.6 per cent) spent over Tk. 2000 of which 24.9 per cent spent in between Tk. 2000-4000 followed by 10.4 per cent in between Tk. 4001-6000. However, 16.6 per cent of them spent more than Tk. 8001.

Table 5.59: Distribution of respondents' health expenditure in last one year

Expenditure (in Tk.)	Frequency	Per cent
>2000	171	44.4
2000 - 4000	96	24.9
4001 - 6000	40	10.4
6001 -8000	14	3.6
8001+	64	16.6
Total	385	100.0

Table 5.60 presented below shows the association between respondents' sex and their household health expenditure in last one year. Among the total number of respondents 72.7 per cent are male of which 51.1 per cent had spent below Tk. 2000 and 23.1 per cent Tk. 2000-4000. Among the total respondents 27.3 per cent are female of which 27.6 per cent had the expenditure between Tk. 2000-4000 and 26.7 per cent had less than Tk. 2000. The chi-square value of these two variables is 21.60, which is significant at 0.000 level.

Table 5.60: Distribution of respondents by their sex and their health expenditure in last one year, survey 2001.

Sex	Pattern of Health Expenditure by Sex (in Tk.)					Total
	<2000	2000-4000	4001-6000	6001-8000	8000+	
Male	143 51.1 83.6	67 23.9 69.8	24 8.6 60.0	9 3.2 64.3	37 13.2 57.8	280 100.0 72.7
Female	28 26.7 16.4	29 27.6 30.2	16 15.2 40.0	5 4.8 35.7	27 25.7 42.2	105 100.0 27.3
Total	171 44.4 100.1	96 24.9 100.0	40 10.4 100.0	14 3.6 100.0	64 16.6 100.0	385 100.0 100.0

Chi-square = 21.604, p<.000

Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

Table 5.61 given below shows the association between respondents' total health expenditure and frequency of visiting to health complex or doctor. Among the total respondents, 44.4 per cent belong to health expenditure group of less than Tk. 2000 of which 9.4 per cent did not visit THC/doctor. The same health expenditure group belongs to 44.4 per cent of whose 39.8 per cent visited doctor or THC one to two times. 16.6 per cent of the respondents having health expenditure more than Tk. 8000 visited doctor or THC within last six months more than three times. The T-value of these two variables is 6.52, which is significant at 0.000 level. The correlation co-efficient of these two variables is 0.094, which indicates a positive relation between the two variables in which with the increase in one variable another one also increases.

Table 5.61: Distribution of respondents by their health expenditure and frequency of visiting THC/ Doctor

Health Expenditure (in Tk.)	Frequency of Visit			Total
	0	1-2	3+	
<2000	16 9.4 69.6	68 39.8 55.3	87 50.9 36.40	171 100.0 44.4
2001-4000	5 5.2 21.7	24 25.0 19.5	67 70.0 28.0	96 100.0 24.9
4001-6000	1 2.5 4.3	10 25.0 8.1	29 72.5 12.1	40 100.0 10.4

Health Expenditure (in Tk.)	Frequency of Visit			Total
	0	1-2	3+	
6001-8000	- 7.1 4.3	5 35.7 4.1	8 57.2 3.3	14 100.0 3.6
8000+	- - -	16 25.0 13.0	48 75.0 20.1	64 100.0 16.6
Total	23 6.0 100.0	123 31.9 100.0	239 62.1 100.0	385 100.0 100.0

T-value = 6.518, P <0.000, Chi-square = 42.705, p<.037, r= 0.094

Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

Access to Major Health Services in the Last Year 2001

Table 5.62 given below reports 80.0 per cent of the total respondents' household received immunization facilities during last year. More than half of the respondents' household received Vitamin A/Fe- capsule. Near about half of the total households got nutrition package for pregnant mother and infant child, 40.3 per cent of them got contraceptive. They also received other services like ORsaline, injection/vaccine for female and treatment but, not more significantly.

Table 5.62: Distribution of major health services received by respondents' households from GOs/NGOs in last year of the survey 2001.

Services	GO/NGO	
	Frequency	Per cent
Immunization	308	80.0
Vit-A/Fe	219	56.9
Vaccine/injection for female	113	29.4
ORsaline	123	31.9
Contraceptives	155	40.3
Medicine	107	27.8
Nutrition package	182	47.3
Others	20	5.2

** Multiple responses*

The table 5.63 given below shows zero order partial correlation coefficients for some selected variables in this study. The variables are doctors' attitude to respondents at THC, respondents' opinion on NGOs health services, household health expenditure in last year, total household yearly income, total yearly household expenditure, total land of household and years of schooling of the respondents. All

variables are arranged in row and column sequence. Among the variables health expenditures, household income and household expenditure - each of these negatively correlate with opinion about NGO's health services. In case of some variables coefficient can not be computed, which are marked as '.'sign. Besides most of the variables are positively correlated which means that with the increase of one variable another one also increase. For example, doctors' attitude to respondents at THC and the variable of health expenditure is highly correlated and the value of the correlation of these two variables is 0.0566 which means that with the increase higher the health expenditure, better the attention by the doctors to the patients. Similarly, it can be defined the correlation between respondents years of schooling and opinion. NGO's health services, which are also positively correlated and the value is 0.0818.

Table 5.63: Partial correlation coefficients for selected variables (Zero Order Partials)

	Doctors attitude	Opinion on NGO services	Health expenditure	Household income	Household expenditure	Total land household	Education
Doctors attitude	1.0000 (0) p= .	.0631 (206) P= .365	.0566 (383) P=.268	.1218 (383) P=. 017	.1972 (378) P= .000	.2458 (365) P= .000	.1801 (383) P=.000
Opinion on NGO services	.0631 (206) P=365	1.0000 (0) p= .	0415 (206) P= 552	0486 (206) P= 486	0397 (203) P= 572	.0048 (195) p= .000	.0818 (206) p= .240
Health expenditure	.0566 (383) P= 268	0415 (206) P= 552	1.0000 (0) P= .	1546 (383) P= 002	1427 (378) P= .005	.0915 (365) P= .080	.1455 (383) p= 0.004
Household income	1218 (383) P= .01	-.0486 (206) P= .486	.1546 (383) P= .002	1.0000 (0) p=	.6901 (378) P= .000	.1668 (365) P= .001	.2173 (383) p=. 000
Household expenditure	.1972 (378) P= .000	.0397 (203) P= ..572	.1427 (378) P= .005	.6901 (378) P= .000	1.0000 (0) P= .	.1462 (360) P= .005	.1928 (378) P= .000
Total land of household	.2458 (365) P= .000	.0048 (195) P= .947	.0915 (365} P= .080	.1668 (365) P= .001	.1462 (360) P= .005	1.0000 (0) P .	.3550 (365) P= .000
Education	.1801 (383) P= .000	.0818 (206) P= .240	.1455 (383) P= .004	.2173 (383) P= .000	.1928 (378) P= .000	.3550 (365) P= .000	1.0000 (0) p=.

Note: *(Coefficient/D.F.)/2-tailed Significance); '.'Coefficient indicates that a coefficient cannot be computed*

Table 5.64 presented below depicts partial correlation coefficient of selected 6 variables which are controlled for the variable of education. Among the variables doctors' attitude and total household income, total household expenditure and total land of household are highly correlated. The value of the first two variables is 0.0681 and for second two variables is 0.0848.

Table 5.64: Partial correlation coefficients of selected variables (Controlling for no education)

	Doctors attitude	Opinion on NGO services	Total health expenditure	Total Household income	Household expenditure	Total land of household
Doctors attitude	1.0000 (0) P=.	.0494 (205) P= .480	.0313 (382) P= .541	.0861 (382) P= .092	.1683 (377) P- .001	.1977 (364) P- .000
Opinion on NGO services	.0494 (205) P=.480	1.0000 (0) p= .	-.0541 (205) P= .439	-.0682 (205) P- .329	-.0567 (202} P= .421	-.0260 (194) P- .717
Health expenditure	.0313 (382) P=.541	-.0541 (205) P= .439	1.0000 (0) p= .	.1273 (382) P= .013	.1181 (377) P- .022	.0431 (364) P-.411
Household income	.0861 (382) P= .092	-.0682 (205) P= .329	.1273 (382) P=.013	1.0000 (0) p =	.6767 (377) P= .000	.0982 (364) P= .061
Household expenditure	.1683 (377) P=.001	-.0567 (202) P= .421	.1181 (377) P-.022	.6767 (377) P=.000	1.0000 (0} p= .	.0848 (359) F= .108
Total land of household	. 1977 (364) P= 000	-.0260 (194) P= .717	.0431 (364) P= .411	.0982 (364) P= .061	.0848 (359) P= .108	1.0000 (0) p=.

Note: *(Coefficient / (D.F.) / 2-tailed Significance); '.' indicates that a coefficient cannot be computed*

The table 5.65 given below indicates regression coefficient of respondents' household total income and selected twelve variables. Here income is independent and others are dependent variables. The dependent variables are respondents' years of schooling, respondents' currently using contraceptive, respondents' household visitation by Health Assistant/Family Welfare Assistant, respondents frequency of visit to doctor/THC, awareness about the sources of public health service, respondents' yearly household expenditure, yearly health expenditure, distance to doctor and Than Health Complex (THC) and pharmacy from respondents household. Among all the variables standardized coefficient or Beta for income and household health expenditure is 0.925, which is significant at 0.000 level of significance with 95 per cent confidence interval for p where lower bound is 0.953 and upper bound is 1.079. In case of income and currently using contraceptive the Beta value is 0.004, which is significant at 0.0873 level of significant with 95 per cent confidence interval for p where lower bound is -1117.037 and upper bound is 131.081.

Table 5.65: Coefficient of income and selected variables

Dependent Variables	Standardized Coefficients Beta	Sig.	95% Confidence Interval for B	
			Lower Bound	Upper Bound
Education	-0.002	0.937	-1814.119	1674.366
Family size	-0.021	0.443	-1280.144	561.891
Using contraceptive	0.004	.0873	-4658.699	5480.588
Respondents visit to doctor/THC	-0.010	0.731	-5437.135	3817.570
Respondents awareness about the sources of public health	-0.043	0.121	-1117.037	131.081
Household expenditure	-0.007	0.805	-3320.298	2580.692
Health expenditure	0.925	0.000	0.953	1.079
Distance to doctor	-0.021	0.435	-0.290	0.125
Distance to THC	-0.024	0.760	-6266.254	4577.873
Distance to pharmacy	0.022	0.795	-5054.883	6595.404
	0.100	0.332	-3733.603	11001.987

The table 5.66 given below shows one sample T-test for the variables of respondents' household income, household expenditure, distance from home to doctor, THC and pharmacy. The T-value for these - variables are 22.139, 18.569, 29.914, 30.985, 32.224 and 27.922. All of these values are significant at 0.000 level.

Table 5.66: One sample T-test for selected variables

Variables	T value	Sig. (2-tailed)	95% Confidence Interval of the difference	
			Lower Bound	Upper Bound
Total household income	22.139	0.000	50135.0238	59908.0931
Total household expenditure	18.569	0.000	47695.5531	58992.3416
Health expenditure	29.914	0.000	2.0845	2.3778
Distance from household to doctor	30.985	0.000	1.8315	2.0797
Distance from household to THC	32.224	0.000	1 .9046	2.1521
Distance from household to pharmacy	27.922	0.000	1.8702	2.1537

The table 5.67 given below shows analysis of variance among the variable of respondents years of schooling and it's main effects on doctors' attitude to respondents at THC, opinion on NGO health - services, household total health expenditure in last 1 year and household yearly income. Here combined sum of square is 123.392 with degrees of freedom of 14 and mean square 8.814. The F ratio, which is test statistic or ratio of the two variances, is 5.503, which is significant at 0.000 level. In case of education and doctors' attitude, the F ratio is 3.622, which is significant at 0.014 level. Regarding opinion on NGO health services the F ratio increases to 1.418, which Is

significant at 0.000 level of significance. For health expenditure in last 1 year the F ratio is 9.022, which is significant at 0.000 level of significance. Years of schooling of the respondents' effect on household yearly income while F ratio becomes 8.138, which is significant at 0.000 level.

Table 5.67: Analysis of variances: respondents' years of schooling and the variables of doctors attitude at THC, opinion on NGO services, health expenditure, total household income

Variables		Hierarchical Method				
		Sum of square	**df**	**Mean square**	**F**	**Sig.**
Respondents	Combined	123.392	14	8.814	5.503	0.000
Year of education	Doctors attitude to respondent at THC	17.404	3	5.801	3.622	0.000
	Opinion on NGO health services	9.087	4	2.272	1.418	0.000
	Health expenditure in last 1 year	57.800	4	14.450	9.022	0.000
	Total household income	39.101	3	13.034	8.138	0.000

In summary, this study explores that gastric/peptic ulcer, dysentery, diarrhoea and worm are the major diseases from which the respondents or household member suffered over the last 1 to 2 years while the study conducted. 46.2 per cent of the total household reported incidence of gastric/peptic ulcer it was more frequent among males and in the age groups of 35 to 39 and above 54 years. 10-12 years ago the major diseases from which respondents or household members suffered were nearly same, but diarrhoea was more prevalent at that time. At the time of independence, the major diseases reported by respondents were diarrhoea, dysentery, chicken pox, cholera and typhoid. For treatment of the diseases at the time of independence majority of the respondents went to homeopathic doctor and palli doctor or paramedics quack or kabiraj. But during post independence period the situation became different as nearly about half of the respondents went to Thana Health Complex (THC). Paramedic/Palli doctor and quack were also prevalent at the same time. A remarkable change has happened during last 1 to 2 years as 67.0 per cent of the informants reported using Thana Health Complex (THC) and MBBS doctor. At the same time, they also received homeopathic treatment to some extent.

At present 98.9 per cent of household use tube-well as a source of drinking water while 98.7 per cent of them use for domestic uses and 0.8 per cent of them use piped water. But this scenario was not found

in the past as 78.3 per cent of the household used tube-well before 10-12 years ago and 12.2 per cent of the household used at the time of independence. Well as a source of drinking water and domestic purpose at the time of independence was mostly prevalent.

Currently package saline plays a vital role in managing diarrhoea which was fully absent at the time of independence while lemon-*gur* solution (22.4 per cent) and others remedies (9.6 per cent) were provided. But 10 to 12 years ago 63.6 per cent of the household used package saline and how the figure has gone up to 90.9 per cent. Changes have happened also in the pattern using toilet facility as most of the respondents (35.9 per cent) used open/bushes and *katcha* type of latrine 919.5 per cent) 10 to 12 years ago, while now slab (44.3 per cent) and *pacca* (26.3 per cent) type of sanitary latrine are significantly prevalent. There exists a relationship between years of schooling and using pattern of toilet facility. This is shown in the study (chi-square=95.39) of which the relation is significant at 0.000 level of significance. There is also a relationship between household income and toilet facility use pattern (Chi-square=148.718) and the relationship is significant at 0.000 level of significance.

From the above pictures, it is clearly reflected that changes have occurred in patterns of morbidity and treatment, sources of drinking and domestic uses of water, sanitary access and managing diarrhoea. Information, education and communication play a vital role which can be found from focus group discussion and in-depth interview. Use of contraceptive methods has also expanded rapidly. More than half of the people are now currently using contraceptive while only 17.7 per cent of them used contraceptive 10-12 years ago. During the period of independence, the number was very low. There is an association between sex and using contraceptive for which chi-square value is 25.994 which is significant at 0.000 levels. Majority of the respondents (60.6 per cent) argued that their supply of family planning services was pharmacy and 50.5 per cent of them argued in favor of Thana Health Complex (THC).

Majority of the informants (38.7 per cent) of this study reported that at the time pregnancy or delivery care they seek help from traditional birth attendants. It follows by help from relatives where the per cent is 33.0. The trend was similar to the period of independence or 10 to 12 years ago. That means in respect of delivery care changes have not significantly happened as local cultural practices are associated with this behavior while the per cent of seeking help from doctor/trained

birth attendants have slightly increased. This study also shows the association between respondents households. The chi-square value for these two variables is 47.817, which is significant at 0.004 level.

In the study area majority of the people (68.1 per cent of them belief on getting cure by using tabiz. Focus group discussions reveal a declining trend in this regard due to increased awareness and modernity. Among the total respondents most of them (76.1 per cent) informed that their kids have already been vaccinated. Immunization is greatly successful while 95 per cent of the children aged 0 to 1 are vaccinated, a curse of viccine may not be provided is all cases.

In case of having injection from male personnel, majority of the respondents did not have any negative attitude; only 12.2 per cent of them disapproved it. A small percentage of the total respondents (15.3 per cent) did not approve of women going out alone for treatment from home. 10-20 years ago women were not permitted to go alone for treatment. Changes has also occurred in decision making adopt have family planning. Only 10.1 per cent reported to have adopted family planning through decision by males. Gender situation is also improved. 85.2 per cent of the respondents do not hesitate to receive treatment from male doctors. Moreover, 91.9 per cent of the respondents were on not providing more food to son than daughter.

More than half of the respondents (56.4 percent) have knowledge about disease of AIDS/HIV and 47.5 per cent of them have no knowledge regarding Arsenic. Respondents reported various sources of information regarding health. Radio, television, doctor, pharmacy, Thana Health Complex (THC), GO and NGO health worker, folk events, friends or relatives and poster are the major sources of information to them. Respondents reported that media plays a vital role in disseminating information. Television (42.9 percent), radio (40.5 percent) and newspaper/ magazine (21.4 percent) are the first three preferred sources of information for them. There is an association between respondents' years of schooling and preference to the sources of information on health communication. Chi-square value of the two variables is 68.53, which is significant at 0.010 level of significance. Majority of the respondents get information on on health staying at home, while 18.7 per cent of them get from neighbor or friends' house. ORsaline/ORT, Immunization, family planning, HIV/AIDS, Arsenic, Safe motherhood are the major subjects which are heard or learned by them. Among these ORsaline/ORT, immunization and family planning are the issues which are mostly accessed by them. There is a relation between respondents' sex and exposure to a program of family

planning and chi-square value of the variables is 18.273, which is significant at 0.000 level. An association is also exist between respondents' years of schooling and listening to issues on safe motherhood. The chi-square value of these two variables is 86.916, which is significant at 0.000 level.

In this study an association between respondents' years of schooling and knowledge on AIDS/HIV is found, where the chi-square value is 127.38 which is significant at 0.001 level of significance. Education of the respondents and knowledge about Arsenic is correlated and in this respect the chi-square value is 110.57, which is significant 0.00 level of significance. Relation between respondents' sex and listening to program of safe motherhood also found and the chi-square value of these variables is 14.068, which is significant at 0.000 level of significance. In the study majority of the respondents (74.3 per cent) discussed with others about the received messages about these issues. Most of them (76.1 per cent) reported that health worker or family welfare assistant visit their household and they get information from them they visit to majority of the household (39.5 per cent) once in a month or more. In this study 60.8 per cent of the respondents had visited a doctor within last 6 months, while only 6 per cent never visited a doctor.

There is an association between respondents' education and frequency of visiting a doctor or Thana Health Complex (THC) within last 6 months and in this regard, the chi-square value of the two variables is 20.53, which is significant at 0.000 level of significance. Regarding distance to doctor or Thana Health Complex (THC) majority of the respondents (38.0 per cent) reported the distance as less than 2.0 km while 19.1 per cent reported the distance as more than 5 km. Pacca type of road was available for more than half of the respondents while 19.7 per cent and 20.5 per cent of them use katcha and katcha-pacca type of road to travel to Thana Health Complex (THC) or health centre. Among them 31.7 per cent of the respondents reported that they face problem in rainy season for going to Thana Health Complex (THC).

Awareness about the sources of public health services are very significant and for this reason the Health and Population Sector programme (HPSP) has stressed on behavior change communication as an indicator of HPSP. In this study 98.2 per cent of the respondents are aware about Thana Health Complex (THC) while 54.0 per cent are aware about satellite clinic or outreach clinic. Outreach or satellite clinic is becoming more important in providing health services to the

target audience. There is a relationship respondents occupation and their awareness about satellite clinic and the chi-square value of these variables is 24.268, which is significant at 0.002 level of significance. Agricultural and non-agriculture laborer, household works and others category of occupational group are more aware about satellite clinic. Among the respondents female are more aware than male about Thana Health Complex (THC) and satellite/outreach clinic. A study report of HPSP (1999) showed female awareness about THC and outreach clinics are 70.0 and 86.0 per cent regarding the whole of Bangladesh, are refers conception of female are 99.0 and 59.0 per cent. In general 93.5 per cent of the total respondents are aware about health services provided by GO. In this respect relationship existed between respondents' years of schooling and awareness of the services. The chi-square value of this two variables is 107.544, which is significant 0.000 level of significance. It is also found that chi-square value of informants sex and awareness of the services is 16.239, which is significant at 0.000 level of significance too. Occupation of the respondents and their awareness regarding this reflects in this study where the chi-square value is 83.624, which is significant at 0.000 level of significance. Service holders and businessmen are more aware than others in this regard.

Majority of the respondents reports that doctor's attitude at THC is quite good while 27.5 per cent of them termed it as bad and 4.2 per cent as very bad. Though the respondents have provided their opinion on doctor' attitude as good but they (70.6 per cent) have also reported for paying money to doctor at THC. Respondents' household income and doctors' attitude is associated where the chi-square value is 46.48, which is significant at 0.000 level of significance and liner by-liner association of these variables is 22.66 which is significant at 0.000 level too. Regarding the health services of THC only 9.6 per cent of the respondents told that they got adequate medicine while 90.4 per cent of them did not get adequate medicine from THC. When asked about the major problems of GO services the respondents eagerly reported the constraints as receiving money by doctors (69.9 per cent), inadequacy of medicine (68.1 per cent), corruption (46.8 per cent) etc. But in case of NGO health services most of the respondents (88.0 per cent) who got services from NGO opined the service as good and 6.3 per cent of them reported it very good. The major NGO services in the locality reported by respondents are health and nutrition, maternal and child health care, immunization, family planning and health education in school. BRAC is the leading NGO in the health sector of this area. Their nutrition program locally familiar as 'pusti' is extremely

successful according to the view of the respondents of this study. Immunization and family planning are the major services from which respondents or their household members are benefited.

More than half of the respondents in this study informed that they spent more than Tk. 2,000 on medical services, 16.6 per cent of them spent above Tk. 3,000 and 44.4 per cent of them spent less than Tk. 2,000. It is found that there is an association between respondents' sex and health expenditure in last one year and the chi-square value is 21.604, which is significant at 0.000 level of significance. Respondents household health expenditure and their frequency of visiting a doctor are also related where the correlation co-efficient of the variable is 0.94 and the T value is 6.52, which are significant at 0.000 level of significance. This study also reports that majority of the respondents household received immunization (80.0 per cent), vitamin A/Fe capsule (56.9 per cent), nutrition package (47.3 per cent) and family planning equipment (40.3 per cent) during the last one year.

In this study some selected variables have been found to be associated. Following zero order partials each of the variable-health expenditure, household income, household expenditure are negatively correlated with opinion on NGOs, health services. In contrast, doctors' attitude, health expenditure, household income, household expenditure, total land of household and respondents' years of schooling are positively correlated. The variables-doctor attitude, total household income, total household expenditure and total land of household, which are controlled by respondents' years of schooling, are highly correlated. This study also depicts the standardized coefficient of Beta for income as an independent variable and others dependent variables including education, currently using contraceptive, home visitation by HA/FWA, frequency of visit to doctor/THC, awareness about the sources of public health service, yearly household expenditure, health expenditure and distance to doctor, THC and pharmacy. The T-value for informants' household yearly income, household expenditure, and distance from home to doctor, THC and pharmacy are 22.139, 18.569, 29.914, 30.985, 32.224 and 27.922, which are significant at 0.000 level. The F ratio for the variable of respondents' years of schooling and combined character including doctors' attitude at THC, opinion on NGO services, health expenditure and household income is 5.503, which significant in the study at 0.000 levels.

Chapter- VI

Grassroots Views on Health Practices, Changes in Health Behavior and Policy Means for Health Communication in Bangladesh

We have entered into the new century but many people of Bangladesh have harmful health behavior still at present. Here, majority of the people have experienced different forms of poverty, illiteracy, malnutrition, starvation, ignorance and superstition. These traditional, native or indigenous methods of healing are exercised, especially in rural areas from early times. In the second half of the 19th century modern scientific medicine has begun to widen in rural areas. During Pakistan period the condition regarding health problems and services was extremely unfortunate. After independence the situation has improved, but not desired level. Here socio-economic and cultural barrier including insufficient information act as a resistance to awareness towards positive changes in health behavior (Mahbullah, 1981). Access of people to health services and its different programs are inadequate. But it should be taken into consideration that generally people continue to practice harmful health behavior not for traditional beliefs or backwardness but for not taking into consider the causal influences on health, containing irrelevant information, using inappropriate methods etc. (Hubley, 1993).

Here, culture as an interrelated values which are much active to influence and condition the perception, judgment, communication and behavior in a society (Airhihenbuwa, 1995). In this respect, communication as a process of supplying information can play a vital role in health promotion and can be accounted very effective in creating an environment favorable to behavior change. Therefore, clients and providers are to be encouraged to modify their attitude and behavior for efficaciousness of the program and this will promote healthier lives (GoB,1997). It is very optimistic that information, education and communication (IEC) on various health issues and family planning in Bangladesh promoted the awareness and greater use of health and family planning services. Remarkable positive changes have happened regarding immunization, national awareness campaigns

on the treatment of diarrhoea, special programs to reduce pneumonia related deaths, better sanitation and better access to safe water and other programs to control emerging and re-emerging diseases in the country (IMF, UN&WB; GoB, 1999). Despite these impressive and positive changes, important health indicators, such as, child and maternal mortality and morbidity are still unacceptably high. Therefore, we have to expand access to basic services and promoting the quality of services both in the public and private sectors. It is rightly being comprehended that prevention of diseases and promotion of health depends on the social condition in which people live and decisions made by policy planners, politicians, families and individuals. The socio-economic development of the country depends on building effective plans and policy measures and their implementation on the basis of the needs of the people.

The socio-economic development of the country depends on building effective plans and policy measures and their implementation on the basis of the needs of the people. It is often taken into consideration that if people of the country specially the rural people of the country could be made aware of their health status and health, then atomically health scenery of the people and the country could be promoted. In this respect, this study studies the health care practices, awareness and role of communication in improving people's health and diseases, health education, health promotion and empowerment of families and communities to take action on health issues. So, it has become important to carry out systematic and scientific research on social aspects of health communication in a wide range of settings including the individual, family, community, schools, health services and the mass media.

Diseases and Treatment

To understand health-care seeking behavior, it is important to know about how people perceive and define different types of diseases. It was found that people suffer from various diseases. Among these gastric/peptic ulcer, dysentery, diarrhoea, worm, jaundice, and chicken pox are the major diseases from which the people suffered over the last 1-2 years. Diarrhoea and cholera were more prevalent 20-30 years ago. At that time majority of the people went to homeopathic doctor, quack, *Kabiraj*, *pally* doctor or paramedics but now move to modern doctor (M.B.B.S or specialized) and Upazila/Thana Health Complex (THC) while seeking treatment though they also receive homeopathic treatment to some extent. Generally the grass root people were

indifferent and did not take any prescribed medicine from physicians unless these become serious. Before going to doctor they usually waited for 4 to 5 days. An illness iceberg exits within them. Several reasons were accountable for this. Among these the main reason was economic concern. They considered disease as easygoing and that it would go away automatically. In case of jaundice prevention few cases are found to cover patient's head with a garland as a way of treatment where they believe as petal dry up, they suck 'yellow' from patient body. Few female cases were found to not visit to any doctor (male) for fear to touch her/their body. Homeopathic treatment is widely preferable for child diseases. In case of diarrhoea, people took juice of leaves, grass and trees, which is locally named '*bonadi'* medicine at the time of independence. At that time they also used to take coconut water and substance from rice (locally named '*bhater mar'*) and banana named *'bagnali'* for removing diarrhoea or dysentery. But now the scenery has changed.

Currently package saline plays a vital role in managing diarrhea that was fully absent at the time of independence while lemon-gur solution and other remedies were provided. Al most every body takes or- saline package, which is now widely available. Now the people are more aware about the issue due to mass communication campaign-specially in television and radio campaign. FGDs in the village of 'Masimpur' reports that at least 20 people had died from diarrhoea and cholera 10-12 years ago. Some villagers became blind because of small pox at that time. Now these diseases have declined but jaundice, dysentery and chicken pox (locally named *'pannya gota'*), skin diseases are more common at present. Another FGD of Miargoan village reports that infant child suffer from a special type of disease-*'Tahura'*. The informants reported that the face of the child turn into various color like red, yellow and blue from time to time. Child aged 3-6 months used to cry while sleeping. This special type of disease attacks the child below 18 months of age. From people's view, this disease sucks the milk from mothers breast and cause to death. People are habituated with *kabiraji*, *tabiz*, and *zhar-phuk* type of treatment in this case. Even people go to *'Zin-er- Beti'* (spiritual healer) while this sickness.

Family Planning Practices

Use of contraceptive methods has also expanded rapidly. Majority of the people are now currently using contraceptive methods. But during the period of independence or 10-12 years ago the situation was very low. Now people in broad-spectrum are found to be conscious about

the recompense of having a small family. They talked generously about family planning practices without any uncertainty. Majority of the viewers reports that theirs wives were taking oral pills and using condoms. Most of the viewers argued that their supply of family planning services was pharmacy and Thana Health Complex (THC). They also get it from family planning workers to some extent. Prevailing previous religious resistance, taboos and stigma were mostly removed. Information, education and communication acted a significant role here. Various family planning programs broadcasted in television and radio, increasing rate of education and motivational work by GO/NGOs health workers contributed immensely to raising the alertness among the people.

But there are some constraints concerning family planning. Most family planning workers and supervisors are living at remoteness areas and visit areas only from time to time. The local people complained against them for not visiting most of the houses. Moreover, other social forces also act as constraints. A group of female respondents of Paikerdia village reported for not using contraceptive as mother-in-law or husbands do not like it although they are not interested to take more children. But it is very optimistic that changes have also occurred in decision making to adopt family planning. Now decision by males is not the dominant factor to adopt family planning. Both husband and wife take decision regarding family planning. Gender situation has also improved. Female viewers reported that they didn't hesitate to receive treatment from male doctors. Moreover, they were not in favor of providing more food to sons than daughters.

Immunization

Expanded program of immunization (EPI) is a very successful program in this locality. Children are being mostly covered under this program. Publicity over television, radio, local health workers of satellite clinic and others made here a strong effect. GO and NGO workers worked hard in to create awareness among the mothers for immunizing their child. Bangladesh Rural Advancement Committee (BRAC) and Grameen Bank is the pioneer in this respect where female members of these NGOS are informed about the benefits of immunization. But a couple of years ago mothers were hardly aware the needs of the immunization. Gradually people have come to realize it positively where negative conception regarding side effects of immunization (such as temperature, sore arm) largely removed. Therefore, immunization is greatly successful while most of the children aged 0-1

are vaccinated, though a course of vaccine may not be provided in all cases.

Sanitary Latrine/Toilet Facility

Changes have happened in the pattern using toilet facility although majority of the people used open bushes and *katcha* type of latrine. Now slab and *pacca* type of sanitary latrine are significantly prevalent. Department of Public Health Engineering (DPHE) provides ring slab type of latrine. Local NGOs like BRAC also promotes the use of sanitary latrines in the area. Due to extensive motivational activities of GO and NGO's with active participation of civil society health and hygiene situation in Masimpur union of Shibpur upazila has much improved in the last few years.

Sources of Drinking Water

For successful communication actions carried out through the past years, no family currently drinks canal, ponds or well water, as tube well water is easily available. They know that tube well water is clean and pure and should be used not only for drinking but also household works. The grass root people viewed that they used tube well for all purposes. But this scenario was not found in 20-30 years ago. The viewers reported that well (locally named '*Indira'*), as source of drinking water and water for domestic purposes for them and the idea was prevalent at that time.

Nutrition

Along with GO, BRAC (Bangladesh Rural Advancement Committee) is the one of the leading NGO, which plays a significant role regarding changing health behavior in this area. The grass root people hold high opinion about the NGOs. A nation based NGO named BRAC played a significant role for health promotion in Shibpur upazila. They have already introduced nutrition project, health education in BRAC schools. They provide iron tablet and other facilities for newly married couples. This nutrition project is very successful in the eyes of the viewers as it runs properly. Under the program *'Pusti Package', food* (packet) for pregnant mother and infant child is provided according to the nutritional criteria. On the basis of height and weight nutritional position of a mother or child is determined. Along with national health campaigns BRAC also motivates their respective members on that issue. Another local NGO named SUS (Samaj Shohayak Sangstha) offers micro credit to the poor people for vegetation. The villagers consider these NGOs as blessings here for them.

Pregnancy

From this study it is known that mothers deliver their babies in most traditional ways seeking help from traditional birth attendants- dais (locally named '*Jan kamala'*) and relatives. Only in a complex situation is a doctor's help solicited. A 70 years old male person of Saidergoan village reported on engaging his mother –in-law at the time of his wife's pregnancy. He also said that appealing to others (like doctor) is an act of sin (locally *'Badayat'*) in Islamic sense. If certain complexities arise, he viewed that Allah (God) would provide the *'Rah mat'* (means sent by God that may save her). This indicates that in respect of delivery care there has not been significant changes ed as local cultural practices are allied with this behavior while the number , seeking help from doctor/trained birth attendants are increasing among them.

HIV/AIDS, Arsenic, Iodine Deficiency, and Breast-feeding

Majority of the viewers reported that they have no clear/ in-depth knowledge about the diseases of AIDS/HIV and Arsenic though they heard about these**.** But they reported that awareness increased about these issues than before. Media campaign and propaganda work behind this. According to the viewers, there is no arsenic contaminated tube well in this locality. Here iodine deficiency is not a common phenomena and the incidence of this disease is not remarkable. Using iodized salt on a large scale than before has reduced cases of goitre. In case of breast-feeding the grass root people feel it as no alternative. Mothers try their best to breast feed their child as long as possible.

Sources of Information and Communication

The grass root viewers reported various sources of information regarding health. Radio, television, doctor, pharmacy, Thana Health Complex (THC), GO and NGO health workers, folk events, friends or relatives and poster are the major sources of information for them. They reported that media plays a vital role in disseminating information. Television, radio, and newspapers, magazines are the most preferred sources of information for them. Here majority of the respondents get information on health staying at home, or from neighbor or friends houses. Or saline/ORT, immunization, family planning, HIV/AIDS, Arsenic, Safe motherhood is the major subjects which are heard or learned by them. Among these Or saline/ORT, immunization, family planning are the issues which are mostly accessed by them. This study shows that grass root people usually discuss with others about the received messages on these issues. They

reported that health workers and family welfare assistants visit their households and they get information from them.

They visit majority of the households once in a month or more. Many of them also visited the doctor within last 6 months for consultation with various purposes. They also consult with the personnel in local pharmacy. Moreover, they discuss with the issues within the family member too. Awareness about the sources of public health services is very significant. This study reflects that the grass root viewers are aware about Thana Health Complex (THC) of whose majorities of them are aware about satellite or outreach clinic. Satellite or outreach clinic is becoming more important in providing health services to the target audience. This study also shows various GO and NGOs health promotion activities or programs at the locality. Among the GO health services- immunization and family planning are widely prevalent.

Other GO services are health and nutrition, general and communicable diseases treatment, and Or saline/ORT etc. is prevalent. But in case of NGO services health and nutrition, maternal and child health care, immunization, family planning, and health education in the school are widely prevalent. Reputed NGO named BRAC is contributing immensely by arranging drama, jatra and other cultural programs at regular interval by which health messages are transmitted to the people to make them aware , effectively. It is found that health education is given to the students in local schools. This education is certainly conducted by out door medical officers and health assistants at the high and primary schools respectively. But this is not provided at a regular basis. It is also found that married couples, teen aged girls are trained on various health issues at a regular interval. In this regard a reputed NGO named BRAC is contributing immensely by arranging drama, jatra and other cultural programs at regular interval by which health messages are transmitted to the people to aware them effectively.

Policy Means for Effective Health Communication

Analysis of effectiveness of health communication intervention is crucial for strengthening health promotion. The interventions or programs should be taken to reach all people and guide them in future policy formulation. From hearing the views of target audiences it is possible to notify few points for action to promote health behavior. These are promoting use and improving satisfaction of government health services, increasing use of contraception, improving

immunization and vitamin A coverage. The informants also provided few suggestions to improve community health. These are: improving sanitation, raising awareness of people, motivating for immunization providing health education, appropriate training, free treatment, and adequate medicine, increasing number of specialized doctors and consulting hours etc. Besides these, policy measures for behavior change are also identified. There should be face-to-face motivation, discussion and group meeting at regular interval at local level; interaction between doctor and patient must be promoted for effective communication. Political leaders, chairmen, and members, of union parisad, maulanas, elite groups, youth and educated people, must have to support with all efforts. Folk songs and drama on various health issues may be organized on a regular basis. NGOs involvement must be more encouraged in health sector.

Constraints for Health Communication

In this study informants were asked through in-depth interviews and focus group discussions (FGDs) to identify specially the problems in obtaining medical care from governmental health facilities. The problems reported by viewers include demand of money by service providers, non-availability of drugs, costly medicine prescribed and bad attitude of service providers. In fact, it is true that health problems are lot but our resources are limited. Effective planning does not exit. Moreover, lack of accountability acts in current health services. FGDs shows that community health clinic for every 6,000 people are not working in villages as physical infrastructure is being constructed. Union health and family Welfare center (UNFWC) physically exist, but not started functioning yet since years of establishment. In the study area, some important features regarding health problems or constraints for health communication are noticed. The major health related problems or constraints of GO services are: receiving money by doctors, not getting adequate medicine from Thana Health Complex (THC), private practice by doctors through neglecting their duties, corruption, existing no communication campaign for adults awaking about safe delivery by trained personnel and problems of adolescents, lack of skilled administrators, lack of training facilities, and not taking timely effective program. The grass roots people viewed that health facilities and services are more accessible for upper class of people, which explores an inequality in health services provision. People are less likely to use government health services. Bad experiences of the usual services are an important reason for not using these. Improving the quality and services could lead to more people using them

In conclusion, facing continued health crisis Government and NGOs are trying to improve the poor health condition of the masses through effective communication intervention. In this respect, it is important to aware grass root people to concern health problems and their responsibilities in reducing the problems. The key factors allied with poor health condition should be identified and analyze for promoting health behavior. In this respect, this study shows that modernization and increasing communication has lead to significant behavioral change regarding health among the grass root people over time. GO and NGO agencies began to use various communication strategies during the post independence period for changing health behavior. As a result, behavior modification has occurred significantly. This study shows the social forces, which are at work behinds the change in health behavior aggregately and with different social groups as well as values, norms and perception of people about health and illness. Finally, this study also provides policy suggestion for improved communication strategy for inducing faster modification of health behavior so that the goal of '*health for all'* can be achieved within force able time to change grass roots people's behavior that eventually leads to health promotion in Bangladesh.

Chapter – VII

Conclusion

This study has undertaken a sociological analysis focusing upon communication and change in health behavior. It shows that modernization and increasing communication has led to significant behavioral changes regarding health among the respondents over time. GoB and NGO agencies began to use various communication strategies during the post-independence period for changes in health behavior. It is clear that behavior modification has occurred significantly as a result.

This study also shows the social forces, which are at work behind the change in health behavioral aggregately and with different social groups as well as values, norms and perception of people about health and illness. This is an area of applied sociology, which provides policy suggestion for improved communication strategy for inducing faster modification of health behavior so that the goal of health for all can be achieved within the foreseeable time. It has been evidenced that inadequate and ineffective health facilities and services cause a lot of sufferings to the people of Bangladesh, especially the rural people of the country. Facing continued health crisis government, NGO and international communities are trying to improve the poor health condition of the masses through effective communication intervention. Government has already formulated health policy and undertaken various health-related programs and issues for client's needs, especially for the vulnerable groups like women, children and the poor. Previous information, Education and Communication (IEC) activities have transformed into behavior change communication of newly introduced essential service package (ESP) for improving health status of the people through changing existing harmful behavior. Health and Population Sector Program (HPSP), 1998-2003) which aims at changing attitudes and behavior of people, improving their health status, building effective community support for health seeking behavior, changing attitudes and behavior of service providers to provide client centered services and promoting men's understanding

and support for health needs of women and girl children. The current study aims to provide information on present and past utilization, experience and perceptions of health and family planning and program effectiveness incorporating interpersonal, group and mass communication. Here effectiveness of the program includes its effectiveness in making health and population services more responsive to users and more locally accountable.

This study studies the health care practices, awareness and role of communication in improving people's health and diseases, health education, health promotion and empowerment of families and communities to take action on health issues. It has been comprehended that the prevention of diseases and the promotion of health depends on the social conditions in which people live and decisions made by policy planners, politicians, families and individuals. This study undertakes to study communication activities and programs on health and their impact from a sociological point of view or perspective, which may be advanced for future evaluation. It is important to note that positive and noticeable changes have occurred due to improved communication. Sociologists are now concerned to identify the characteristics of groups that differed in their incidence of illness behavior and to establish statistical associations between specific social traits in the population and a number of health behaviors. Therefore, it has become important to carry out systematic and scientific research on sociological aspects of health communication in a wide range of settings including the individual, family, community, schools, health services and the mass media.

From this study, it is revealed that of few specific programs like, Expanded Program on Immunization (EPI) and Oral Rehydration Therapy (ORT) are highly successful. These are playing vital role in saving the lives of hundreds and thousands of children. The spread of various media of communication has led a quiet revolution, which is perceived by the audiences including social workers, teachers and community leaders. These people highlight the small and many powerful behavior changes taking place in hundreds of houses and families in the study area. The grass-root voices in the study describe the process of deep and lasting change. Transition from age-old custom of using tabiz and blessed water from folk and spiritual healers to

modern doctors mark a social transformation in village society. Human life is not and can not be isolated from the culture of the society in which he lives. In the study it is found that delivery of the people's babies took place at home, mostly in the presence of a traditional birth attendant or near relatives. For delivery of babies they preferred home to hospital. In case of jaundice covering patients' head with garland is also practices as treatment in few areas.

It is found in this study that health education is given to the students of local schools. Such education is mainly conducted by out door medical officer and health assistants at the high schools and primary schools respectively. But this is not provided on a regular basis in the area of the study. It is also found that married couples are visited by family planning workers mostly once in every one to two months. They provide necessary advice to the couples and mothers on family planning methods, breast feeding, weaning, vitamin-A, EPI and other aspects of health information. Along with GO, BRAC is one of the leading NGO which plays a significant role regarding changing health behavior. Besides these, mass media also plays a significant role in health communication. As an indicator of Health and Population Sector programme (HPSP) behavior change communication (BCC) explores the proportion of awareness of population specially women about selected health services, including referral system to thana level. In this regard this study explains the awareness about health services, which has been promoted though various communication strategies.

In this study the grassroots people viewed that health facilities and services are more available for upper classes of people. This refers an inequality in health services provision. People are less likely to use government health services. Bad experiences of the usual services are an important reason for not using these. Improving the quality and services could lead to more people using them. This study shows that BCC of Health and Population Sector Programme has been quite successful but a lot need to be done, especially in motivating grassroots people, especially poor people. This study has also identified policy measures for behavior change. There should be face to face motivation, discussion and group meeting at regular intervals organized by a team of voluntary workers. All efforts must be taken into full and support of the maulana, union parishad members and chairman, elite group,

political leaders, youths and educated section of the rural population. Folk song program on health issue may be organized on a regular basis and NGOs involvement has to be more encouraged in the health sector. Therefore, this study has undertaken a sociological analysis focusing upon communication and change in health behavior. It shows that modernization and increasing communication has led to significant behavioral change regarding health among the respondents over time. GO and NGO agencies began to use various communication strategies during the post-independence period for changes in health behavior. It is clear that behavior modification has occurred significantly as a result. This study shows the social forces, which are at work behind the change in health behavioral aggregately and with different social groups as well as values, norms and perception of people about health and illness. Diffusion of innovation, communication persuation model, social learning theory and health belief model are mostly persistent in this study. This is an area of applied sociology, which can further direct policy suggestion for improved communication strategy for inducing faster modification of health behavior so that the goal of health for all can be achieved within foreseeable time.

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Appendix

Additional Statistical Tables

Table A1: Distribution of respondents those who suffered from dysentery by sex

Dysentery	No.	Total	Male	Female
Yes	153	39.8	71.9	28.1
No	232	60.1	73.4	26.6

Table A2: Distribution of respondents those who suffered from diarrhoea by sex

Diarrhoea	No.	Total	Male	Female
Yes	141	36.7	73.0	27.0
No	244	63.3	72.6	27.4

Table A3: Distribution of respondents those who suffered from gastric/peptic ulcer by sex

Gastric/peptic ulcer	No.	Total	Male	Female
Yes	178	46.2	70.8	29.2
No	206	53.5	74.3	25.7

Table A4: Distribution of respondents those who seek treatment from THC by sex

Treatment from THC	No.	Total	Male	Female
Yes	259	67.3	74.1	25.9
No	110	28.6	68.2	31.8
Inapplicable	16	4.1	81.3	18.8

Table A5: Distribution of respondents those who seek treatment from MBBS doctor by sex

Treatment from MBBS	No.	Total	Male	Female
Yes	156	40.5	64.7	35.3
No	213	55.3	77.9	22.1
Inapplicable	16	4.2	81.3	18.8

Table A6: Distribution of respondents those who seek treatment from Homeopathic doctor by sex

Treatment from Homeopathic doctor	No.	Total	Male	Female
Yes	213	55.3	72.3	27.7
No	155	40.3	72.3	27.7
Inapplicable	17	4.4	82.4	17.6

Table A7: Distribution of respondents those belief on using tabiz to get cure from diseases by sex

Belief on using tabiz	No.	Total	Male	Female
Yes	135	35.1	64.4	35.6
'No	250	64.9	77.2	22.8

Table A8: Distribution of respondents' learned/heared issue of ORsaline/ORT from different sources by sex

ORsaline/ORT	No.	Total	Male	Female
Yes	361	93.8	72.6	27.4
'No	24	6.2	75	25.0

Table A9: Distribution of respondents' learned/heared issue of immunization from different sources by sex

Immunization	No.	Total	Male	Female
Yes	345	89.6	72.8	27.2
'No	40	10.4	72.5	27.5

Table A10: Distribution of respondents' learned/heared issue of hygiene and sanitation from different sources by sex

Hygiene and sanitation	No.	Total	Male	Female
Yes	178	46.2	63.5	36.5
'No	207	53.8	80.7	19.3

Table A11: Distribution of respondents' learned/heared issue of safe motherhood from different sources by sex

Safe motherhood	No.	Total	Male	Female
Yes	182	47.3	63.7	36.6
'No	203	52.7	80.8	19.2

Table A12: Distribution of respondents' opinion on learned issue of AIDS/HIV from different sources by sex

Opinion on AIDS/HIV	No.	Total	Male	Female
Yes	204	53.0	68.1	31.9
'No	181	47.0	77.9	22.1

Table A13: Distribution of respondents’ conception on AIDS/HIV and Arsenicosis

Conception	Frequency		Percent	
	AIDS	Arsenic	AIDS	Arsenic
Yes	217	202	56.4	52.5
No	168	183	43.6	47.5
Total	385	385	100.0	100.0

Table A14: Distribution of respondents' opinion on learned issue of arsenic from different sources by sex

Opinion on Arsenic	No.	Total	Male	Female
Yes	196	50.9	69.4	30.6
No	189	49.1	76.2	23.8

Table AI5: Distribution of respondents' opinion on discussion of learned information with others by sex

Opinion on Discussion with others	No.	Total	Male	Female
Yes	286	75.5	70.3	29.7
No	93	24.5	81.7	18.3

Table A16: Distribution of respondents by sex and their opinion on existing health and nutrition activities in the locality from where they get services

Sex of the respondents	Health and Nutrition		
	Yes	No	Total
Male	150 53.6 79.8	130 46.4 66.0	280 100.0 72.7
Female	38 36.2 20.2	67 63.8 34.0	105 100.0 27.3
Total	188 48.8 100.0	197 51.2 100.0	385 100.0 100.0

Chi-square = 9.233, p<.002 Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

Table A17: Distribution of respondents' opinion on doctor's attitude to them at THC by sex

Opinion	No.	Total	Male	Female
Very bad	16	4.2	75.0	25.0
Bad	106	27.5	74.5	25.5
Good	254	66.0	71.7	28.3
Very good	9	2.3	77.8	22.2

Table A18: Distribution of respondents' opinion on paying money to doctor at THC by sex

Opinion on doctor's attitude	No.	Total	Male	Female
Yes	272	70.6	71.3	28.7
No	113	29.4	76.1	23.9

Table A19: Distribution of respondents' health expenditure during last 1 year by sex

Expenditure (in Taka)	No.	Total	Male	Female
<2000	173	44.4	83.6	16.4
2000-4000	96	24.9	69.8	30.2
4001-6000	40	10.4	60.0	40.0
6001-8000	14	3.6	64.3	35.7
8001+	64	36.6	57.8	42.2

Table A20: Distribution of respondents' suffered from dysentery by age

Opinion	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Yes	153	39.8	4.6	6.5	8.5	13.7	19.0	11.8	7.2	9,8	19.0
No	229	59.6	3.5	7.9	15.3	9.2	17.5	10.0	9.6	7.9	19.2
Inapplicable	2	--	--	--	50.0	--	--	50.0	--	--	--

Table A21: Distribution of respondents' suffered from diarrhea by age

Opinion	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Yes	141	36.7	2.1	7.1	7.8	11,3	18.4	9.9	7.8	12.1	23.4
No	241	62.8	5.0	7.5	15.4	10.8	17.8	11.2	9.1	6.6	16.6
Inapplicable	2	0.5	--	--	50.0	--	--	50.0	--	--	--

Table A22: Distribution of respondents' suffered from gastric/ peptic ulcer by age

Opinion	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Yes	178	46.2	2.2	5.6	11.8	11.8	19.7	10.7	9.0	7.9	21.3
No	206	53.5	5.3	8.7	13.6	10.2	16.5	10.7	6.3	9.2	17.5
Inapplicable	1	0.3	--	--	--	--	--	100	--	--	--

Table A23: Distribution of respondents' seek treatment at THC by age

Opinion	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Yes	259	67.3	2.7	6.2	10.4	10.8	18.9	12.0	8.1	10.4	20.5
No	110	28.6	5.5	9.1	16.4	11.8	17.3	9.1	8.2	5.5	17.3
Inapplicable	16	4.2	12.5	12.5	25.0	6.3	6.3	6.3	18.8	--	12.5

Tabic A24: Distribution of respondents' who seek treatment from MBBS doctor by age

Opinion	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Yes	156	40.5	6.4	10.3	14.1	11.5	15.4	10.3	9.0	3.8	19.2
No	213	55.3	1.4	4.7	10.8	10.8	20.7	11.7	7.5	12.7	19.7
Inapplicable	16	4.2	12.5	12.5	25.0	6.3	6.3	6.3	18.8	--	12.5

Opinion	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Table A25: Distribution of respondents' seek of treatment from Homeopathic doctor by age Yes	213	55.3	3.3	7.0	11.3	10.3	18.8	11.7	9.9	9.9	17.8
No	155	40.3	3.9	7.1	12.9	12.3	18.1	10.3	5.8	7.7	21.9
Inapplicable	17	4.4	11.8	11.8	29.4	5.9	5.9	5.9	17.6		11.8

Table A26: Distribution of respondents' opinion on disease as a course or *gajab* by age

Opinion	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Yes	80	20.8	1.3	10.0	12.5	12.5	18.8	13.8	6.3	6.3	18.8
No	43	11.2	-	4.7	9.3	9.3	23.3	7.0	7.0	7.0	32.6
Certain	262	68.1	5.3	6.9	13.4	10.7	16.8	10.7	9.5	9.5	17.2

Table A27: Distribution of respondents' by age and their bclief on getting cured from disease by using Tabiz

Opinion	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Yes	135	35.1	5.2	8.1	14.8	12.6	16.3	6.7	7.4	7.4	21.5
No	250	64.9	3.2	6.8	11.6	10.0	18.8	13.2	9.2	9.2	18.0

Table A28: Distribution of respondents by their age and conception of AIDS/HIV

Age and Respondents		Conception of AIDS		
Age	**Frequency of respondent**	**Percent**	**Yes (%)**	**No (%)**
<20	15	3.9	5.5	1.8
20-24	28	7.3	10.6	3.0
25-29	49	12.7	15.2	9.5
30-34	42	10.9	11.5	10.1
35-39	69	17.9	16.6	19.6
40-44	42	10.9	9.7	12.5
45-49	33	8.6	8.3	8.9
50-54	33	8.6	6.0	11.9
55+	74	19.2	16.6	22.6
Total	385	100.0	100.0	100.0

** Pcrson Chi-squarc = 20.430, p<.009*

Table A29: Distribution of respondents by their age and conception on Arsenic

Age and Respondents		Conception of Arsenic		
Age	**Frequency of respondent**	**Percent**	**Yes (%)**	**No (%)**
<20	15	3.9	5.9	1.6
20-24	28	7.3	9.4	4.9
25-29	49	12.7	16.3	8.7
30-34	42	10.9	10.9	10.9
35-39	69	17.9	14.9	21.3
40-44	42	10.9	10.9	10.9
45-49	33	8.6	8.4	8.7
50-54	33	8.6	5.9	11.5
55+	74	19.2	17.3	21.3
Total	385	100.0	100.0	100.0

** Person Chi-square = 18.041, p<.021; linear by linear association=10.94,p>.001*

Table A30: Distribution of respondents by age and their first preference of the sources of information on health communication

Sources	**No.**	**Total**	**<20**	**20-24**	**25-29**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**54+**
Radio	89	23.1	5.6	6.7	36.9	12.4	14.6	10.1	10.1	10.1	13.5
Television	165	42.9	5.5	9.1	14.5	10.3	15.2	12.1	9.1	6.1	18.2
Newspaper	39	10.1	--	5.1	12.8	12.8	25.6	7.7	5.1	12.8	17.9
HA/FWA	21	5.5	--	4.8	9.5	23.8	38.1	--	4.8	--	19.0
NGO's HA	11	2.9	--	9.1	--	--	27.3	18.2	--	27.3	18.2
Doctor	19	4.9	--	5.3	--	10.5	10.5	10.5	10.5	21.1	31.6
THC	12	3.1	8.3		25.0		8.3	16.7	--	--	41.7
Pharmacy	16	4.2	--	6.3		12.5	25.0	12.5	12.5	--	33.3
Friend/ relatives	2	0.5	--	--	--	--	--	50.0	--	--	50.0
Poster	1	0.3	--	--	--	--	--	--	100	--	--
Folk events	9	2.3	--	11.1	--	--	33.3	11.1	11.1	22.2	11.1
Others	1	0.3	--	--	--	--	--	--	--	--	100

Table A31: Distribution of respondents by age and their second preference of the sources of information on health communication

Sources	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Radio	156	40.5	5.1	9.6	12.2	12.2	17.3	11.5	7.1	7.7	17.3
Television	103	26.8	3.9	4.9	15.5	10.7	14.6	9.7	8.7	11.7	20.4
Newspaper	37	9.6	2.7	--	13.5	5.4	27.0	8.1	10.S	10.8	21.6
HA/FWA	14	3.6	--	21.4	--	7.1	21.4	21.4	7.1	14.3	7.1
NGO's HA	10	2.6	--	30.0	--	--	10.0	30.0	10.0	--	40.0
Doctor	30	7.8	6.7	10.0	10.0	10.0	16.7	6.7	13.3	3.3	23.3
THC	15	3.9	--	--	13.3	33.3	13.3	6.7	6.7	"	20.0
Pharmacy	11	2.9	--	9.1	18.2	--	27.3	9.1	9.1	9.3	18.2
Friend/ relatives	4	1.0	--	--	25.0	--	25.0	25.0	25.0	--	--
Poster	1	0.3	--	--	--	100	--	--	--	--	--
Folk events	4	1.0	--		25.0		50.0				25.0
Others	--	--	--	--	--	--	--	--	--	--	--

Table A32: Distribution of respondents' by age and their third preference on the sources of information on health communication

Sources	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Radio	72	21.1	2.8	1.4	12.5	5.6	20.8	8.3	15.3	8.3	25.0
Television	56	16.4	1.8	12.5	7.1	12.5	26.8	8.9	5.4	10.7	14.3
Newspaper	73	21.4	9.6	9.6	12.3	9.6	15.1	6.8	13.7	8.2	15.1
HA/FWA	21	6.2	--	--	14.3	14.3	4.6	14.3	4.8	14.3	33.3
NGO's HA	11	3.2	--	9.1	9.1	27.3	--	27.3	--	9.1	18.2
Doctor	48	14.1	2.1	10.4	12.5	12.5	12.5	12.5	4.2	16.7	16.7
THC	25	7.3	8.0	4.0	20.0	8.0	16.0	24.0	8.0	--	12.0
Pharmacy	14	4.1	--	--	7.1	--	28.6	14.3	7.1	7.1	35.7
Friend/ relatives	9	2.6	--	22.2	11. 1	--	44.4	11.1	--	--	11. 1
Cinema	1	0.3	--	--	--	100	--	--	--	--	--
Poster	3	0.9	--		66.7	33.3	--	--	--	--	--
Folk events	6	1.8	--	16.7	16.7	33.3	--	16.7	--	--	16.7
Mosque	1	0.3	--	--	--	--	--	--	--	--	100
Others	1	0.3	--	--	--	--	--	--	--	--	--

Table A33: Distribution of respondents by age and their opinion on the frequency of visiting household by health assistant (HA) and family welfare assistant (PWA)

Frequency of visit	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Almost everyday	4	1.4	25.0	--	50.0	--	25.0	--	--	--	--
One to two times a week	13	4.4	--	7.7	23.1	7.7	23.1	15.4	7.7	7.7	7.7
One in every 15 days	89	30.2	3.4	5.6	7.9	6.7	16.9	16.9	7.9	10.1	24.7
Once in a month or more	152	51.5	2.0	9.2	15.8	10.5	21.1	7.2	10.5	6.6	17.1
At least once m two months	16	5.4	--	6.3	6.3	31.3	12.5	12.5	6.3	--	25.0
At least once within 2 to 6 months	21	7.1	9.5	4.8	14.3	14.3	9.5	--	4.8	9.5	33.3

Table A34: Distribution of respondents by age and their opinion on THC as a major source of public health, GoB (Govt. of Bangladesh)

THC	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Yes	378	98.2	4.0	7.4	12.4	10.8	18.3	11.1	8.2	8.5	19.3
No	7	1.8	--	--	28.6	14.3	--	--	28.6	--	14.3

Table A35: Distribution of respondents by age and their opinion on Union Sub-Centre (USC)/Union Health and Family Welfare Centre (UHFWC) as a major source of public health, GoB

USC/ UHFWC	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Yes	38	9.9	--	--	13.2	10.5	21.1	7.9	13.2	13.2	21.1
No	347	90.1	4.3	8.1	12.7	11.0	17.6	11.2	8.1	8.1	19.0

Table A36: Distribution of respondents by age and their opinion on Satellite clinic as a source of public health, GoB

Satellite clinic	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Yes	208	54.0	3.8	7.2	11.1	10.1	20.7	11.1	7.7	10.1	18.3
No	177	46.0	4.0	7.3	14.7	11.9	14.7	10.7	9.6	6.8	20.3

Table A37: Distribution of respondents by age and their opinion on others as sources of public health, GoB

Others	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Yes	15	3.9	6.7	--	6.7	13.3	20.0	--	--	20.0	33.3
No.	370	96.1	3.8	7.6	13.0	10.8	17.8	11.4	8.9	8.1	18.6

Table A38: Distribution of respondents by age and their awareness of the source of public health

Opinion	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Yes	213	55.3	5.2	11.7	14.1	12.2	16.9	10.8	8.5	6.1	14.6
No.	25	6.5	8.0	4.0	16.0	20.0	8,0	12.0	4.0	--	28.0
Certain	147	38.2	1.4	1.4	10.2	7.5	21.1	10.9	9.5	13.6	24.5

Table A39: Distribution of respondents by age and their opinion on doctor's attitude to them at THC

Doctor's attitude	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Very bad	16	4.2	--	6.3	25.0	25.0	12.5	--	6.3	--	25.0
Bad	106	27.5	5.7	8.5	9.4	12.3	15.1	12.3	6.6	13.2	17.0
Good	254	66.0	3.1	6.7	13.4	9.8	19.3	10.6	9.8	7.5	19.7
Very good	9	2.3	11.1	11.1	11.1	--	22.2	22.2	--	--	22.2

Table A40: Distribution of respondents by age and their opinion on paying money to doctor at THC

Opinion of paying money	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
Yes	272	70.6	3.3	8.1	12.9	12.1	18.8	10.7	8.1	8.5	17.6
No	113	29.4	5.3	5.3	12.4	8.0	15'. 9	11.5	9.7	8.8	23.0

Table A41: Distribution of respondents by age and their household health expenditure in last year, survey 2001

Health expenditure (in Tk.)	No.	Total	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	54+
<2000	171	44.4	1.8	5.3	13.5	8.2	19.9	13.5	10,5	9.9	17.5
2000-4000	96	24.9	7.3	9.4	9.4	11.5	8.3	12.5	6.3	9.4	26.0
4001-6000	40	10.4	7.5	1 0.0	10.0	10.	25.0	10.0	10.0	5.0	12.5
6001-8000	14	3.6	--	7.1	7.1	14.3	35.7	--	7.1	14.3	14.3
8000+	64	16.6	3.1	7.8	18.8	17.2	18.8	4.7	6.3	4.7	18.8

Table A42: Distribution of respondents by religion and their seek of treatment from THC

Treatment from THC	No.	Total	Muslim	Hindu
Yes	259	67.3	94.6	5.4
No	110	28.6	93.6	6.4
Inapplicable	16	4.2	75.0	25.0

Table A43: Distribution of respondents by religion and seek of treatment from MBBS doctor

Treatment from MBBS doctor	No.	Total	Muslim	Hindu
Yes	156	40.5	97.4	2.6
No	213	55.3	92.0	8.0
Inapplicable	16	4.2	75.0	25.0

Table A44: Distribution of respondents by religion and seek of treatment from homeopathic- doctor

Treatment from homeopathic doctor	No.	Total	Muslim	Hindu
Yes	213	55.3	93.4	6.6
No	155	40.3	95.5	4.5
Inapplicable	17	4.4	76.5	23.5

Table A45: Distribution of respondents by religion and using contraceptive method

Using contraceptive method	No.	Total	Muslim	Hindu
Yes	208	54.3	96.2	3.8
No	175	45.7	90.3	9.7

Table A46: Distribution of respondents by their religion and using contraceptive

Religion	Using Contraceptive		Total
	Yes	No	
Muslim	2000 55.9 96.2	158 44.1 90.3	358 100.0 93.5
Hindu	8 32.0 3.8	17 68.0 9.7	25 100. 0 6.5
Total	208 54.3 100.0	175 45.7 100.0	383 100.0 100.0

Person Chi-square = 5.364, p<.02; Linear- by - linear association, r= 5.350, p<.021

Table A47: Distribution of respondents by religion and causes for not using contraceptive method

Causes for not using contraceptive	No.	Total	Muslim	Hindu
No knowledge of its utility	53	25.4	98.1	1.9
Non availability of FP services	14	6.7	50.0	50.0
Methods not available	3	1.4	100	--
Lack of consciousness	20	9.6	100	--
Religious reason	31	14.8	90.3	9.7
Souse unwillingness	15	7.2	73.3	26.7
Others	19	9.1	100	--
Inapplicable	54	25.8	96.3	3.7

Table A48: Distribution of respondents' by religion and their opinion on providing more food to son than daughter

Opinion on more food to son than daughter	No.	Total	Muslim	Hindu
Yes	31	8.1	96.8	3.2
No	354	91.9	93.2	6.8

Table A49: Distribution of respondents by religion and their opinion on not taking treatment by female from male personnel

Religion	Opinion		Total
	Yes	No	
Muslim	56 15.6 98.2	304 84.4 92.7	360 93.5
Hindu	1 4.0 1.8	24 96.0 7.3	25 100.0
Total	57 14.8 100.0	328 85.2 100.0	385 100.0 100.0

Note: *In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.*

Table A50: Distribution of respondents' by religion and their opinion on going out alone for treatment by female

Going alone for treatment by female	No.	Total	Muslim	Hindu
Yes	326	84.7	92.9	7.1
No	59	15.3	96.6	3.4

Table A51: Distribution of respondents' by religion and their opinion on disease as course or *Gajab*

Disease as a course or *Gajab*	No.	Total	Muslim	Hindu
Yes	80	20.8	96.3	3.8
No	43	11.2	93.0	7.0
Certain	262	68.1	92.7	7.3

Table A52: Distribution of respondents by religion and their opinion on THC as a source of public health

THC as a sources of public health	No.	Total	Muslim	Hindu
Yes	378	98.2	93.7	6.3
No	7	1.8	85.7	14.3

Table A53: Distribution of respondents by religion and their opinion on USC/UHFWC as a source of public health, GoB

USC/UHFWC as a source of public health	No.	Total	Muslim	Hindu
Yes	38	9.9	92.1	7.9
No	347	90.1	93.7	6.3

Table A54: Distribution of respondents by religion and their opinion on satellite clinic as a source of public health, GoB

Satellite clinic as a source of public health	No.	Total	Muslim	Hindu
Yes	208	54.0	93.8	6.3
No	177	46.0	93.2	6.8

Table A55: Distribution of respondents by religion and their opinion on others as source of public health, GoB

Others as source of public health	No.	Total	Muslim	Hindu
Yes	15	3.0	93.3	6.7
No	370	96.1	93.5	6.5

Table A56: Distribution of respondents by religion and their awareness of the sources of public health, GoB

Awareness about the services of public health	No.	Total	Muslim	Hindu
Yes	213	55.3	99.1	0.9
No	25	6.5	92.0	8.0
Certain	147	38.2	85.7	14.3

Table A57: Distribution of respondents by marital status and causes for not using contraceptive

Causes for not using contraceptive	No.	Total	Married	Widow	Separated	Unmarried
No knowledge of its utility	53	25.4	75.5	7.5	3.8	13.2
Non available of FP services	14	6.7	85.7	7.1	--	7.1
Methods not available	3	1.4	100	--	--	--
Lack of consciousness	20	9.6	95.0	5.0	--	--
Religious reason	31	14.8	93.5	3.2	--	3.2
Spouse unwillingness	15	7.2	93.3	6.7	--	--
Others	19	9.1	78.9	5.3	--	15.8
Inapplicability	54	25.8	75.9	7.4	--	16.7

Table A58: Distribution of respondents by year of schooling (education) and suffered disease from dysentery

Suffered from dysentery	No.	Total	1-5	6-9	10-12	12+
Yes	53	39.8	56.9	16.3	20.9	5.9
No	232	59.6	59.8	I4.S	21.0	4.4

Table A59: Distribution of respondents by year of schooling and suffered from diarrhoea

Suffered from diarrhoea	No.	Total	1-5	6-9	10-12	12+
Yes	141	36.7	63.1	9.9	24.1	2.8
No	244	62.8	56.0	18.7	19.1	6.2

Table A60: Distribution of respondents by years of schooling and suffered from gastric/peptic ulcer

Suffered from gastric/peptic ulcer	No.	Total	1-5	6-9	10-12	12+
Yes	178	46.2	62.4	13.5	19.7	4.5
No	207	53.8	55.3	17.0	21.8	5.8

Table A61: Distribution of respondents sources of seeking help for delivery of care at pregnancy by years of schooling

Sources	No.	Total	1-5	6-9	10-12	12+
Doctor	31	8.5	38.7	6.5	45.2	9.7
Thana Health Complex	9	2.5	33.3	--	11.1	55.6
Traditional Birth Attended	149	40.7	68.5	14.1	14.8	2.7
Trained Birth Attended	42	11.5	45.2	26.2	26.2	2.4
Relatives	127	34.7	62.2	17.3	15.7	4.7
Others	8	2.2	37.5	12.5	37.5	12.5

Table A62: Distribution of respondents by years of schooling and opinion on giving more food to son than daughter

More food to son than daughter	No.	Total	1-5	6-9	JO-12	12+
Yes	31	8.1	67.7	12.9	12.9	6.5
No	354	91.9	57.9	15.5	21.5	5.1

Table A63: Distribution of respondents by year of schooling and their opinion on adopting family planning through males decision

Opinion	No.	Total	1-5	6-9	10-12	12+
Yes	39	10.1	64.1	10.3	20.5	5.1
No	346	89.9	58.1	15.9	20.8	5.2

Table A64: Distribution of respondents by year of schooling (education) and their conception of AIDS/HIV

Conception	No.	Total	1-5	6-9	10-12	12+
Yes	217	56.4	39.6	20.7	30.9	8.8
No	168	43.6	83.3	8.3	7.7	0.6

Table A65: Distribution of respondents by year of schooling and their conception of Arsenic

Conception on arsenic	No.	Total	1-5	6-9	10-12	12+
Yes	202	52.5	39.6	19.3	31.7	9.4
No.	183	47.5	79.8	10.9	8.7	0.5

Table A66: Distribution of respondents by years of schooling and their first preference of the source of information on health communication

Sources of Information	No.	Total	1-5	6-9	10-12	12+
Radio	89	23.1	48.3	16.9	34.8	--
Television	165	42.9	54.5	18.8	20.6	6.1
Newspaper	39	10.1	66.7	5.1	15.4	12.6
HA/FWA	21	5.5	76.2	9.5	9.5	4.8
NGO's HA	11	2.9	72.7	9.1	18.2	--
Doctor	19	4.9	57.9	21.1	10.5	10.5
THC	12	3.1	58.3	8.3	16.7	16.7
Pharmacy	16	4.2	81.3	12.5	6.3	--
Friend/relatives	2	0.5	100	--	--	--
Poster	1	0.3	100	--	--	--
Folk events	9	2.3	88.9	11.1	--	--
Others	1	0.3	100	--	--	--

Table A67: Distribution of respondents by years of schooling and their second preference of the sources of information on health communication

Sources of information	No.	Total	1-5	6-9	10-12	12+
Radio	156	40.5	53.2	18.6	21.2	7.1
Television	103	26.8	49.5	11.7	35.0	3.9
Newspaper	37	9.6	75.7	5.4	13.5	5.4
HA/FWA	14	3.6	42.9	28.6	21.4	7.1
NGO's HA	10	2.6	100	--	--	--
Doctor	30	7.8	73.3	16.7	10.0	--
THC	15	3.9	80.0	13.3	--	6.7
Pharmacy	11	2.9	54.5	45.5	--	--
Friend/relatives	4	1.0	75.0	--	--	25.0
Poster	1	0,3	100	--	--	--
Folk events	4	1.0	100	--	--	--
Others	--	--	--	--	--	--

Table A68: Distribution of respondents by years of schooling and their third preference on the sources of information on health communication

Sources of information	No.	Total	1-5	6-9	10-12	12+
Radio	72	21.1	80.6	1.4	12.5	5.6
Television	56	16.4	67.9	17.9	8.9	5.4
Newspaper	73	21.4	32.9	17.8	39.7	9.6
HA/FWA	21	6.2	66.7	14.3	19.0	--
NGO's HA	11	3.2	36.4	18.2	45.5	--

Sources of information	No.	Total	1-5	6-9	10-12	12+
Doctor	48	14.1	56.3	20.8	14.6	8.3
THC	25	7.3	56.0	28.0	16.0	--
Pharmacy	14	4.1	64.3	21.4	--	--
Friend/relatives	9	2.6	66.7	22.2	--	--
Cinema	1	0.3	100	--	--	--
Poster	3	0.9	66.7	--	33.3	--
Folk events	6	1.8	66.7	16.7	16.7	--
Mosque	1	0.3	100	--	--	--
Others	1	0.3	100	--	--	--

Table A69: Distribution of respondents by year of schooling and easy access of health information staying health at home

Access at home	No.	Total	1-5	6-9	10-12	12+
Yes	234	60.8	46.2	18.4	27.4	8.1
No	151	39.2	78.1	10.6	10.6	0.7

Table A70: Distribution of respondents by year of schooling and easy access of health information at neighbors/friends house

Opinion	No.	Total	1-5	6-9	10-12	12+
Yes	72	18.7	75.0	15.3	6.9	2.8
No	313	81.3	55.0	15.3	24.0	5.8

Table A71: Distribution of respondents by year of schooling and easy access of information on health at office

Access at office	No.	Total	1-5	6-9	10-12	12+
Yes	17	4.4	70.6	11.8	17.6	
No	368	95.6	58.2	15.5	20.9	5.4

Table A72: Distribution of respondents by year of schooling and easy access of health information at other places

Access at places	No.	Total	1-5	6-9	10-12	12+
Yes	45	11.7	82.2	8.9	8.9	
No	340	88.3	55.6	16.2	22.4	5.9

Table A73: Distribution of respondents by years of schooling and their awareness of the services of public health, GOB

Awareness	No.	Total	1-5	6-9	10-12	12+
Yes	213	55.3	38.5	20.7	31.9	8.9
No	25	6.5	92.0	4.0	4.0	--
Certain	147	38.2	82.3	9.5	7.5	0.7

Table A74: Distribution of respondents' opinion on doctors' attitude to them at THC by their years of schooling

Doctors' attitude	No.	Total	1-5	6-9	10-12	12+
Very bad	16	4.2	68.8	12.5	12.5	6.3
Bad	106	27.5	72.6	13.2	12.3	1.9
Good	254	66.0	52.0	16.9	24.8	6.3
Very good	9	2.3	66.7	--	22.2	11.1

Tabie A75: Distribution of respondents by years of schooling and their opinion on paying money to doctor at THC

Opinion on paying money to doctor	No.	Total	1-5	6-9	10-12	12+
Yes	272	70.6	63.2	14.7	18.0	4.0
No	113	29.4	47.8	1 6.8	27.4	8.0

Table A76: Distribution of respondents by years of schooling and their opinion on access of adequate medicine from THC

Opinion on access of adequate medicine	No.	Total	1-5	6-9	10-12	12+
Yes	37	9.6	51.4	13.5	24.3	30.S
No	348	90.4	59.5	15.5	20.4	4.6

Table A77: Distribution of respondents by year of schooling and their opinion on least quality of medicine as a problem of GO health services.

Opinion on least quality of medicine	No.	Total	1-5	6-9	10-12	12+
Yes	230	59.7	63.0	16.1	17.4	3.5
NO	155	40.3	52.3	14 2	25.8	7.7

Table A78: Distribution of respondents by years of schooling and their opinion on inadequacy of medicine as a problem of GO services

Opinion in adequacy of medicine	No.	Total	1-5	'6-9	10-12	12+
Yes	262	68.1	60.7	15.6	19.S	3.8
No	123	31.9	54.5	14.6	22.8	8.1

Table A79: Distribution of respondents by years of schooling and their opinion on shortage of doctors and nurse as a problem of GO services

Opinion on small number of doctor and nurse	No.	Total	1-5	6-9	10-12	12+
Yes	62	16.1	50.0	17.7	25.8	6.5
No	323	83.9	60.4	14.9	19.8	5.0

Table A80: Distribution of respondents by years of schooling and their opinion on corruption as a major problem of GO health services

Opinion on corruption	No.	Total	1-5	6-9	10-12	12+
Yes	180	46.8	50.	15.6	27.2	7.2
No	205	53.2	66.3	15.1	15.1	3.4

Table A81: Distribution of respondents by years of schooling and their opinion on receiving money by doctors at THC as a problem of GO services

Opinion on receiving money by doctor	No.	Total	1-5	6-9	10-12	12+
Yes	269	69.9	59.5	14.9	21.2	4.5
No	116	30.1	56.9	16.4	19.8	6.9

Table A82: Distribution of respondents by years of schooling and their opinion on bad attitudes of service providers as major problem of GO services

Bad attitude of service providers	No.	Total	1-5	6-9	10-12	12+
Yes	112	29.1	45.5	18.8	29.5	6.3
No	273	70.9	64.1	13.9	17.2	4.8

Table A83: Distribution of respondents by years of schooling and their opinion on others as problems of GO services

Opinion	No.	Total	1-5	6-9	10-12	12+
Yes	24	6.2	66.7	8.3	16.7	8.3
No	361	93.8	58.2	15.8	21.1	^To

Table A84: Distribution of respondents by years of schooling and their health expenditure during the last 1 year, survey 2001.

Health expenditure (in Taka) in last year	No.	Total	1-5	6-9	10-12	12+
<2000	171	44.4	72.5	14.0	10.5	2,9
2000-4000	96	24.9	51.0	17.7	28.1	3.1
4001-6000	40	10.4	42.5	27.5	27.5	2.5
6001-8000	14	3.6	71.4	7.1	21.4	
8000+	64	16,6	40.6	9.4	32.8	17.2

Table A85: Distribution of respondents suffered from dysentery by their occupation

Opinion	No.	Total	Own Ag-	Ag-labour	Non -Ag.	Other
Yes	153	39.8	25.5	5.2	5,9	63.4
No	229	59.6	21.0	1.7	10.9	66.4
In applicable	2	0.5	50.0	--	--	50.0

Table A86: Distribution of respondents suffered from diarrhoea by their occupation

Opinion	No.	Total	Own Ag.	Ag. labour	Non-Ag.	Other
Yes	141	36.7	25.5	5.7	1 1.3	57.4
No	241	62.8	21.2	1.7	7.5	69.7
In applicable	2	0.5	50.0	--	--	50.0

Table A87: Distribution of respondents suffered from gastric/peptic ulcer by their occupation

Opinion	No.	Total	Own Ag.	Ag-labour	Non -Ag.	Other
Yes	178	46.2	28.1	5.1	5.1	61.8
No.	206	53.5	18.0	1.5	12.1	68.4
In applicable	1	0.3	100	--	--	--

Table A88: Distribution of respondents those who seek treatment at THC during last 1 years by their occupation

Opinion	No.	Total	Own Ag.	Ag-labour	Non-Ag.	Other
Yes	259	67.3	25.9	3.9	7.7	62.5
No	110	28.6	16.4	1.8	8.2	73.6
Inapplicable	16	4.2	18.8	--	31.3	50.0

Table A89: Distribution of respondents those seek treatment from MBBS doctor during last 1-2 years by their occupation, survey 2001

Opinion	No.	Total	Own Ag.	Ag. labour	Non-Ag.	Other
Yes	156	40.5	18.6	0.6	2.6	78.2
No	213	55.3	26.3	5.2	11.7	56.8
In applicable	16	4.2	18.8	--	31.3	50.0

Table A90: Distribution of respondents those who seek treatment from homeopath during last 1-2 years by their occupation, survey 2001

Opinion	No.	Total	Own Ag-	Ag. labour	Non -Ag.	Other
Yes	213	55.3	24.9	4.7	7.0	63.4
No	155	40.3	20.6	1.3	9.0	69.0
In applicable	17	4.4	17.6	--	29.4	52.9

Table A91: Distribution of respondents by their occupation and currently using contraceptive, survey 2001

Opinion	No.	Total	Own Ag.	Ag. labour	Non-Ag.	Other
Yes	208	54.3	23.1	2.9	7.2	66.8
No	175	45.7	22.9	3.4	10.3	63.4

Table A92: Distribution of respondents by occupation and their sources of seeking help at time of pregnancy or delivery care

Sources of seeking help	No.	Total	Own Ag.	Ag. labour	Non-Ag.	Other
Doctor	31	8.5	6.5	--	3.2	90.3
Thana Health Complex	9	2.5	11.1	11.1	--	77.8
Traditional Birth Attended	149	40.7	32.2	6.0	10.1	51.7
Trained Birth Attended	42	11.5	21.4	2.4	9.5	66.7
Relatives	127	34.7	19.7	0.8	6.3	73.2
Others	8	2.2	12.5	--	--	87.5

Table A93: Distribution of respondents' first preference of the source of information on health communication

Sources of information	No.	Total	Own Ag.	Ag. labour	Non -Ag.	Other
Radio	89	23.1	23.6	3.4	5.6	67.4
Television	165	42.9	18.8	4.2	6.7	70.3
Newspaper	39	10.1	28.2	--	7.7	64.1
HA/FWA	21	5.5	19.0	9.5	4.8	66.7
NGO's HA	11	2.9	45.5	--	9.1	45.5
Doctor	19	4.9	15.8	--	10.5	73.7
THC	12	3.1	33.3	--	16.7	50.0
Pharmacy	16	4.2	25.0	--	37.5	37.5
Friend/ relatives	2	0.5	--	--	--	100
Poster	1	0.3	100	--	--	--
Folk events	9	2.3	44.4	--	33.3	22.2
Others	1	0.3	--	--	--	100

Table A94: Distribution of respondents' second preference of source of information on health communication

Sources of information	No.	Total	Own Ag-	Ag. labour	Non -Ag.	Other
Radio	156	40.5	18.6	4.5	7.1	69.9
Television	103	26,8	23.3	1.9	6.8	68.0
Newspaper	37	9.6	35.1	5.4	2.7	56.8
HA/FWA	14	3.6	7.1	7.1	7.1	78.6
NGO's HA	10	2.6	20.0	--	20.0	60.0
Doctor	30	7.8	26.7	--	20.0	53.5
THC	15	3.9	26.7	--	13.3	60.0
Pharmacy	11	2.9	36.4	--	18.2	45.5
Friend/ relatives	4	1.0	25.0	--	25.0	50.0
Poster	I	0.3	--	--	--	100
Folk events	4	1.0	50	--	25.0	25.0
Others	--	--	--	--	--	--

Table A95: Distribution of respondents' third preference of the source of information on health communication

Sources of information	No.	Total	Own Ag.	Ag. labour	Non -Ag.	Other
Radio	72	21.1	27.8	1.4	18.1	52.8
Television	56	16.4	25.0	5.4	5.4	64.3
Newspaper	73	21.4	12.3	4.1	2.7	80.8
HA/FWA	21	6.2	28.6	14.3	4.8	52.4
NGO's HA	11	3.2	9.1	--	27.3	63.6

Sources of information	No.	Total	Own Ag.	Ag. labour	Non -Ag.	Other
Doctor	48	14.1	31.3	2.1	4.2	62.5
THC	25	7.3	16.0	4.0	12.0	68.0
Pharmacy	14	4.1	50.0	--	7.1	42.9
Friend/ relatives	9	2.6	--	--	33.3	66.7
Cinema	1	0.3	--	--	--	100
Poster	3	0.9	66,7	--	--	33.3
Folk events	6	1.8	33.3	--	50.0	16.7
Mosque/Church	1	0.3	100	--	--	--
Others	1	0.3	--	--	--	100

Table A96: Distribution of respondents by occupation and their opinion on the frequency of visiting household by HA/FWA

Frequency of visit	No.	Total	Own Ag.	Ag. labour	Non-Ag.	Other
Almost everyday	4	1.4	--	--	--	100
One to two times a week	13	4.4	30.8	7.7	--	61.5
One in every 15 days	89	30.2	22.5	2.2	7.9	67.4
Once in a month or more	152	51.5	21.7	4.6	6.6	67.1
At least once in two months	16	5.4	31.3	--	--	66.8
At least once to 2 to 6 months	21	7.1	28.6	4.8	--	66.7

Table A97: Distribution of respondents by occupation and their opinion on the frequency of visiting to doctor/THC during last 6 months, survey 2001

Frequency of visiting to doctor/THC	No.	Total	Own Ag.	Ag. labour	Non-Ag.	Other
0	23	6.0	21.7	--	21.7	56.5
1-2	123	31.9	23.6	1.6	13.8	61.0
3-4	128	33.3	22.6	5.7	7.3	64.2
5-6	56	14.5	28.6	5.4	1.8	64.3
7+	55	14.3	18.2	--	3.6	78.2

Table A98: Distribution of respondents' awareness of the sources of public health by their occupation

Opinion	No.	Total	Own Ag.	Ag. labour	Non -Ag.	Other
Yes	213	55.3	14.6	2.3	0.9	82.2
No	25	6.5	16.0	4.0	24.0	56.0
Certain	147	38.2	36.1	4.1	17.7	42.2

Table A99: Distribution of respondents by family size and their opinion on the frequency of visiting household by HA/FWA

Opinion	No.	Total	1-2	3-4	5-6	7+
Almost everyday	4	1.4		50.0	25.0	25.0
One to two times a week	13	4.4	7.7	30.8	23.1	38.5
One in every 15 days	89	30.2	2.2	21.3	41.6	34.8
Once in a month or more	152	51.5	2.0	23.0	36.2	38.8
At least once in two months	16	5.4	6.3	6.3 -	43.8	43.8
At least once to 2 to 6 months	21	7.1	--	23.6	33.3	42.9

Table Al00: Distribution of respondents by family size and their opinion on the frequency of visiting to doctor/THC during last 6 months, survey 2001

Frequency of visiting to doctor/THC	No.	Total	1-2	3-4	5-6	7+
0	23	6.0	8.7	39.1	34.8	17.4
1-2	123	31.9	3.3	22.0	39.0	35.8
৩-৪	১২৮	৩৩.৩	১.৬	২৬.০	৩৫.০	৩৭.৪
৫-৬	৫৬	১৪.৫	--	১৭.৯	৩৯.৩	৪২.৯
৭+	৫৫	১৪.৩	১.৮	২৭.৩	৩০.৯	৪০.০

Table A101: Distribution of respondents by their health expenditure and family size

Expenditure in taka	No.	Total	1-2	3-4	5-6	7+
<2000	171	44.4	3.5	26.9	39.8	29.8
2000-4000	96	24.9	3.1	27.1	28.1	41.7
4001-6000	40	10.4	2.5	25.0	40.0	32.5
6001-8000	14	3.6	--	28.6	28.6	42.9
8000+	64	16.6	--	10.9	40.6	48.4

Table A102: Distribution of respondents those who suffered from dysentery during last 1-2 years by their household income (in Taka), survey 2001

Opinion	No.	Total	<3000 0	30000-60000	60001-90000	90000+
Yes	153	39.8	28.8	44.4	14,4	12.4
No	229	59.6	31.0	43.2	15.3	10.5
Inapplicable	2	0.5	50.0	--	--	50.0

Table A103: Distribution of respondents those who suffered from diarrhoea during last 1-2 years by their household income (in Taka), survey 2001

Opinion	No.	Total	<30000	30000-60000	60001-90000	90000+
Yes	141	36.7	29.8	51.8	10.6	7.8
No	241	62.8	30.3	39.0	17.4	13.3
Inapplicable	2	0.5	50.0	--	--	50.0

Table A104: Distribution of respondents those who suffered from gastric/peptic ulcer during last 1-2 years by their household income (in Taka), survey 2001

Opinion	No.	Total	<30000	30000-60000	60001-90000	90000+
Yes	178	46.2	31.5	41.0	13.5	14.0
No	206	53.5	29.1	45.6	16.0	9.2
Inapplicable	1	0.3	100	--	--	--

Table A105: Distribution of respondents by their household income (in Taka) and opinion on seeking help at the time of pregnancy/delivery of care

Opinion	No.	Total	<30000	30000-60000	60001-90000	90000+
Doctor	31	8.5	22.6	22.6	19.4	35.5
Than Health Complex	9	2.5	11.1	55.6	11.1	22,2
Traditional Birth Attended	149	40.7	32.9	43.6	15.4	8.1
Trained Birth Attended	42	11.5	21.4	42.9	19.0	16.7
Relatives	127	34.7	33.9	48.0	11.0	7.1
Others	8	2.2	--	50.0	12.5	37,5

Table A106: Distribution of respondents by household income (in Taka) and easy access of information on health staying at home

Opinion	No.	Total	<30000	30000-60000	60001-90000	90000+
Yes	234	60.8	20.5	42.7	20.9	15.8
No	151	39.2	45.7	44.4	5.3	4.6

Table A107: Distribution of respondents by household income (in Taka) and easy access of information on health at friends/relatives' house

Opinion	No.	Total	<30000	30000-60000	60001-90000	90000+
Yes	72	18.7	47.2	44.4	5.6	2.8
No	313	81.3	26.5	43.1	16.9	13,4

Table A108: Distribution of respondents by household income (in Taka) and opinion on access of adequate medicine from THC

Opinion	No.	Total	<30000	30000-60000	60001-90000	90000+
Yes	37	9.6	24.3	45.9	13.5	16.2
No	346	90.4	31.0	43.1	14.9	10.9

Table Al09: Distribution of respondents by household income (in Taka) and their health expenditure during last 1 year, survey 2001

Health expenditure (in taka)	No.	Total	<30000	30000-60000	60001-90000	90000+
<2000	171	44.4	43.9	45.6	8.2	2.3
2000-4000	96	24.9	25.0	41.7	19.8	13.5
4001-6000	40	10.4	20.0	47.5	17.5	15.0
6001-8000	14	3.6	21.4	42.9	28.6	7.1
8000+	64	16.6	10.9	37.5	20.3	31.3

Table A110: Distribution of respondents by household land (in acaor) and seek of treatment from THC during last 1-2 years, survey 2001

Opinion	No.	Total	O.50	0.51-1.50	1.51-2.50	2.50+
Yes	245	66.8	27.3	37.1	20.4	15.1
No	107	29.2	33.6	33.6	16.8	15.9
In applicable	15	4.1	66.7	26.7	--	6.7

Table Al11: Distribution of respondents by household land (in acaor) and seek of treatment from MBBS doctor during last 1-2 years, survey 2001

Opinion	No.	Total	O.50	0.51-1.50	1.51-2.50	2.50+
Yes	149	40.6	25.5	37.6	18.8	18.1
No	203	55.3	32.0	35.0	19.7	13.3
In applicable	15	4.1	66.7	26.7	--	6.7

Table A112: Distribution of respondents by household land (in acaor) and their seek of treatment from homeopath during last 1-2 years, survey 2001

Opinion	No.	Total	<0.50	0.51-1.50	1.51-2.50	2.50+
Yes	203	55.3	28.1	37.4	21.2	13.3
No	148	40.3	31.1	33.8	16.9	18.2
In applicable	16	4.4	62.5	31.3	--	6.3

Table A113: Distribution of respondents by their household land (in acaor) and currently using toilet facility

Opinion	No.	Total	<0.50	0.51-1.50	1.51-2.50	2.50+
Pacca	98	26.8	12.2	40.8	23.5	23.5
Slab	163	44.5	25.8	37.4	20.2	16.6
Pit	2	0.5	100	--	--	--
Katcha	84	23.0	54.8	27.4	13.1	4.8
Open/bush	19	5.2	57.9	31.6	5.3	5.3

Table A114: Distribution of respondents by their household land (in acaor) and currently using contraceptive, survey 2001

Land (in acre)	Opinion		Total
	Yes	No	
<0.50	49 43.4 24.1	64 56.6 39.5	113 100.0 31.0
0.50-1.00	58 65.9 28.6	30 34.1 18.5	88 100.0 24.1
1.01-1.50	28 66.7 13.8	14 33.3 8.6	42 100.0 11.5
1.51-2.00	32 56.1 15.8	25 43.9 15.4	57 100.0 15.6
2.01-2.50	6 60.0 3.0	4 40.0 2.5	10 100.0 2.7
2.51-3.00	12 54.5 5.9	10 45.5 6.2	22 100.0 6.0
3.0+	18 54.5 8.9	15 45.5 9.3	33 100.0 9.0
Total	203 55.6 100.0	162 44.4 100.0	365 100.0 100.0

Chi-square = 12.838, p<.046

Table Al15: Distribution of respondents by their household land (in acre and opinion on frequency of visiting household by HA/FWA

Opinion	No.	Total	O.50	0.51-1,50	1.51-2.50	2.50+
Almost everyday	3	1.1		66.7	33.3	
One to two times a week	12	4.3	33,3	16,7	33.3	16,7
One in every 15 days	84	29.8	19.0	42.9	27.4	10.7
Once in a month or more	146	51.8	25.3	39.0	13.7	21.9
At least once in two months	16	5.7	25.0	31.3	18.8	25.0
At least once to 2 to 6 months	21	7.4	42.9	28.6	23.8	4.8

Table Al16: Distribution of respondents by household land (in acaor) and opinion on frequency of visiting doctor/THC during last 6 months, survey 2001

Frequency of visiting doctor/THC	No.	Total	O.50	0.51-1.50	1.51-2.50	2.50+
0	22	6.0	54.5	27.3	4.5	13.6
1-2	117	31.9	33.3	39.3	12.8	14.5
3-4	122	33.3	24.8	35.9	22.2	17.1
5-6	54	14.7	27.8	35.2	22.2	14.8
7+	52	14.2	32.7	32.7	23.1	11,5

Table Al17: Distribution of respondents by their land and awareness of the health services

Land (in acre)	Awareness			Total
	Yes	No	Certain	
<0.50	49 43.4 24.0	15 13.3 68.2	49 43.4 34.8	113 100.0 30.8
0.50-1.00	50 56.2 24.5	3 3.4 13.6	36 40.4 25.5	89 100.0 24.3
1.01-1.50	25 59.5 12.3	1 2.4 4.5	16 38.1 11.3	42 100.0 11.4
1.51-2.00	28 48.3 13.7	2 3.4 9.1	28 48.3 19.9	58 100.0 15.8
2.01-2.50	6 60.0 2.9	-- -- --	4 40.0 2.8	10 100.0 2.7
2.51-3.00	19 86.4 9.3	-- -- --	3 13.6 2.1	22 100.0 6.0
3.0+	27 81.8 3.2	1 3.0 4.5	5 15.2 3.5	33 100.0 9.0
Total	204 55.6 100.0	22 6.0 100.0	141 38.4 100.0	367 100.0 100.0

Chi-square = 36.999, p<.000 Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

Table Al18: Distribution of respondents by their health expenditure and awareness of source of public health services

Health Expenditure (in Taka)	Awareness			Total
	Yes	No	Certain	
<2000	63 36.8 29.6	16 9.4 64.0	92 53.8 62.6	171 100.0 44.4
2001-4000	61 63.5 28.6	6 6.3 24.0	29 30.2 19.7	96 100.0 24.9
4001-6000	29 72.5 13.6	1 2.5 4.0	10 25.0 6.8	40 100.0 10.4
6003-8000	10 71.4 4.7	-- -- --	4 28.6 2.7	14 100.0 3.6
8000+	50 78.1	2 3.1	12 18.8	64 100.0

Health Expenditure (in Taka)	Awareness			Total
	Yes	No	Certain	
	23.5	8.0	8.2	16.6
Total	213 55.3 100.0	25 6.5 100.0	147 38.2 100.0	385 100.0 100.0

Chi-square = 46.723, df =8, p<000 Note: In each cell first one is the number of respondents, second in parenthesis is row percentage and third one is column percentage.

Table A119: Distribution of respondents by household income (in Taka) and their treatment at THC during last 6 months, survey 2001

Opinion	No.	Total	<30000	30000-60000	60001-90000	90000+
Yes	254	66.8	30.7	42.9	16\9	9.4
No	110	28.9	37.3	40.9	12.7	9.1
In applicable	16	4.2	37.5	563	6.3	--

Table A120: Distribution of respondents by household income (in Taka) and their treatment from MBBS doctor last 1-2 years, survey 2001

Opinion	No.	Total	<30000	30000-60000	60001-90000	90000+
Yes	155	40.8	19.4	50.3	15.5	14.8
No	209	55.0	42.6	36.4	15.8	5.3
In applicable	16	4.2	37.5	56.3	6.3	--

Table A121: Distribution of respondents by household income (in Taka) and their treatment from homeopathic doctor during last 1-2 years, survey 2001

Opinion	No.	Total	<30000	30000-60000	60001-90000	90000+
Yes	211	55.5	32.7	42.7	17.5	7.1
No	152	40.0	32.9	42.1	13.2	11.8
In applicable	17	4.5	35.3	52.9	5.9	5.9

Table A122: Distribution of respondents by household income (in Taka) and their frequency of visiting doctor/THC during last 6 months, survey 2001

Frequency of visiting to doctor/THC	No.	Total	<30000	30000-60000	60001-90000	90000+
0	23	6.1	39.1	39.1	8.7	13.0
1-2	120	33.6	38.3	40.8	15,0	5.S
3-4	127	33.4	27.6	47.2	16.5	8.7
5-6	56	14.7	30.4	41.1	19.6	8.9
7+	54	14.2	33.3	40.7	11.1	14.8