

Socio-cultural factors responsible for the causation of some diseases in Bangladesh

Submitted by:

Course No: 599

Exam Roll No: 4462

Registration No: Ha-4636

Session: 2007-2008

Submitted in partial fulfillment of the requirement of the MSS Final Examination
2012.

Department of Sociology

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Abstract

Disease is basically a socio-cultural construction. The role of socio-cultural factors as the aetiology of diseases has long been overlooked by the pure medical knowledge. Society is changing rapidly. So the knowledge of the aetiology of diseases has been diversified. People are now more conscious about their health and disease conditions as they were in the past. Now various diseases are related to lifestyle. Those who maintain satisfying lifestyle can easily avoid some diseases of modern society. Now the life expectancy of people has increased compared to the antiquity. Rapid development of medical science and technology has made it possible. According to sociologists and anthropologists, social class, economic position, gender, life events and cultural beliefs can be correlated with the incidence and distribution of certain diseases. In the developing world like Bangladesh, there is a clear relationship between health and income. In our country, much of the population already weakened by poor nutrition will suffer from infectious and other communicable diseases. These diseases are often transmitted with the help of polluted water supplies, poor sanitation and inadequate housing, all of which can be improved by an adequate income. The cultural factors are often difficult to quantify and are therefore less attractive to medical epidemiologists and statisticians. Nevertheless, despite this difficulty in quantifying cultural factors, there is sufficient evidence available to confirm their role in the development of diseases –even if this role is contributory, rather than directly causative. It should also be noted that in some cases, cultural factors may protect against ill-health. This study mainly focuses on the socio-cultural factors on the causation of some diseases in Bangladesh. It finds that there is a correlation between socio-cultural factors like lack of consciousness, diet, exercise, housing, environment, cultural practices, food intake, social relation, economic conditions etc. and causation of some diseases like diarrhoea, dysentery, tuberculosis, malaria, arsenicosis, STDs/STIs and HIV/AIDS. Kamrangir char area has been selected for the study. By interviewing and discussing with the people of kamrngir char, the study finds that there is a correlation between socio-cultural factors and disease causation.

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Chapter- one:

Introduction:

Introduction:

Diseases are socially produced and distributed- they are not just a part of nature or biology (White, 2009). For sociologists, the experience of sickness and disease is an outcome of the organization of society. Poor living and working conditions make people sicker and poorer people die earlier, than their counterparts at the top of the social system. The outcome of the unequal distribution of political, economic and social resources necessary for a healthy lifestyle is the social gradient of health. Those at the top of the social system are healthier and live longer, while those at the bottom are sicker, don't live as long and die more from preventable diseases and accidents. These links between social factors and health and disease are the focus of the research. The medical model explained disease and illness as the outcome of the invasion of a germ or virus into the individual's body. The cure was the administration of drugs or the applications of technologically based treatments (Engle, 1981). A key aspect of the sociology of health is to go further and carry out research that shows that it is one's social characteristics that actually play a predominant role in determining one's sickness and health status. Social factors (, i. e. diet, exercise, stress, social environment, lack of consciousness, smoking, economic conditions, housing, food intake, involvement in risky behavior etc.) play a vital role in causing some diseases such as diarrhoea, dysentery, malaria, tuberculosis, arsenicosis, mental disorders, HIV/AIDS, STDs/STIs et. These diseases are behavioural disease and we can prevent it through consciousness. Indeed, socio-cultural factors and lifestyle are responsible for the causation some common diseases in our society than the invasion of germ or virus into the individual's body.

1.1 Background of the Study:

Disease is mainly a socio-cultural construction. The environment we live in has a great influence in the causation of some diseases such as diarrhoea, dysentery, malaria, tuberculosis, arsenic contamination, STDs/STIs, HIV/AIDS etc. The germ theory of disease argues that virus or bacteria is only responsible for the causation of diseases. The biomedical

model also suggests that disease is a breakdown of the human body caused by a specific biological agent. But disease causation is not something which can be explained only through biological agent. Many socio-cultural factors are directly responsible for diseases. The socio-cultural factors that are responsible for diseases are lack of consciousness, lack of knowledge, adopting risky behaviours, living in unhealthy environment, intake of rotten food, lack of safe source of water, working in stressful conditions etc. So, while taking preventive measures against diseases, we must consider the socio-cultural factors behind disease causation.

1.2 Rationale of the Study:

Sociology can be defined as the study of society, social institutions and social structure. Sociologists put a lot of emphasis on the social aspects of any events taking place in society. Most of the studies basically focus on the biomedical aspects of diseases. They simply overlook the socio-cultural factors of diseases. So, this study focuses on the socio-cultural factors like lack of awareness, lack of information, intake of food, smoking etc. in the causation of diseases. One of the areas of sociology is medical sociology. The basic concern of medical sociology is to study health and diseases in relation to social structure and process. This study basically focuses on the factors that are sometimes ignored by biologists in the causation of diseases like diarrhoea, dysentery, malaria, tuberculosis, arsenicosis, STDs/STIS etc. This study finds that lifestyle, diet, exercise, environment, housing, food patterns etc. have impact on the causation of diseases. The biologists argue that there is universality in the causation of diseases in the world. But this study focuses on the socio-cultural aspects that may vary from culture to culture, society to society.

1.3 Statement of the problem:

Most of the previous researches focus on the biomedical aspects of diseases. They simply ignore the socio-cultural factors of disease. The biomedical model views human body as a machine and treats it in this way ignoring his/her feelings and emotions. The doctors suggest that the patients should take antibiotic to cure the diseases. But they don't regard the socio-cultural factors behind their conditions. So, this study tries to focus on the socio-cultural factors in the causation of some diseases. It also focuses on the raising of awareness in the prevention of diseases. The diseases that the study focuses are mainly behavioural and

preventable. We can prevent diarrhoea, dysentery, malaria, arsenicosis, tuberculosis, STDs/STIs simply by being conscious about it and by knowing the causes of it.

1.4 Sociological Significance of the Study:

This study has sociological significance because sociology focuses on the socio-cultural aspects of any event taking place in society. One of the areas of sociology is medical sociology which deals with the health and illness behaviours of people. This study is sociologically significant because it is conducted by using sociological perspectives. The study of diseases is sociologically significant because if a man suffers from any disease, his/her behaviour changes to a great extent. If human behavior changes, social change begins to happen. Health and illness is one of the basic issues in introductory sociology. So, the study of the factors of diseases is nothing but the study of core sociological issues. It has sociological significance because the collection of data, selection of study area, analysis and presentation of data etc. have been conducted by using the methods commonly used in Sociological research. Sociological research may be regarded as a double hermeneutic because it is a two way process. This study tries to explore the causes of diseases and the readers can change their behavior by knowing the information from it. Indeed, it is a sociological research because it has been conducted by following the rules of sociological research. This study is very much practical because diseases are something which we may experience in any time. There is no ambiguity in this research. The concepts that have been used in this research are very clear to understand. This study has also sociological significance because the issue of health and illness is related to social development. As the study deals with the current and ever present social problem, it is sociologically significant.

1.5 Objective of the Study:

1. To identify the number of diseases not only created physiologically but also socially,
2. To identify the socio-cultural factors of diseases,
3. To assess the impact of diseases on the patients and the family,
4. To find out clues of how to raise consciousness about diseases.

1.6 Research Hypothesis:

Socio-cultural factors have impact on the causation of some diseases.

1.7 Operational definition of the concept:

a. Disease:

A disease is an abnormal condition that affects the body of an organism. It is often construed as a medical condition associated with specific symptoms and signs. It may be caused by factors originally from an external source, such as infectious disease, or it may be caused by internal dysfunctions, such as autoimmune diseases. In humans, disease is often used more broadly to refer to any condition that causes pain, dysfunction, distress, social problems, or death to the person afflicted, or similar problems for those in contact with the person. In this broader sense, it sometimes includes injuries, disabilities, disorders, syndromes, infections, isolated symptoms, deviant behaviors, and atypical variations of structure and function, while in other contexts and for other purposes these may be considered distinguishable categories. Diseases usually affect people not only physically, but also emotionally, as contracting and living with many diseases can alter one's perspective on life, and one's personality.

b. Socio-cultural factors:

Socio-cultural factors are the larger scale forces within societies and cultures that affect the thoughts, behaviors, and feelings of individual members of those societies and cultures. Examples of socio-cultural factors include aesthetics (appearance), language, law, politics, religion, values, attitudes, social organizations, reference groups, family, a person's role and status in their chosen society, technology and material culture. These issues can become very important for small business owners, because they need to target their promotions based on the socio-cultural factors that are at play. For example, when a society or culture has a higher percentage of individuals that have attended post-secondary institutions it is reasonable to assume that using more details and explanations when promoting a product is acceptable.

It also refers to are the forces that characterize the relationships and activities of people in a specific region or area. They include: child rearing practices, cultural change and cross cultural differences.

1.8 Limitations of the study:

No research is without its limitation. So this study has also some limitations. This study is limited only to the Kamrangir char area and data were not collected from whole Bangladesh. Moreover purposive sampling was used. This was conducted from sample which is not representative of the larger population. It is a complex issue to quantify socio-cultural factors of disease causation as some of the factors are contributory rather than directly causative. The study is basically exploratory because research on socio-cultural factors responsible for the causation of some diseases in Bangladesh is rare. So lack of available materials affects the whole study. The study is on small set of variables. Time constraint is another limitation of the study. Lack of financial support or facilities for conducting the research is one of the limitations of the study. Due to the lack of education, many of the respondents didn't provide much information about the concepts used in the interview schedule.

Conclusion:

Chapter one is the foundation of any research work. It mainly discusses with the background, rationale, statement of the problem, objectives, hypothesis, and operational definition of the concepts and limitations of the study. The above issues have been discussed in details in the study. As it is a basic issue in research, possible efforts have been given to make it clearer.

Chapter –two

Socio-cultural factors in the causation of malaria, tuberculosis and diarrhoea:
Bangladesh context:

Introduction:

Malaria, tuberculosis and diarrhoea are one of the main health problems of Bangladesh. The poor are mainly the victim of it. They have lack of money to treat it properly. Lack of awareness, social environment, lack of education, economic conditions etc. are basically responsible for malaria, Tuberculosis and Diarrhoea in Bangladesh. So the Government should take proper steps to control it. The people can be made aware about these socially produced diseases through campaign and mass media.

2.1.1 Malaria in Bangladesh:

Malaria is a parasitic infection transmitted by the female Anopheles mosquito, infecting humans and insects alternatively. Caused by four Plasmodium species (*P vivax*, *P falciparum*, *P ovale* and *P malariae*), malaria is a public health problem in 90 countries around the world, affecting 300 million people and responsible directly for about one million deaths annually. Africa accounts for 90% of the mortality burden for malaria and South-east Asia accounts for 9% of the burden. Bangladesh is considered as one of the malaria endemic countries in South Asia. General symptoms of malaria include headache, nausea, fever, vomiting and flu-like symptoms. However these can vary depending on the species causing the infection. Bangladesh has 34 Anopheles mosquito species. An entomological investigation conducted by ICDDR,B scientists identified seven species to be positive with highest infection rate: *Anopheles Karwari*, *An. maculatus*, *An. barbriostriis*, *An. nigerrimus*, *An. vagus*, *An. subpictus* and *An. philippinensis*. World Health Organization (WHO) considers malaria to be a major public health concern in Bangladesh. Malaria was nearly eradicated from the country by 1970s but never disappeared in the eastern regions which are associated with tea gardens and forests. It re-emerged as one of the major public health concern in the 1990s and remains so. Malaria transmission is mostly seasonal and concentrated in the border regions of Bangladesh. Out of 64 districts 13 districts bordering east

and northeast parts of Bangladesh facing Indian states of Assam, Tripura and Meghalaya and part of Myanmar belong to the high risk malaria zone. ICDDR,B found that the overall malaria prevalence in these 13 districts was 3.1% and it was significantly higher in children. The prevalence of Falciparum malaria in children up to 4 years was as high as 8.5% and between 5 and 14 years, 6.6%. In Khagrachari district however, the average prevalence was over 15%. Understanding this spatial distribution of malaria, identifying geographic risk factors and the population at risk are important steps toward effective malaria control and targeted interventions in high risk areas can significantly control malaria. A lack of proper data to date has prevented targeted interventions taking place in any of these endemic districts yet. A three-year surveillance study begins for the first time in Bangladesh in 2009 to map malaria epidemiology, to record benchmark information on the prevalence of infection, knowledge and awareness, health-seeking behaviour, use of bed nets and socioeconomic differentials in the community, before launching the malaria control interventions. This project is a collaboration with Johns Hopkins Malaria Research Institution.

2.1.2 History of the prevalence of Malaria:

Human beings have long been living with malaria. As far back as 2700 BC, medical writings in China and India allude to what is most likely malaria, and the disease is also described in the writings of Homer (Bruce-Chwatt, 1988). In one of the four Vedas of the Hindus, malaria is referred to as "a disease most dreaded affliction, King of disease." The Chinese referred to the disease as "Mother of Fevers." The relationship of fever to swamps and low-lying water was also recognized by the Greeks in the sixth century, to drain large areas of swampland was probably motivated by the desire to reduce malaria. Protective measures against mosquitoes date back at least to 484-425 BC, when Herodotus observed that in parts of Egypt above the marshes, people slept in lofty towers that mosquitoes could not reach, while those in marshlands slept under nets. Marco Polo noted that the wealthier residents of the Coromandel Coast in India slept on bedsteads with curtains that could be closed at night. Historically, malaria was not confined to "tropical" climates. It disappeared from the United States and Northern Europe largely as a result of changes in human behaviour, including improved housing, self-protection using housing screens, etc., and only a small part of the decline was the result of direct primary health interventions (Brown, 1983). In the course of human cultural evolution, it seems that malaria

became widespread only after the introduction of agriculture which increased human population density and provided breeding places for *Anopheles* mosquitoes. Desowitz (1991) has argued that the hunter-gatherer way of life protected against malaria because groups were highly mobile and their numbers sufficiently small, so the chance for transmission from animal to human or human to human hosts was minimal, with few malaria carriers able to re-circulate the infection through the mosquito and maintain continuous transmissions to humans. The altering of the social and ecological environments by new agriculture allowed greater numbers of people to live in settled proximity with large numbers of animals. It also created peridomestic-puddled water, ideal breeding grounds for the *Anopheles gambiae* vector. Malaria became a human disease and the female mosquitoes could nourish their eggs on the steady food supply of human blood of the settled human agriculturalists. Subsequently, with human migration, which "has always played a role in malaria transmissions" (Bruce-Chwatt, 1988:5), malaria was brought to the Nile Valley, Mesopotamia, India, and South China. The conquest of the Americas affected the spread of the disease, as did the slave trade a few centuries later.

2.1.3 Socio-cultural factors in the transmission of Malaria:

Human population movements have also played a significant role in malaria transmission. Since the environment was set for the introduction of malaria to humans in West Africa some 10 000 years ago, changes in settlement patterns and migration carried the infection to the great riverain centres of civilization in Mesopotamia, India, South China, and Egypt (Bruce-Chwatt, 1988). Today, population growth, resulting in resource pressure and redistribution of people from rural to urban areas as well as cyclical migration, is an important factor in malaria transmission. This population rise has also been a primary cause of mobility, which is now easier than ever due to increasingly sophisticated technology and expansion of modern transportation. Natural and man-made disasters further stimulate movement, both small-scale and large-scale, especially by swelling the numbers of refugees (Prothero, 1977). Why, how, and where people move can have profound effects on the distribution and incidence of malaria; moreover, population movements can hinder anti-malaria interventions (Prothero, 1965). Understanding and controlling malaria among mobile populations requires knowledge of population distribution, settlement patterns, the nature and quality of housing, and administrative and social organisation, as well as the

economic activities in which people engage (Prothero, 1965). Different types of mobile populations present different kinds of problems, each requiring a unique understanding and solution. Rural to urban migration is also responsible for the transmission of malaria in Bangladesh. The people of Kamrangir char area have a misconception that malaria can happen if many mosquitoes bite at the same time. But it is not true. It can happen if one mosquito which contains virus bites. Lack of awareness, dirty environment, water logging in drainage system, inability to buy mosquito net and lack of information are primarily responsible for malaria transmission in Bangladesh.

2.1.4 Role of community participation and involvement in malaria control:

Community participation can also be defined as "a process whereby specific group(s) living in a defined geographic area and interacting with each other, actively identify their needs and make decisions to meet them" (Bermejo &

A high degree of community participation is essential for dealing with diseases where control depends on behavioural changes, as it does with malaria. Using case studies of the Ghana Guinea Worm Eradication Programme and the

Nicaraguan Tuberculosis Control Programme, Bermejo & Bekui (1993) have identified and have developed a framework of variables that affect participation, including government support and decentralisation; community segmentation and social environment; managerial capacity of the provider and inter-sectoral cooperation; epidemiology of the disease; and relevance of community participation to the task at hand. The framework they have developed can be relevant to malaria as well. All too often, the people in the community are not involved in the decision-making process. Yet community members not only can contribute to vector control and broad epidemiological surveillance for keeping local malaria incidence under control, but they are essential for the success of such work. In India, Rajagopalan & Panicker (1986) observed that many times people go along with programmes that are forced upon them without truly participating in these efforts. The community's primary expressed need of providing clean drinking water and electricity was addressed first, and once resolved, vector control measures were linked to economic incentives. In Bangladesh, community participation can play a role in

malaria control. If one is affected, others can immediately come forward to help him/her for treatment.

2.1.5 Role of women in malaria risk and control:

In Bangladesh, women can play a particular role in malaria risk and control. As most of the women in Bangladesh do household chores, they can easily take care of the patients. While we realise that men engage in some activities (such as hunting) that put them at increased risk for malaria in certain circumstances, in general, women bear the greater burden because of issues related to poverty, access to health care, and control of resources. In all societies men and women play different roles, have different needs, and face different constraints. Gender roles differ from the biological roles of men and women in that they are socially and culturally constructed, although they may overlap. Women's biological roles in child bearing may extend their gender responsibilities of child rearing, food preparation, and household maintenance. Thus it is gender roles that segregate responsibilities between men and women in social and economic activities, access to resources, and decision-making and authority. But these roles can and do shift with social, economic, and technological change. Factors such as the introduction of new crops and technologies, mounting pressure on land, or increasing poverty or migration can alter the roles of men and women in agriculture. The World Bank has identified some of the economic and social factors that influence gender-based difference, including institutional arrangements; the formal legal system; socio-cultural attitudes, and ethnic and class-based obligations; and religious beliefs and practices.

2.2.1 Social determinants of Tuberculosis:

Tuberculosis is one of the main health-related problems in Bangladesh. The poor women are basically victim of it. Poverty, lack of social support, malnutrition, lack of consciousness etc. are primarily responsible for tuberculosis in our country. The CSDH defines structural determinants of health as those conditions that generate or reinforce social stratification in society. Social stratification in turn gives rise to an unequal distribution of the social determinants of health, including material living conditions and psychosocial circumstances as well as behavioral and biological risk factors. Key structural determinants of TB epidemiology include global

socioeconomic inequalities, high levels of population mobility, and rapid urbanization and population growth. These conditions give rise to unequal distributions of key social determinants of TB, including food insecurity and malnutrition, poor housing and environmental conditions, and financial, geographic, and cultural barriers to health care access. In turn, the population distribution of TB reflects the distribution of these social determinants, which influence the 4 stages of TB pathogenesis: exposure to infection, progression to disease, late or inappropriate diagnosis and treatment, and poor treatment adherence and success.

These social determinants are among the key risk factors for TB. For example, poor ventilation and overcrowding in homes, workplaces, and communities increase the likelihood of uninfected individuals being exposed to TB infection. Poverty, malnutrition, and hunger may increase susceptibility to infection, disease, and severity of clinical outcome. Individuals with TB symptoms such as a persistent cough often face significant social and economic barriers that delay their contact with health systems in which an appropriate diagnosis might be made, including difficulties in transport to health facilities, fear of stigmatization if they seek a TB diagnosis, and lack of social support to seek care when they fall sick.

2.2.2 Gender and Tuberculosis:

Women are mainly the worst victims of tuberculosis in Bangladesh. In our country, patriarchy is dominant in every aspects of life. In family life, men suffer from malnutrition less than women. Many studies have been conducted to explore this issue, though the scenario is unchanging. The experience of the World Health Organization (WHO) since 1997 in assisting high TB burden countries to set up standardised TB surveillance systems shows that globally, men account for a higher proportion of notified TB cases (63% or 64%).¹ Data on sex differentials in TB from some Western European countries during the period from 1930 to 1950, when the disease burden there was still high, present a different picture: no significant difference in TB between sexes in childhood and pre-adolescence, a higher incidence in female than in male adolescents and young adults, and a higher incidence in men than in women after 40 years of age. Studies in various countries have also shown that progression from TB infection to disease is likely to be faster for women compared with men in their reproductive years, and faster for men after 40 years of age. Whether, and the extent to which, identifying fewer women with TB globally is due to sex (as a

biological determinant) or gender (as a socio-cultural determinant influencing access to TB care) have been issues for discussion and debate. While some attribute it to barriers women may face in accessing TB care, others ascribe it to the natural epidemiology of the disease. This region-wise reproducibility of the sex ratio, which is relatively constant throughout this period, suggests that the sex distribution of notified TB cases may be determined partly by region-specific factors. Intriguingly, however, in the European Region, where the disparities between sexes in accessing health services are likely to be lesser than in other regions, reports show the highest sex ratio. In contrast, the African and the Eastern Mediterranean regions, where such disparities in accessing care are likely to be greater, the reported sex ratios are lowest. An explanation based solely on access appears not to account for disparities in the notification of male and female TB cases in the WHO regions.

2.2.3 Making tuberculosis control a reality:

A considerable decline has taken place in the mortality from tuberculosis in almost every country in the world. In many countries the incidence of the disease has also fallen, but at a slower rate than the mortality. If a study is made of the tuberculosis statistics published by WHO and those of the health department of many countries, it is possible to classify the countries of the world into three groups. In the first, there are those few countries where tuberculosis infection is still unknown, or a very rare event—small areas in Africa, South America, Nepal and Borneo, where the population is 100 per cent tuberculosis-negative. The second group is a large one containing those countries where the disease is widespread and not yet under control. Examples of these countries are Hong Kong, most of the states of India. In the third group are the countries where the mortality and morbidity figures have been continuously falling. The future approach to the tuberculosis problem is, of course, different in the three groups. There are difficulties common to all countries and varying only in degree. They are connected with environment, educational standards, local customs and the economies of the countries. All these factors influence the distribution and regular taking of drug in treatment. Where tuberculosis infection is rare, the main problem is preventing the infection reaching the non-infected population by careful exclusion of all tuberculosis immigrants and protecting the indigenous community by mass VCG vaccine. Eventual control over tuberculosis depends on overcoming the menace of the drug-

resistant case. Drug resistant tuberculosis is a new form of the disease and needs special methods of control.

2.2.4 The efforts we must make:

Great progress has been made in the past decade towards the control of TB. Mortality has already been decimated; morbidity is greatly reduced; infection rates have fallen; and there is evidence in the falling of the Heaf positive rates of thirteen-year-old children that latent disease in the community has been greatly reduced. Eradication is still a distant horizon, but I believe it is attainable if we intensify our efforts. To do so we need to examine the causes in order to determine the appropriate ways to tackle this problem. There are reservoirs of infection-foci in the community-from which the disease continues to spread. In the main these are-

1. The chronic infected carrier, often an unco-operative and reluctant patient until exacerbation of the disease forces him to seek attention
2. The infected contact- often aversive, apathetic and even antagonistic to examination
3. The undiagnosed case, often lingering in the least suspected place.

All these must be diligently searched out and dealt with.

2.3.1 Meaning of diarrhoeal disease:

Diarrhoea means stools of decreased consistency and increased volume due to imbalance of secretion and absorption of water and salts in the intestine. Diarrhoeal Diseases conditions show frequent and excessive discharge of watery material from the bowel. Diarrhoeal diseases mostly result from ingestion of harmful germs with food and water, although in some cases short episodes of diarrhoea may result from eating poisonous substances, and difficult to digest food, or through physiological intolerance of certain foods. Diarrhoea caused by virus, bacteria or parasites possesses two characteristics- firstly, the offending organisms colonise the intestine and as a consequence cause inflammation of the intestine or enteritis; and secondly, they upset the balance of intestinal fluid absorption and secretion mechanism, often enhancing the latter very considerably, which is then manifested as watery stool discharged frequently in large volumes. Most diarrhoeal episodes are acute infections of the intestine and are self-limiting illnesses

lasting for a few days but requiring treatment either to correct the lost fluid or to contain the tissue damage or other complications of the infection. Diarrhoea is one of the most common health problems in Bangladesh. Almost each and every man fall a victim to it at least one or two times in life. Unhygienic lifestyle, rotten food intake, dirty environment etc. are basically responsible for it. So, raising of awareness is a must to prevent diarrhoeal disease.

2.3.2 Types of diarrhoeal diseases in Bangladesh:

Diarrhoeal diseases are primarily of two types. They are

- a. Noninfectious (infrequent), e.g., congenital, inflammatory bowel disease
- b. Infectious (predominant), e.g., bacterial, viral, parasitic

There are some other types of diarrhea. They are: viral diarrhea, bacterial diarrhoea and parasitic diarrhoea.

1. Viral Diarrhoea:

Diarrhoea caused by viruses is generally mild. The two common viral agents commonly associated with diarrhoea are the 'Norwalk' virus and rotavirus. Viral diarrhoea is often associated with watery stool, nausea, vomiting, low-grade fever, headache, abdominal cramp and general malaise. The International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) conducts research on rotavirus diarrhoea that is aimed at developing a live oral vaccine consisting of an attenuated virus to be administered as oral drops similar to oral polio vaccines. No diagnostic tests are performed to detect Norwalk agents in Bangladesh.

2. Bacterial Diarrhoea:

The most prevalent and frequently the most severe types of life threatening diarrhea is bacterial diarrhoea. Among bacterial diarrhoea, the two most common types are watery diarrhoea, the prototype of which is cholera caused by *Vibrio cholerae* and some toxin-producing strains of the colon bacteria *Eschericia coli*, and bacillary or bloody dysentery caused by the enteric bacteria Shigella. The toxin-producing *E. coli* is also called enterotoxigenic *E. coli* or ETEC, and the diarrhoea referred to as ETEC diarrhoea. In

addition, there is a type of enteritis caused by *Salmonella typhi*, a close relative of *Shigella*, whose primary manifestation is not, however, diarrhoea. The route of entry of the pathogen is the intestine from where it travels to the blood stream, thereby causing typhoid fever. Cholera is caused by *Vibrio cholerae*, a comma-shaped motile Gram-negative bacteria which when ingested with contaminated food or water, grows and colonises the small intestine of susceptible individuals. During the process it produces a toxin, the cholera toxin (CT) which is adsorbed onto the gangliosides of the intestinal epithelial cells. The toxin stimulates hypersecretion of water and chloride ions from all parts of the small intestine into the lumen of the gut while simultaneously inhibiting absorption of sodium by the gut wall from the luminal fluid. The result is profuse watery diarrhoea with an outpouring of fluids and electrolytes lost with the stool. So potent is the secretogenic effect of cholera toxin that a patient may lose as much as 30 liters of fluid in one day or twice his body weight during the course of the disease. Severe dehydration thus results which is often accompanied by acidosis of the blood. Unless these are corrected, death results rapidly. In oral rehydration therapy (ORT), fluid replacement can be brought about in the patient by oral administration of a solution containing salt and glucose, instead of injection of such fluid through the intravenous route. Because of this methods, cholera mortality in Bangladesh has been greatly reduced in recent years. A somewhat milder form of watery diarrhoea is caused by some *E. coli* which is generally referred to as ETEC diarrhoea and is common in children. Cholera and ETEC diarrhoea are non-invasive diseases since the bacteria never reach the bloodstream so that the illness is usually self-limiting and can be managed by adequate fluid replacement. Cholera and ETEC diarrhoea together may account for nearly three-quarter of the million cases of diarrhoea annually occurring in Bangladesh. In contrast to cholera and ETEC infections that are non-invasive, enteritis caused by *Shigella* and *Salmonella* is invasive, that is, the bacteria enter cells of the intestine and spread within the intestinal tissue. *Shigella* causes bloody dysentery or bacillary dysentery by invading the epithelial cells of the large intestinal mucosa, causing inflammation, tissue damage, and bleeding. Infective dose of *Shigella* is remarkably small; as few as 100 bacteria can potentially trigger an episode of the disease. Onset of the disease may be associated with mild watery diarrhoea, but bloody stool with abdominal pain and fever are more pronounced symptoms than diarrhoea related dehydration in episodes of bacillary dysentery. Cases of bacillary dysentery may run to about

a quarter of a million a year in Bangladesh. Enteritis caused by *Salmonella* is also initiated as an intestinal infection, similar to Shigella infection. The infective dose of *Salmonella* is about 100,000 bacteria. When ingested with contaminated food, they invade the small intestine and reach the bloodstream where they multiply. At early stages, constipation may result, but as the disease progresses, bloody diarrhoea with associated high fever can cause severe incapacitation. Duration of the disease is several weeks. Antibiotics are the preferred course of treatment.

3. Parasitic Diarrhoea:

Intestinal parasitic diarrhoea includes amoebic dysentery or amoebiasis, caused by the non-flagellated protozoan parasite *Entamoeba histolytica*, and giardiasis, or diarrhoea caused by the flagellate protozoa *Giardia lamblia*. *E. histolytica* enters human intestine through the oral route and invades the mucosa. Mucosal invasion is aided by the production of proteolytic enzymes by the parasite causing tissue lysis and production of discrete ulcers. Disease symptoms include abdominal tenderness, pain and fulminating dysentery - 30 or more movements of mucoid stool in a day - nausea and frequent urgent desire to defecate. As opposed to *E. histolytica*, *G. lamblia* is a relatively weak pathogen. Infection by *G. lamblia* triggers diarrhoea with loose semi-solid stool, abdominal distension, flatulence, malaise and weight loss. The organism occasionally invades the gall bladder and bile ducts. Children are more susceptible to clinical giardiasis than adults. Both amoebiasis and giardiasis are common parasitic infections in children in Bangladesh. Three-quarters of children under the age of 15 years have exhibited immunological evidence of *E. histolytica* infection at an earlier stage of their life. Thus, amoebic dysentery is a disease of high prevalence in Bangladesh. Estimates on the prevalence of giardiasis are not available, but in ICDDR,B surveillance, about 5% of diarrhoeal patients have shown presence of *G. lamblia* in their stool.

2.3.3 Preventive measures for Diarrhoea:

There are some preventive measures to control diarrhea. They are:

a. Breastfeeding and complementary feeding

- b. Improving food safety, water, sanitation, and hygiene
- c. Vitamin A
- d. Zinc
- e. Measles immunization
- f. Future—specific vaccines, e.g., for rotavirus, ETEC (enterotoxigenic *Escherichia coli*), shigella

2.3.3.1 Risk factors for childhood diarrhoea:

The children are the worst victim of diarrhea. The risk factors for them are:

- a. Suboptimal breastfeeding
- b. Contaminated complementary foods
- c. Poor quality of water
- d. Poor sanitation and hygiene
- e. Malnutrition and micronutrient deficiencies
- f. vitamin A deficiency
- g. Zinc deficiency

2.3.3.2 Prevention of childhood diarrhoea:

There are some preventive measures for childhood diarrhoea. They are as follows:

1. Breastfeeding
2. Safe complementary feeding
3. Latrines and hand washing
4. Water supply and quality
5. Correcting Vitamin A deficiency—reduces mortality, but not incidence
6. Correcting zinc deficiency—reduces mortality and incidence
7. Preventing stunting—reduces mortality and incidence

Conclusion:

To sum, malaria, tuberculosis and diarrhea threaten our life to some extent. In kamrangir char area, these are the common health problems. Their lack of awareness and the environment they live in are basically responsible for it. So, proper steps should be taken to control it.

Chapter –three

Socio-cultural construction of arsenicosis: Bangladesh perspective:

Introduction:

Arsenic contamination of ground water is now a hazard in Bangladesh. The number of people in Bangladesh at high risk of arsenic is highest in the world. It has become a great concern for us. It is basically a socio-cultural construction. Lack of safe source of water, lack of identification, tendency to boil arsenic contaminated water and lack of consciousness are mainly responsible for it.

3.1 Meaning of Arsenic:

Arsenic is a ubiquitous element in the nature and widely distributed in air, water, soils, rocks, plants and animals in variable concentrations. But it is usually found combined with one or more other elements such as oxygen, chlorine and sulfur, with the highest mineral concentrations occurring as arsenides of gold, silver, copper, iron, and lead. Major arsenic containing minerals are arsenopyrites (FeAsS), realgar (As_4S_4), orpiment and arsenic trisulfide (As_2S_3). Its position in the periodic table in the VA column and electronic configuration is $3d^{10}4s^24p^3$, with three electrons in the outer shell. This configuration allows a variety of oxidations states: -3, 0, +3 and +5. It is available in both organic and inorganic forms. The inorganic As (III) form as H_2AsO_3 is 40-60 times more toxic than As (V) form as H_2AsO_4 (Rashid, M.R and Mridha, M.A.K, 1998).

3.2 Sources of Arsenic in Groundwater in Bangladesh:

The source and method of arsenic entering the groundwater in Bangladesh is a controversial issue and has yet to be determined. But it is now widely believed that the high arsenic levels in the groundwater in Bangladesh have a natural geological source which may be due to abstraction water from quaternary confined and semi-confined alluvial or deltaic aquifers. A large number of diverse chemical and biological reactions, viz. oxidation, reduction, adsorption, precipitation, methylation and volatilization participate actively in the cycling of this toxic element in the groundwater table. These reactions control the availability of arsenic, and hence, arsenic

concentrations effectively exposed to humans are governed more by arsenic speciation than by the total amount of arsenic. The main process of arsenic contamination is explained in two main processes, namely oxidation of arsenic pyrites or ferrous hydroxides and oxy-hydroxide reduction. Oxidation of Arsenic Pyrites or Ferrous Hydroxides: Arsenic pyrites or ferrous hydroxides are very arsenic rich minerals which are generally stable in reducing environment under the water table and normally concentrated in organic deposits. But for different anthropogenic activities, like lowering of water table below the organic deposits, accelerate the oxidation process. When they oxidized and arsenic is released from the minerals. Some of them are absorbed onto iron hydroxide. But when water table is recharged and the arsenic adsorbed onto iron hydroxide returns to the reduced environment under the water table and mixes with water and caused the poisoning of water. According to this hypothesis, the origin of arsenic rich groundwater is man-made, which is a recent phenomenon. Moreover, the whole processes also accelerate by different geological process like weathering, erosion, sedimentation, use of irrigation and fertilizers.

3.3 Nature of arsenic and its occurrences:

Arsenic is a metalloid element, which is brittle in nature and gray or tin white in color. Arsenic cannot be found in nature as a free element. It can be found as a compound of oxygen, chloride, sulfur, carbon, hydrogen, lead, mercury, gold, and iron. There are as many as 150 species of arsenic bearing minerals that exist in the nature. However, only three of them are considered as arsenic ore because the amount of arsenic is higher in these three compounds. Moreover, they are more available than other arsenic compounds. These three compounds are: Realgar or arsenic disulfide (As_2S_2); Orpiment or arsenic tri-sulfide (As_2S_3); and Arsenopyrite or ferrous arsenic sulfide ($FeAsS$). Arsenopyrite has been primarily identified as the main source of arsenic pollution in Bangladesh. Chemically, arsenic compounds are two types: inorganic and organic.

Inorganic arsenic is again divided into two types: trivalent and pentavalent. Inorganic arsenic is more toxic than the organic ones. The trivalent arsenic (arsenite, $As(III)$) is 60 times more toxic than the pentavalent arsenic (arsenate, $As(V)$). Usually, there are four types of arsenic compounds that exist in water, in inorganic form: arsenite ($H_2AsO_3^-$) and arsenate ($H_2AsO_4^-$), which are commonly found in the groundwater of Bangladesh, and in organic form: methyl arsenic acid ($CH_3AsO(OH)_2$) and dimethyl arsenic acid ($(CH_3)_2As(OH)$). Most of Bangladesh and the

arsenic-affected areas of West Bengal, India, lie on the Quaternary alluvial plains of the Bengal Basin. The Garo-Rajmahal Gap broad alluvial plains of the Ganges and the Brahmaputra, so-called Himalayan Foredeep, extend to the northwest and northeast, respectively. To the north of this line, lie the crystalline rocks and meta-sediments of the great Himalayan thrust blocks. West Bengal (Purulia District), Bihar, and the Shillong Plateau (north of Sylhet and Mymensingh districts of Bangladesh) are extensive areas of Precambrian high metamorphic rocks and granites with widespread sulphide mineralisation. The eastern portion of the Indian Platform also includes important Rajmahal coalfield. Because of their position close to where the Ganges enters Bangladesh, some authors have suggested that they may be the primary source of arsenic in the Bengal alluvium (BGS, 1999).

3.4 Causes of Arsenic Contamination in Bangladesh:

Two hypotheses are prevailing to describe the cause (mobilization) of arsenic into groundwater of Bangladesh. These are: a) Pyrite Oxidation and b) Oxy-hydroxide Reduction.

a. Pyrite Oxidation Hypothesis:

Arsenic is assumed to be present in certain sulphide minerals (pyrites) that are deposited within the aquifer sediments. Due to the lowering of water table below deposits, arseno-pyrite oxidized in the vadose zone releases arsenic as arsenic adsorbed on iron hydroxide. During the subsequent recharge period, iron hydroxide releases arsenic into groundwater. According to this hypothesis, the origin of arsenic rich groundwater is man-made, which is a recent phenomenon. The mechanism is illustrated in Figure The intensive irrigation development in the country supports the above hypothesis. Irrigation development in Bangladesh using DTWs and STWs started in the early 1960s and rapidly expanded in the early 1980s. At first DTW irrigation became popular in the country because the government of Bangladesh (GOB) subsidized farmers to purchase DTWs, but under the privatization policy of the government and according to the suggestion of the World Bank since 1991, the GOB stopped giving loans to the farmers. As a result, DTW irrigation development became stagnant. Since then, STWs have become popular, mainly due to their low cost and due to the withdrawal of rules and regulations of tubewell installation by the GOB under the new privatization policy. Only during the irrigation season between 1995/1996 season and the 1996/1997 season, the area under STWs increased by 7.7

percent. The irrigated areas under DTWs, LLPs (low lift pumps), and the traditional system decreased by 11.7, 1.2, and 20 percent, respectively. As a result, the overall area under the minor irrigation increased by 1 percent. During this period, the area under groundwater irrigation increased by 3.1 percent, while the area under surface water irrigation decreased by 3.8 percent. The contribution of groundwater to total irrigated area increased from 41 percent in 1982/1983 to 71 percent in 1996/1997 with an increasing tendency in each year, while the contribution of surface water steadily declined from 59 to 29 percent over the same period (NMIDP, 1998). The growth of irrigation area since 1983 in terms of irrigation technologies is shown in iron hydroxide. The sediments were deposited in valleys eroded in the delta when the stream base level was lowered due to the drop in sea level during the last glacial advance. The organic matter deposited with the sediments reduces the arsenic bearing iron hydroxide and releases arsenic into groundwater. According to this hypothesis, the origin of arsenic rich groundwater is due to a natural process, and it seems that the arsenic in groundwater has been present for thousands of years without being flushed from the delta.

- b. The Oxy-hydroxide Reduction hypothesis to describe the mobilization of arsenic from the source to the groundwater for Bangladesh basin was first proposed by Nickson et al. (1998).

3.5 The number of people exposed to arsenic in Bangladesh:

The BGS report states that the probable number of people exposed to arsenic concentrations above the Bangladesh standard (0.05 mg/l) is about 21 million. This number would be roughly doubled if the WHO guideline value of 0.01 mg/l were adopted as a standard (BGS, 1999).

On the other hand, the SOES-DCH (2000) report shows that these numbers are 25 million and 52 million out of 85 million people in 43 districts, respectively. Therefore, if we consider all 64 districts of the country, the population exposed to arsenic concentrations above the Bangladesh standard may be as much as around 40 million. However, another important matter is that though SOES-DCH surveyed all 64 districts out of the total 490 thanas, they covered only 222 thanas. Therefore, if they would cover all the thanas, there is a possibility of increasing number of districts contaminated by arsenic. Another limitation of SOES-DCH survey is that their samples are biased as they first identified arsenic patients and then analyzed tubewells water used by those arsenic patients. However, there may be a doubt whether 61 or 47 districts out of 64 are

contaminated, while there is no doubt that the country is facing with sever groundwater arsenic problem. To get a clear and accurate picture of groundwater arsenic contamination, a coordinated survey of all drinking water wells and some sampled irrigation wells throughout the country is necessary. Adequate numbers of samples should be collected without any bias and they should be analyzed accurately in the laboratory. Mitigation of arsenic contamination depends on accurate identification of the contaminated wells, but most of the organizations are not strictly following the appropriate identification procedure.

3.6 Health risks related to arsenic in Bangladesh:

Skin diseases are the common effects of arsenic poisoning. The toxic effect of arsenic species depends mainly on their chemical form, route of entry, age, sex, doses, and duration of exposure. A number of skin lesions have been attributed to chronic exposure to arsenic compounds. Symmetric hyperkeratosis of the palms and soles is a characteristic finding after long-term ingestion of inorganic arsenic in drinking water. Hyper pigmentation (melanosis) of the skin is commonly encountered and occurs throughout the body. Melanosis is not always associated with keratosis, but keratosis is always associated with melanosis. Melanosis is also observed in tongue and buccal mucus membrane (DCH, 1998). Other effects of arsenic are: 1) liver enlargement and cirrhosis of the liver; 2) myocardial degeneration and cardiac failure; 3) peripheral neuropathy affecting primary sensory function; 4) diabetics mellitus and goiter; and 5) skin cancers. Three types of skin cancers are observed: Bowen's disease, Basal cell carcinoma, and Squamous cell carcinoma. These cancers are frequently multiple in origins and develop primarily from arsenical keratosis (DCH, 1998). In Bangladesh, the majority of the patients are in the initial and middle stages. By February 2000, the water samples from 22,003 hand tubewells, around 11,000 randomly selected hairs, nail, urine, and skin-scale samples from 1,063 affected villages were analyzed in laboratory under the SOES-DCH survey. The presence of high-level arsenic was detected in 53.47 percent of the water samples, 83.15 percent of the hair samples, 93.77 percent of the nail samples, and 95.11 percent of the urine samples. Of the total, 20.6 percent had identified skin lesions (SOES-DCH, 2000). Altogether, some thousands of arsenic patients and 40 deaths due to arsenic-related diseases were identified by the

SOES-DCH survey only for 241 affected villages. There are 86,000 villages in the country out of which at least 25,000 may be arsenic affected. In the past it was assumed that the symptoms of arsenic toxicity may take eight to 14 years to be manifested in human body after the patient starts drinking arsenic contaminated water (DCH, 1998), but the SOES-DCH survey revealed arsenic symptoms in the body of children ranging from four to seven years old also. The percentage of identified arsenic patients seems to be higher than the national average, since the selected villages were biased towards more affected areas. But the true situation may be different; as only a small percentage of the true patients in the affected areas were identified due to many social constraints. Another detailed survey of DCH which covered 500 arsenic affected villages shows that 52.17 percent tubewells are contaminated, 56.15 percent of the total population (of affected 500 villages) is at risk, and only 0.28 percent of the total population is identified as arsenic patients (DCH, 2000). The above findings reveal a disastrous situation regarding arsenic pollution in Bangladesh. Table 3 shows the latest statistics regarding groundwater arsenic contamination in Bangladesh.

3.7 Social implications of arsenic in Bangladesh:

a. Social Hazards and Poverty:

Arsenic is not only a physical but also a social phenomenon. Besides arsenic toxicity and arsenicosis diseases, arsenic poisoning creates extensive social implications for its victims and their families in affected areas. A number of socio-economic problems like social uncertainty, social injustice, social isolation and problematic family issues are reported due to arsenicosis. Arsenicosis is found to be more prevalent among the poor who suffer from dietary deficiency, who have no alternative sources of safe drinking water and who are unable to get proper care and treatment because of financial constraints. The effects of long-term arsenicosis are also severe in the poor and could cause social problems, interrupt the societal ties and trigger the social problems. Unfortunately, these social problems in affected areas are still not fully recognized and understood. There is a strong link between poverty and arsenicosis diseases. Arsenicosis enhances the economic burden of the poor. The majority of victims are considered as a burden to their family and society. Most of the poor arsenicosis patients remain untreated due to financial

restraints. For example, 20–70% of the patients did not receive any treatment in Bangladesh due to financial problems. This lack of treatment further deteriorates the overall health and economic conditions of arsenicosis victims. Because poverty rises as the untreated poor victims are incapable of doing hard work and gradually lose strength to move. This disease is associated with social discriminations such as losing jobs, barriers to access new jobs and social rejections. Again, if the poor arsenicosis patients go for treatment, they need to spend a big proportion of their money on this, which finally diminishes the household income and increases the economic burden on the poor victims and their families. Moreover, the cost of obtaining arsenic free water also diminishes household income.

b. Social Instability:

Chowdhury *et al.* and Nasreen have described the extreme instability of social life in Bangladesh due to arsenicosis. Arsenic is producing social stigmatization and discrimination. Unaffected people are generally scared of arsenicosis, therefore they tend to avoid and isolate arsenic victims. Social conflicts over contaminated water destroy the social harmony and network relationships. Arsenic victims are often wrongly identified as leprosy patients and isolated from their close relations. In many cases the victims attribute their diseases to their fate. Arsenicosis disease hampers socialization by social stigmatization and discrimination. For instance, arsenic patients often remain ostracized in all age-groups and barred from social activities. Children of arsenicosis patients are not allowed to attend social and religious functions as well as denied to take water from a neighbour's tube well and students debarred from school. Affected families are also not allowed to take baths in any of the village ponds. Some unaffected people behave in a hostile manner and think that patients should either stay in their homes or leave the village.

c. Ostracism and Marriage Related Problems:

Arsenic victims are abandoned, not only by society but also by their family members. There are some instances that arsenicosis leads to a break-down of the marital relationships. For instance, wives were divorced or separated or sent back to their parents' house because of the arsenicosis disease. There are also some evidences that wives left arsenic affected husbands because they

were afraid of arsenicosis. Problems before marriage are also notable. For example, it is difficult to find a spouse for an arsenic victim. Generally people are reluctant to establish marital relationships with those families suffering from arsenicosis. Young women and men in the affected families are advised to remain unmarried. Such incidents cause unlimited anxiety for both patients and parents of arsenic-affected adult children. In Bangladesh, arsenicosis women are the worst victims of ostracism than arsenicosis men, because they are vulnerable by two ways: firstly by the disease itself and secondly by becoming outcast. Affected women also experience socially undesirable events like dowry, physical torture, and polygamy. Due to the patriarchal system and lower socio-cultural position of women in the society, unmarried women and women abandoned by husband and families live inhumanly.

d. Superstition:

Public awareness is necessary to fight against arsenicosis. Unfortunately poor people living in rural areas of Bangladesh are not adequately informed about arsenic contamination and arsenicosis. As a result of ignorance, mainly among the illiterate people in the remote villages, some people believe in superstitions, prejudices and fairy tales. For instance, some people think that the disease is ‘an act of the devil/impure air’ or ‘a curse of God’ or ‘the work of evil spirits’. Due to such superstitions and prejudices, 30 to 80% of the patients in an arsenic affected village in Bangladesh did not receive any treatment.

3.8 Measures required to take for arsenic mitigation:

a. Treatment for Arsenicosis:

Unfortunately there is no specific treatment for chronic arsenicosis. Stopping further intake of arsenic contaminated and drinking arsenic-free water improves the cases. A recent report of DCH (2000) states that chronic arsenicosis cannot be cured, but the symptoms are reversible up to certain point if a patient discontinues ingesting contaminated water. If a patient crosses this threshold, he/she still needs medical assistance to save his/her life. For instance, amputation may save the life of a patient suffering from gangrene. Palliative drugs may also be administered along with micronutrient supplement (DCH, 2000).

b. Watershed Management:

For a proper remedy of the problem, at first all of the contaminated tube wells should be identified accurately, and then the proper cause(s) of the contamination should be investigated. The over-abstraction of groundwater should be regulated. In highly affected areas where most tube wells are found contaminated, the immediate solution may be to share safe tube wells. If that is not possible, water from contaminated tube wells should be used after filtering to reduce concentration of arsenic. In the contaminated area, immediate installation of deep tube well may be an alternative, as most of the deep aquifers are arsenic free. It is better to use alternative source of water, such as pond water with slow sand filtration and harvested rainwater, if possible. If no other options exist, it is urgent to shift to surface water use or construct arsenic treatment plants.

c. Building of capacity through training:

Appropriate and comprehensive training programs are to be developed following targets:

- a. Development of skills of the doctors and health workers;
- b. Enhancement of the knowledge and skills of engineers and hydrologists, NGO workers etc;
- c. Strengthening implementation capacities of the organizations involved in the planning and implementation of arsenic contamination free water supply system.

There are some other strategies to mitigate arsenic problems in Bangladesh. They are:

1. Alternative sources of drinking water: innovative alternative sources such as pond sand filters, infiltration galleries, or Ranney wells, and in some places even rainwater harvesting can be adopted to alleviate the arsenic disaster.
2. Use of surface water: Existing surface water could be purified by filtration and chlorination, and even by ultraviolet disinfection or solar radiation and can be used in drinking and other house hold purposes.
3. Removal of arsenic by chemical precipitation: Coagulants such as the salts of aluminium and iron should be used to remove the arsenic from domestic drinking water.
4. Removal of arsenic by oxidation: Oxidants such as free chlorine, ozone, permanganate, hypochlorite, and Fenton reagent (H_2O_2/Fe^{2+}) should be used to remove arsenic from drinking water.

5. Extraction and distribution of arsenic free groundwater from deep aquifers: If other alternatives are costly and complicated potable drinking water can be extracted and distributed from deep aquifers.
6. Removal of arsenic from water collected from the existing contaminated sources by filtration: Water filters should be used at drinking water treatment plant or at each individual household source.
7. Removal of arsenic from the existing water sources: The sources of arsenic contamination must be controlled and arsenic contaminated soil and shallow groundwater aquifers should be cleaned to prohibit the future contamination.
8. In-situ remediation of arsenic contaminated groundwater: This can be achieved by using iron filings permeable walls.
9. Implementation of efficient water supply system: A safe and long lasting efficient water supply system should be implemented for the whole country.
10. Development of sewage and waste disposal system: An efficient sewage and waste disposal system should be developed to prevent the contamination of soil and water supplies.

Principally, the best solution appears to be the restoration of natural river flow and groundwater level. The natural groundwater level that existed prior to 1975 should be restored. The flushing of arsenic contaminants may take a long time but these will be diluted by the restoration of natural rivers and groundwater aquifers. Thus, the severity of arsenic contamination will be reduced gradually. Besides, this will provide plenty of water for drinking, irrigation, and industry.

Conclusion:

To some, it can be said that arsenic problem is a national problem today. Taking massive action about arsenic contamination is a must. Mobilization of concerned efforts is needed to combat this public health problem. The common people must be made aware of the problem. The govt. must take proper steps to tackle the problem. Safe sources of water must be ensured.

Chapter-four

Socio-Cultural factors and mental disorders in Bangladesh:

Introduction:

Mental disorders are problems that every man and woman face in any stages of life. It is common problem in developing countries like Bangladesh where at least 30.5% population live below the poverty line. Depression, anxiety, insomnia, schizophrenia, feeling of isolation and electro light imbalance are some of the mental disorders we often face. Social structure/process, important change in life, high ambition, economic backwardness and social circumstances etc are some of the factors responsible for mental illness in Bangladesh. The people of Kamrangir char often face mental problems due to economic backwardness.

4.1 Meaning of mental illness:

Mental Illness means any disorder of behaviour, which is mostly self-defeating and maladaptive in nature, and causes harms to the individual, and to the society. It is associated with some kind of distressing symptoms that may manifest themselves as psychological or physical symptoms or both. Mental illness is most neglected in Bangladesh, although a large number of people are suffering from different types of mental illness. It is prevalent in Bangladesh probably in the same magnitude as in developed countries. According to WHO, the number of mentally ill people in Bangladesh is about 8.4 million ie, 7% of the population of 120 million. In a community survey in a rural area it was found that about 15 per thousand people suffered from serious mental disorder and about 50 per thousand have various types of psychoneurotic and psychosomatic disorders. In Bangladesh women suffer more than men do. Mental illness can affect any or every aspect of an individual's life, it may vary in severity, symptoms, causes, and treatment. Mental illness can be classified in different ways.#

4.2 Mind and body:

In striving for good general health, it is just as important to give attention to mental health as to physical health- not that mental health and physical health are independent. On the contrary, the

human body functions as a unit, the mind (the Psyche) and the body (the soma) being merely different aspects of the same organism. It is this oneness that is expressed by the frequently used term “Psychosomatic”. On the one hand, the condition of the body influences and affects the mind and the emotions. Loss of vision or of hearing, for example, may lead to feelings of depression or even to mental illness. At times all of us have experienced the feelings of discouragement and depression which accompany excessive fatigue or unrelenting pain. Everything looks dismal; it is difficult to concentrate on jobs to be done or to be pleasant or even civil to others. For this reason, the maintenance of good physical health, which adequate nutrition, rest, exercise, and recreation, is important to good mental health. Conversely, the mind affects the body in many ways, unconsciously as well as consciously. We blush with embarrassment, we flush with anger, we pale and may become weak and faint with fright. These are easily observable effects of emotional responses, exerted usually through the autonomic nervous system and certain of the endocrine glands. Fear and anger activate the autonomic nervous system to stimulate the adrenal glands, thus producing increased amounts of adrenaline. This in turn has multiple effects upon the body, including increases in the heart rate and the blood pressure, and the release from the liver of glycogen, a highly concentrated form of food which the muscles utilize to produce energy. All of this prepares the body for supreme effort. Under such conditions, one may be capable of physical or mental achievements far in excess of what would normally be possible. Strong emotions may seriously impair judgment and control. Recognizing this, people shouldn’t drive when angry, depressed, or preoccupied. The immediate physiological effects of strong emotions, even including the vomiting and diarrhea which sometimes occur, are usually of short duration and produce no lasting ill effects. But, if emotional responses of this kind are frequent or persistent, physical illness such as high blood pressure, ulcers of stomach duodenum, or spastic bowel may develop. Other illnesses which may be attributable at least in part to “nervous” or emotional causes are headaches, fatigue, arthritis, allergies, certain skin disorders, etc. In fact, it is estimated that at least half the patients who visit physicians do so because of complaints which are primarily “nervous” in origin and that, in addition, many physical illnesses have “nervous” components which contribute to the patient’s symptoms.

4.3 Types of mental disorders in Bangladesh:

Some of the important types of mental illness encountered in Bangladesh are described below:

1. Psychoses:

Psychoses are major mental illness in which marked disturbances in thinking, feeling, and behaviour are found. Such illness makes an individual unable to function in society. The psychotic patients lack insight and are unable to evaluate reality objectively. Abnormalities of thought in the form of delusion, which means false beliefs usually involving a misinterpretation of perception or experience, are found in psychotic patients. Hallucination, a sensory perception which is said to occur in the absence of any appropriate external stimulus, is also seen in those patients. The common people of Bangladesh believe that psychosis is caused by supernatural forces or by evil spirits and the person suffering from these disorders is called 'mad' (pagal) or 'insane'. Psychoses are fundamentally of two types, organic and functional. A person with a psychosis may need to be placed in a mental hospital to obtain proper care. In organic psychoses there are demonstrable abnormalities in the brain or in other organic systems. Organic psychotic disorder may be acute or chronic, reversible or irreversible. Symptoms of organic brain disorders may include reduced awareness and impaired ability to think, speak or remember. The patient is disoriented in time and place. The incidence of organic brain syndromes is associated with aging. Delirium and Dementia showing memory impairment are the common organic psychoses found in Bangladesh. In functional psychoses, no demonstrable abnormalities in the brain or in other organs of the body are found, though there may be some form of undetermined biochemical or other abnormalities. Schizophrenia and mood disorders/affective disorders are the two important functional psychoses. The term schizophrenia (from the Greek '*schizen*' meaning to split and '*phren*' meaning 'mind') refers to the fragmentation or disconnection of the normally integrated psychological functioning. Delusions, hallucinations, disorganised speech, disorganised behaviour and negative symptoms (eg, apathy) are found in schizophrenic patients. About one fifth of all patients in mental health facilities of Bangladesh are schizophrenic. Psychosis is equally common in men and women in Bangladesh.

2. Neuroses:

Neuroses are emotional disorder, primarily characterized by anxiety. Neuroses are less severe than psychoses. They do not involve the major distortion of external reality or marked personality disorganisation but a neurotic person's social relations and work performance are likely to be impaired. Unrealistic and irrational fear or anxiety is the dominant features of the anxiety disorders. Anxiety disorders include phobias, panic disorder, generalized anxiety disorder, obsessive compulsive disorder, and post traumatic stress disorder. The majority of the neurotic patients in Bangladesh seek help at the general health service, which often leads to prolonged distress and unnecessary prescriptions and investigations.

3. Personality disorders:

Personality disorders are long standing inflexible, maladaptive inner experience and behaviours that impair social or occupational functioning. They deviate significantly from the expectation of the person's cultural norms and cause distress both for the individual, his family and the society. Personality disorders differ in form and severity. Like other countries personality disorders are also found in Bangladesh mostly in males and they occur in adolescence or earlier.

4. Substance related disorders:

Substance related disorders are maladaptive behaviour associated with the prolonged and the recurrent use of some substances such as drinking heavily and taking drugs. They are detrimental to individual and to the society and give rise to legal, social or occupational problems. Study conducted on trends in substance abuse in Bangladesh reveals that majority of drug abusers are unmarried and unemployed, and majority (79.5%) of the abusers are between 20-34 years. Trends of primary drug abuse have shown that heroine is consumed by the majority (54.06%) of patients and that of alcohol by the lowest number (1.39%) of patients. The number of drug abusers is increasing in Bangladesh, therefore, proper care and management of this problem is necessary.

5. Childhood behaviour disorders/problems:

Childhood behavior disorders/problems are deviant or irregular patterns of behaviour that vary widely in type and severity. Hyperactivity, conduct disorder, aggressiveness, delinquency, depression, schizoid anxiousness, social withdrawal, nervousness, inattentiveness, self-destructiveness, sex problems etc, are some of the common behaviour problem in children. Study on behavioural problems in children in Dhaka, Bangladesh revealed that mothers reported 11.8% of boys and 10.7% of girls, and teachers reported 12.8% of boys and 11.2% of girls to have behaviour problem in the clinical range. Boys scored significantly higher than girls, and children from lower socio-economic status obtained higher problem score than children from upper and middle socio-economic status. Slum dwelling children have higher problems than those of the non-slum areas.

6. Mental depression:

Mental depression is disorder of mood and emotion characterized by sadness, inactivity, and a reduced ability to enjoy life. Simple grief or sadness in mild form is a part of human life and they are expressed as appropriate emotional responses to the loss of loved persons or objects. Depression is considered to be present when the depressed mood is disproportionately prolonged or extreme that disrupts the normal life or activities of the person. The depressive disorder may vary in severity; it may be acute or chronic, and unipolar or bipolar in nature. In unipolar depression the patient experiences one or more major depressive episodes without a history of either a manic episode or a hypomanic episode. Patients with bipolar depression also experience depressive episodes but this period alternates with episodes of mania. These two categories are also called endogenous depression and both of them are recurrent disorder. Mental depression is very common in Bangladesh. In a survey of a village near Dhaka City it was found that 2.9% of the people were suffering from depression. Another study revealed that about one third of the patients attending psychiatric outdoor of a hospital in Dhaka City, and in general practice were diagnosed as depressive. The rate of depression is found to be the highest in the ages between 50 and 59 years and the widowed, divorced or separated persons have highest incidence of depressive illness. In Bangladesh women suffer three times more than men and most of the women are housewives. In depressive illness the individuals suffer not only from mood but also

from motivation, thinking, and physical and motor functioning. A depressed person usually experiences one or more of the following symptoms: feeling of sadness, hopelessness or feeling of worthlessness and guilt, loss of pleasure or interest in usual activities, disturbance of appetite and signs of loss of weight, sleep disturbance or insomnia, psychomotor retardation or agitation, loss of energy and vitality, slowness of thought or action and a preoccupation with death and suicide. In Bangladesh, symptoms of depression are somewhat different compared to western countries. They are often expressed as somatic complains rather than the feelings of sadness and guilt. Due to cultural factors, prejudice and lack of acceptance of psychological symptoms, physical symptoms are overemphasized. Burning all over the body, pain and other sensations which include numbness and tickling etc, heat in the head and headache, palpitation, sleep disturbance, loss of libido, and gastrointestinal problems are the common physical symptoms expressed by a depressive patient in Bangladesh. Depression may be caused by many factors, such as loss of one's beloved one, childhood trauma and stressful life events. Biological research in different countries has shown that the major mood disorder is sometimes genetically transmitted, especially in bipolar depression. Among biochemical causes, low level of norepinephrine leads to depression and a low level of serotonin allows wild fluctuations in the activity of other neurotransmitters and produces depression and mania. In Bangladesh antidepressant drugs are commonly used in the treatment of depression. The clinical psychologists and trainee clinical psychologists are using different types of psychotherapy to resolve underlying psychic conflicts that may be causing depressive state. For mild form of depression supportive psychotherapy and counselling are also found to be very beneficial. Like other western countries electro-convulsive therapy is used in Bangladesh as a last resort for severely depressed people who fail to respond to other treatments and who need quick therapeutic results.

7. Mental retardation:

Mental retardation is subnormal intelligence defective brain development. The consequence is the impairment in intelligence from early life, inadequate and slow mental development during the growth period, reduced learning ability, and poor behavioural and social adjustment. It is a permanent disability but not a disease. Mentally retarded children have reduced language capacity, deficiencies in different types of skills and reduced cognitive abilities. According to the

severity of their intellectual deficit, mentally retarded children are divided into four groups such as mild, moderate, severe, and profound. One type of mental retardation differs from other types in presentation, etiology, associated features, prevalence, management, and outcome. Intellectual capacity is generally measured by a standardized intelligence test. For a diagnosis of mental retardation the child's intelligence quotient (IQ) should be less than 70, and he should be functionally impaired in his everyday life. Mildly retarded individuals have an IQ in the range of 50-70. They are not always distinguishable from the normal children until they enter school. The moderately and severely retarded persons have IQ in the range of 30-49 and 20-30, respectively. Profoundly retarded persons have IQ below 20. Many severely and profoundly retarded children have serious motor and sensory impairment. In Bangladesh interest in mental retardation is relatively recent. An organisation of the parents of the mentally retarded children was formed in 24 December 1967. In 22 June 1980 the first National Conference on Mental Retardation was held in Dhaka. The number of retarded person in Bangladesh is more or less the same as in other developing countries. A nationwide epidemiological study of childhood disability in Bangladesh showed the prevalence rate per 1000 children for severe mental retardation (SMR) and mild mental retardation (MMR) were 5.93 and 4.45, respectively. The prevalence rate of SMR was higher for girls' (6.94) than boys' (5.08). All types of mental retardation and disabilities were found more prevalent in urban area (6.03) compared to rural area (5.84). Lower socio-economic status was associated with the occurrence of MMR but not with SMR. The mildly retarded persons are difficult to be identified as they can adjust in a simple society like Bangladesh and moreover, the education standard in Bangladesh is lower compared to western countries. Diagnosis of mental retardation is difficult in Bangladesh as birth register is not strictly maintained and correct record of health information does not exist. However, Weschler Intelligence Scale for Children (WISC) and Denver Developmental Screening Test (DDST) have been translated and standardized for diagnosis of mental retardation in Bangladesh. Mental retardation may be caused by a number of factors that may occur before, during or after birth. In one study with urban children in Bangladesh it was observed that the genetic factors, Down syndrome, cerebral palsy, and prolonged labour were among the main causes of mental retardation. In another study in a rural area of Bangladesh it was found that the severity of retardation among children increased with the increase of malnutrition. Prenatal threat, low birth size, and postnatal hazards were found to be related with the occurrence of serious mental

retardation. In Bangladesh, anoxia and birth trauma during delivery have been found to cause damage to the brain leading to both mentally and physically handicapped children. There are a few voluntary organisations that run training programme for the retarded persons. The Society for the Care and Education of Mentally Retarded Children of Bangladesh (SCEMRCB) run 11 education classes for the retarded children in regular schools in the Dhaka city. SCEMRCB has at present 21 branches all over the country. Bangladesh Institute for the Mentally Retarded (BIMR), established in 1982 provides vocational training course and training in basic skills of behavioural development. Bangladesh Protibondhi Foundation (BPF) which was formed in May 1994 also provides services, training and counselling for the retarded children and their parents.

8. Schizophrenia:

Schizophrenia is psychosis marked by withdrawn, bizarre, and sometimes delusional behaviour and by intellectual and emotional deterioration. Schizophrenia is the single largest cause of admission to mental hospitals and private clinics in Bangladesh. It is estimated that about 1.3 million people (1% of the population) of Bangladesh suffer from schizophrenia. The illness usually appears in adolescence and early adulthood and in most of the cases the onset is between 17 and 25 years of age but it can occur at any age. Antipsychotic drugs are mainly used by the psychiatrists and various forms of psychotherapy are used by the clinical psychologists for the treatment.

9. Anxiety:

Anxiety is an unpleasant state of inner turmoil, often accompanied by nervous behavior, such as pacing back and forth, somatic complaints and rumination. It is the subjectively unpleasant feelings of dread over something unlikely to happen, such as the feeling of imminent death. Anxiety is not the same as fear, which is felt about something realistically intimidating or dangerous and is an appropriate response to a perceived threat; anxiety is a feeling of fear, worry, and uneasiness, usually generalized and unfocused as an overreaction to a situation that is only subjectively seen as menacing. It is often accompanied by restlessness, fatigue, problems in concentration, and muscular tension. Anxiety is not considered to be a normal reaction to a perceived stressor although many feel it occasionally. Anxiety is a mood. When it becomes a

mental disorder, that is, characterized by excessive, uncontrollable and often irrational worry about everyday things that is disproportionate to the actual source of worry, it is diagnosed as generalized anxiety disorder (GAD). GAD occurs without an identifiable triggering stimulus. It is called generalized because the remorseless worries are not focused on any specific threat; they are, in fact, often exaggerated and irrational. It is distinguished from fear, which is an appropriate cognitive and emotional response to a perceived threat and is related to the specific behaviors of fight-or-flight responses, defensive behavior or escape. Anxiety occurs in situations only perceived as uncontrollable or unavoidable, but not realistically so. David Barlow defines anxiety as "a future-oriented mood state in which one is ready or prepared to attempt to cope with upcoming negative events," and that it is a distinction between future and present dangers which divides anxiety and fear. In a 2011 review of the literature, fear and anxiety were said to be differentiated in four domains: (1) duration of emotional experience, (2) temporal focus, (3) specificity of the threat, and (4) motivated direction. Fear is defined as short lived, present focused, geared towards a specific threat, and facilitating escape from threat; while anxiety is defined as long acting, future focused, broadly focused towards a diffuse threat, and promoting excessive caution while approaching a potential threat and interferes with constructive coping. While almost everyone has experienced anxiety at some point in their lives, most do not develop long-term problems with anxiety. If long term or severe problems with anxiety develop, such problems are classified as an Anxiety disorder. Symptoms of anxiety can range in number, intensity, and frequency, depending on the person. Subtypes of anxiety disorders are phobias, social anxiety, obsessive-compulsive behavior, and Posttraumatic stress disorder. The physical effects of anxiety may include heart palpitations, tachycardia, muscle weakness and tension, fatigue, nausea, chest pain, shortness of breath, headache, stomach aches, or tension headaches. As the body prepares to deal with a threat, blood pressure, heart rate, perspiration, blood flow to the major muscle groups are increased, while immune and digestive functions are inhibited (the *fight or flight* response). External signs of anxiety may include pallor, sweating, trembling, and pupillary dilation. For someone who suffers anxiety this can lead to a panic attack. Sir Aubrey Lewis even suggests that "anxiety" could be defined as agony, dread, terror, or even apprehension.

10. Insomnia:

Insomnia, or sleeplessness, is a sleep disorder in which there is an inability to fall asleep or to stay asleep as long as desired. While the term is sometimes used to describe a disorder demonstrated by polysomnographic evidence of disturbed sleep, insomnia is often practically defined as a positive response to either of two questions: "Do you experience difficulty sleeping?" or "Do you have difficulty falling or staying asleep?" Insomnia is most often thought of as both a sign and a symptom that can accompany several sleep, medical, and psychiatric disorders characterized by a persistent difficulty falling asleep and/or staying asleep or sleep of poor quality. Insomnia is typically followed by functional impairment while awake. Insomnia can occur at any age, but it is particularly common in the elderly. Insomnia can be short term (up to three weeks) or long term (above 3–4 weeks), which can lead to memory problems, depression, irritability and an increased risk of heart disease and automobile related accidents. Those who are having trouble sleeping sometimes turn to sleeping pills, which can help when used occasionally but may lead to dependence or addiction if used regularly for an extended period. Insomnia can be grouped into primary and secondary, or comorbid, insomnia. Primary insomnia is a sleep disorder not attributable to a medical, psychiatric, or environmental cause. It is described as a complaint of prolonged sleep onset latency, disturbance of sleep maintenance, or the experience of non-refreshing sleep. A complete diagnosis will differentiate between free-standing primary insomnia, insomnia as secondary to another condition, and primary insomnia co-morbid with one or more conditions.

Types of insomnia:

Insomnia can be classified as transient, acute, or chronic.

1. **Transient insomnia** lasts for less than a week. It can be caused by another disorder, by changes in the sleep environment, by the timing of sleep, severe depression, or by stress. Its consequences – sleepiness and impaired psychomotor performance – are similar to those of sleep deprivation.
2. **Acute insomnia** is the inability to consistently sleep well for a period of less than a month. Insomnia is present when there is difficulty initiating or maintaining sleep or

when the sleep that is obtained is non-refreshing or of poor quality. These problems occur despite adequate opportunity and circumstances for sleep and they must result in problems with daytime function. Acute insomnia is also known as short term insomnia or stress related insomnia.

3. **Chronic insomnia** lasts for longer than a month. It can be caused by another disorder, or it can be a primary disorder. People with high levels of stress hormones or shifts in the levels of cytokines are more likely to have chronic insomnia. Its effects can vary according to its causes. They might include muscular fatigue, hallucinations, and/or mental fatigue. Some people that live with this disorder see things as if they are happening in slow motion, wherein moving objects seem to blend together. Chronic insomnia can cause double vision.

4.3.1 Mental health problems in elderly:

Mental health problems in the aged persons are increasing in Bangladesh due to weakening of the traditional family structure and the family support system. It was found that anxiety, loneliness, insomnia, memory loss and inattentiveness were the important psychological problems faced by the old people of Bangladesh. Mental health service in Bangladesh is poor compared to other neighbouring countries. Here formal care and treatment of mentally ill persons started only in 1957 with the establishment of MENTAL hospital at Pabna with 60 bed facilities, which were later increased to 400. Outpatients' services for the mentally ill patients and a few in-patients beds were available in the psychiatric units of general hospitals since the early seventies. In 1975 post-graduate course in psychiatry was started in IPGM&R (now Bangabandhu Sheikh Mujib Medical University). For the extension of mental health services to the rural areas of Bangladesh, training for upazila medical officers and health assistants in mental health was organised in Dhaka. Recently a National Institute of Mental Health has been established at Sher-e-Banglanagar, Dhaka. Some private clinics/hospitals/institutes are also offering valuable services to mentally ill patients. Bangladesh for its present population of over 130 million, have only about 70 psychiatrists. In 1995 a three-year postgraduate training course in clinical psychology was introduced in the Department of Psychology, the University of Dhaka, linking with the University College, London, under the financial assistance of the British Government.

In 1997 the Department of Clinical Psychology of Dhaka University was established with the objectives of promoting the psychological health of the people of Bangladesh. Drugs are commonly used in Bangladesh for the treatment of mental illness. Electroconvulsive therapy is also used for rapid and effective treatment for severe depressive patients. In order to help the distressed individual with emotional and psychological problems different types of psychotherapy are currently being used by the clinical psychologists and the trainee clinical psychologists. Although mental health services are available in Dhaka and some other cities, vast majority of the population living in rural areas in Bangladesh receive little service facilities. Prejudice, superstition, and ignorance about mental illness exist in this country among different sections of people. It is a common belief that mental illness is caused by supernatural forces or by evil spirits, and most of them are not curable. Many mentally ill persons of Bangladesh seek help of religious and traditional healers, *fakirs*, *kabiraj* and magicians etc, who usually maltreat, and exploit them. Knowledge and awareness about mental illness are still in the very early stage in Bangladesh. Organising seminars, symposia and workshops may create awareness among general people. There is no developed rehabilitation centre for mentally ill people in Bangladesh; hence, a planned rehabilitation service is urgently needed.

4.4 Socio-cultural factors of mental disorders:

Certain mental illnesses have a definite physical or physiological basis. For example, the psychoses of general paresis, arteriosclerosis, senility, injury and brain tumor are due directly to the destruction of brain tissue. Some recent studies suggest that a specific abnormal substance may be present in the blood of certain psychotic patients. If this proves to be correct, it indicates that chemical changes within the body are associated with or are the cause of at least some mental illnesses. Furthermore, hallucinations, fears, compulsions, or other emotional disorders may be due to disturbances in the functioning of the glands of internal secretion; to nutritional deficiencies; to infectious processes, the toxins of which give rise to states of delirium; to the action of drugs; or to the actual destruction of the brain tissue. Such conditions may, and do, give rise to strange thinking and behavior.

4.4.1 Psychological mechanism of mental illness:

The most generally accepted explanation of the psychological concept of mental health and emotional disturbances is that every individual has emotional needs which must be satisfied if he is to enjoy good mental health, just as certain physical needs must be satisfied if he is to enjoy good physical health. The intensity of these needs and their relative importance change with age, as do the emotional responses to them, but the basic need persist and influence feelings and behavior from birth until death.

4.4.2 Basic emotional needs:

Although emotional needs can't be specifically enumerated or counted, students of behavior generally agree that the following are basic emotional needs: love; independence or individual autonomy; faith; sex-creative needs; guidance or examples in living; companionship. Some would add to, subtract from, or otherwise modify this list, but the concepts expressed in it are today quite generally accepted.

4.4.3 Satisfying emotional needs:

Many persons think that if they only had good looks, money, social position, or this or that, they would be content and happy. Contentment, peace of mind, and happiness, however, depend vastly most upon the individual than upon material things. The northwoods guide who likes nature, the mother who raises a large family in frugal circumstances but with love and understanding; the teacher who likes children, the physician, nurse or social worker who understands and values people. Love is an essential need of every human being. Children need the love of parents and of brothers and sisters; parents need the love of each other and of their children. Love is unselfish. It consists in giving rather than receiving. It is natured by kindness, sympathy, tenderness, helpfulness, and tolerance. Independence or individual autonomy is both an emotional need and a right of every individual in a free society.

4.4.4 Reaction to unsatisfied emotional needs:

The emotional needs of any individual are never completely satisfied. Many individuals are denied basic individual rights because of colour, creed or social or economic positions. Among the more common types of reactions to unsatisfied emotional needs are following:

A. Suppression:

Everyone at times has thoughts or fantasies which, if put into action, would bring him or her into conflict with parental teaching, with religious or other moral codes, or with the law. Some conscious suppression of such thoughts may be necessary, but suppression is basically immature and, when used frequently, may contribute to feelings of failure, insecurity, tension, and depression and to other evidences of mental ill-health. From the psychiatric or medical point of view, such thoughts, impulses, ideas, fantasies, wishes or dreams are not issues of right or wrong are not moral issues, are not against the code.

B. Daydreaming:

It is out of dreams of bitter things ambition, inventions, scientific discoveries and social movements are born. He who does not “dream dreams” is dull and imaginative. Yet exaggerated and unhealthy daydreaming may come to be a source of emotional satisfaction and a substitute for real accomplishment. It is easier to achieve success and to escape unpleasant situations in a world of make-believe than in a world of reality. For this reason excessive daydreaming is likely to occur in maladjusted individuals.

C. Worry:

This is an influential expenditure of time and nervous energy upon uncertainties or upon situations beyond one's control. Most worry is anxiety about trivialities out of proportion to their importance. Its result is confused and diagnosed thinking, which interferes with both accomplishment and peace of mind. Worry over mistakes that have been made, uncertainties ahead, or situations beyond one's control obviously can be of no avail.

D. Fear:

Basically a protective reaction, fear, if justified, may prevent injury or death. On the other hand, unjustified fear about ourselves, our dear ones, our business or other

responsibilities or associations interfere with clear thinking and undermine self confidence. Frequently the underlying cause of such fears is some unjustified emotional need or needs.

There are some other reactions to unjustified emotional needs. They are: insecurity, withdrawal, sex conflict, substitution, rationalization etc.

4.5 Mental disorders and social isolation:

There is a direct connection of mental disorders with social isolation. The people who are mentally disordered are isolated socially. People simply avoid a mentally disordered person. They experience a reduced social relationship. The friends and relatives with whom he/she had good relations avoid him/her. In our society, they are unexpected and unwelcomed persons. Sometimes they are regarded as a burden to the family and society. The problem of mental disorders is basically a problem of elderly people. But the young and even the children may experience mental disorders and social isolation simultaneously. In kamrangir char area, there are many people who experience mental disorders. They are more or less isolated from social life. Economic condition, social structure or process, stressful condition are basically responsible for mental disorders in our society.

Conclusion:

To sum, mental disorders are problems which people face at any stage of life. There is no particular treatment for mental illness. It is basically a socio-cultural construction. The people who are ambitious and work in a stressful condition mainly face these problems. So, we should be careful about it and try our best so that we can avoid these problems.

Chapter- five:

Socio-Cultural Construction of STDs/STIs and HIV/AIDS: Bangladesh context:

Introduction:

STDs/STIs and HIV/AIDS are behavioral diseases. Those who involve in risky behaviours are susceptible to it. In our country, the prevalence of HIV/AIDS is still low. Socio-cultural factors are mainly responsible for it. Unwillingness to use condoms, injecting drug use, unsafe blood transfusion, commercial sex working etc. are mainly responsible for HIV/AIDS and STDs/STIs in our country. There is a direct link between STDs/STIs and HIV/AIDS. Those who are infected with STDs/STIs have a greater possibility to be infected with HIV/AIDS. HIV/AIDS lessens the capacity of body to resist diseases. So, raising of awareness is mainly necessary to prevent HIV/AIDS and STDs/STIs.

4.1 Meaning of STDs/STIs:

A sexually transmitted disease (STD), also known as a sexually transmitted infection (STI), Venereal Disease (VD), is an illness that has a significant probability of transmission between humans by means of human sexual behavior, including vaginal intercourse, oral sex and anal sex. While in the past, these illnesses have mostly been referred to as STDs or VD in recent years the term sexually transmitted infection (STI) has been preferred, as it has a broader range of meaning; a person may be infected, and may potentially infect others, without showing signs of disease. Some STIs can also be transmitted via the use of drug needles after its use by an infected person, as well as through childbirth or breastfeeding. Sexually Transmitted infection has been well-known for hundreds years. It is transmitted by sexual contract; caused by microorganisms that survive on the skin or mucus membranes of the genital area; or transmitted via semen, vaginal secretions, or blood during intercourse. Because the genital areas provide a moist, warm environment that is especially conducive to the proliferation of bacteria viruses, and yeasts, a great many diseases can be transmitted this way. They include AIDS, Chlamydia, genital herpes, genital warts, gonorrhea, syphilis, yeast infections and also some forms of hepatitis.

4.2 Symptoms of STDs/STIs:

The symptoms of STDs vary somewhat according to the disease agent (virus or bacterium), the sex of the patient, and the body systems affected. The symptoms of some of the STDs are easy to identify; others produce infections that may either go unnoticed for some time or are easy to confuse with other diseases. Syphilis in particular can be confused with disorders ranging from infectious mononucleosis to allergic reactions to prescriptions medications. In addition the incubation period of STDs varies. Some produce symptoms close to the time of sexual contact—often less than 48 hours; for the patients to recognize the connections between the behavior and the symptoms. Others have a long incubation period, so that the patient may not recognize the early symptoms as those of a sexually transmitted infection.

Some symptoms of STDs affect the genital and reproductive organs:

- a. A woman who has an STD may bleed when she is not menstruating or has abnormal vaginal discharge. Vaginal burning, itching, and odor are common, and she may experience pain in her pelvic area while having sex.
- b. A discharge from the tip of the penis may be a sign that a man has an STD. Males may have also painful or burning sensations when they urinate.
- c. There may be swelling of the lymph nodes near the groin area.
- d. Both men and women may develop skin rashes, sores, bumps, or blisters near the mouth or genitals. Homosexual men frequently develop these symptoms in the area around the anus.

Other symptoms of STDs are systematic, which means that they affect the body as a whole.

These symptoms may include:

- a. Fever, chills, and similar flu-like symptoms
- b. Skin rashes over the large parts of the body
- c. Arthritis-like pains or aching in the joints
- d. Throat swelling and redness that lasts for three weeks or longer

4.3 Types of STDs/STIs in Bangladesh:

There are several types of STDs in Bangladesh. They are:

a. Gonorrhoea:

Gonorrhea is a common human sexually transmitted infection caused by the bacterium *Neisseria gonorrhoeae*. The usual symptoms in men are burning with urination and penile discharge. Women, on the other hand, are asymptomatic half the time or have vaginal discharge and pelvic pain. In both men and women if gonorrhea is left untreated, it may spread locally causing epididymitis or pelvic inflammatory disease or throughout the body, affecting joints and heart valves. Treatment is commonly with ceftriaxone (Rocephin) as antibiotic resistance has developed to many previously used medications. This is typically given in combination with either azithromycin or doxycycline, as gonorrhea infections may occur along with chlamydia, an infection which ceftriaxone does not cover. Some strains of gonorrhea have begun showing resistance to this treatment, which will make infection more difficult to treat. Half of women with gonorrhea are asymptomatic while others have vaginal discharge, lower abdominal pain or pain with intercourse. Most men who are infected have symptoms such as urethritis associated with burning with urination and discharge from the penis.^[4] Either sex may also acquire gonorrhea of the throat from performing oral sex on an infected partner, usually a male partner. Such infection is asymptomatic in 90% of cases, and produces a sore throat in the remaining 10%. The incubation period is 2 to 14 days with most of these symptoms occurring between 4–6 days after being infected. Rarely, gonorrhea may cause skin lesions and joint infection (pain and swelling in the joints) after traveling through the blood stream. Very rarely it may settle in the heart causing endocarditis or in the spinal column causing meningitis (both are more likely among individuals with suppressed immune systems, however). Gonorrhea is caused by the bacterium *Neisseria gonorrhoeae*. The infection is transmitted from one person to another through vaginal, oral, or anal sex. Men have a 20% risk of getting the infection from a single act of vaginal intercourse with an infected woman. The risk for men who have sex with men is higher. Women have a 60–80% risk of getting the infection from a single act of vaginal intercourse with an infected man. A mother may transmit gonorrhea to her newborn during childbirth; when affecting the infant's eyes, it is referred to as ophthalmia neonatorum. It cannot be spread by toilets or bathrooms.

b. Chlamydia:

Chlamydia infection is a common sexually transmitted infection (STI) in humans caused by the bacterium *Chlamydia trachomatis*. The term Chlamydia infection can also refer to infection caused by any species belonging to the bacterial family Chlamydiaceae. *C. trachomatis* is found only in humans. Chlamydia is a major infectious cause of human genital and eye disease. Chlamydia infection is one of the most common sexually transmitted infections worldwide; it is estimated that about 1 million individuals in the United States are infected with chlamydia. *C. trachomatis* is naturally found living only inside human cells. Chlamydia can be transmitted during vaginal, anal, or oral sex, and can be passed from an infected mother to her baby during vaginal childbirth. Between half and three-quarters of all women who have a chlamydia infection of the cervix (cervicitis) have no symptoms and do not know that they are infected. In men, infection of the urethra (urethritis) is usually symptomatic, causing a white discharge from the penis with or without pain on urinating (dysuria). Occasionally, the condition spreads to the upper genital tract in women (causing pelvic inflammatory disease) or to the epididymis in men (causing epididymitis). If untreated, chlamydial infections can cause serious reproductive and other health problems with both short-term and long-term consequences.

c. Herpes:

Genital herpes refers to a genital infection by Herpes simplex virus. Following the classification HSV into two distinct categories of HSV-1 and HSV-2 in the 1960s, it was established that "HSV-2 was below the waist, HSV-1 was above the waist". Although genital herpes was previously caused primarily by HSV-2, genital HSV-1 infections are increasing and now cause up to 80% of infections. HSV is believed to be asymptomatic in the majority of cases, thus aiding contagion and hindering containment. When symptomatic, the typical manifestation of a primary HSV-1 or HSV-2 genital infection is clusters of genital sores consisting of inflamed papules and vesicles on the outer surface of the genitals, resembling cold sores. These usually appear 4–7 days after sexual exposure to HSV for the first time. Genital HSV-1 infection recurs at rate of about one sixth of that of genital HSV-2. In males, the lesions occur on the glans penis, shaft of the penis or other parts of the genital region, on the inner thigh, buttocks, or anus. In females, lesions appear on or near the pubis, labia, clitoris, vulva, buttocks or anus. Other

common symptoms include pain, itching, and burning. Less frequent, yet still common, symptoms include discharge from the penis or vagina, fever, headache, muscle pain (myalgia), swollen and enlarged lymph nodes and malaise. Women often experience additional symptoms that include painful urination (dysuria) and cervicitis. Herpetic proctitis (inflammation of the anus and rectum) is common for individuals participating in anal intercourse. After 2–3 weeks, existing lesions progress into ulcers and then crust and heal, although lesions on mucosal surfaces may never form crusts. In rare cases, involvement of the sacral region of the spinal cord can cause acute urinary retention and one-sided symptoms and signs of myeloradiculitis (a combination of myelitis and radiculitis): pain, sensory loss, abnormal sensations (paresthesia) and rash. Historically this has been termed Elsberg syndrome, although this entity is not clearly defined.

d. Syphilis:

Syphilis is a sexually transmitted infection caused by the spirochete bacterium *Treponema pallidum* subspecies *pallidum*. The primary route of transmission is through sexual contact; it may also be transmitted from mother to fetus during pregnancy or at birth, resulting in congenital syphilis. Other human diseases caused by related *Treponema pallidum* include yaws (subspecies *pertenue*), pinta (subspecies *carateum*), and bejel (subspecies *endemicum*). The signs and symptoms of syphilis vary depending in which of the four stages it presents (primary, secondary, latent, and tertiary). The primary stage classically presents with a single chancre (a firm, painless, non-itchy skin ulceration), secondary syphilis with a diffuse rash which frequently involves the palms of the hands and soles of the feet, latent syphilis with little to no symptoms, and tertiary syphilis with gummas, neurological, or cardiac symptoms. It has, however, been known as "the great imitator" due to its frequent atypical presentations. Diagnosis is usually via blood tests; however, the bacteria can also be detected using dark field microscopy. Syphilis can be effectively treated with antibiotics, specifically the preferred intramuscular penicillin G (given intravenously for neurosyphilis), or else ceftriaxone, and in those who have a severe penicillin allergy, oral doxycycline or azithromycin. Syphilis is thought to have infected 12 million people worldwide in 1999, with greater than 90% of cases in the developing world. After decreasing dramatically since the widespread availability of penicillin in the 1940s, rates of infection have increased since the turn of the millennium in many countries, often in combination with human

immunodeficiency virus (HIV). This has been attributed partly to unsafe sexual practices among men who have sex with men, increased promiscuity, prostitution, and decreasing use of condoms.

E. Chancroid:

Chancroid is a bacterial sexually transmitted infection characterized by painful sores on the genitalia. Chancroid is known to spread from one individual to another solely through sexual contact. Chancroid is a bacterial infection caused by the fastidious Gram-negative streptobacillus *Haemophilus ducreyi*. It is a disease found primarily in developing countries, most prevalent in low socioeconomic groups, associated with commercial sex workers. Infection levels are very low in the Western world, typically around one case per two million of the population (Canada, France, Australia, UK and US). Most individuals diagnosed with chancroid have visited countries or areas where the disease is known to occur frequently, although outbreaks have been observed in association with crack cocaine use and prostitution. Chancroid is a risk factor for contracting HIV, due to their ecological association or shared risk of exposure, and biologically facilitated transmission of one infection by the other.

There are strong correlation between the presence of STIs and the spread of HIV. Both ulcerative and non-ulcerative STIs increase the risk of sexual transmission of HIV. Presence of any STI makes it easier for the virus to pass from one person to another. Thus the control of STIs contributes significantly to a reduction in HIV transmission.

4.4 Link between STDs and HIV transmission:

Individuals who are infected with STDs are at least two to five times more likely than uninfected individuals who acquire HIV infection if they are exposed to the virus through sexual contract. In addition, if an HIV-infected individual is also infected with another STD, that person is more likely to transmit HIV through sexual contact than other HIV infected person (Wasserheit, 1992). There is substantial biological evidence demonstrating that the presence of other STDs increases the likelihood of both transmitting and acquiring HIV.

a. Increased Susceptibility:

STDs appear to increase susceptibility to HIV infection by two mechanisms. Genital ulcers (e.g. syphilis, herpes, or chancroid) result in breaks in genital tract lining or skin. These breaks create a portal of entry for HIV. Additionally, inflammation resulting from genital ulcers or non-ulcerative STDs (e.g. Gonorrhea, Chlamydia and Trichomoniasis) increases the concentration of cells in genital secretions that can serve as targets for HIV.

b. Increased infectiousness:

STDs also appear to increase the risk of an HIV-infected person transmitting the virus to his or her sex partners. Studies have shown that HIV-infected individuals who are also infected with other STDs are particularly twice as likely to have HIV in their secretions as are those who are only infected with HIV. Moreover, the median concentration of HIV in semen is as much as 10 times higher in men who are infected with gonorrhea and HIV than in men infected only with HIV. The higher the concentration of HIV in semen or genital fluids, the more likely it is that HIV will be transmitted to a sex partner.

4.5 The meaning of HIV/AIDS:

The Acquired Immunodeficiency Syndrome (AIDS) is one of the deadliest diseases of the modern age, and a major threat to global health. According to a comprehensive review by Mann et al. 164 countries had reported cases of AIDS to the WHO by 1992. Nearly 2.5 million people including more than 550000 children- had died from the disease; 75 percent of these deaths had occurred in Africa, including 90 percent of all children dying from the disease. In the Americas, where 268477 cases had been reported, the USA alone accounted for 80 per cent of them, while most of the remainder had occurred in Canada, Brazil and Mexico. In many industrialized countries, AIDSs is now among the ten leading causes of death for men aged 35-44 years; in New York City in 1988-9, it was also the leading cause of death among women aged 25-39 years. As well as actual cases of AIDS, about 12875450 people had been infected by the HIV virus by 1992, and it was estimated that this would rise to nearly 20 million by 1995- and that 90 percent of all HIV infections would have occurred in the developing world. Since 1985 there have been some changes in the virus's pattern of transmission- mainly a fall in the rate of homosexual transmission, an increase by heterosexual sex and injection drug use. Overall, it has been estimated that

by the year 2000, between 5.9 million and 20.4 million adults will have died from this deadly disease. AIDS is not only unique from a biological point of view. Because its spread is so clearly linked to certain patterns of human behavior, especially sexual behavior, it is truly both a biological and a socio-cultural phenomenon. As such, any attempt to control its spread can't focus, only on the search for a vaccine or a pharmacological cure. It must also take into account the complex social, cultural and economic environments in which the disease is embodied, and which may either help or hinder its spread.

4.6 Cultural representations of AIDS:

AIDS is a global disease, but different human groups differ widely in their understanding of its origins significance and modes spread- as well as in the meanings they ascribe to it. This is further example of the split between 'disease' and 'illness'. In many ways AIDS has become the pre-eminent 'folk illness' of the modern age, absorbing, in each local context, a variety of indigenous images, metaphors and cultural themes. As in all forms of human misfortune, these provide answers to questions, that people ask themselves, such as 'why me' and 'why now?' In many western countries, widespread publicity about AIDS has led some anxious or depressed individuals to develop what may be termed folk AIDS. This is a type of 'illness without disease' that has also been termed 'Pseudo-AIDS in which people become convinced that they have the disease, even though there is no evidence for this. One reason for this may be that the early symptoms of AIDS such as lethargy, loss of appetite and weight, excessive sweating- are similar to those of anxiety and depression, and some individual may thus misinterpret them. In other contexts, cultural representations of AIDS may be a blend of medical and indigenous beliefs: as a physical disease, but also as a punishment for sinful behavior. For example, Ingstad, describes how in Botswana, traditional healers knew of AIDS, but saw it just a new form of meila, a folk illness caused by the breaking of certain sexual taboos. In the USA, Flaskerud and Rush found similar beliefs among some African Americans, with AIDS as 'punishment for sin': a result of breaking of religious and moral laws', especially those against homosexuality or extra-marital sex. These cultural representations are not static, however. Anthropologists have shown how they can change over time, as new information is received, and then blended with older, more traditional beliefs.

4.7 Social dimensions of AIDS:

People diagnosed as having AIDS (or as being HIV positive), often become the victim of discrimination and prejudice, even of violence. In extreme cases, this social rejection may lead to the 'social death'. Anthropological studies can provide baseline data on the attitudes, prejudices and stereotypes about AIDS held by the rest of the population, and the degree of stigma attached to it. Katz et al. for example, interviewed a group of 433 adults- mainly nurses, medical students and chiropractic students- in New York City, about how they perceived suffers from serious diseases, including AIDS. The study revealed that AIDS is a 'severely stigmatizing condition', and for all groups in the sample of the status of the AIDS sufferers were as 'social deviants who are seen as themselves responsible for having this disease'. In a Owambo, Namibia, too, Webb found that AIDS was a highly stigmatizing disease, and that many believed that 'those who are infected will knowingly infect others, either deliberately through some malicious motive, as result of their inability to remain abstinent. As Temoshok et al. note, there are 'cultural differences in the degree of interaction with and prejudice against the higher risk groups based on fear of the disease'. Data on these differences can be used to design public education programmes which aim at decreasing ignorance of the disease, and irrational fear of the disease. Anthropologists can also help identify the social networks, self-help groups and other community resources that can be mobilized to help those with AIDS, and which can be integrated into their long term treatment. This is particularly important in cities since – in western countries particularly- AIDS is predominantly an urban disease. By the end of 1991, for example, nearly 20 per cent of all AIDS cases identified in the USA were reported in New York City. Despite their anomie, urban environment offers some advantages over rural ones for people with AIDS: greater concentration of medical resources, more developed support networks and self-groups, and a greater tolerance of lifestyles. Health Education Programmes therefore need to take into account both the social and cultural diversity of urban populations and the many different kinds of community support available for those with the disease.

4.8 Traditional and alternative healers and AIDS:

Ingstad describes how in Botswana the various traditional Tswana healers often have different attitudes to the origins and treatment of AIDS. Some saw it as a modern disease,

which traditional medicine was unable to help. Others saw it as a Tswana disease only as a version meila, an indigenous folk illness, and which they could treat by traditional methods. In this condition, disease and misfortune are ascribed to the breaking of sexual taboos.

4.8.1 Bodily mutilations and alterations:

Many of the forms of body mutilations practiced worldwide can involve risk to health. Among those that may help spread HIV virus are tattooing, scarifications, circumcisions ear and lip-piercing, and the sharing of blood in ceremonious marking relationships of a cult, 'blood brotherhood'. Also, rituals where blood is regularly spilt- by self-flagellation or piercing of the skin- may sometimes also be implicated. All forms of bodily mutilations should therefore be taken into account when planning an AIDS prevention programme. Where a particular cultural group is unwilling to abandon these practices, aid workers may be able to convince them to use needles, instruments and disinfectants and to supply these free of charge where necessary.

4.8.2 Patterns of migrations and the spread of AIDS:

Studies of regular patterns of migration – such as those of migrant labourers, seasonal farm workers, truck drivers, travelling businessmen or tourists are relevant to an understanding of how AIDS spreads within and between different countries. Where people migrate as individuals, rather than as part of an established family unit, there is a greater risk of acquiring sexually transmitted diseases, including AIDS. The process of migration into cities is also important, since in some cases, social constraints on behavior may be less powerful, than they would be in small, rural communities.

Overcrowding, contact with people from different backgrounds, and exposing to advertising and the media, may all weaken these social constraints in an urban environment, and increase the incidence of alcoholism, drug abuse, teenage pregnancies and sexually transmitted disease – especially AIDS. In other cases, population movements to the city may follow a more circular pattern, with newly urbanized people maintaining close links with their roots and traditional values, and returning there regularly to visit their families, and vice versa.

4.8.3 Marriage and kinship patterns:

In different cultures, certain patterns of kinship and marriage may sometimes increase the risk of the HIV virus spreading within a community. These include polygyny and polyandry 'ghost marriage', and 'woman marriage'. Polygyny is particularly important since the Embers estimate that it is still practiced in some form in about 70% of human societies. In this situation, a husband who has contracted the HIV virus may thus pass it on to several women, and then on to their children. In addition, some societies which practice the levirate where a man is obliged to marry his brother's widow or the sororate –a woman is obliged to marry her deceased sister's husband–may also be more at risk of the spread of AIDS. In the industrialized world, where the rates of separation, divorce and re-marriage are greatly increasing, the effect may sometimes be similar.

4.8.4 Evaluation of preventive strategies:

Anthropology is useful in the follow-up or evaluation of preventive strategies. Because of the diversity of at risk groups, local interventions are usually also necessary in addition to national public health campaigns. In many communities, 'outreach programmes' have been successful in bringing information about AIDS prevention to different communities and to particular groups of people within them. Daly and Horton point out that 'the best workers are often recruited from the target group itself', whatever that is. Thus some outreach programmes have recruited prostitutes as 'community health workers': encouraging them to distribute condoms, spread information about AIDS refused to have unprotected sex with their clients.

4.9 The vulnerable factors for Bangladesh of HIV/AIDS:

In the Asia Pacific region, which has the second highest number in the world of people living with HIV/AIDS, the information on HIV prevalence in Bangladesh is limited and available data suggests that the overall prevalence is low even. However, continuing high risk behaviours among male and female sex workers and their clients, transgender, men having sex with men, injecting drug users, high rates of STIs, low condom use, extramarital and pre-marital sexual activity, large scale migration, illiteracy, low level of HIV/AIDS awareness, High level of TBs, low nutritional status, gender inequalities, socio-economic disparity all contribute to the threat of the spread of epidemic unless preventive

efforts are initiated to avert it in the general populations. These conditions are discussed in further detail below:

4.9.1 Geographical location:

Geographically Bangladesh is located in such a place where the risk of being infected by the deadly disease is apprehended to be very high. Bangladesh is in the vicinity of the area where the expansion of the Asian epidemic has focused on the ‘Golden Triangle’ which grows 20 percent of the world’s heroin supply and a major trade and transportation hub. In addition to sharing its land borders with India and Myanmar, a flourishing sex industry, increased injection use, large scale migration, illiteracy and socio-economic disparity are all important factors present in Bangladesh as well as in the other countries in the region that facilitate the spread of HIV in Bangladesh might occur in a manner similar to that witnessed in several neighboring countries.

4.9.2 Low level of HIV/AIDS awareness:

Unfortunately low level of HIV and AIDS awareness still prevail in Bangladesh. The 1999-2000 Bangladesh demographic and Health Survey found that only 31 percent of ever married women and 50% of currently married men had heard of AIDS. However, this didn’t present a positive change since 1996. Knowledge of STIs was even lower – 89% of women and 81% of men didn’t know about any STI other than AIDS. Education and an urban background were found to improve the levels of knowledge amongst all the groups. It is difficult to generate awareness about the risks associated with HIV transmission due to the conservative social environment and level of denial, which limit free and open discussion of sexual issues.

4.9.3 Poverty related vulnerabilities:

In a study on health inequalities in Bangladesh, an unacceptably high gap was found between the poor and the rich quintiles with respect to health indicators (Sen, 2001). Bangladesh has a large number of overseas migrant workers who have gone in search of better job opportunities mainly to countries to Middle East, followed by Malaysia and East Asian countries. Migration between rural and urban areas within the country is also high due to the increasing job opportunities in the cities as a result of the increasing urbanization that is

taking place. Rural people are often forced into migration within or outside Bangladesh due to poverty or natural disaster. Many women and adolescent girls who migrate for employment are victimized or forced to resort to sex work to support them. They are vulnerable to STIs/AIDS because of lack of awareness regarding safer sex and lack of negotiating power in this context (Blancher, 2002).

4.9.4 Gender inequalities:

Women and adolescent girls are more susceptible to STIs/HIV infection than men due to biological and other factors e.g. they tend to receive blood transfusion more often because of anemia, childbirth complications. The gender situation in Bangladesh can increase the vulnerability of women and girl children due to the lower social status accorded to them, low levels of literacy, and limited skills training and employment opportunities. Women are more at risk from violence trafficking, and coercive sex or leave risky relationships. This leaves women in a position where they are often unaware of the dangers of HIV/AIDS, but yet are exposed to high risk behaviours of their partners/spouses.

4.9.5 Gap in health care delivery:

Despite considerable progress in terms of policy guidelines and new safe blood legislation, blood transfusion practices in the country remain complex and can be conducive to transmission of HIV/STIs infection. Blood is now screened at 97 hospitals across the country, but a proportion at other public and private facilities is still not screened. Biomedical safety issues and universal precautions are not observed at all health care facilities. In fact, the health care system has to integrate as a core function to increase the level of HIV and AIDS awareness.

4.9.6 Prostitution:

There are about 100000 CSWs in Bangladesh (VHSS, 1993). They are illiterate, divorced or separated women and may be organized in brothels or may be floating. In fact, they are almost ubiquitous in distribution, in urban, semi-urban or rural. STDs are widespread amongst the prostitutes that include syphilis, gonorrhoea, chlamydiosis, trichomoniasis, herpes and cancrroids. Some investigators have reported prevalence of heroin addiction among some of the prostitutes.

4.9.7 Pre-marital sex:

Pre-marital sex is traditionally taboo in Bangladesh for a variety of social, cultural and religious reasons. In the past very little attention has been given to explore the sexual behavior of unmarried adolescents in Bangladesh – but the paradigm shifts towards HIV/AIDS arena make it important to explore any risk associated with their sexual behavior. Several studies indicate that the incidence of pre-marital sex is quite widespread in Bangladesh. A study indicates that the incidence of pre-marital sex is quite widespread in Bangladesh. A study shows that 50% of the youths had the experience of sex before marriage and the incidence of this practice was more in the lower socio-economic class than in the higher (Aziz et al.1985). Another study shows that prevalence of pre-marital sex among the study respondents and 29% of them used condoms.

4.9.8 Extra marital sex:

A survey of long distance Truck Drivers revealed that 60% of STDs investigated had extra marital sex with the prostitutes about twice a month and they didn't know about HIV/AIDS. Extra marital sex was quite common particularly in rural societies. Instances of adultery were also not uncommon especially when the husband was away for a long period (Aziz et al. 1985).

4.9.9 Adolescents sex:

Increasing risk behavior trends are also noticed among adolescents who include engaging in sex, suffering from STIs, having sex with sex workers, in addition to having limited knowledge regarding HIV/AIDS and limited access to reproductive health services. Furthermore, adolescents are involved in sex trade, taking drug, and migrating to other countries where they are exposed to risky situations. In the fourth round HIV surveillance, more than 55% of the STI patients were below 24 years. According to BDHS 1999-2000, more than half of the male adolescents work in the urban areas was rural migrants, and one of the main complaints these adolescents had was the various kinds of abuse they had.

4.9.10 Individual Drug Users:

Exact prevalence of drug users is not known. Various studies carried out so far do point about the existence of drug addiction, mention about the substance abuse but remain curiously silent about the method of their use. Findings, however, indicate that heroin addiction is predominant one and it is generally believed the main method of use is by inhalation. The other popular drug of abuse is 'phensedyl' although banned in Bangladesh. Bangladesh being one of the conduits of the 'Golden Triangle' and 'golden crescent' heroin is quite easily available and it is feared that the present day inhalers will be converted to injectors.

Conclusion:

This chapter focuses on the socio-cultural factors in the causation of STDs/STIs and HIV/AIDS. The people who are infected with STDs/STIs have a possibility to be infected with HIV/AIDS. Lacks of carefulness, illiteracy, poverty, unprotected sex, injecting drug use etc. are responsible for STDs/STIs. The number of HIV/AIDS infected people in Bangladesh is still unknown. Awareness raising is a must for controlling the spread of HIV/AIDS. As it is one of our health problems, the government should take proper steps to control the spread HIV/AIDS and STDs/STIs.

Chapter-Six:

Review of literature:

Introduction:

This chapter reviews the existing literature on the subjects of the study. It is mainly based the secondary sources which include books, journals, documents, articles, e-journal, previous theses etc. It is one of the bases of any research. Without reviewing the existing literature, it is impossible to conduct a research. It makes the research highly enriched. It mainly makes the research informative. It is provides the guidelines of research. So, highest efforts have been given in reviewing the literature to conduct the research.

6.1 Cultural factors in the epidemiology of disease:

Cultural factors can be causal, contributory or protective in their relation to ill-health. The socio-cultural factors that can be responsible for disease are described below.

Economic Situation:

This includes whether wealth is evenly distributed throughout the society; whether the sample group are poor, or wealthy, relative to other members of society; whether income is sufficient for adequate housing, nutrition, and clothing; the cultural values associated with wealth, poverty, employment and unemployment; and whether the basic economic unit (of earning, accumulating and sharing wealth) is the individual, the family or a larger collectivity.

Family structure:

This includes whether nuclear, extended, joint or one-parent families are the rule; the degree of interaction, cohesion, and mutual support among family members; whether the emphasis is on familial rather than on individual achievements; and whether responsibility for child-rearing, the provision of food and care of the elderly, sick or dying is shared among family members.

Gender roles:

This includes the division of labour between the sexes, especially who works, who remains at home, who prepares the food, and who cares for the children; the social rights, obligations and expectations associated with the two gender roles; cultural beliefs about the behavior appropriate to each gender; the threshold of consultation with a doctor, of each of the genders; and the degree of 'medicalization' of the female life-cycle.

Marriage patterns:

This includes whether monogamy, polygamy or polyandry are encouraged; whether the levirate or sororate are practiced; and whether marriage is endogamous (where individuals must marry within their family, kin-group, clan or tribe) or exogamous (where they must choose a partner outside these groups). In the case of endogamy, there is a greater likelihood of the 'pooling' of recessive genes, with a higher incidence of such inherited disease as haemophilia, thalassaemia major, cystic fibrosis and Tay-Sachs disease.

Sexual behavior:

This includes whether promiscuity, pre or extra marital sexual relation are encouraged or forbidden; whether these sexual norms apply to men or women, or to both; whether special sexual norms (such as celibacy, or promiscuity) are applied to restricted groups within the society (such as nuns or prostitutes); whether resource to prostitutes are socially acceptable, or not; whether homosexuality, both male and female, is tolerated or forbidden; whether certain sexual practices (such as anal intercourse) are regarded as acceptable, or not; and whether there are taboos on sexual intercourse during pregnancy, menstruation, lactation or puerperium.

Contraceptive patterns:

This includes cultural attitudes towards contraception and abortion. A taboo on both of these enlarges family size, and in some cases may have a negative effect on maternal health. Certain forms of contraception, or abortion, may also be dangerous to maternal health. Also, attitudes to the use of condoms may influence the spread of sexually transmitted diseases, as well as hepatitis B and AIDS.

Population policy:

This includes the cultural beliefs about the optimal size of the family and the gender of its children- the incidence of infanticide and illegal and self-induced abortion may be related to these beliefs. Wagley describes a Brazilian Indian tribe, the tenetehera, who believe a woman should have no more than three children, and that these should not be all of the same sex. If a woman with two daughters gives birth to a third, then it is killed. Over time, such beliefs can affect the size and compositions of the local community.

Pregnancy and childbirth practices:

This includes changes in diet, dress or behavior during pregnancy; the techniques used in childbirth, and the nature of birth attendants; the position of the mother during labour, care of the umbilical cord (in some cultures, dung is applied as a dressing to the newly cut umbilical cord, thus increasing the risk of neonatal tetanus); customs related to the puerperium, such as social isolation or the observance of the special taboos; and whether breast or artificial infant foods (such as powdered milk) are preferred.

Child rearing practices:

This includes the emotional climate of child-rearing, whether permissive or authoritarian; the degree of competitiveness encouraged among children (which may be related to mental illness, suicide attempts and development of the 'Type A' coronary prone behavior pattern in later life) ; the degree of physical or emotional abuse regarded as normal by the society; and initiation rituals carried out after birth, and at puberty (such as circumcision and scarification).

Body image alteration:

This includes culturally sanctioned bodily mutilations or alterations such as male or female circumcision, scarification, tattooing, ear and lip-piercing, foot binding and forms of cosmetic surgery (like augmentation mammoplasty operations). Also cultural values supporting, or discouraging, certain body shapes, such as slimness, tallness or obesity, especially among women.

Diet:

This includes how food is prepared, stored and preserved; the utensils used in cooking storing food routinely contains contaminants (such as aflatoxins); whether food is symbolically classified into 'food' and 'non-food' 'sacred or 'profane' food or 'hot' and 'cold', irrespective of nutritional value; whether vegetarianism or meat-eating is the rule; whether special diet are followed during pregnancy, lactation, menstruation and ill-health; whether dietary fads and fashions are common; and the use of western food stuffs- with high salt, high fat, and refined carbohydrate levels- in non-western communities, as a sign of 'modernization'.

Dress:

This includes cultural prescriptions about the forms of dress appropriate for men and women, and for special occasions; fashions of dress, such as tight dresses or corsets, high-heeled or 'platform heeled' shoes- which may relate to the incidence of certain diseases or injuries; and body adornments, such as cosmetics, jewellery, perfume and hair dyes which may cause skin diseases. Long dresses which covers much of the body may predispose to certain conditions: for example the under woods relates to long dress and veil worn by women in Yemen as well as their confinements to the 'harem', to their increased rates of osteomalacia, tuberculosis, and anemia. In the UK lack of sunlight combined with a vegetarian diet, confinement to home and long dresses are believed to contribute to high rates of osteomalacia in Asian females.

Personal hygiene:

This includes whether personal hygiene is neglected or encouraged; whether, and how often, hair is washed or cut; how often clothing is changed; whether rituals of washing and purification are carried out on a regular basis; and whether bathing arrangements are private or communal.

Housing arrangements:

This include the construction, siting and internal division of living space is occupied by members of the same family, clan or tribe; the number of occupants per room, house or hut (which may influence the spread of infectious diseases); and how the living space is heated or cooled, in different seasons of the year.

Sanitation arrangements:

This specially concern the modes of disposal of human wastes; who carries out he disposal; whether they are routinely buried or not; and whether they are disposed of near residences, food stemsupplies, bathing areas or water sources.

Occupations:

This includes whether men and women follow similar or different occupations; whether certain occupations are reserved for particular individuals, families or groups within the society –as in the traditional caste system in India, or the former apartheid in South Africa; whether certain occupations have a higher prestige and get higher rewards in some societies (such as the ‘Type A executive in western societies); the use of certain techniques, such as traditional methods of hunting, fishing, agriculture and mining –which are associated with a high incidence of accidental death, trauma, or infectious diseases; and some modern industrial occupations which are also associated with certain diseases (such as pneumoconiosis in coal miners, bladder cancer in dye workers, silicosis in metal grinders, or mesotheliomas in asbestos workers).

Religion:

This includes whether a religion is characterized by a coherent, reassuring world-view; whether it requires such religious practices fasts, food taboos, ritual immersions, communal feasts, circumcision, self-mutilation or flagellation, fire-walking, or mass pilgrimages,, all of which may be associated with the incidence of certain diseases.

Funerary customs:

This concerns especially how, when and by whom the dead are disposed of; whether the corpse is buried or cremated immediately or displayed in public for some time (which may aid the spread of infectious diseases); and the sites of burial cremation or display of the corpse, and whether they are near to residences, or food or water supplies.

Culturogenic stress:

This includes whether culturogenic stress –and the nocebo effect –is induced, or aggravated, or sustained by the cultures values, goals, hierarchies of prestige, norms, taboos or expectations; whether the fosters ‘workaholism’, or more relaxed attitudes to daily life, and whether there is conflict between the social expectations of one generations of one generation, and those of the next.

Migrant status;

This includes whether the immigration is voluntary (pull), or involuntary (‘push’) –as with refugees; whether migrants have adapted to their new culture in terms of behavior, diet, language and dress; whether they are subject to discrimination or racism or persecution by the host community; whether their familial structure and religious world-view remain intact after migration; and the culture of the host community, and its attitude to migrant populations.

Seasonal travel:

This includes regular, seasonal patterns of mass migration –whether of tourists, pilgrims, nomads or migrant workers. While nomads migrate as a community, tourists and migrant workers often migrate as individuals or in small social units; in both cases absence from community, family and home may sometimes predispose to high rates of alcoholism and /or sexually transmitted diseases (such as AIDS and hepatitis B).

Use of ‘chemical comforters’:

This specially includes cultural values associated with smoking, alcohol, tea, coffee, snuff, prescribed and non-prescribed the use of hallucinogens as sacramental drugs; the use of intravenous ‘hard’ drugs by an addict sub-culture, and the prevalence of needle-sharing among those groups (relevant to the spread of both hepatitis B and AIDS).

Leisure pursuits:

This includes the various forms of sport, recreation and tourism; whether these involve physical exercise or not; whether they are competitive or not; and whether they are associated with the risks of injury or disease.

Domestic animals and birds:

This includes nature and number of pets and domestic livestock; whether they are kept within the home or outside it; and the degree of direct physical contact between individuals and these animals. Various viral illnesses have been linked to domestic pets, such as lymphoreticulosis m (cat-scratch) and psittacosis (parrot fever), and also protozoal diseases such as toxoplasmosis, transmitted by cat faeces.

Self-treatment strategies and lay therapies:

This includes all the treatment used within the popular and folk sectors such as the use of herbal remedies, patent medicines, special diets, bodily mutilations, injections and cupping. Lay healing that takes place in a public ritual, rather than a private consultation, may predispose to the spread of infectious diseases. Certain alternative therapies, such as acupuncture, may be implicated in the spread of hepatitis B, and other infections. It also includes cultural attitudes to medical treatments and preventive strategies: such as antibiotics, oral rehydration therapy and immunizations.

The above lists summarize some of the cultural factors that may be of relevance to epidemiologists. It should be noted, however, that in many cases of diseases, several cultural factors actually coincide –such as economic status, occupations use of ‘chemical comforters’ and dietary preferences –some some of which may be pathogenic to individuals, others protective (Helman, 1984).

6.2 The social construction of medical knowledge:

Underpinning the sociology of health is an argument that scientific knowledge is a social product. The sociology of knowledge was developed in classical sociology by Emile Durkheim. In contemporary sociology of health, this has led to the development of ‘social constructionism’,

which argues that medical knowledge can be explained in social terms, as the product of specific societies. One of the earliest developments of this argument is in the works of Ludwik Fleck, who demonstrated the way in which medical knowledge of disease, of infection and of the body can be shown to be the product of politics, economics and cultural factors. Generally speaking medical sociology has not concerned itself with the knowledge claims of medicine. The characteristics of sociology of health and of the medical history have four presuppositions. They are: first, since medicine and medical knowledge were taken for granted by the sociologists, research tended to focus on the achievements of medicine, institutional developments such as hospitals and clinics, and proposed individualistic explanations of social change. Second, medicine was seen to be the part of the natural sciences and granted an epistemologically privileged position. Thus, its knowledge claims were not open to sociological inquiry in the same way as the other professions. This led to the third proposition, that for medicine to advance it had to distance itself from the social.

6.2.1 The social constructionist theory of medical knowledge:

The social constructionist theory of medical knowledge has several aims. They are: first, to demonstrate that medical knowledge parallels other forms of knowledge, through either analogy or isomorphism, and thus to show the social nature of medical thought; second, to introduce the contextual elements that influence the development of medical thought and, by emphasizing the relativistic implications of both historical and anthropological research into medicine, highlight its contextual qualities; third, to examine medicine as social practice and ask the most general questions of how medical knowledge comes to be constituted as an abstract entity, and the implications of this for examining the process where the process whereby medical concepts are transferred into social life (Wright and Treacher, 1982).

6.2.2 Medical and dental knowledge as socially located:

Dussault and Sheiham (1982) argue that the acceptance by British dentists of Hunter's theory of oral sepsis at the beginning of 20th century –that bad teeth were the source of all other bodily ailments –occurred within a social and political context rather than one in which 'science' was at work. The professional dental bodies were weak, had difficulty attracting members and publicly recognized. At the same time, in the broader social context, there was a growing awareness of

the need for a fit population if national efficiency was to be achieved. Dental sepsis offered a focus for the profession and leverage on the state, for a profession in pursuit of an occupational monopoly. The theory of oral sepsis improved the self-image of the profession, and linked the health of the nation to qualified and registered practitioners. The impact of the constructionist approach can be examined under the following headings: first, it problematizes reality, particularly the claim that we understand the nature through an objective natural science. Second, it demonstrates how scientific medical knowledge mediates social relations. Third, it shows how the technical realm of medical practice is not neutral with respect to social processes.

6.2.3 Making reality problematic: the problem of medical model of disease:

The most important of this argument is found to be in the sociology of disease. Within the medical model, disease is presented as a fact within the context of a natural science of health. The biological determinism holds that disease and manifestations of it are recognizable by a natural science methodology. This approach can vary, with disease being defined as any entity or condition that deviates from the norm of the species, thus placing the organism at a biological disadvantage. The most popular contemporary analyses of 'biological disadvantage' are socio-biological accounts of the lowering of inclusive fitness. But this premise leads those in this position to argue for absurdities from within their own framework. For example, the concept of inclusive fitness is both too broad and too narrow when it comes to defining disease. It is too narrow insofar as any 'disease' such as an infection which doesn't affect genetic fitness, is not regarded as a disease. The second problem with such approaches is with the concept of normality.

6.2.4 Diseases change independent of their biology: the case of tuberculosis:

Attempts like these to distinguish diseases from social circumstances lead to other problems. Thus, Bollet is taken aback by the fact that tuberculosis steadily after 1855 in the UK; that is to say prior to the discovery of the tubercule bacillus. By attempting to explain diseases as a biological phenomenon, Bollet is led to the puzzling conclusion that many changes have occurred in the nature, frequency and distribution of major diseases, beyond those which can be attributed to improved medical understanding and use of diagnostic terms (Bollet, 1981). As Rosenberg has summarized it : 'Disease doesn't exist as a social phenomena until it is somehow

perceived as existing' (Rosenberg, 1989). Sociologically, then, we can circumscribe the problems of a positive medical theory by suggesting that the category of disease will come into play in those situations in which the boundary between 'nature and 'culture' is problematic; and where agency and structure are contested issues.

6.2.5 Social aspects of diseases –the critique of medical model:

The 1970s and 1980s saw the development of a new confidence –the third phase of third phase of the relationship between medicine and sociology –among sociologists working in the area of health and illness. Rather than taking for granted the medical model, they started to question it. The medical model explained disease and illness as the outcome of the invasion of a germ or virus into the individual's body. The cure was the administration of drugs or the application of technologically based treatments (Engel, 1981). That individuals become sick because of the invasion of a germ or virus, and could be cured by the application of medically prescribed regimens, overlooked the fact that individuals also lived in social groups that may have had as much to do with their illness and diseases as germs or viruses. It is quite possible to be infected with germs or viruses. Indeed, a key aspect of the sociology of health is to go further and carry out research that shows that it is your social characteristics that actually play a predominant role in determining your sickness and health status. Your occupation is clearly related to your health. The lower is your occupation on the British General's scale, the poorer your overall standards of health, and the shorter your lifespan. Similar correlations have been established in relation to your social position as a man or woman, that is to say, your gender. The generation you belong to also appears to play a large part in your health, as does your marital status (Macintyre, 1986). Sociologists are interested in finding that diseases and feelings of sickness are far from being determined by some underlying biological reality. Further, they are interested in exploring the relationship between social conditions as either cause or facilitators of disease.

6.2.6 Social factors shaping medical practice:

Sociologists demonstrate the social processes that underlie the feeling of being sick, the diagnoses of being diseased, and the treatment of those who are held to be diseased. Sociologists argue that germs or viruses may be necessary for a disease to occur, but they not sufficient in themselves. The social environment comes from between the germs and the individual, and it is

responsible for whether or not a disease develops (Twaddle, 1982). Following the work of social historians, sociologists demonstrated that the prevailing social conditions had to be right before a germ developed into a disease. By corollary, they argued that good social environments –and not more medicine –would produce healthier populations (white, 2009).

6.3 Lay perceptions of health, illness and disease:

Studies of the interpretation of health, illness and disease in western culture have developed two approaches. First, a traditional approach explores the provision and uptake of services within the biomedical framework. The second approach is a more interpretative exploration of the health and illness experiences of the individuals in society. Within this second approach, it is important to understand how people make senses of their well-being, disturbance or sickness. The decision to seek professional care, for example, may be only one of a range of alternatives available to people when unwell. Friedson (1970b) has suggested lay health beliefs, and perceptions of illness and disease, are, at least in part, the product of medical knowledge. Thus, in a study of middle-class French people, the perceived causes of illness and diseases were found to be variations of the ideas contained within medical theories (Herzlich, 1973). Stacey has argued that any common ground between lay and professional understanding is not because lay people have internalized the medical model, more that they both draw on common cultural understanding (Stacey, 1988: 143). Writers such as Wendy Stainton Rogers (1991) have challenged the dominant view held by many health professionals, of the superiority of biomedical knowledge, and therefore the legitimacy of its primacy. She outlines the ways in which the dominance of biomedical approach has often led to the discontinuing of lay knowledge which may sometimes be seen as a watered-down version of medical knowledge old wives' tale, superstition or quackery. Thus the complexity of people's experience, she argues, can be seen to constitute alternative, rather than subordinate meanings. She interprets eight ways in which people interpret and account for their experiences:

1. The 'body as a machine' closely associated with the biomedical model where disease is seen as an objective phenomenon with biomedicine as appropriate treatment.
2. The 'body under siege' where the body as though under threat of attack from germs and diseases, or through the stress of modern living reaching the body through the mind.

3. The 'inequality of access' account, recognizing the value of modern medicine, but suggesting that unfair allocation goes against those who need such services most.
4. The 'cultural critique' of medicine, highlighting a 'post-modern' approach where medical knowledge is seen as a social construct and dominant ideology.
5. The 'health promotion' account, where both collective and personal responsibility for health are recognized.
6. 'Robust individualism', where freedom of choice is considered paramount, despite the health effects of particular health behaviours, for example smoking.
7. The 'power of God', where good health is seen to be derived from spiritual well-being.
8. The 'willpower' account that emphasizes individual responsibility to maintain good health (Moon and Gillespie).

6.4 Types of diseases that we often experience:

There are mainly three types of diseases. They are:

a. Communicable disease:

Exposure is an important variable in the analysis of communicable diseases such as diphtheria, dysentery, measles, small pox, typhoid and gonorrhoea. Most such illnesses are caused by a variety of micro-organisms that become parasites of human host. A primary method of prevention is to break the chain of transmission, that is, to prevent the carrier from reaching and infecting a new host. Sanitation and immunization represent the first steps in reducing the danger of the contact between a disease agent and a non-infected host. Once a host is exposed to the disease bacteria, however, secondary prevention is provided by drugs, particularly antibiotics, to arrest the growth or to actually destroy the disease germs already at work in the body. Typically, a communicable disease has an incubation period between the time of infection and the time when the first symptoms of the illness appear. If the infected person has a strong internal copying ability or an immunity, the infection may be contained by the body's defenses. If not and if the body has gone through the automatic tissue responses to the disease germ, the individual will begin to exhibit manifest symptoms at the end of the incubation period. Eventually, the body may repair itself, with or without medical intervention, or the patient may die. Fortunately, most communicable diseases, such as the common cold, are self-limiting in that

their effects don't pass beyond a relatively short period of time, which is termed as disease cycle. Of course there are some negative expectations such as streptococcal infections, where the disease can have after effects that bring about permanent structural damage.

b. Chronic diseases:

Chronic diseases include arthritis, cancer, heart disease, rheumatic fever, syphilis, tuberculosis, and others. Most of them are not contagious and their causes can't be traced to a single agent as is the in communicable diseases. For example, many chronic diseases involve the degeneration of tissue and the dysfunctions of vital organs. In some cases, however, those conditions are simply due to processes of senescence. Unlike communicable diseases, the cycle for chronic diseases is not self-limiting, and they are insidiously characterized by chronicity. Even worse, they progress by the time the individuals feel ill. For that reason, rarely fully recovers from a chronic ailment. In contrast to communicable maladies, chronic diseases don't seem to have simple or singular origins, and that characteristic is the basis for the theory of multiple causation for chronic diseases. This theory has not only led researchers to investigate social variables (particularly the factor of social stress) and physical variables, but their interactions have been examined as well.

c. Mental diseases:

There is much less consensus on the classification of mental disorders than on the nomenclature of the physical diseases. Mental symptoms are frequently subjective in nature and depend on the socio-cultural norms. In order to reduce unreliability due to varying diagnostic criteria used by clinicians, the American Psychiatric Association set forth the standard diagnostic nomenclature – the diagnostic and Statistical Manual of Mental Disorders –the first edition being appeared in 1952, the second edition in 1968, and the third edition currently being drafted. Some of the mental disorders are: mental retardation, organic brain syndromes, psychoses, neuroses, and transient situational disturbances (Maykovich, 1980).

6.5 Stress and disease:

The general principles illuminated by Cannon were not applied by him to the creation of a theory of disease, although many of his observations had to do with pathological responses. The first investigator to call attention to the fact that certain diseases occur primarily or exclusively among highly civilized peoples was George Cricke, who demonstrated repeatedly that many of these diseases could be terminated by interrupting the action of the glands intimately connected with emotional changes. An organism seldom responds directly to separate stimuli. It may fail to respond repeatedly to the same stimuli or to assorted stimuli. Then in the presence of a new combination, arrangement, or sequence of stimuli, a new stimulus pattern, it may respond overwhelmingly. It is in the exhausted condition that the organism makes unusually inaccurate responses, and if these are profound they are recognizable as maladaptations: excessive reactions, inadequate reactions, or inappropriate reactions. The probability of maladjustive response varies according to the number, kind, and duration of preceding stress. It varies according to age, work habits, and current environmental conditions of the individual. It also varies from person to person and has varying probability within any one of the enumerated influences. There is no essential distinction among the various stresses resulting from overwork, worry, poisonous fumes, germs or economic insecurity, except that the type of disease which may eventuate is strongly influenced by whichever predominates at that particular point where malfunctioning makes necessary a decisive change in the "frozen function" known as organic structure. In men the stresses are characteristically emotional and symbolic, as man becomes more dependent upon culture than upon the physical environment, his diseases are more frequently of the kind which typifies repeated tension and vigilance. Some of these are gastric ulcer, rheumatic fever, allergies, arthritis, and high blood pressure. These have many symptoms and many etiologic factors in common, and one organ or another gives the appearance of being the seat of trouble only because it is impossible that they should all be equally prepared or unprepared at the moment of systematic crisis. The chief contribution of the stress theory is the manner in which it combines environmental threats, errors in recognizing or meeting those threats (Hawkins, 1958).

6.6 Social influence on mental disorders:

One general approach to the social development of disordered behavior referred to the sequences of social influences that have contributed to the disordered behavior of the afflicted person. This is distinct from the physical maturational approach to disordered behavior, which would emphasize the influence of organic changes and dysfunctions on social behavior, and from the psychogenic position, which claims that disordered behavior is based upon experiences in early formative years and that subsequent stresses tend to exacerbate or manifest a basically predisposed condition of the personality. Experiences in early life are significant in personality formation and frequently are determinants of severe mental disorders. The stresses encountered in subsequent experiences tend to sustain a continuity of personal strain which can eventuate into mild or severe mental disorders. Formative influences in early life or even constitutional deficits may contribute to the predisposition of the severe disorders. But many disorders can arise from the combined sequence of stressful influences in early and later life, and some disorders can emerge from stresses in adolescence and later, despite a seemingly stable childhood. The readings concern the kinds of experiences disordered persons had, prior to their breakdowns, in successive groups such as the family, peer group, school, work, marriage, and old age. In the characterization of the familial influences on the disordered behaviours, we include the analyses dealing with patterns of family organizations and the modes of parent child relations, especially mother-child relations, which may affect disordered behavior generally and schizophrenia particularly. Since schizophrenia has been investigated intensively and offers the most thorough and consistent information, several papers deal with this psychotic condition. But the kinds of pathological influences that contribute to schizophrenia are evident to some measure in other disorders. At the extreme level, the neurotogenic mother seemingly was a highly tentative person pervaded by guilt and worry, one who required continual reassurance. Persons in the lower classes encounter basic stress because of job dissatisfaction and the inability to earn a living. But persons in the middle classes experience intense stress when economic mobility is blocked. Lack of job satisfaction and the discrepancy between the types of job one has and the jobs one wants can also contribute to anxiety and frustration for these people. Furthermore, persons in the different classes define and react differently to disordered behavior (Weinberg, 1997).

6.7 Social influences on diseases:

Just as disease influences society, so social factors affect the manifestation of disease. Disease doesn't strike at random; there are always reasons why one person or group rather than another falls victim, even if those reasons are not immediately apparent. Genetic and constitutional factors play an important part in the genesis of disease; of course, they do so in interaction with social and cultural factors. For example, until a few decades ago the Fore, a horticultural tribe of New Guinea, suffered from Kuru, a fatal viral disease of the brain. At first medical and social scientists couldn't understand why the Fore seemed so susceptible to this exceedingly rare disease but they eventually found the reason. Kuru, it turned out, was transmitted by an unusual cultural practice of the tribe; as a mark of their deep respect for their dead kins-folk, they ate them. In the course of cracking open skulls and preparing and eating the contents, they exposed themselves to the virus (Bingham, 1981). Like the Force, every society has typical patterns of health and disease closely linked to its cultural practices. The United States has one of the highest rates of heart disease in the world, a problem that arises in part from a general lack of exercise combined with high consumptions of animal fats in dairy products and red meat. Japan, in contrast, has much lower rates of heart disease, in part because of strong dietary preferences for fishes over fatty meats. The young, for example, are more likely to suffer from acute diseases than the old, who are more prone to chronic ailments. Whites are generally healthier than the blacks. Women tend to live longer than men. Single people are more likely to suffer from depression than married people. The higher ones social class, the better one's health is likely to be. In short, human health is shaped by interactions between the natural and social environments (Robertson, 1987).

Conclusion:

The existing literature has been reviewed in this chapter on the subject of the study. The literature supports the influence of socio-cultural factors in the causation of some diseases in Bangladesh. Health is the production of interaction between natural and social environment. The existing literature suggests that social class, occupation, diet, exercise, housing, cultural practices etc. have impact on the disease causation. As reviewing of literature is the basis of a research, possible efforts have been given to review it.

Chapter-Seven

Theoretical and conceptual framework:

Introduction:

Theoretical framework is an important part of a research whether qualitative or quantitative. In this study, some particular theories have been adopted. The theories that have been adopted are quite relevant to this research. The theories that have been adopted are Health Belief Model (HBM), The Stress Theory, The Epidemiological Model, The Exposure Copying model, The knowledge, Attitude and Practice (KAP) Model and Explanatory Model. The theories are presented in details below.

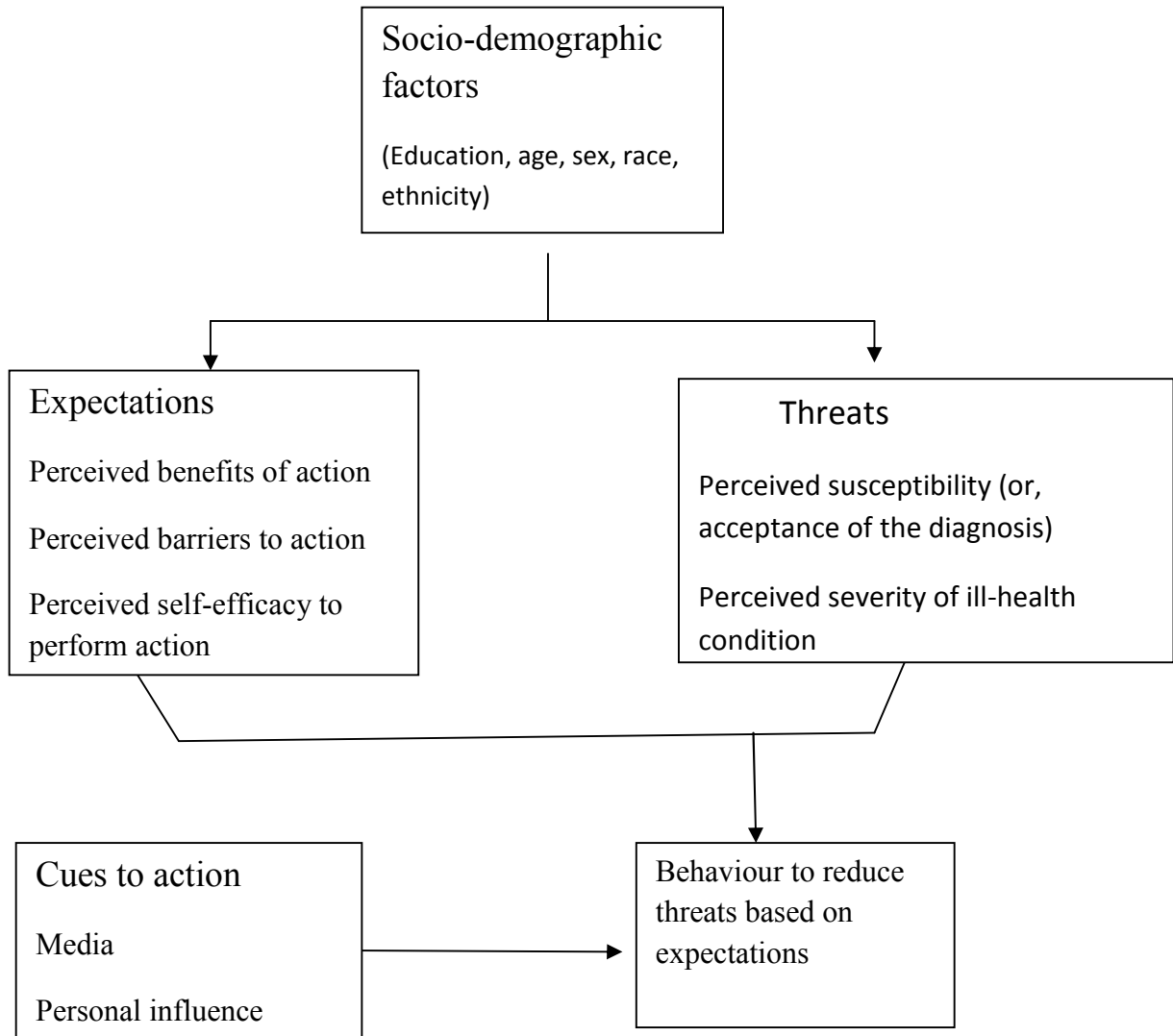
7.1.1 Health Belief Model (HBM):

The Health Belief Model (HBM) can be applied in this study because it suggests that whether an individual will take care of his health and engage in particular health behavior or not is determined by his or her age, accessibility of services, general satisfaction with services, clinical practice style and previous experience. It emphasizes that inappropriate or unhealthy practices are responsible for diseases. According to HBM, psychological factors, cultural values, individual's cognition etc. are crucial in affecting personal behavior. The Health Belief Model (HBM) is one of the oldest social cognition models. In the 1950s, the U.S. public health service developed the model in order to explain people's participation in health screenings (Rosenstock, 1966). The HBM aims to predict whether individuals choose to engage in a healthy action in order to prevent the chances of diseases or the health threats posed by inappropriate or unhealthy practices. According to HBM, there are two main types of beliefs that influence people to take appropriate preventive action. These include beliefs related to readiness to take action and beliefs related to modifying factors that facilitate or inhibit action. The variables that are used to measure readiness to take action are perceived susceptibility to the illness or any health threats and the perceived severity of the illness. Perceived benefits (i. e. the perceived advantages to take action) and perceived barriers (i. e. the perceived costs or constraints of the specific action) are the main modifying variables (Rosenstock, 1990; Norman and Brain, 2005). According to the HBM, when individuals are faced with a potential threat to their health they consider their

susceptibility to, and the severity of, the health threat. According to HBM, once an individual perceives a threat to his/her health and is simultaneously cued to action, his/ perceived benefits outweigh his/her perceived threats then the individual is most likely to undertake the recommended preventive health action. Thus, as Rosenstock notes in describing this model, the combined levels of susceptibility and severity provided the energy or force to act the perception of benefits (less barriers) provide a preferred path of action (Rosenstock, 1966). For instances, when applied to parents' immunization behavior, the HBM suggests that simply having knowledge and awareness about infectious disease will not necessarily result in increased visits to a hospital for vaccinations. Instead, the model specifies four related elements that must be present for knowledge about disease to be translated into preventive action.

Although the HBM has been used extensively in studies of predicting health behaviours, critiques of the model have pointed out a variety of limitations. According to them, there has been a lack of uniformity in testing the model; specially in the way variables are operationalized. Tools used to measure HBM components have not been refined or standardized. In addition, the model doesn't numerical coefficients to the concepts of susceptibility, severity, and barriers nor does it delineated the specific nature of the relationships among the variables (Masuda, 2002).

Figure: 7.1 A schematic outline of the Health belief Model proposed by Rosenstock (1990)



Most studies, however, have treated the model as additive and have tested only direct relationships between the variables and the health related behavior of interest. Another problem with the HBM is lack of consistency in the use and testing of the model. That is, not all variables have been included all studies. For example, identifying and measuring the concept of cues to action has been problematic. Cues can be diverse in nature, may occur in a transient manner, and an individual may or may not consciously remember events that elicit action. In specific studies, the nature and importance of cues is more difficult to evaluate because research participants are questioned about behaviours performed in the past. However, this model totally ignore the socio-structural variables that are also crucial in affecting personal behavior like sexual risks,

immunization behavior dieting, waste scavengers behavior and risk practices while performing occupational practices etc (Masuda, 2002). Because of its too much reliance on psychological factors there has been trenchant criticism of HBM. Rather than depending on cultural values, myths, assumptions and survivability factors in which most risky behavior are embedded the HBM primarily depends on individual's cognition.

7.1.2 Stress Theory:

Stress theory can be applied in the analysis of some behavioural and preventable diseases because it is clear that the control of germs doesn't prevent chronic and mental illness Stressful conditions are more responsible in disease causation than virus or bacteria. The concept of stress was introduced as the condition that disturbs interferes with the normal physiological equilibrium of an organism and makes the body vulnerable to disease agents. The stress theory of disease gained prominence because it became clear that the control of germs doesn't prevent chronic and mental illness. Also, the advances in methods of controlling the physical environment have been accompanied by the creation of new hazards in the environment. Some germs, and even insects have grown stronger and more resistant to the use of antibiotics. In the meanwhile new physical hazards, such as air pollution, synthetic food containers, and artificial food colouring, which are suspected of having an adverse effect on humans, have been developed and are in common use. As a result, the distribution of disease agents has been homogeneous in the world. Microbes and other health hazards appear to be ubiquitous in the environment, and they persist in the body without causing obvious harm under ordinary circumstances. Insidiously, they only seem to exert pathological effects when the infected people are under stress, thereby rendering them vulnerable (Dubos, 1965). Attempts to establish a causal link between stress and illness have been made both by experimental and survey methods. Dating back to Seyle's (1956) studies of the effects of stressful stimuli on laboratory animals, there have been hundreds of inventive experiments on human and animal subjects. They demonstrate both the threat and the actual use of either the psychic or stressors produce physiological reactions in vital organs, such as increased acidity in the stomach, which might erode the walls of stomach (Kaplan, 1979). Experiment is helpful in elucidating the relationships between stress and illness, but it lacks the complexity of a natural situation. Thus, health surveys have been supplemented to derive the causal associations between the occurrences of disease and the stress experienced by people in various social settings. One of

the difficulties in validating the stress theory of disease stems from conceptual ambiguity in defining the term stress. Stress has been defined either explicitly or implicitly by different investigators: stress as stimulus, response or mediator (Stock and Howard, 1970).

Stress as stimulus:

The term stress is used by many researchers to refer to stimuli or to stressors such as an electric shock, flood or the loss of the loved ones. The efforts to identify stressors have taken two directions. One is the attempt to locate potential stressors in social structures and processes. On a very general level, society as a whole can be viewed as a stress-inducing environment. On a more specific level, certain subgroups, social institutions, or organizations may be designated as stressors. Thus, racial minority groups, lower social classes, physically demanding or hazardous job, and disorganized families have been identified as potential stressors.

The second source of stress is found in life events. It is assumed that a significant change in life is stressful to individual and is likely to lower the resistance to disease. Stressful life events may affect the individual confounded with other factors. Further, potentially stressful events are not necessarily perceived as stressful by everyone (Kaplan, 1979).

Stress as response:

A second definition of stress is to view it as a response to stimuli. Thus, may take the form of hyperventilation, increased blood pressure, or personality disintegration (Cassell, 1970). Stress is also used to indicate the emotional state accompanying a changing personal or social situation, such as anxiety and frustration (Barrabe and Mehring, 1953). The definition of what constitutes stress response has met theoretical and methodological difficulties. On the physiological level, different autonomic measures such as heart beat and the skin conductance have yielded different results depending on the measures used and the biological constitutions of subjects. To make it worse, there is only a low correlation between subjective reports of stress and physiological stress.

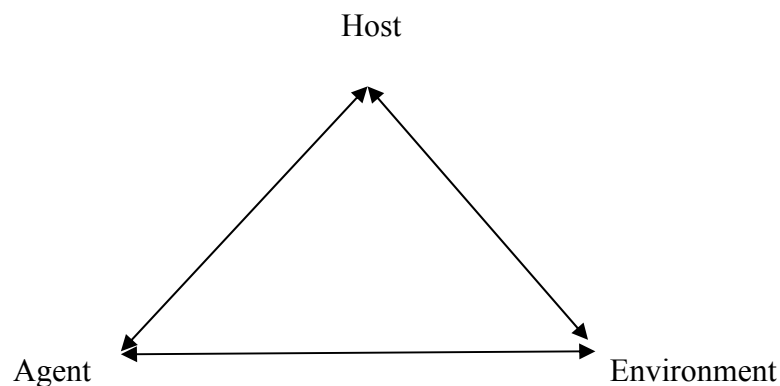
Integration of stress concepts:

One-sided definitions of stress either as stimuli or responses are accompanied by a number of unwarranted assumptions: 1. all difficult situations are stressful, 2. what is perceived as stressful to one will inevitably be stressful to others, 3. Stressful events must lead to pathological consequences. Because of such difficulties, attempts have been made to integrate various concepts of stress. Levine and scotch (1970) conceptualized stress as being both stimulus and response. Stress as stimulus refers to various sources of stress (e.g. family occupation) to which one is exposed. When the individual is unable to cope with a stressful situation, stress as a response results, which may take the form of mental illness.

7.1.3 Epidemiological Model:

Epidemiological Model can be applied in this study because it puts emphasis on the link among three elements in disease causation. They are host, agent and environment. According to this model, not only virus and bacteria are responsible for disease but also host and environment are related to it. It tries to break the link among these elements in treating diseases though it is not possible. The epidemiological model links three elements: the agent, the host and the environment (see figure:). The noxious agent includes biological (bacteria, viruses, fungi, etc.), chemical (chemical dust, gases, etc.), physical (soil, climate, radiation, etc.), nutritional (vitamins, minerals, fats, etc.) and other agents. The environment consists of physical as well as socioeconomic circumstances. The study of the host involves genetic, psychological and sociological traits of humans.

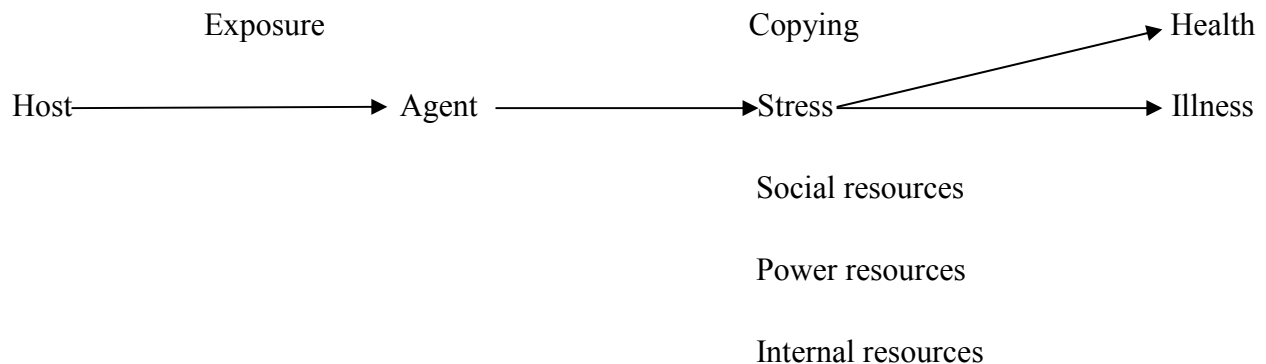
Figure: 7.2 Epidemiological Model



7.4 Exposure-copying Model:

The exposure copying model may be appropriate in this study because it is a combination of both stress theory and epidemiological model. It tries to identify an individual's socially determined degree of exposure to physical hazards. The version of the epidemiological model influenced by the germ theory encourages preventing a host's exposure to an agent (micro organism) by manipulating the environment and by fostering the host's capacity to overpower the agent, such as immunization. The main thrust of the model is breaking the link between the host and the agent. In contrast, stress theory assumes the inevitability of host's exposure to an agent, and it concentrates on examining how the individual copes with the agent (hazards), which is viewed as ubiquitous in the environment. According to this theory, one's coping ability decreases or in other words, one's susceptibility to hazards increases, when one is under stress.

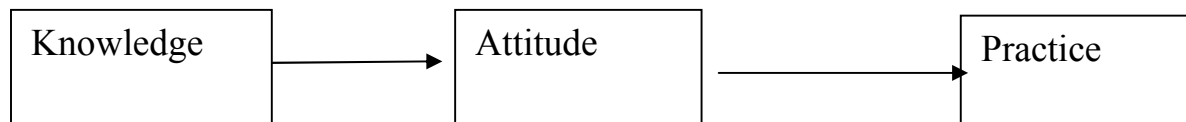
Figure: 7.3 Exposure-copying model:



An alternative model proposed here is exposure-copying model, which incorporates concepts from both epidemiological and stress theories. The physiological implications of exposure variables (e, g. physical environment, agent) in the epidemiological model and the psychological connotation attached to stress to stress theory have been combined. The proposed model consists of (1.) an individual's socially determined degree of exposure to physical hazards, and (2.) his or her socially determined ability to cope with the hazards once exposed.

7.1.5 Knowledge, Attitude and Practice (KAP) Model:

The KAP model can be applied in this study because if a man has knowledge about disease causation, he/she can change his attitude. And by changing attitude one can change his practice. If a man knows that some diseases are caused by lack of consciousness and social environment, he can change his attitudes and tries to change his practices related to health and diseases. The KAP model was popular in developing countries to study human behavior during 1950s to 1960s. To protect human risk behaviour, psychologists used this first. The UCSF Health Project stated that in HIV/STD prevention as in other areas of health and behavior, the knowledge, the attitude-behaviour (KAP) or knowledge attitude-practice continues is often referred to. It is simply a convenient way to organize. The main aspects of knowledge attitudes that must be present before change in behaviour or practice can occur. In other words, the main argument of KAP model is that human behavior is influenced by ascribed knowledge which can change the attitude. As a result the practice can be changed. This can be shown in the following way:



Where,

Knowledge= The capacity to acquire and use information, a mixture to comprehension, experience, discernment and skill.

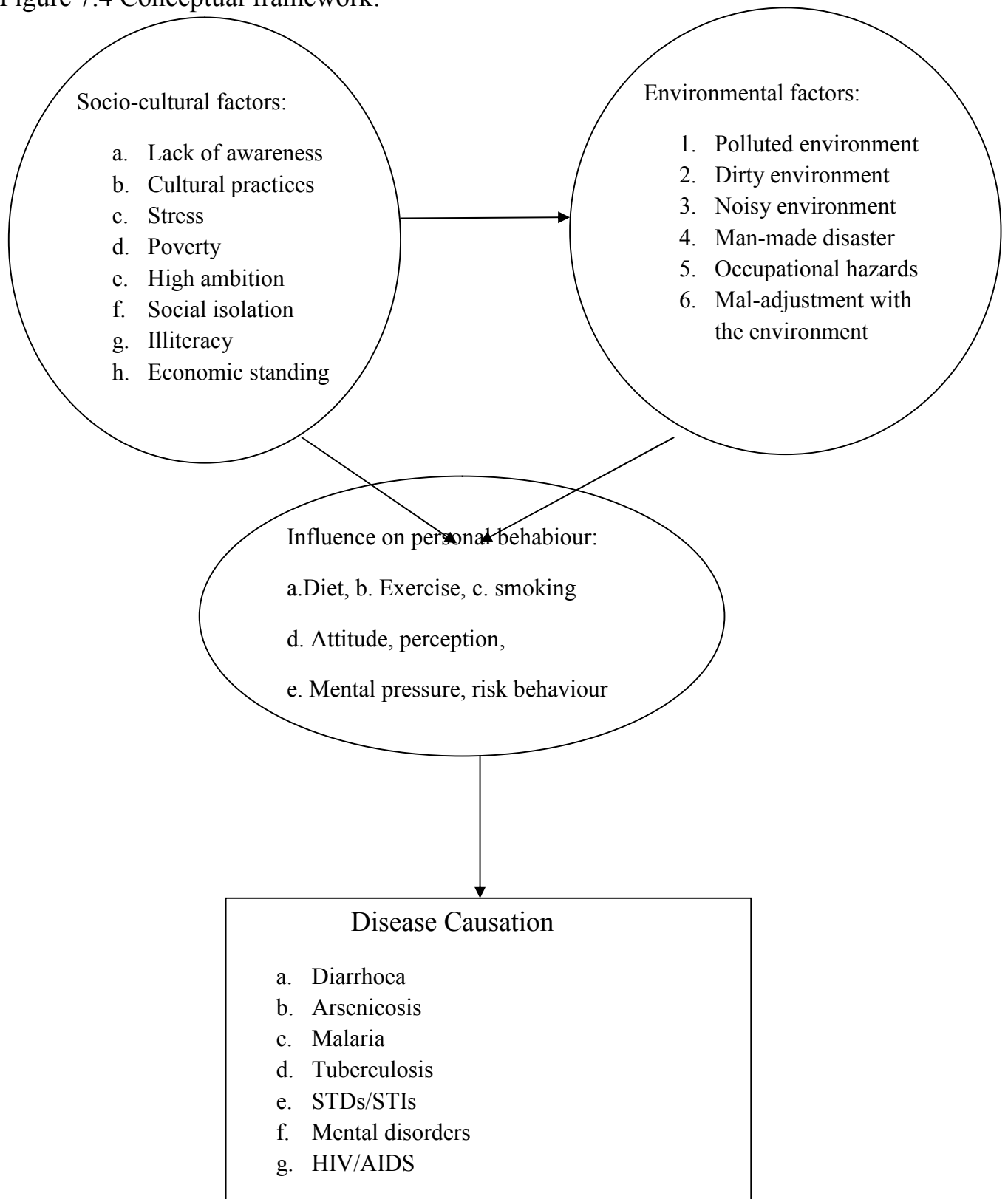
Attitude= The inclinations to reject in a certain pre-dispositions or to organize opinions into coherent and interrelated structures.

Practice= The application of rule and knowledge that leads to action. According to the sociologists, it is not easy to change sexual behavior. They stated that the particular of clients promote the sex workers to risk behaviours. The sociologists argued that the commercial sex workers (CSWs) can't practice on ascribed knowledge. Though they have positive attitude towards knowledge they can't practice to survive. The sociologists identified these factors for these risk practice. These are survival, male domination, economic stability, cultural variation,

religion, education, environment and remoteness of diseases. The sociologists believe that KAP model can be effective in developing countries if it is reshaped by cultural construction. They argued that practice is originated through culture and it is related to individual's own belief, socialization process, rituals, religion etc.

7.2 Conceptual Framework:

Figure 7.4 Conceptual framework:



Conclusion:

As theoretical framework is an important part of any research work, proper emphasis has been given on this issue. The theories selected for the research is related to the topic of the research. Theoretical framework is the foundation of any research. If the theories don't support the hypothesis of the research, it will be valueless. So, possible attempts have been done to select the theories appropriately.

Chapter-Eight:

Methodology of the Study:

Introduction:

Quantitative methodology has been adopted in this study. Primary data were collected by using a semi-structured questionnaire with two open-ended questions. The primary sources of data for this study are survey. This study covers both men and women from Kamrangir char area aged from fifteen to sixty five and above. Data were collected from 110 respondents who are from Kamrangir char area. Most of them are rickshaw pullers and housewives. The title of the research covers whole Bangladesh. But it is not possible to cover whole Bangladesh. So Kamrangir char area has been selected randomly for the study.

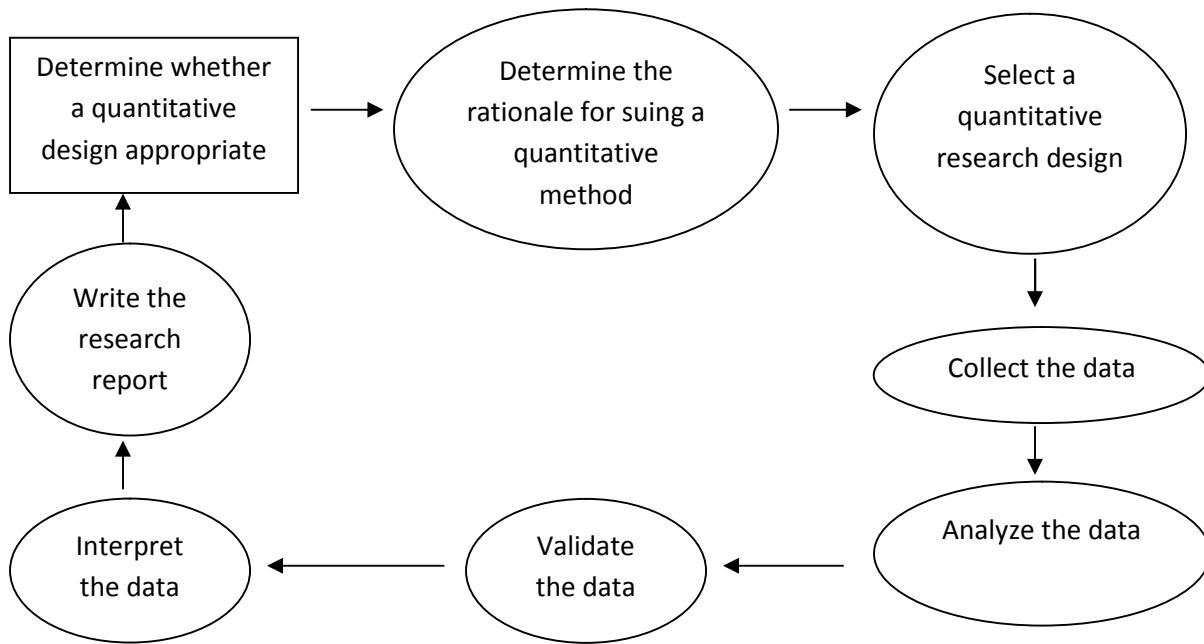
8.1 Rational of the Quantitative Study:

Quantitative methodology has been adopted in this study. It is appropriate in this study. This methodology offers great promise for practising researchers when researcher would like to see clear picture of the study. The main objective of the study is to identify the socio-cultural factors of diseases. It is important to identify the socio-cultural factors like lack of consciousness, social environment, smoking, diet, exercise, economic conditions etc. responsible for the causation of some diseases such as diarrhea, dysentery, malaria, tuberculosis, arsenicosis, STDs/STIs and HIV/AIDS. This understanding is mainly quantitative. A quantitative method is a time-honoured scientific method. It is about prediction, generalizing a sample to a larger group of subjects, and using numbers to prove or disprove hypotheses.

The quantitative approach is based on the assumption that social reality has an objective ontological structure and that individuals are responding agents to this objective, environment (Morgan and Smircich 1980). Quantitative approach involves counting and measuring of events and performing the statistical analysis of a body of numerical data (Smith, 1988). The assumption behind the positivist paradigm is that there is an objective truth existing in the world that there can be measured and explained scientifically. The main concerns of the quantitative paradigm are that measurement is reliable, valid, and generalizable in its clear prediction of cause and effect (Cassell and Symon, 1994). Quantitative approach is based upon formulating

the research hypothesis and verifying them empirically on a specific set of data. Scientific hypotheses are value-free where the researchers have no place in the quantitative approaches. Hypothesis must be proved by mathematical and statistical means. It helps me to overcome limitation of other form of research. It is important to understand that one can easily create more user specific and more complex designs by using quantitative approach. The study followed the eight stages in the quantitative research process, as shown in the following figure.

Figure 8.1 Steps of quantitative methodology:



Researcher believes that he can best answer of research questions through the use of quantitative method in this study. Quantitative approach will offer the best design for the amount and kind of evidence that researchers hope to obtain in this study. The study holds the major method of data collection tool such as questionnaire.

This study used various validity strategies. Data interpretation continues throughout the research study. Remember that interpretation and data validation go hand-in-hand. The study adopts quantitative methodology because of various reasons. The study involves reviewing and analyzing evidence from the respondents such that a study's findings are based on the convergence of that information. The study tries to quantify the variables that are used in the

study. There is a hypothesis in this study. It is necessary to test this hypothesis by quantitative measure. Without quantitative data, it is impossible to test hypothesis.

Advantages of the quantitative approach:

1. Stating the research problem is very specific set of variables (Nachmias and Nachmias, 1992);
2. Clearly and precisely specifying both the independent and dependent variables under investigation;
3. Following firmly the original set of research goals, arriving at more objective conclusions, testing hypothesis, determining the issues of causality;
4. Achieving high levels of reliability of gathered data due to controlled observations mass surveys, or other form of research manipulations (Basely 1970);
5. Eliminating or minimizing subjectivity of judgment (Kealey and Protheroe, 1996);
6. After statistical analysis of the results, a comprehensive answer is reached, and the results can be legitimately discussed and published;
7. quantitative approach also filter our external factors, if properly designed, and so the results gained can be seen as real and unbiased;
8. Quantitative experiments are useful for testing results gained by a series of qualitative experiments, leading to a final answer, and a narrowing down of possible directions for follow up research to take.

8.2 Selection of the Study area:

Kamrangir char area has been selected for the study. The study was conducted among various occupational groups and other people in this area. These occupational groups are rickshaw pullers, day labourers, shop keepers, cobblers, servants and house maid, school teachers, bus drivers etc. The people selected for the study are mainly from Kamrangir char area. They live in a marginal area and have living conditions which are not healthy. Their economic conditions are not high and they have a lack of consciousness about disease causation. They adopt an unhealthy lifestyle responsible for some diseases like diarrhea, malaria, dysentery, tuberculosis etc. Their level of education is not high and some people can only read and write. Lack of consciousness

about food consumption is basically responsible for diarrhea among various occupational groups of Kamrangir char area.

8.3 Source of data:

A quantitative approach was followed in this study to collect primary data. Survey is the main tool of data collection. Data are also collected from both primary and secondary sources. Secondary sources were books, reports, published research studies, newspaper, articles, documents available in the internet and library. Some data have been produced from the analysis of the questionnaire.

8.4 Study Populations:

The target groups for primary sources of information are people of various occupations from Kamrangir char area. My study covers both men and women ranged in age from fifteen to sixty five years old and they are all from Kamrangir char. Most of the people belong to the category of rickshaw pullers. They are mainly from rural areas. Most of them came to Dhaka many years ago. Some of them were born in Kamrangir char and adopted the task of rickshaw pulling. The sampling population of this study belongs to different occupational groups such as rickshaw pullers, day labourers, cobblers, shop keepers, school teachers, servants and house maid, bus drivers, construction workers etc. The people who live in Kamrangir char area and belong to different occupational categories are my study population.

8.5 Study Unit:

Study unit was drawn from the study population keeping in mind the time constraints and feasibility of conducting the research. Each respondent of different categories was a probable study unit of this research project.

8.6 Sample design and sample size:

The study involves non-probability sampling technique to draw the necessary sample from the target population. Though there was a defined target population, the research was not able to carry out a research using probability sampling techniques. Since this is a student research project and the necessary time and budget were not provided with, the researcher considered purposive sampling technique in selecting respondents from various occupational categories. The total number of respondents is 110 and they are selected using purposive sampling method. The respondents are from Kamrangir char area from different occupational groups. For obtaining statistically significant size of the sample, the researcher takes a total of 110 samples from the study areas.

Table 8.1 Sampling design of the study:

Categories of respondents	Number
Rickshaw pullers	45
Day labourers	17
Construction workers	13
cobblers	12
School teachers	7
Bus drivers	10
Servants and house maid	6
Total	110

8.7 Techniques of data collections:

The only data collection technique for this study is survey which is the most widely used data gathering technique in sociology (Neuman, 2006, 273). The reasons behind choosing survey as a data gathering technique in this study are that survey produces quantitative information about the social world and describes features of the social world. It is appropriate for research hypothesis about self-reported beliefs or behaviors. It is particularly strong when the answers respondents give to questions measure variables. In a survey, the researcher can ask about many things at one

time, measure many variables often with multiple indicators and test several hypotheses in a signal survey. To collect data, this survey solely depends on survey questionnaire.

8.8 Data Collection instrument:

Interview has been used as the main data collection instrument for the study. For collecting the necessary information, a semi-structured interview schedule with a series of close-ended and two open-ended questions are used. The interview schedule was printed in English and was made as simple and easy as possible to understand. The questionnaire is SPSS friendly.

The interview schedule is grouped in six sections. The **first section** aims to determine respondents' demographic characteristics and provides information about age, religious affiliation and marital status. **Section B** analyzes the impact of socio-cultural factors in disease causation. It tries to analyze the factors of disease causation such as food intake, garbage disposal, stress, lack of consciousness, safe drinking water, sanitation etc. It tries to identify disease more prevalent in our societies such as diarrhea, dysentery, malaria, tuberculosis, arsenicosis, STDs/STIs and HIV/AIDS. **Section C** provides information about the impact of socially created disease on the patients and the family. It tries to analyze whether they face economic problems, lack of care from others, social isolation and hamper of daily activities when they are sick. It also tries to analyze whether consciousness and physical environment play a vital role in treating socially produced disease. **Section D** tries to analyze the role of socio-cultural factors and virus and bacteria in disease causation. It deals with the strategies to prevent socially created diseases such as reducing stress, stop smoking, creating safe environment, trying to improve economic conditions and enhancing social relationship. It tries to identify cultural practices responsible for HIV/AIDS or STDs/STIs. The practices are unwillingness to use condoms, unsafe blood transfusion, injecting drug, commercial sex working and lack of religious values. It tries to analyze the factors of arsenic contamination such as lack of safe source of water, lack of consciousness, tendency to boil arsenic contaminated water, lack of identification (by red or green colour). It also tries to analyze the causes responsible for malaria in Kamrangir char such as lack of awareness, dirty environment, inability to buy mosquito net and the lack of information. It tries to analyze the mental disorders which they often face such as depression, schizophrenia, anxiety, insomnia, feeling of isolation and electro light imbalance. It also tries to analyze whether food consumption, unhygienic food, damp & dirty environment, housing and

unsafe drinking water are responsible for diarrhea or not. **Section E** analyzes the relationship between stressful condition and disease causation. It tries to analyze the factors responsible for stress such as social structure/process, important change in life, high ambition, economic backwardness etc. Finally, **last section** is designed to analyze the relationship between level of education and consciousness about disease causation. It basically tries to analyze the factors that can help to raise consciousness about disease causation such as campaign through media, education, community leader's role and consciousness raising through facebook, twitter etc.

8.9 Presenting and finalizing questionnaire:

Before finalizing the interview schedule, it was pretested with a small set of respondents similar to those in the final survey. However, as per the rule, they were not included in the final survey. In this study, researcher designed the draft interview schedule and also completed pre-testing. Based on pre-testing findings, the study checked the translation and integrity of the questionnaire. Finally, the interview schedule has been finalized and showed it to the supervisor for final approval. Moreover, the following issues were closely examined:

- a. The language necessary to address the sensitive issues.
- b. The sequencing of questions
- c. The techniques or options for documenting responses.
- d. Upon completing the pre-test, the necessary revisions, corrections and modifications were made in the questionnaire to make final for the actual data collection.

8.10 Data Collections:

The study is a survey. Survey was the main data collections tools. An interview schedule was put in place to collect information on perspective of individual participants and also collect demographic data about the participants. A survey instrument was developed to facilitate data collection from participants. The survey included both structured (or closed) questions with pre-determined responses and several open-ended questions to give respondents the opportunity to elaborate on their views and motives. This tool was employed to analyze the impact of socio-cultural factors in disease causation. This study is carried out in Kamrangir char area.

8.11 Data Processing:

After completing data collections, it was processed, and presented in tables and graphs to facilitate data analysis and interpretations. The interpretation of primary data was carried out keeping in mind the overall perspective of research study and by comparing and correcting, whenever needed. Since the collected data in itself does not contain meaning, the act of data processing and analysis has the objective of bringing meaning to the data and display it to the audience. Firstly, the data have been edited and then have been coded and tabulated in SPSS. Editing was undertaken to ensure that the data were accurate, consistent, with other facts gathered, uniformly entered and as completed as possible. Though most of the questions in questionnaire were close-ended, the whole questionnaire was left for appropriate post-coding. After the completion of editing and coding, the filled in interview schedule has been sent to the computer with tabulation plan for processing.

8.12 Data Analysis:

This section is mainly concerned with the presentation of the analysis of data collected by an interview schedule on the impact of socio-cultural factors in disease causation. The short answer questions were coded and transferred to SPSS for analysis using descriptive statistics. Responses to the open-ended questions were analyzed qualitatively by looking for the emerging themes and coding each respondents based on those themes. The data collected revealed that the age of respondents ranged 15 to 65 years of age. Both from univariate and bivariate cross tabulation tables of percentage distributions were developed in order to analyze the data. The socio-economic and demographic variables along with some other variables were presented in bivariate tables.

8.13 Reliability and Validity:

Reliability and validity are central issues in all scientific measurement. Both are concerned how concrete measures or indicators are developed for constructs. Reliability tells us about an indicator's dependability and consistency. Validity tells us whether an indicator actually captures the meaning of the construct in which we are interested. Perfect validity and reliability

are virtually impossible to achieve (Neuman, 1997:128). Validity and reliability of the study has strictly been maintained. Special attention was given on the validity and reliability.

8.14 Population validity:

It is important to recognize both the limitations and the value of the survey results. Population validity refers to the extent to which the sample gives an accurate representation of the population that it represents (Sapsford, 1999). Because of the response rate, the survey results can't be seen as representative of the whole population. The number of people interviewed in this study can't be viewed as representative of the whole population in Bangladesh. The survey results provide an opportunity to examine the association between socio-cultural factors such as lack of consciousness, social environment, stress, diet, exercise etc. and causation of some diseases like diarrhea, dysentery, malaria, tuberculosis, arsenic contamination, STDs/STIs. It also helps to explore the impact of cultural practices on the causation of STDs/STIs in our society. While their responses can't be regarded as statistically representative of the whole population in Bangladesh, their perceptions and thoughts provide valuable insights about the impact of socio-cultural factors in the creation, production and distribution of some diseases in Bangladesh especially in Kamrangir char area.

8.15 Ethical Considerations:

Social Researchers must consider the right of the respondents involved in any study. It is impossible to study human behavior without considering emotion and circumstances. In this study, ethical standards had been maintained in every stage of the research. The research topic is not so much sensitive and that is why the study has faced very little consideration about ethical issues. Respondents spontaneously answered about the questions of the interview. They have voluntarily participated in the study. They gave their information without any confidentiality and without any hesitation. Nobody was compelled to participate in the study. They were very cooperative and were interested in participating with the study. They took little inquiry about the research. Although respondents don't have any consideration but the study maintained all of ethical codes as a researcher. The study needs to maintain all ethical issues in the researcher to ensure the validity and reliability in the study. The study didn't discover any personal aspect of the respondents. One of the ethical considerations was that the researcher would disclose the

purpose of the study. It was also ensured that the result of the research wouldn't be published in future.

8.16 Confidentiality and Privacy:

Data would be kept strictly confidential. Only the respondents and the researcher would have access to the questionnaires. The name and address of the respondent were not recorded anywhere in the questionnaire. Privacy of the respondent would be strictly maintained. One of the basic issues is that the respondents may have names attached to it but it is the responsibility of the researchers to keep it confidential. The respondents may disclose information that may be unknown to their friends and intimate one. One of the straight forward principles of confidentiality is that the researchers must take the responsibility of physical harm due to participation in research and terminates a study if he/she can't guarantee the protection of the respondents.

Conclusion:

Quantitative methodology has been chosen to conduct the study. Socio-cultural factors are responsible for the causation of some diseases in Bangladesh. This understanding is mainly quantitative. The Kamrangir char area has been selected for the study. The area has been selected randomly. Highest efforts have been given to maintain the reliability and validity of the study. The anonymity and confidentiality have also been maintained.

Chapter-nine:

Findings of the study:

Introduction:

To understand the impact of socio-cultural factors in the causation of some diseases in Bangladesh, 110 people from Kamrangir char area were interviewed with a semi-structured questionnaire. Following findings help to understand the impact of socio-cultural factors on the causation of some diseases in Bangladesh. All questionnaire findings are presented using frequency and bivariate tables. In this regard, cross tables are formed using SPSS. The statistical relations between variables are tested by using a number of appropriate measures of association. Chi-square test has been used in this study to test hypothesis. Chi-square test is applied for nominal level variables.

9.1 Demographic profile of the respondents:

9.1.1 Name of the occupations of the respondents:

The following table represents the name of the occupations of the respondents. With regard to the occupations of the people, most of the people are rickshaw pullers (nearly 41%). The people also studied in this study are day labourers (15%), construction workers (nearly 12%), cobblers (nearly 11%), school teachers (6%), Bus drivers (9%), servants and house maid (5%).

Table 9.1 Name of the occupation of the respondents:

Categories of respondents	Number	Percentage
Rickshaw pullers	45	40.91%
Day labourers	17	15.45%
Construction workers	13	11.82%
cobblers	12	10.91%
School teachers	7	6.36%
Bus drivers	10	9.09%
Servants and house maid	6	5.45%
Total	110	100.00%

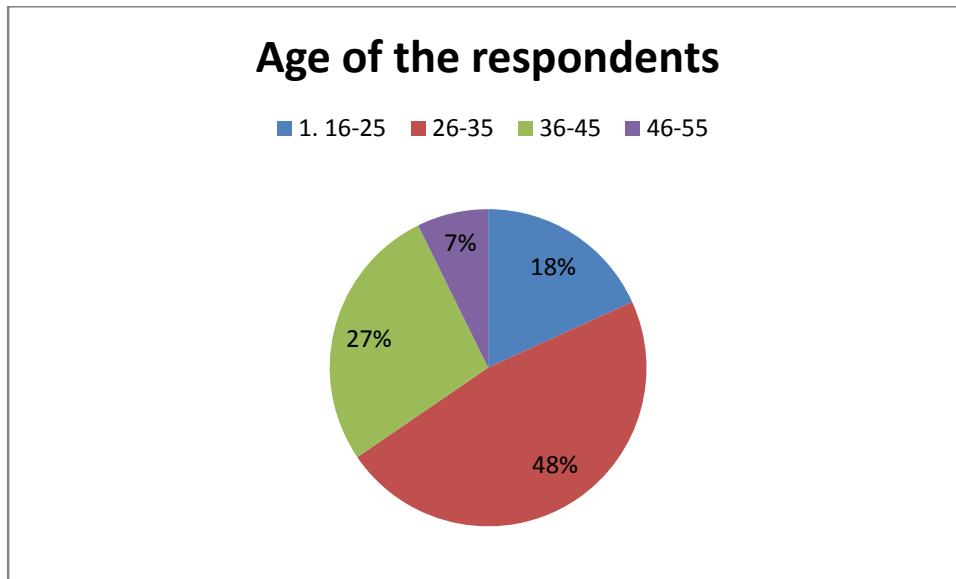
Source: Field survey 2013

9.1.2 Age of the respondents:

The age of the most of the respondents is between 26 and 35 years of age (48%) followed by 27% between 36 and 45 years of age and 18% between 16 and 25 years of age.

Only 4% of the respondents are above 46 years of age.

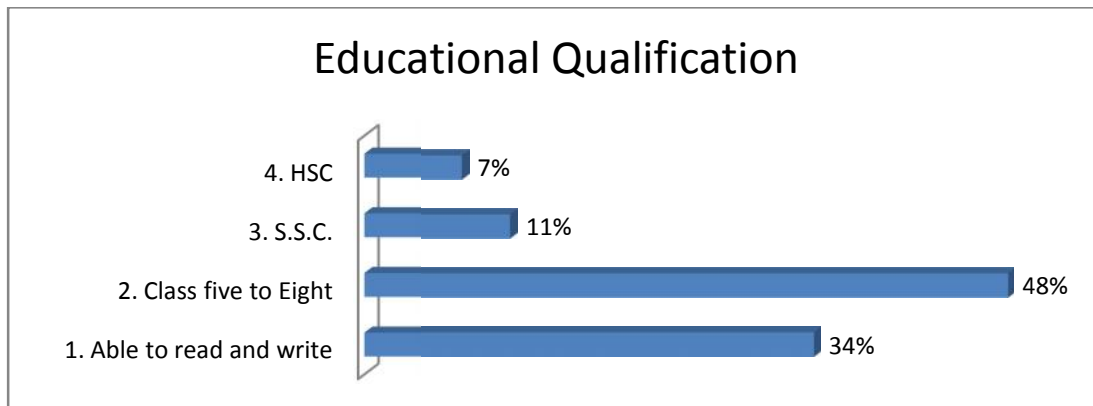
Figure 9.1 Age of the respondents



Source: Field survey 2013

9.1.3 Educational qualifications of the respondents:

Figure 9.2 Educational qualifications of the respondents



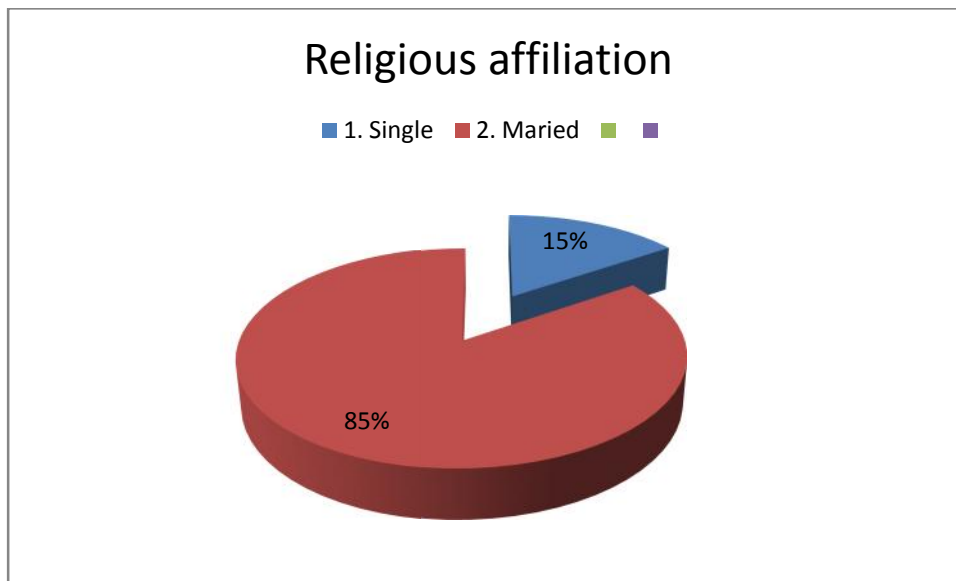
Source: Field survey 2013

In this study, most of the people studied from class five to class eight (48%). 34% people are only able to read and write. Only 11% people studied crossed SSC examination and 7% people have crossed HSC examination.

9.1.4 Religious affiliations of the respondents:

As Bangladesh is a Muslim country, most of the respondents are Muslims (69%) followed by (22%) Hindus, (5%) Christians and people of other religion include only 4%.

Figure 9.3 Religious affiliations of the respondents:

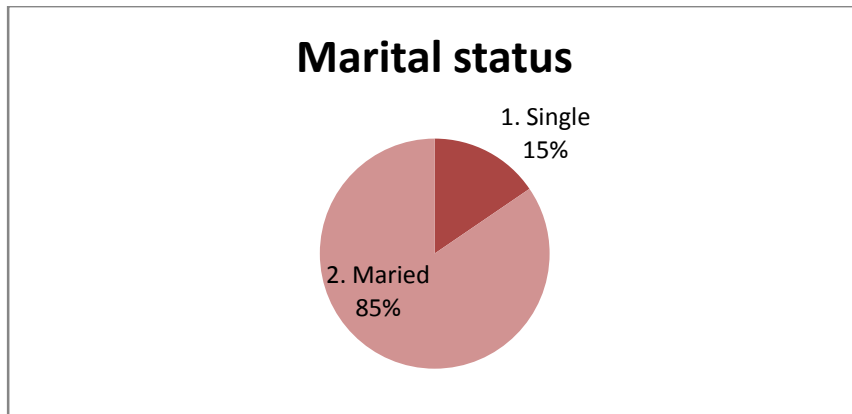


Source: Field survey 2013

9.1.5 Marital status of the respondents:

Married people are more concerned about diseases causation. In the following figure, most of the respondents are married (85%) followed by 15% people are single. Those who are single are less concerned about their health.

Figure 9.4 Marital status of the respondents:



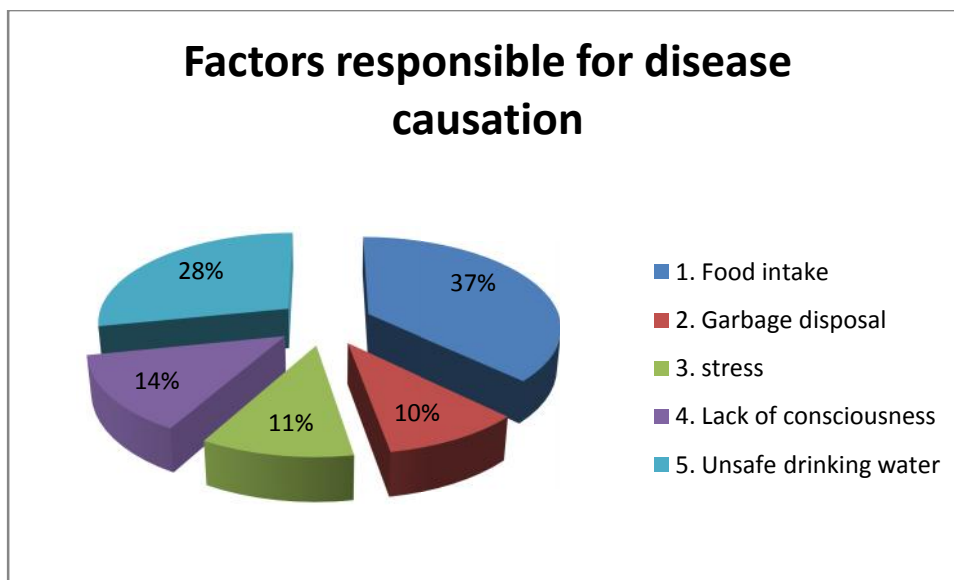
Source: Field survey 2013

9.2 Impact of socio-cultural factors in disease causation:

9.2.1 Factors responsible for disease causation:

Most people think that food intake (37%) and unsafe drinking water (28%) are mainly responsible for diseases. Some think that lack of consciousness (14%), stress (11%), garbage disposal (10%) are also responsible for diseases.

Figure: 9.5 factors responsible for disease causation:

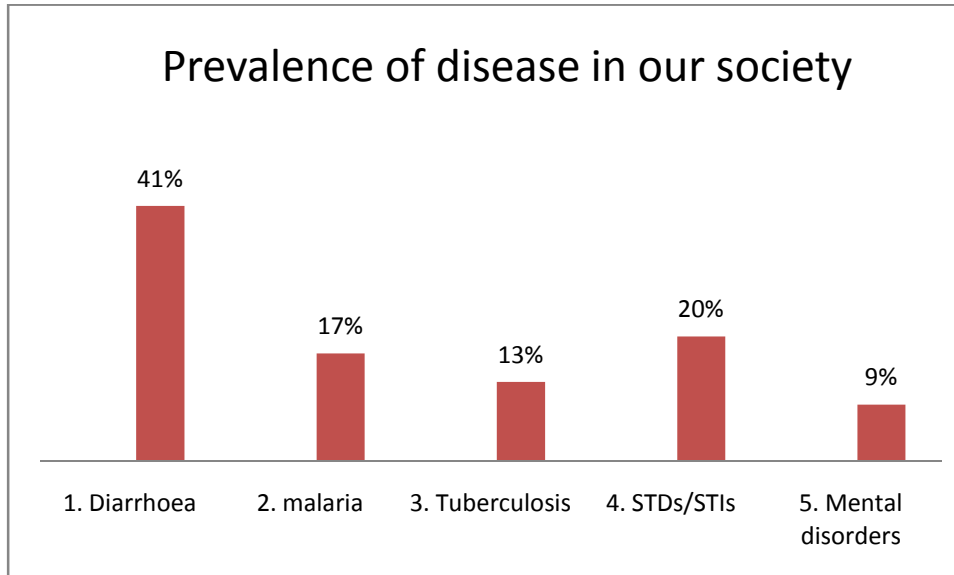


Source: Field survey 2013

9.2.2 Prevalence of diseases in our society:

Diarrhoea (41%) is the most prevalent disease in our society especially in Kamrangir char area. Most people think that STDs/STIs (20%), malaria (17%), and tuberculosis (13%) are prevalent in our society. Only 9% of the respondents think that mental disorders are prevalent in our society.

Figure 9.6 Prevalence of diseases in our society

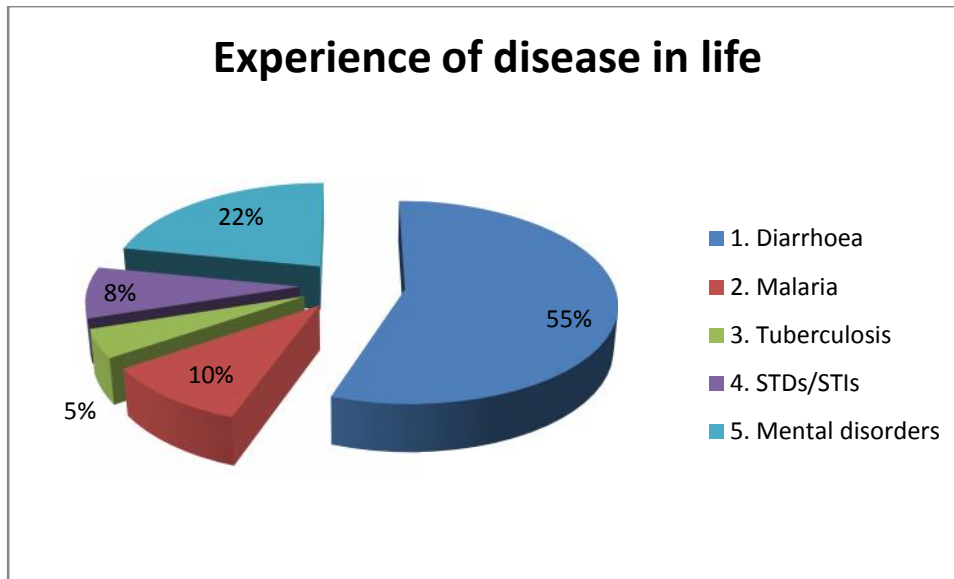


Source: Field survey 2013

9.2.3 Experience of diseases in life:

In this study, most of the people experienced diarrhoea (55%) in their life. Some of the respondents experienced mental disorders (22%), malaria (10%), and STDs/STIs (8%). Only 5% of the respondents experienced tuberculosis in their life.

Figure 9.7 Experience of disease in life



Source: Field survey 2013

9.3 Impact of socially created diseases on the patients and the family:

9.3.1 Problems faced in times of sick:

Table 9.2 problems faced in times of sick:

1. Economic problems	55	50%
2. lack of care from others	14	13%
3. Social isolation	8	7%
4. Hamper of daily activities	33	30%
Total	110	100%

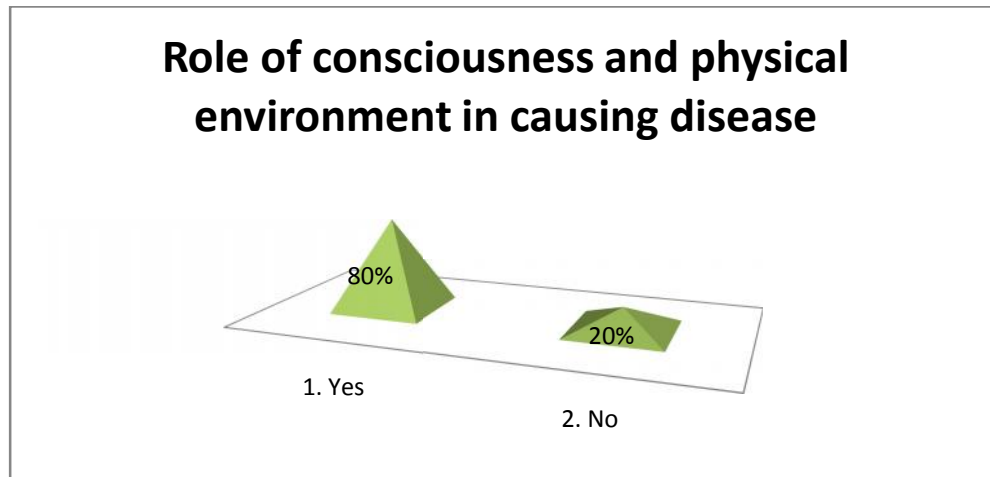
Source: Field survey 2013

In this study, 50% respondents face economic problems in times of sick. 30% people think that their daily activities are hampered due to diseases they experience. Some people told that they face lack of care from others (13%) when they fall ill. Only 7% people reported that they feel social isolation in times of sick.

9.3.2 Role of lack of consciousness and physical environment in disease causation:

In the following figure, 80% respondents think that lack of consciousness and physical environment play a vital role in disease causation. 20% people think that lack of consciousness and physical environment have no impact in disease causation.

Figure 9.8 Role of lack of consciousness and physical environment in disease causation



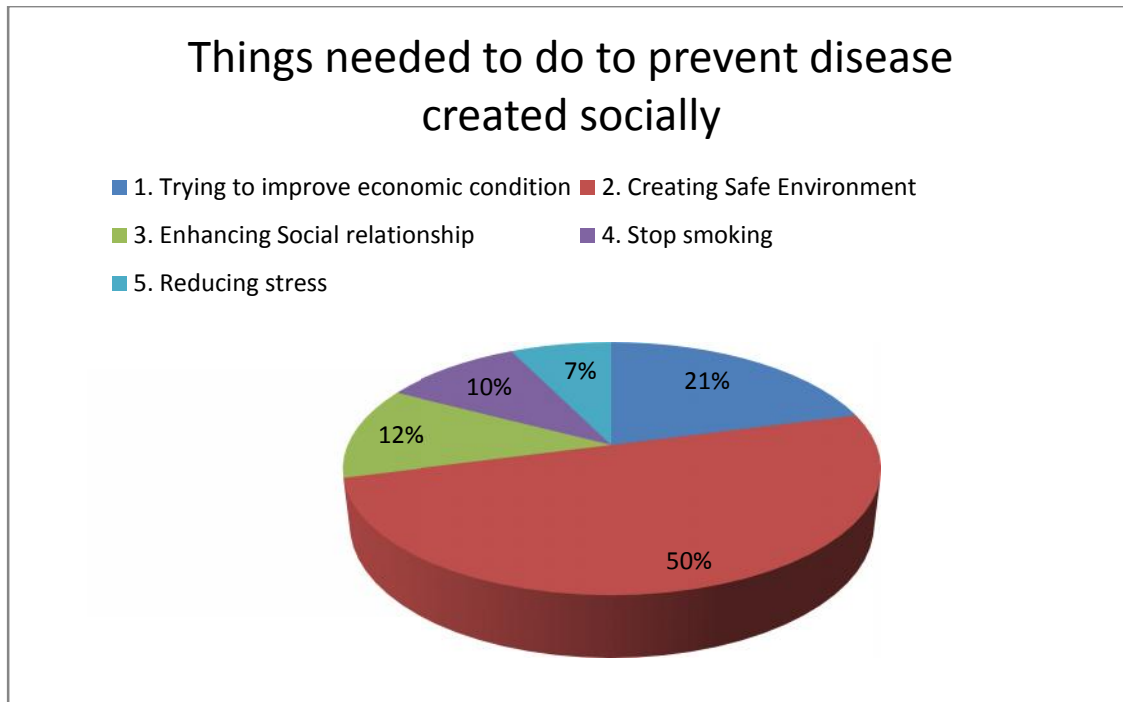
Source: Field survey 2013

9.4 Role of socio-cultural factors and virus or bacteria in disease causation:

9.4.1 Things needed to do to prevent diseases created socially:

In the following figure, most of the people think that creating safe environment (50%) is necessary to prevent socially produced disease. 21% of the respondents think that they should try to improve economic condition to prevent socially produced diseases. Only 10% people think that they should stop smoking followed by 7% respondents who think that they should reduce stress to prevent diseases created socially.

Figure 9.9 things needed to do to prevent diseases created socially:

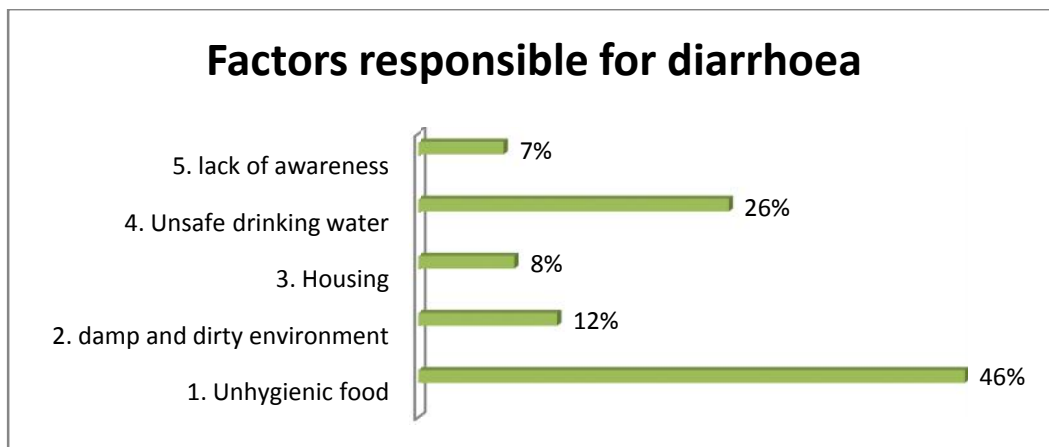


Source: Field survey 2013

9.4.2 Factors responsible for diarrhoea in our society:

In the following figure, most of the respondents think that unhygienic food (46%) is mainly responsible for diarrhoea. Some people think unsafe drinking water (26%), followed by damp and dirty environment (12%), housing (8%), and lack of awareness (7%) are responsible for diarrhoea.

Figure 9.10 Factors responsible for diarrhoea in our society



9.4.3 Factors responsible for arsenic contamination in our society:

In the following table, 52% respondents think that lack of safe source of water is responsible for arsenicosis in our society. Some think that lack of identification (30%), lack of consciousness (11%), and tendency to boil arsenic contaminated water (7%) are responsible foer arsenicosisn in our society.

Table 9.3 Factors responsible for arsenic contamination in our society:

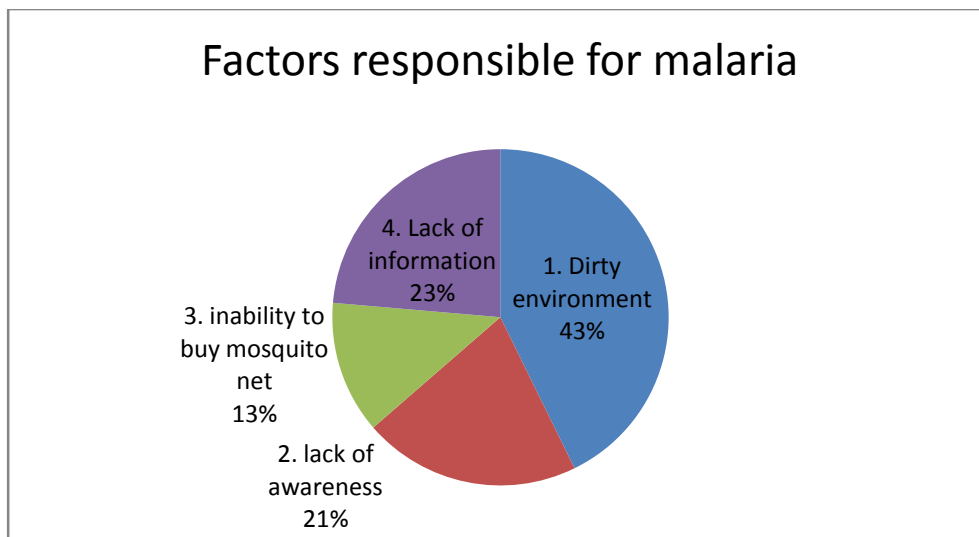
1. lack of safe source of water			57	52%
2. lack of consciousness			12	11%
3. lack of identification			33	30%
4. Tendency to boil arsenic contaminated water			8	7%
Total			110	100%

Source: Field survey 2013

9.4.4 Factors responsible for malaria in our society:

In the following figure, most of the people think that dirty environment (43%) is responsible for malaria in our society. Some of the respondents think that lack of information (23%), lack of awareness (21%), and inability to buy mosquito net (13%) are responsible for malaria in our society especially in Kamrangir char area, Dhaka.

Figure 9.11 Factors responsible for malaria in our society:

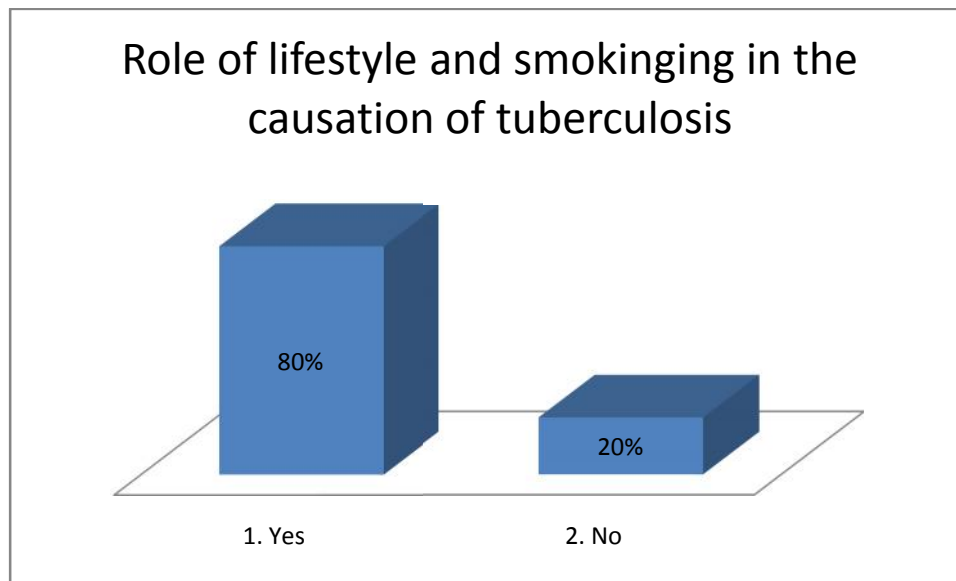


Source: Field survey 2013

9.4.5 Role of lifestyle and smoking in the causation of tuberculosis:

In the following figure, 80% of the respondents think that lifestyle and smoking have an impact on the causation of TB in our society. Only 20% people think that lifestyle and smoking are not related to the causation of TB in our society.

Figure 9.12 Role of lifestyle and smoking in the causation of tuberculosis:

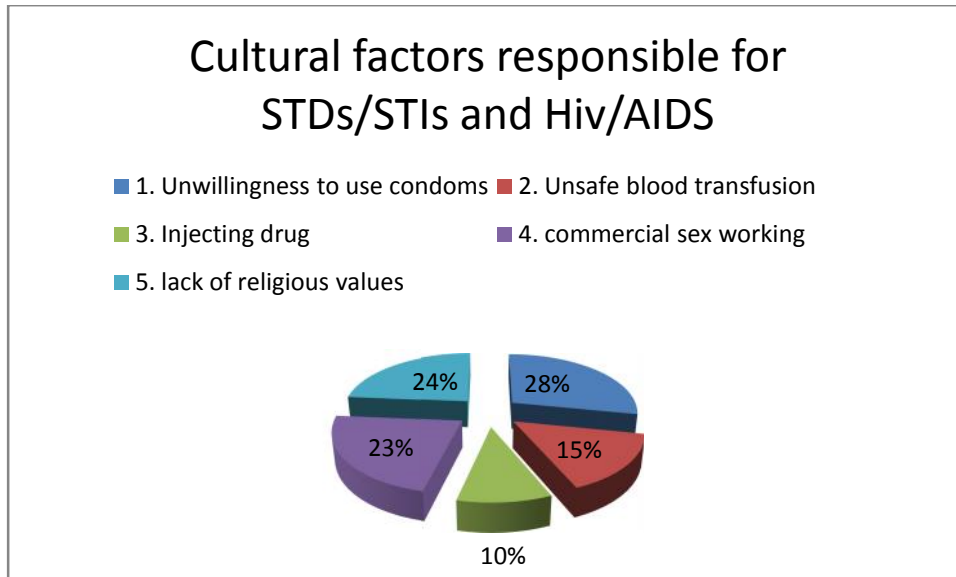


Source: Field survey 2013

9.4.6 Cultural factors responsible for STDs/STIs and HIV/AIDS in our society:

In the following figure, 28% of the respondents think that unwillingness to use condoms is responsible for STDs/STIs and HIV/AIDS in our society. Some think that lack of religious values (24%), commercial sex working (23%), unsafe blood transfusion (15%), and injecting drug use (10%) are responsible for STDs/STIs and HIV/AIDS in our society.

Figure 9.13 Cultural factors responsible for STDs/STIs and HIV/AIDS in our society:

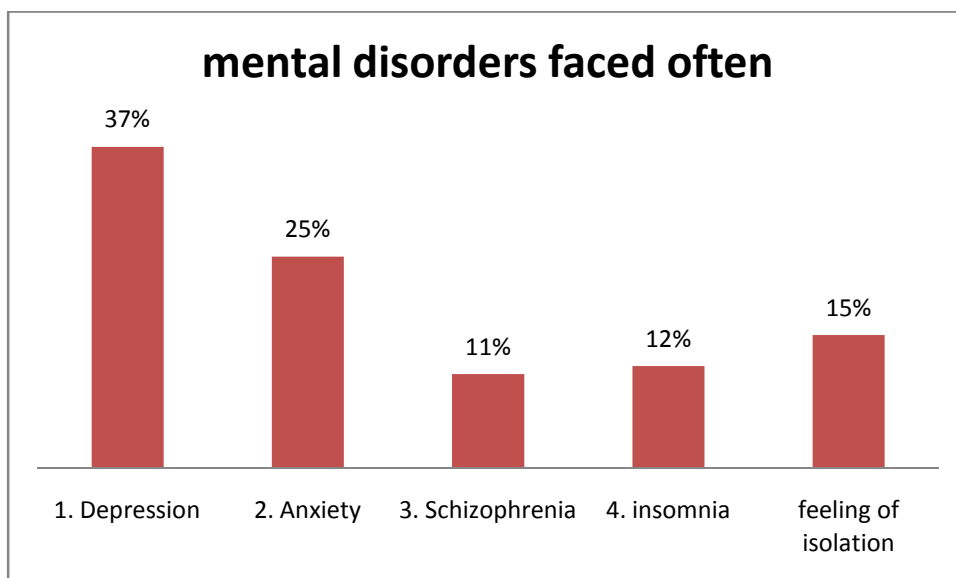


Source: Field survey 2013

9.4.7 Mental disorders often faced in our society:

In the following figure, most of the people face depression (37%). Some have reported that they face anxiety (25%), feeling of isolation (15%), insomnia (12%), and schizophrenia (11%) in their daily life.

Figure 9.14 Mental disorders often faced in our society:



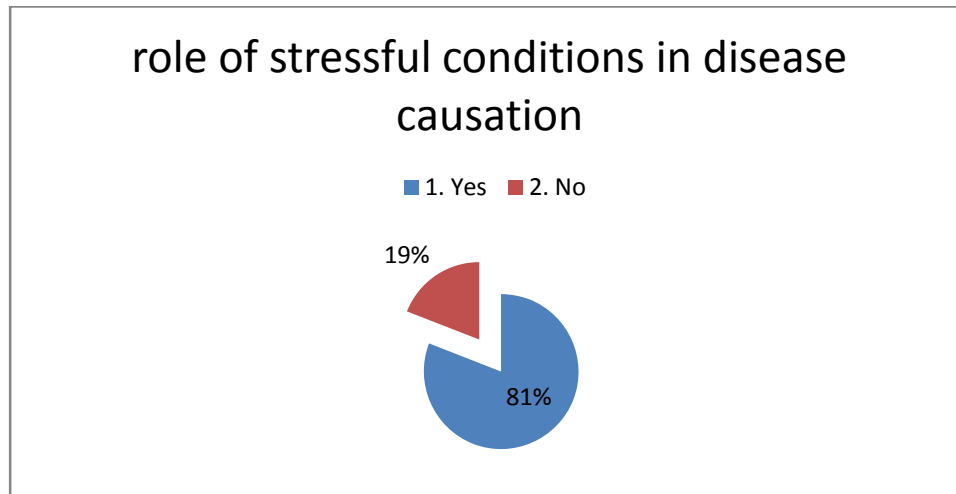
Source: Field survey 2013

9.5 Stressful working conditions and disease causation:

9.5.1 Role of stressful conditions in disease causation:

In this study, 81% of the respondents think that stressful conditions have impact on the causation of diseases. Only 19% of the respondents think that stress is not related to disease.

Figure 9.15 Role of stressful conditions in disease causation:

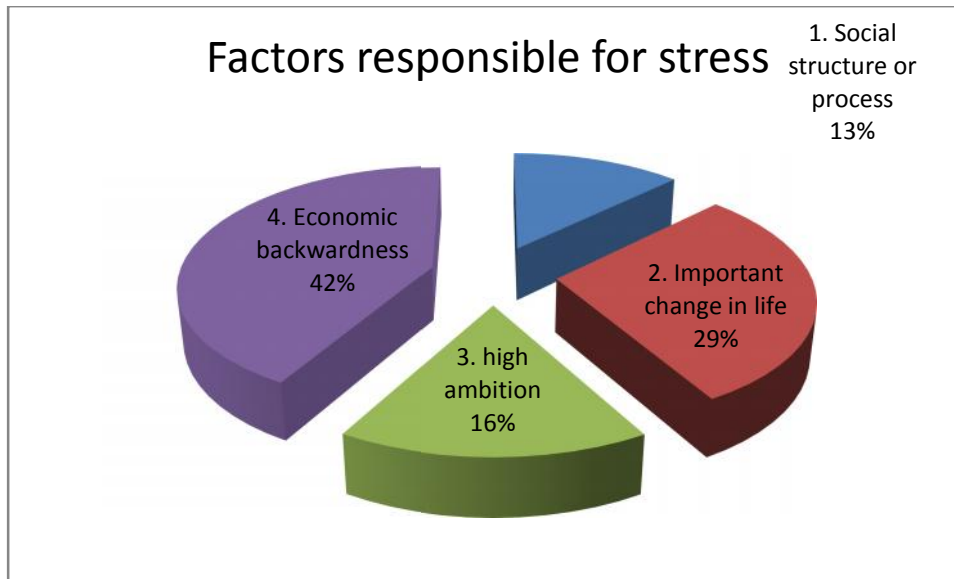


Source: Field survey 2013

9.5.2 Factors responsible for stress in our society:

Stress is directly related to disease causation. In this study, 42% of the people think that economic backwardness is responsible for stress. Some have reported that important change in life (29%), high ambition (16%), and social structure or process (13%) are responsible for stress in day to day life.

Figure 9.16 Factors responsible for stress in our society:



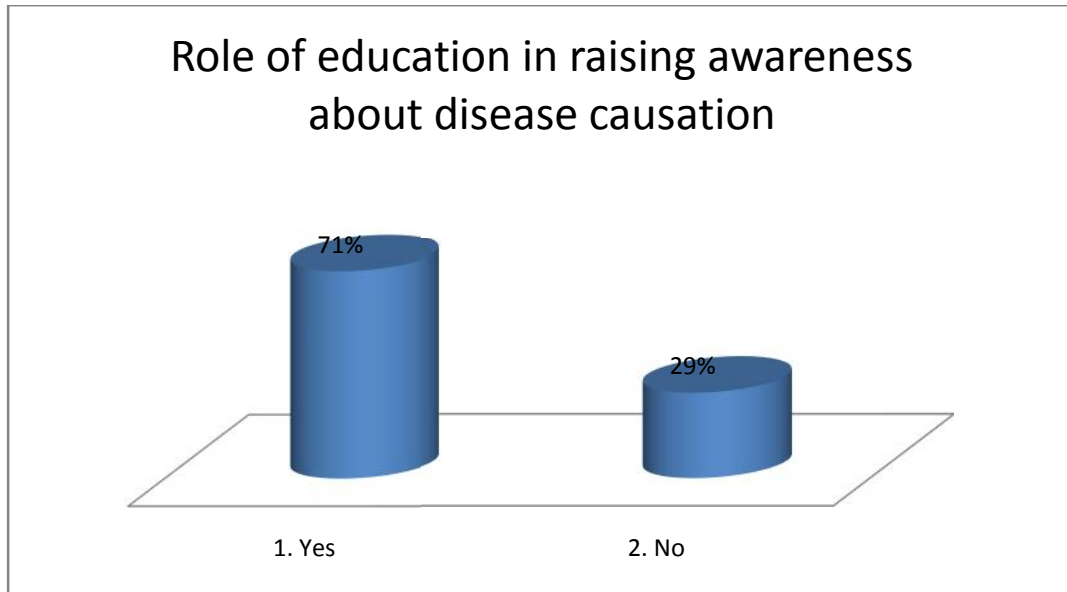
Source: Field survey 2013

9.6 Level of education and consciousness about disease causation in our society:

9.6.1 Role of education in raising awareness about disease causation:

Education can play a vital role in raising awareness about disease causation. In this study, 71% of the respondents think that education plays a significant role in raising awareness about disease causation. 29% of the respondents think that education isn't related to awareness to diseases.

Figure 9.17 Role of education in raising awareness about disease causation:

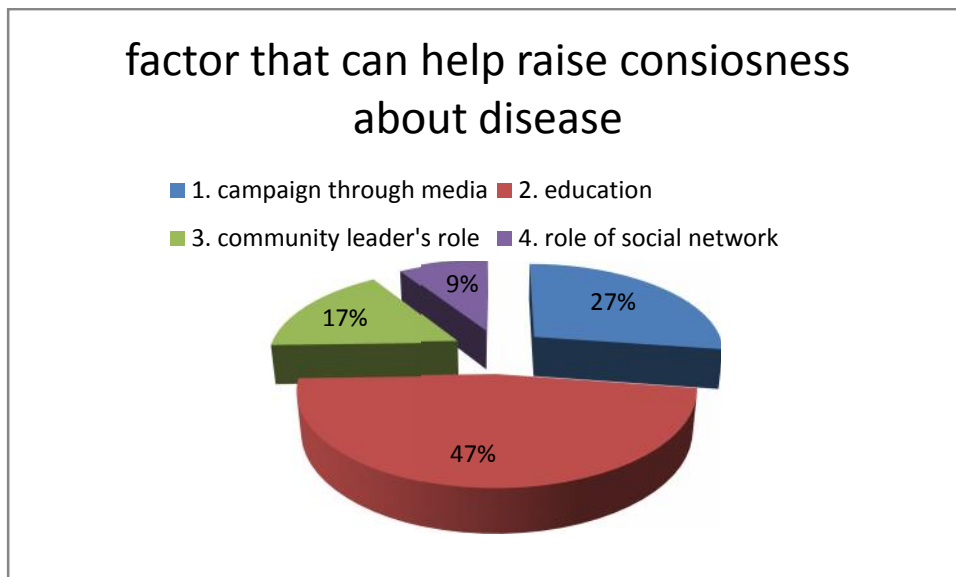


Source: Field survey 2013

9.6.2 Factors that can help to raise consciousness about disease causation:

In the following figure, 47% of the respondents think that education helps to raise consciousness about disease causation. Some argue that campaign through media (27%), community leader’s role (17%), role of social network (9%) etc. can help raise consciousness about diseases.

Figure 9.18 Factors that can help to raise consciousness about disease causation:



Source: Field survey 2013

9.7 Chi-square test:

The chi-square is one of the simplest and most widely used non-parametric tests in the statistical work. In the sociological research, this test is frequently used to measure the association between two nominal scale variables. This study is directed on the basis of a hypothesis. The main purpose of this study is to test this hypothesis. This study conducts the chi-square test because all of the variables related to the hypothesis are the nominal level variables. Chi-square informed that the variables used in the research may be related or not. To test the relationship between the variables used in study, chi-square is obvious. This study is mainly nonparametric so that chi-square test is used here.

9.7.1 Socio-cultural factors in the causation of disease:

Table: 9.4 Socio-cultural factors and disease causations:

Socio-cultural factors	Disease causation		
	Cause disease	doesn't cause disease	Total
Socio-cultural factors	53(80%)	18(41%)	71(65%)
Virus or bacteria	13(20%)	26(59%)	39(35%)
Total	66(100%)	44(100%)	110(100%)

(df 1, $\chi^2 = 17.84$, table value = 4.841)

At 5% level of significance with 1 degree of freedom, we get table value of chi-square 4.841 and calculated value of chi-square 17.84. As the chi-square value (17.84) is greater than the table value (4.841), we can say that socio-cultural factors have impact on the causation of some diseases in Bangladesh.

Conclusion:

In this study, it statistically proved that socio-cultural factors have impact on the causation of some diseases in Bangladesh. As socio-cultural factors are responsible for the causation of diseases, we have to be careful about this issue. By keeping the environment neat and clean and by being aware, we can keep our body healthy and lead a happier, healthier and better life.

Chapter-ten:

Discussion of the study:

Introduction:

In this chapter a short discussion has been done on the findings of the study. The data collected from the field have been presented in graphs and tables through the use of SPSS. It is now clear to us that socio-cultural factors have a significant influence in the causation of diarrhoea, malaria, tuberculosis, mental disorder, and STDs/STIs and HIV/AIDS. This study finds that diet, exercise, occupation, environment, housing, and cultural practices are responsible for some diseases in our society.

10.1 Socio-cultural construction of diseases:

Disease is not only a biological construction but also a socio-cultural construction. Man is a social being. So, social environment has a great impact on his or her health. In this study, nearly 76% people think that socio-cultural factors have impact on the causation of diseases. The impact of socio-cultural factors in the causation of diseases is basically contributory, rather than directly causative. Sometimes, they work as mediating factors. Lack of awareness and lack of information are two important factors in disease causation. If people are not aware of their health, they will involve in risky behavior and will be infected by various diseases. Income is directly related to disease and health. The poor are basically victim of diseases created socially. Most of the studies focus on the biomedical perspectives of diseases. But this study basically focuses on the correlation between socio-cultural factors and disease causation. In fact, socio-cultural factors can be causal, contributory or protective in their relation to ill-health.

10.2 Stressful working conditions and disease causation:

Stress is directly related to disease causation. It disturbs the normal physiological equilibrium of the organism of the body and makes it vulnerable to disease. Some of the mental disorders happen due to stress. The people who work in stressful condition have life expectancy less than those who don't work in stressful condition. Stress enhances the aging process very rapidly. In

this study, nearly 81% people think that stress is one of the causes of diseases. The people who live in the midst of poverty are also stressed or tensed. Stress increases the susceptibility to hypertension. Those who work in stressful conditions have a reduced social relation with their family and neighbours. Particular change in life events is also stressful to the individuals. The stressed people can't take care of their health properly. As a result, their health becomes vulnerable to diseases. So, while taking measures to treat diseases, we have to keep in mind about the stress factors.

10.3 Environment, housing and disease causation:

Environment has a great impact on disease causation. Environment includes soil, climate, radiation, pollution etc. There are two types of environment. They are natural environment and social environment. The people who live in drought, flood prone areas face many problems. Each year flood, cyclone, tornado, earth quake etc. make their life vulnerable and many communicable and water-borne diseases break out due to it. The social environment includes working conditions, relations with others, pollution etc. The social environment which is polluted is responsible for many kinds of diseases. The environment of kamrangir char area is very much polluted. So, they suffer from many diseases due to it. Housing has also an impact on the causation of diseases. In this study, nearly 9% people think that housing has an impact on the causation of diarrhoea. Housing conditions have a well-known impact on the health and disease. Blane points out to the 12-fold difference in accidental deaths due to falls in the homes of the poor which are caused by overcrowded and unsafe conditions. Poor quality housing has a large impact on Chronic obstructive Airways Diseases both in children and subsequently their adult life. Atmospheric pollution has a major impact on the health of the individuals, especially as its effect is often confined to specific areas. These may be proximate to specific industries, such as asbestosis plants, or nuclear energy plants. It may also be experienced as a consequence of the structure of the city, which heavily used industrial roads running ribbon like through areas of poor-quality housing and low quality. So, diseases are the results of environment and poor quality housing.

10.4 Diet, exercise and lifestyle and disease causation:

Diseases are also caused by lack of exercise. If a man doesn't exercise regularly, many diseases will attack his body. Lack of exercise makes the body vulnerable to disease. In this study most of the respondents think that exercise and lifestyle are responsible many diseases. Lifestyle also affects a person's health. If a man leads an unhygienic lifestyle, he will be susceptible to many diseases. Lifestyle' refers to the choices people make in the conduct of their daily lives. This includes how they eat, drink, and exercise and whether they engage in risky behaviours, and whether they use harmful substances such as tobacco or drugs (Daugherty and kammeyer 1995: 150). Lifestyle is expressed in both work and leisure behavior patterns and in activities, attitudes, interests, opinions, values, and allocation of income. It also reflects people's self-image or self-concept; the way they see themselves and believe they are seen by the others. It is a composite of motivations, needs and wants and is influenced by factors such as culture, family, reference group and social class. Though evidence is sketchy for the impact of diet on mortality, Blane et al.(1997) estimates that diet is responsible for 15% of all deaths. Diet is a material factor, rather than a behavioural one, in the sense that income level defines access to the range of foods available, even if the individual has scope for choice within that range. It is one of the ironies of life in a capitalist society that the unprocessed foods that have been associated with reduced bowel cancer now cost more than the refined and processed sugars and cereals. The regular consumption of 'fast food' and reduction in home-based food preparation across the western world has also been implicated in rising rates of type of two diabetes and an increasing social focus on obesity (Williams and Germove, 2005).

10.5 Cultural practices and disease causation:

Some of the cultural factors are responsible for STDs/STIs and HIV/AIDS in our society. Unwillingness to use condoms, injecting drug use, unsafe blood transfusions, commercial sex working, and lack of religious values etc. are responsible for HIV/AIDS in our society. Among the African Tongas, polygamy, sexual cleansing, dry sex, circumcision, and beliefs in witchcraft etc. are believed to be responsible in the spread of HIV/AIDS. Polygamy might be responsible for accelerating the infection. If one partner is infected in a polygamous family, the number of persons at risk becomes higher than in a monogamous family. Sexual cleansing and the

inheritance of widows are often mentioned when talking about the cultural barriers to AIDS prevention. If a man dies of AIDS, his lives are likely to be infected and to infect others if they are sexually cleansed or are inherited by a brother of the deceased. Scarifications and collective healing rituals might spread the virus, if the same knife or razor blade is used collectively. Beliefs in witchcraft might appear as an obstacle to a good understanding of how the virus spreads, which is necessary if people are to change their behavior. The practice of dry sex may cause vaginal lesions during intercourse, which may in turn facilitate infection by HIV virus. It is often said that Africans are unwilling to use condoms because of different prejudices and beliefs. Some of the cultural practices of Africa are not incompatible to our society. They are mainly discussed to emphasize the role of cultural practices in the causation of STDs/STIs and HIV/AIDS.

10.6 Occupational status and disease causation:

Occupational status has impact on the disease causation. Those who work in stressful conditions are susceptible to many diseases. Occupation exposes us to a broad range of physical and psycho-social insults. Take, for example, exposure to cancer-causing agents. Clearly there are high risk industries in which occupation can be easily shown to be the sole cause of cancer, as in the asbestos industry. But beyond this, the prestigious science journal *Nature* reported that 20% of all cancer deaths can be attributed to occupation. The stress of environments that combine low autonomy and high workloads in an unsupportive has been claimed to be the cause of up to 35% of cardiovascular mortality. It is increasingly recognized that the health of the individual worker doesn't necessarily have to be physically at risk for the impact of capitalist employment practices to make itself felt. Lack of autonomy at work, lack of control over the production process, and separation from fellow workers –the key components to Marx's alienation –are all now supported in empirical research as causes of diseases (Karasek and Theorel, 1990).

10.7 Diarrhoea, malaria, tuberculosis: the diseases of socio-cultural factors:

Socio-cultural factors are mainly responsible for the causation of diarrhoea, malaria and TB in our society. The poor children are basically victim of diarrhoea. They live in damp and dirty environment, intake rotten food, drink contaminated water, and face a lack of care from parents. These factors mainly make them vulnerable to diarrhoea. In this study, nearly 46% people think

that unhygienic food consumption is responsible for diarrhoea. Malaria is basically caused by lack of awareness. Mosquito can live in an unhealthy environment. If we don't keep our environment neat and clean, the mosquito enhances in number. Malaria can develop by the biting of at least a mosquito if it bears the virus. In this study, nearly 43% people think that dirty environment is mainly responsible for malaria in our society. Tuberculosis is also caused by socio-cultural factors. The poor women and those are chain smoker mainly fall a victim to malaria.

Conclusion:

To sum, virus or bacteria is not the only causes of diseases. There are some mediating factors in the causation of some diseases. We may designate these factors as socio-cultural because they are related to our social environment. As there are some factors other than virus or bacteria in the causation of diseases, we have to be careful about it.

Chapter-eleven:

Conclusion:

Socio-cultural factors influence health by affecting exposure and vulnerability to disease, risk-taking behaviors, the effectiveness of health promotion efforts, and access to, availability of, and quality of health care. Socio-cultural factors also play a role in shaping perceptions of and responses to health problems and the impact of poor health on individuals' lives and well-being. In addition, such factors contribute to understanding societal and population processes such as current and changing rates of morbidity, survival, and mortality. Virus or bacteria play a predominant role in the causation of diseases. But they are not the only factors in causing some diseases in our society. The environment we live in and the situation we work have a great impact in disease causation. Diet, exercise, dress, environment, housing, occupation, cultural practices, lack of awareness, family pattern, economic condition, stressful working conditions, consumption of unhygienic food, lack of safe source of water etc. have great impact on the causation of diarrhoea, malaria, tuberculosis, arsenicosis, mental disorders, STDs/STIs and HIV/AIDS. Most of the research focuses on the biomedical aspects of diseases. The socio-cultural factors in the causation of diseases are often overlooked by the pure medical science research on the aetiology of diseases. This study is conducted in Kamrangir char area. Most of the people here think that their economic condition, illiteracy and environment are responsible for diseases they experience in life. Diarrhoea is basically caused by the lack of awareness and consumption of unhygienic food. Lack of safe source of water is mainly responsible for arsenic contamination. Damp and dirty environment are basically responsible malaria in our society. Some cultural practices such as unwillingness to use condoms, injecting drug, unsafe blood transfusion, lack of religious values etc. are responsible for STDs/STIs and HIV/AIDS in our society. Though socio-cultural factors have impact on disease causation, it is very much difficult to quantify them. The role of socio-cultural factors are not always directly causative, rather they are contributory in the causation of some diseases in our society.

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Interview Schedule:

Socio-cultural factors responsible for the causation of some diseases in Bangladesh

I am an M.S.S (2nd Semester) student of the department of Sociology at the University of Dhaka. In partial fulfillment of my M.S.S degree, I have chosen to prepare a thesis for further study. For this purpose, I'm undertaking the above mentioned research project. In this respect, I seek your generous co-operation and you are cordially requested to fulfil this questionnaire. Note that all the information provided by you will be strictly confidential and your answers will not be published in any circumstances. Your kind response will be used only for this academic research and this thesis report will not be published in future. If you feel uncomfortable to answer any question, feel free to leave them blank. But you are requested to write the correct answer that you believe to be.

I would really appreciate if I could take 15-20 minutes of your valuable time.

Thanks in advance

Md. Faruq Hossain

2nd Batch, M.S.S (2nd semester)

Department of Sociology

University of Dhaka

Section A: Demographic profile of the respondents:

1. Name of the occupation:

=

2. Age: 1. 15-25 2. 26-35 3. 36-45 4. 46- 55 5. 56- 65

3. Educational Qualification: 1.able to read or write 2. S.S.C 3. H.S.C

4. Religious affiliation 1. Islam 2. Hindu 3. Christianity

5. Marital status: 1. Single 2. Married

Section B: impact of socio-cultural factors in disease causation:

6. Do you think that socio-cultural factors have impact on disease causation? Tick

1. Yes 2. No

7. What factors are responsible for disease causation? Tick

1. Food intake

2. garbage disposal

3. lack of consciousness

4. stress

5. Unsafe drinking water

6. space

8. Which diseases are more prevalent in our society? Tick

1. Diarrhoea 2. Dysentery 3. Malaria 4. Tuberculosis

5. Arsenic contamination 6. STDs/STIs

9. Which disease did you experience in your life? Tick

1. Diarrhoea

2. Dysentery

3. Malaria

4. Tuberculosis

5. Arsenicosis

6. STDs/STIs

Section C: impact of socially created disease on the patients and the family:

10. Which problems do you face when you are sick? Tick

- 1. Economic problem
- 2. Lack of care from others
- 3. Social isolation
- 4. Hamper of daily activities

11. Can consciousness and physical environment play a vital role in treating socially created disease? Tick

- 1. yes 2.No

Section D: Role of socio-cultural factors and virus and bacteria in disease causation:

12. Do you think that virus and bacteria is only responsible for disease?

- 1. Yes 2. No

13. What can we do to prevent socially created disease? Tick

- 1. Creating safe environment
- 2. Reducing stress
- 3. Stop smoking
- 4. Trying to improve economic condition
- 5. Enhancing social relationship

14. What factors are responsible for diarrhoea? Tick

- 1. Food consumption
- 2. Unhygienic food
- 3. Damp and dirty environment
- 4. Housing
- 5. Unsafe drinking water

15. Which factors are responsible for malaria in your locality? Tick

- 1. Dirty environment
- 2. Inability to buy mosquito net
- 3. Lack of consciousness
- 4. Lack of information

16. Which factors are responsible according to you for arsenic contamination? Tick

- 1. Lack of safe source of water 2. Lack of identification (by red or green colour)
- 3. Tendency to boil arsenic contaminated water
- 4. Lack of awareness

17. Which cultural practices in our society are responsible for STDs/STIs and HIV/AIDS ?

- 1. Unwillingness to use condoms
- 2. Unsafe blood transfusion
- 3. Injecting drug
- 4. Commercial sex working
- 5. Lack of religious values

18. What do you mean by mental disorder?

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19. Which mental disorder do you often face?

- 1. Depression 2. Schizophrenia 3. Anxiety 4. Insomnia 5. Electro light imbalance

Section E: Stressful condition and disease causation:

20. Do you think that stressful condition can cause disease? Tick

- 1. Yes 2. No

21. Which factors are responsible for Stress?

- 1. Social structure/process
- 2. Important change in life
- 3. High ambition
- 4. Economic backwardness

Section F: Level of education and consciousness about disease causation:

22. Do you think that education help raise consciousness about disease causation? Tick

1. Yes 2. No

23. What factors can help raise consciousness about disease causation? Tick

- 1. Campaign through media
- 2. Education
- 3. Community leader's role
- 4. Consciousness raising through social networking

Thank you so much.....