The effects of extreme poor *Adivashi* income-earners' ill-health on the resilience of their households: A qualitative analysis from the CHT

Working paper number 18

Rupa Datta[1]
Sayeed Hasan Raza
Dr. Mathilde Maitrot

[1] Corresponding author, email- rupabd23@yahoo.com. Contributor Author; Rupa Datta Research Associate, Sayeed Hasan Raza Research Officer Caritas Bangladesh and Dr. Mathilde Maitrot, University of Bath

This research was conducted under the umbrella of the Extreme Poverty Research Group (EPRG) which supports action research. The final findings will be shared with EPRG (research team, Shiree and Bath University).

LIST OF TABLES:

LIST OF MAPS

LIST OF FIGURES:

Abstract

Ill-health is often considered as a poverty trap, especially when it affects income-earners. Access to very limited and low quality health services can worsen the situation. Like most developing countries, Bangladesh still lags behind in terms of achievement of health related MDG targets. The impact of ill-health in the context of Bangladesh is not only short-term well-being decline but these also have longer-term significant negative impact on households' overall resilience.

This qualitative study, conducted in the CHT explores the health-seeking behaviour and the treatment-seeking process of *Adivashi* in Bandarban district, the existing health services, coping strategies adopted by the people in cases of ill-health (diseases, accident, illness) and their (short and long-term) impacts on households' livelihood and resilience. This study was conducted in two phases: the first phase explored the health-seeking process and existing health services, and the second phase investigated coping strategies in response to sickness and their impact on households' resilience.

The main findings of this study underscore the significant negative impact of ill-health. This impact is multiplied by the longer-term effects of the coping strategies adopted by the extreme poor households during the period of their suffering and treatment-seeking process. This study also confirms and contributes to earlier work arguing that the recovery period from ill-health of indigenous groups in the CHT is longer and more uncertain than the national average (MICS 2009; Rahman and Kielmann 2012). The research identified that often the outcome of the health-seeking behaviour and treatment-seeking process is affected by issues of inaccessibility, limited and low quality health services which critically impinge on income-earners' chance and time of recovery through different coping strategies. The main message of this paper is that coping strategies adopted by the extreme poor following a health shock are often not sufficient to allow households to maintain a stable economic status. In fact such shocks often contribute to the decline in their economic status. The paper concludes that health training and savings facilities would be appropriate interventions which can sustainably help the extreme poor in the Chittagong Hill Tracts mitigate the impact of ill-health on their long-term resilience.

Key words: ill-health, extreme poor households, income earners, health seeking behaviours, coping strategies, household resilience, Bandarban, CHT.

1. Introduction

Ill-health and poverty are mutually reinforcing factors (Wagstaff 2002; Grant 2005). Health shocks are often considered as a major cause of descent into poverty. Health shock (short-term, long-term, chronic or accidental) can cause serious life crises (CMS5 data) for extreme poor households living in remote places. A number of studies found that extreme poverty pockets persist in Bangladesh where ill health has been a main contributing factor to deepening poverty (Ahmed 2005; Hossain 2011).

This study explores the choices and compromises that extreme poor households in the Chittagong Hill Tracks (CHT, henceforth) make to overcome health shocks. The main finding emerging from qualitative data is that the recovery period from ill-health of *Adivashi* in the CHT groups is longer and more uncertain than the national average (in Bangladesh's mainland) (MICS 2009; Rahman and Kielmann 2012) and that therefore health-shocks' impact on the extreme poor is especially acute when it affects the main household's income-earners. The study shows how extreme poor households adopt mechanisms to cope with health shocks, called 'coping strategies' to adjust expenditures to income variation (Kenjiro 2005). It is argued that during the treatment seeking process, successive coping strategies get increasingly risky, absorbing important resources of the households (labour, savings, health or assets), which often has non-negligible short term impact on the households' poverty and longer-term impact on the households' resilience.

The paper is structured as follows. Firstly it reviews the literature on ill-health in the context of poverty and presents the conceptual framework used for this study. Secondly, the research objectives, methodology and tools are presented in detail. Thirdly, the analytical section starts with the first sub-section which details the major causes of ill-health and health shocks in the study area reported by the respondents. The second sub-section focuses on analysing the circumstances of ill-health and the facilities available to the extreme poor in the CHT with their responses to the major health issues. It sheds light on the heath-seeking behaviour, treatment-seeking process, existing health services and the barriers extreme poor households face in order to access them. The third sub-section draws an in-depth analysis of the consequences of the successive coping strategies adopted during the treatment-seeking process. The study identifies mostly practised coping strategies i.e. using cash in hand, selling assets, borrowing money, extra labouring and compromising consumption. It argues that the lengthy treatment seeking process, mis-diagnosis and ineffective treatment have serious consequences which can lead to household asset depletion and impoverishment which, in turn, has an impact on the resilience of extreme poor households. The last section analyses the process of the impact.

2. Literature review and conceptual framework

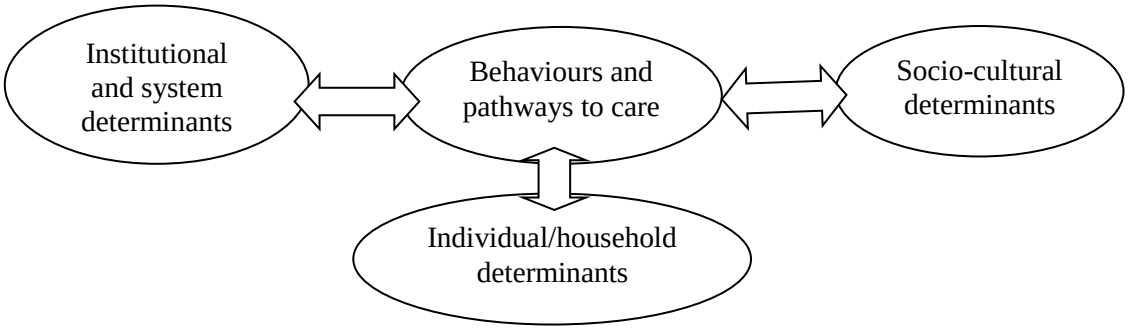
One of the main focuses of the Millennium Development Goals (MDGs) is health. MDGs commit countries to achieving improvements in health as well as to halving extreme income poverty by 2015 (WHO 2003; WB 2013). The member states of the United Nations recommitted themselves to the Charter goal of achieving the highest attainable standard of health as one of the fundamental rights of every human being without distinction of race, religion, and political belief, economic or social conditions (WHO, 1948). The World Health Organization broadly defined health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity2. If any negative change comes within any of the elements mentioned, it is considered as ill-health.

[2] Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948. http://www.who.int/governance/eb/who_constitution_en.pdf

The common assumption is that when people experience health shocks, regardless of its magnitude they all seek treatment. However, a few studies show that a noticeable number of extreme poor sufferers in developing countries do not take any remedy at all. In rural Kenya this is reported as being as high as 37% of the sufferers who do not access treatment (Schulpen & Swinkels, 1980). Seeking health treatment is a complex process which often differs from person to person and from one context to another. Studies found discernible characteristics of health-seeking behaviour of people influenced by such determinants as status of women, ethnicity, religion or faith, age, sex, household resources, costs of care, types and severity of illness, distance and access (MacKain, 2003).

There is an important relationship between health and socio-economic conditions (Phillips and Verhasselt, 2002). Economic condition is a key determinant for selecting particular health facilities (Krishna, 2007). In Sri Lanka wealthier households often prefer private health services while poorer households mostly use public health facilities (Russell, 1996; Weerasinghe, 2009). Mustaq et al. (2011) concluded that socio-demographic factors significantly influence health-seeking behaviours of the general population and that multiple factors also determine health-seeking behaviour of individuals. People in developed countries give priority to modern medical services rather than traditional healing practices (Ruger, 2010). Traditional medication or healing is more popular in developing countries (Rahman, 2000; Krishna, 2007, Fischer & Salehin, 2009). Grundy and Annear (2010) refer to three important components relevant to overall health care content- institutional and system determinants, socio-cultural determinants and individual/household determinants. These dynamics are captured in Figure 1.

FIGURE 1: DETERMINANTS OF HEALTH CARE–SEEKING BEHAVIOURS



Source: Adapted from Grundy and Annear (2010)

The health seeking behaviour has a common characteristic in developing countries (Jones, 1991; Strauss & Thomas, 1998; MacKain, 2003; Ahmed *et al,* 2000; Rahman, 2000; WHO, 2003; Russell, 2001; Krishna, 2007; Grundy and Annear, 2010; Huang et al., 2012). Firstly, people try for home remedies, if it fails then they try traditional (herbalists, faith-healers including homeopathy) care facilities which is followed by para-professionals (Jones, 1991; Ahmed *et al,* 2000; Rahman, 2000; WHO, 2003; Krishna, 2007; Grundy & Annear, 2010). In rural Kenya, 35% of the population depend initially on self-medication while 21% went to traditional or modern authorities (Schulpen & Swinkels, 1980). Unqualified practitioners play a vital role in this health seeking process (Jones, 1991; Ahmed *et al,* 2000; Rahman, 2000; WHO, 2003; Krishna, 2007; Grundy & Annear, 2010).

Seeking treatment requires money and time, both of which the poor generally lack (Ahmed *et al,* 2000; Rahman, 2000; MacKain, 2003; Krishna, 2007; Weerasinghe & Fernando, 2009). In general, the extreme poor suffer more in the health seeking process (Jones, 1991; Rahman, 2000; WHO, 2003; MacKian, 2003; Krishna, 2007; Ruger 2010; Grundy and Annear, 2010; Huang et al., 2012). Studies on illness-related costs, report that 2.5% to 7% of household's income is used for treatment purposes (Russell, 2003). There are two types of cost related to the health seeking process: direct cost and

indirect cost (Budhathoki, 2012), these are listed in Table 1. Opportunity cost is most important among all the indirect hidden costs. In a poor or extreme poor household, when the wife is sick the husband generally stops working to tackle the situation or, inversely when the husband is sick and unable to work, his wife (or children) tend to get involved in income generating activities (Russell, 2003). In Bangladesh 30-40% slum dwellers in Dhaka reported approximately four days lost due to illness of the main income-earning household member (Pryer, 2003). Table 2 confirms that the cost of ill-health is a big portion of household income.

TABLE 1: DIRECT AND INDIRECT COST OF ILL-HEALTH

Direct Cost	Indirect Cost
Doctor's fee or consulting fee	Special food for patient
Medicine or pharmaceuticals	Opportunity cost/ lost of productive labour time
Transportation	Reduced labouring capacities after seeking treatment
Hospitalization	

Source: Adapted from Russell (2003)

TABLE 2: DIRECT, INDIRECT AND TOTAL EXPENDITURE OF HOUSEHOLD INCOME

Country	Direct costs (% of HH income)	Indirect costs (% of HH income)	Total costs (% of HH income)	Source
Burkina Faso (rural)	$4.80 3.7%	$10.39 8.1%	$15.39 11.8%	Sauerbornet al., 1995
Nigeria (rural)	$4.44 7.0%	$2.36 3.7%	$6.80 10.7%	Onwujekweet al., 2000
Sri Lanka	$7.5 6.5%	$5.1 5.0%	$12.6 11.5	Russell, 2001

Source: Adapted from Russell (2003)

Ill-health care expenses were found as a primary reason for poverty (Khishna, 2007). Evidence from Cambodia, Ethiopia, Haiti, Sierra Leone, Senegal and Vietnam indicates the negative effects of healthcare costs upon household welfare (Barett *et* al., 2001, Strauss and Thomas 1998, Kenjiro, 2005). Khishna (2007) traced poverty trajectories of about 25,000 households in India, Kenya, Uganda, Peru and North Carolina (USA) where she found ill health as the main reason behind poverty. 88% of households that fell into poverty in two decades in the communities blamed ill health, hard-to-reach medical facilities and high healthcare costs (Krishna 2007) for their present situation. Households employ different coping strategies to adopt with this extra expenditure. Most of the time poor people have very few cash savings (Fischer & Salehin, 2009) and they use that to pay instant ill-health expenses (McIntyre and Thiede, 2003). After that, they borrow money to handle the additional expenses for ill-health (Khishna, 2007; Ruger, 2010). As an immediate response of covering health related expenses poor people sell assets (McIntyre and Thiede, 2003) and/or contact many types of conditional loans which sometimes require paying an interest that is more than the actual loan (Krishna, 2007; McIntyre and Thiede, 2003).

These coping strategies have long-term negative effects on sustainability of households (McIntyre and Thiede, 2003, Krishna, 2007). Poor households having 5% of cost burden, have to compromise on their basic needs (food, education) to readjust the additional health cost (Russell, 2001; Pryer *et al.* 2003). Households in debt have to change their regular consumption patterns, which can have severe negative impacts on household members (Krishna, 2003; Ruger, 2010). In Laos, people suffering from health shocks are losing 0.6 points of their former health on a 5-point scale (Wagsaff & Lindelow,

2010). People with poor health condition cannot do much physical or mental work which leads to decline of household income. In the different studies it is observed that poor households face difficulties when their income earners experience health shocks. The impact is not only in the short term but can also affect the households' resilience in the long term. Resilience refers to, "the capacity of a system to retain its functions when confronted by change" (Adger 2000). All studies indicate that coping strategies adopted during the ill-health period affect the resilience of extreme poor households. Table 3 reports health seeking behavioural trends in Bangladesh as reported by three studies.

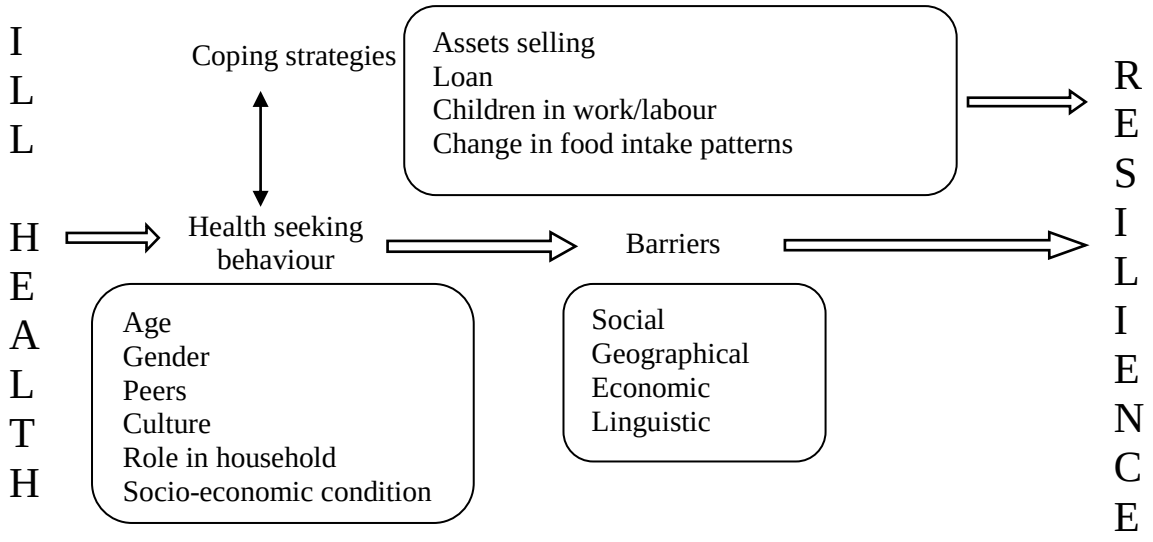
TABLE 3: TREATMENT TYPOLOGIES IN BANGLADESH IN 2000, 2003 AND 2009

Different type of Treatment	Matlab (Ahmed *et al,* 2000)	Dhaka (Pryer *et al.* 2003)	Ethnic group (CHTDF, 2009)
None	-	-	13.7
Home remedies	8.6	38.4 (20.59 yr)	13.9
Traditional	12.1	3.7	4.5
Para-professionals	46.8	23.7	9.9
Unqualified allopath	22.6	15.6	40.0
Qualified allopath	9.9	18.7	18.0

Sources: compilation of Ahmed et al, 2000; Pryer et al. 2003; CHTDF, 2009

Based on the literature review presented in this section the authors developed the conceptual framework for the present study (Figure 2). The authors worked with a set of hypotheses made regarding the influencing factors of health-seeking behaviour of the extreme poor and their coping strategies. The study focuses on understanding how coping strategies influence the resilience of extreme poor households (Russell, 2003). Following MacKian (2003), the study considers factors such as ethnicity, costs of care, types of illness and distance as drivers and determinants of health-seeking practices and behaviours. The study also considers other factors such as geographical position, lack of cash in hand and gender. The coping strategies adopted during the period of ill-health are important elements which influence the process and the outcome of ill-health.

FIGURE 2: THE IMPLICATIONS OF HEALTH SHOCKS OF EXTREME POOR INCOME-EARNERS ON THEIR HOUSEHOLDS' RESILIENCE



Source: The authors

3. Research process

Based on the conceptual framework the study investigated the health-seeking behaviour of households in case of ill-health of the main income earner and focused on understanding the treatment-seeking stages and coping strategies and its impact on extreme poor households' resilience. This research was conducted mainly by adapting a qualitative approach and through the use of several research tools.

The study focuses on four main objectives:
1. To understand the barriers to accessing health services specific to the CHT.
2. To explore the health seeking behaviour and process of income earners in the CHT context.
3. To understand what coping strategies households adopt during the health-seeking process.
4. To understand the impact of ill-health on their resilience.

3.1 The research approach and tools

A qualitative research approach was used to conduct this study, because it was considered that qualitative research would enable the authors to collect more in-depth data under the form of narratives allowing the authors to be more investigative and accurate regarding the behavioural analysis of extreme poor households (Kothari 2006). Before the fieldwork commenced, a literature review was undertaken to obtain related information on the ill-health of the extreme poor. After that, the research was structured into two phases: Phase 1 (from October 2012 to January 2013) investigated the health-seeking behaviour and barriers of extreme poor and Phase 2 (July 2013 to September 2013) explored the coping strategies adopted by extreme poor households and their effects on resilience.

In-depth interviews (IDIs) have been used during both Phases as a main research tool, 55 have been conducted in total. Various types of stakeholders were interviewed in Phase 1, medical practitioners, chemists and local leaders. Because Phase 2 intended to collect data on the immediate coping strategies of income-earners facing health shocks and the effect of these on their households, the team interviewed income earners facing health shocks (Appendix 2), including two types of sufferers: nine longer term and nine shorter term (six males and, three females[3]). The researchers made a distinction between the coping strategies of chronic illnesses and sudden health shocks (accident, cold, fever…). Besides IDIs, nine Focus Group Discussions (FGDs) were conducted for this research, where each of FGDs had 8-10 participants (Appendix 2). IDIs and FGDs in Phase 1 collected information on health seeking behaviour, treatment facilities, costs and barriers. Throughout the fieldwork, participant observations were used for triangulating information (informal discussions with different stakeholders, visiting public-health facilities in the study areas and observing interactions between the patients and the service providers).

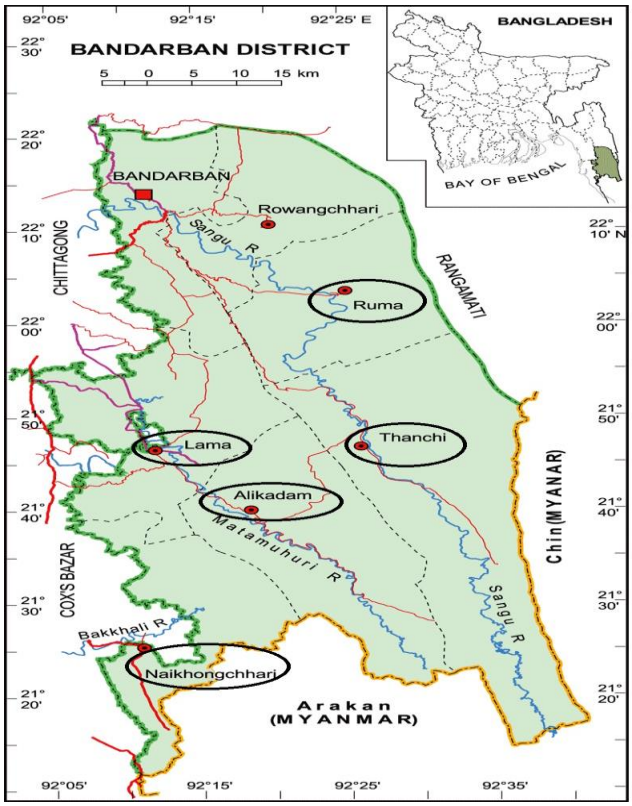
The information collected in the field was recorded in written format and then compiled in an Excel matrix per themes. Researchers have analysed the contents manually following their research objectives. The data gathered is presented in this paper using tables and quotes in the text and in annex.

[3] CMS 1 base line survey reported that 88 percent of total beneficiaries are male headed HH and 12percent are female headed HH. Male and female sample were determined based on that ratio.

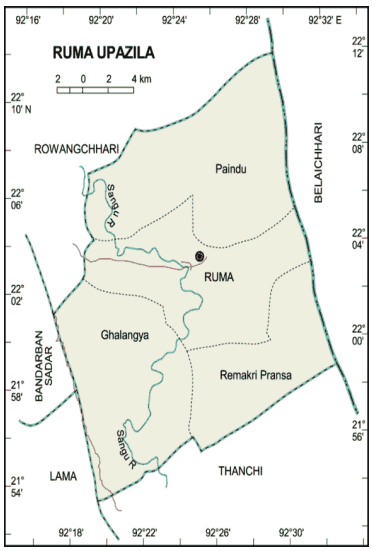
3.2 The research sites

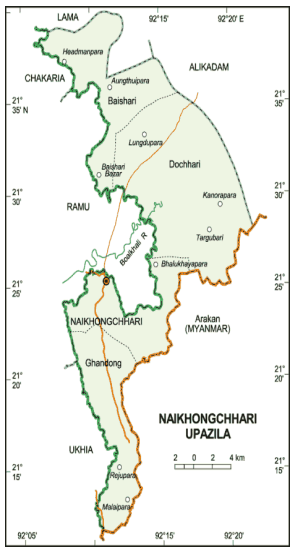
Caritas Bangladesh is implementing Ensuring Sustainable Livelihood of Extreme Poor of Chittagong Hill Tracts (ESLEP-CHT) project in five *Upazilas*. Three *Upazilas* (sub districts) were selected for the fieldwork considering the significance of location and remoteness. Lama Upazila is the least remote area of fieldwork sites with a large municipality (*pourashava*); Naikhangchari *upazila* is the intermediate remote area and Ruma *upazila* is the most remote area.

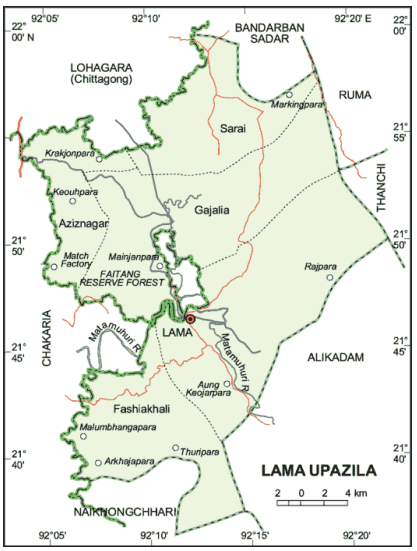
MAP 1: THE ESLEP-CHT PROJECT SITE: BANDARBAN DISTRICT



MAP 2: THREE STUDIED UPAZILLA







3.3 Research challenges

Different *Adivashi* groups have a distinct language, tradition, history and culture. Therefore carrying out the research within this context and ensuring research integrity proved to be challenging. Language was not the only barrier, but also the conflict between *Adivasi* groups and Bangali was found challenging. The ethnicity of the researchers therefore was important and could have negatively influenced the whole process. Nonetheless, field staff of Caritas Bangladesh (ESLEP-CHT project), who are mostly from *Adivashi* groups and are generally trusted by beneficiaries, played a key role in overcoming these problems (e.g. played the role of translator during the data collection).

Another important challenge was related to gender and age. Women and adolescent girls often appeared initially reluctant to share their views with an adult male interviewer[4] operating through a translator. In response to this, FGDs or discussions involving women and young adolescent girls were conducted by a female interpreter. The research team faced some logistical difficulties in conducting the second phase of the research during the months of July and August 2013, due to the monsoon rain which makes traveling in hilly areas more difficult and risky.

4. Analysis

The structure of the analysis section follows the research objectives. The first sub-section analyzes different stakeholders' perception of the causes of ill-health. The second sub-section presents a contextual analysis of the medical facilities and analyzes the treatment-seeking process of the extreme-poor in this context. The third sub-section analyzes the multiple types of coping strategies adopted by household members during times of illness and treatment-seeking. The last section shows how these often extreme, consecutive or simultaneous coping strategies negatively affect the well-being of the extreme poor *Adivasi* in the short-term and their resilience in the longer-term.

4.1 Causes of ill-health and health shocks

A few cultural and traditional habits have been pointed as causes for some diseases. Problems related to food intake and water were commonly reported as common causes of ill-health in the studied area[5]. The majority of Bengali respondents reported that generally *Adivashi* communities do not consume enough nutritious food (Appendix 5) which often creates nutritional deficiencies and affects their health. For example numerous respondents stated that usually *Adivashi* (except for those living in Upazilla town) do not use cooking oil which can allegedly cause vitamin A & D deficiencies and increases the risk of ill health. Women generally breastfeed children until they reach two or three years of age without feeding them additional food. The CMS3[6] (anthropometric survey) reports a large proportion of anaemic beneficiaries (or on the edge of being anaemic). Also, water scarcity pushes households to use and consume water from rivers and streams[7] especially during the dry season (from February to May) which can have important health consequences. The frequency and type of health shock varies according to the seasons as Table 6 shows.

It is far beyond the scope of this research to investigate the accuracy of such findings. For example Dr. Ba Cing, medical officer, UNDP Bandarban district reported *nappie*, unrefined tobacco as cigarette

[4] One of the researchers
[5] According to the data gathered from medical doctors, traditional healers, medicine seller and community members
[6] Change Monitoring System 3: Annual Socio-economic and Anthropometric Survey conducted by Shiree
[7] About 70% inhabitants of Bandarban use (according to CMS1 baseline survey data)

and traditional rice wine as sources of diseases. The latter reportedly contains some micro-organisms responsible for cancer.

TABLE 4: HEALTH SHOCKS AND DISEASES EXPERIENCED BY EXTREME POOR HOUSEHOLDS IN BANDARBAN[8]

Summer	Monsoon	Winter
Measles	Influenza virus	Pneumonia/ Asthma
Chicken Pox	Malaria	Cool Dysentery
Malaria	Pneumonia	Cool Attack/Cough
Diarrhoea	Diarrhoea	Scabies rash
Typhoid	Typhoid	Viral Fever
Viral fever	Viral Fever	Typhoid
Jaundice	Dysentery	Cold Diarrhoea
	Jaundice	

Sources: Community study (extreme poor households and health practitioners)

4.2 Health issues, facilities and its consequences in Bandarban district

This sub-section argues that extreme poor households facing health issues have few options to get access to effective treatment because of the poor quality of medical services, their inaccessibility and high-costs. These constraining factors incentivize them to go to unqualified doctors, quacks or medicine sellers which involve less direct and indirect costs in the short-term (Appendix 8). The different steps and barriers in the treatment-seeking process are analysed in this section.

i. Inaccessibility

Geographically, Bandarban district is the most remote area of Bangladesh (MICS, 2009) due to hills, streams, and inaccessibility. The lack of accessibility to medical facilities and public infrastructure has increased the vulnerability of extreme poor inhabitants in the CHT. The extreme poor *Adivashi* in the CHT, particularly in the Bandarban area, are generally deprived of quality childhood immunization services, professional delivery care and access to government health facilities as compared to plain land areas (Ahmed et al., 2003; Rafi and Chowdhury, 2001). Mobility is challenging as very few areas have infrastructure and vehicle facilities such as local jeeps, rickshaw, *tempu*, buses or boats necessary to travel. When someone faces a health shock, regardless of whether the medical facilities exist, travelling to the place of treatment is a significant obstacle[9], often discouraging people from going to a hospital or visiting qualified doctors (Appendix 7). For example, Mui Hla Marma who lived six kilometres from Ruma town fractured her leg and could not find a way to travel there as it involved crossing the hills and wild water streams to reach the nearest hospital. There was no close qualified doctor, paraprofessional or local medicine seller she could access to get a medical check-up. She therefore went to see a traditional healer and religious charmer both of whom were near her village.

ii. Self-medication and nearby medical care and risk of wrong diagnosis and treatment

Self-medication, unqualified medicine sellers, traditional healers and religious charmers are common first stages in the health-seeking process of the extreme poor in Bandarban (when these are possible). Commonly, respondents reported to start their treatment process by self-medication. It is observed that nowadays some of them keep some extra tablets in their house (i.e. medicine for fever, diarrhoea). If this is not effective then they go to a nearby pharmacy or medicine seller to seek medical advice. Unqualified allopath practitioners are popular because they are generally near and

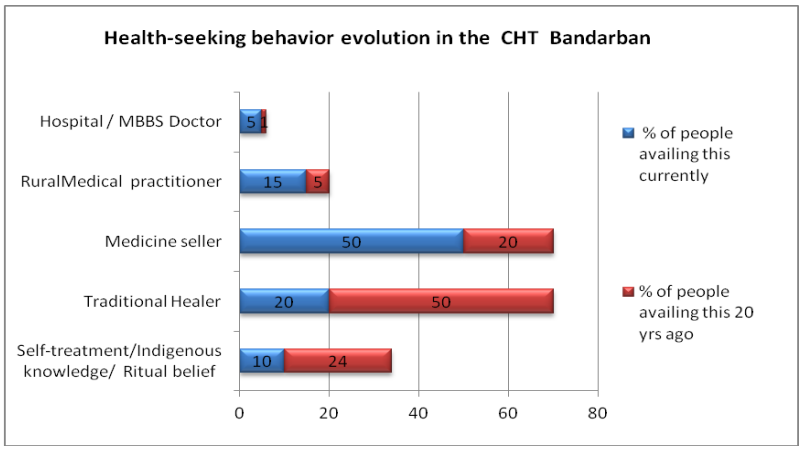
[8]Three upazilla out of seven were covered by this study

[8]Beside transportation issues, communication (mobile phone network coverage) is also limited. This prevents sufferers from getting medical advice when needed.

relatively inexpensive. Some studies reported that in developing countries allopathic treatment is more popular than qualified practitioners (Rahman, 2000; Grundy & Annear, 2010).

Based on the data collected from respondents, it is clear that these unqualified doctors give medicine to patients based on their own diagnosis and best judgement after observing the main symptoms. This increases the risks of mistreatment, lengthens suffering and involves costs and time for the extreme poor whose health conditions may worsen. This practice is increasing as Figure 3 shows.

FIGURE 3: HEALTH-SEEKING BEHAVIOUR EVOLUTION IN THE CHT, BANDARBAN



Source: 25 In-depth interviews with traditional healers, medical practitioners and nine FGDs with community people

Not only are medical facilities like hospitals difficult to access but their efficiency and quality is not guaranteed. Places which are able to run pathological tests are scarce, and except from upazilla Government hospitals, private diagnostic centers are not available in any of the three upazillas in the study. Upazilla health centres have limited capacity to run pathological tests such as total blood count (TBC), Malaria and Parasites. In the hospitals, low or unqualified pathologists use low-grade equipment and substandard chemicals for diagnosis (reagent) which are rarely maintained in good conditions and significantly increases the likelihood of misdiagnosis.

Apart from misdiagnoses, the uncertain quality of the medicines available can put the life of patients at serious risk and often worsen their condition. A large number of respondents during both Phase 1 and 2 reported that the quality of medicine available in rural pharmacies is low because pharmacists selling unauthorized pills and medicines was a common practice and local medicine sellers use them to increase their margins. Unauthorized pills were found in the respondents' homes during Phase 2 of the fieldwork. In the process, patients often lose faith and waste important sources of income. Their disease is rarely cured and they are sometimes left in a worse condition than they were initially (with reduced laboring capacities).

Figure 3 suggests that a significant number of people initially follow religious or ritual procedures at the first stage of their treatment-seeking which can include forms of shamanism. In cases of illness or accidents, often *Adivasi* households perform group prayers and regular offerings to their God and/or rituals (which often involve sacrificing livestock). These practices incur additional expenses for the religious support or guidance of a religious leader or charmer and for buying the necessary livestock. Some of our respondents, like Kamag Marma, sacrificed one goat and one chicken, or like Khenia Marma, sacrificed one pig and nine chickens. This form of spiritual response often results in serious health issues.

iii. Limited and poor health facilities

There is one public hospital in each upazilla (Table 5), but equipment and qualified doctors are hardly available. The data from an Upazilla Health and Family Planning officer shows that currently there are only four doctors in Ruma upazilla, whereas there are 13 available posts. Lama and Naikhangchari Upazilla has three and two doctors (respectively) whereas 11 and 12 posts are available. As suggested earlier, the data collected from the extreme poor households strongly indicates that reaching public hospitals is often not enough for patients to get cured. The quality of services available at the hospital is consistently reported as being low or sometimes absent as Yang Rai Mru explains:

> *"Critically ill people were carried on people's shoulders to the upazilla health complex and returned to their villages without receiving proper treatment because there was no medical officer there".*

TABLE 5: EXISTING HEALTH FACILITIES IN STUDIED UPAZILLAS

Type of Facility	Lama		Naikhangchari		Ruma	
	Total	**# of beds**	**Total**	**# of beds**	**Total**	**# of beds**
# Upazila Health Complex	1	31	1	31	1	10
# of Union Sub-Centres	1	N/A	1	N/A	0	N/A
# of Union Health and Family Welfare Centres	2	N/A	2	N/A	2	N/A
# of Rural Dispensaries	0	N/A	0	N/A	14	N/A
# of Community Clinics	3	N/A	3	N/A	2	N/A
# of Trauma Centres	0	0	0	0	0	0
# of MCWC	0	0	0	0	0	0
# of Chest Disease Clinics (TB clinic)	0	N/A	0	N/A	0	N/A

Source: Upazila Health Complex Health Bulletin 2012

In most of the places, qualified doctors do not find incentives to stay in remote hilly areas, because they are mostly from cities and do not enjoy working or living in this kind of environment. Doctors, although they have an official position at the hospital, often do not turn up to work. Dr. Bamong Pru, the Ruma upazilla health and family planning officer, reported that this low retention rate was due to the lack of comfort for their families and the poor administrative capacities of the health centre. In Ruma Upazilla Health Centre the number of Upazilla Health administrators is 32. The same is applicable for the other health experts (e.g. surgical specialists and pathologists). None of the operation theatres are usable in the three studied upazillas.

Bad experiences with formal health facilities has increased communities' prejudice against modern or mainstream types of treatment. One of the FGD participants from *Mru Adivashi* community in Lama reported that one new born baby got sick and died after getting an immunization shot. This started a rumour among the entire Mru community of Bandarban who subsequently lost faith in vaccinations. They blamed the immunization for the baby's death. As a consequence, Mru leaders threatened the CMS3 survey team not to do anaemia tests. This is associated with a growing negative attitude towards existing modern health processes. As a result, few community members use public hospitals and even fewer report being satisfied with their services.

TABLE 6: UTILIZATION OF SERVICES AT UPAZILLA HEALTH COMPLEX (JANUARY TO DECEMBER 2011)

Indicators	Naikhangchari	Lama	Ruma
Average Length of Hospital Stay (No. of days per patient)	1.84	2.11	2.12
Bed Occupancy Rate (%)	44.93%	100%	82.52%
Hospital Death Rate (%)	0.17%	0.5%	1.57%

Source: Compilation of Hospital Reports

Whether the health-seeking path of the income-earner sufferers was lengthened because of consecutive wrong diagnoses or because of receiving poor health care, the result is the same. The impact of an illness or accident on this household's livelihood is always negative. They also result in chronic diseases or medium to long-term disability. This affects the labouring capacity of the extreme poor income earner in the longer term and is likely to negatively affect income and increase households' vulnerability. The type of health shock (Appendixes 3 and 4) income earners experience not only influences their health seeking behaviour, but also affects the longer-term impact of the shock on their resilience. As argued earlier, limited health-care facilities and poor quality of medical services increases the vulnerability of inhabitants in the CHT. They tend to have lengthier health-seeking paths compared to better-off households because of the cost and knowledge barriers they face at different stages in the process. They have very limited options and/or sometimes no option to choose their health services.

The impact of health shocks on resilience varies significantly according to the type of illness, disease or accident. In cases of accidents, time is critical because often the patient does not get the proper treatment in a timely manner. The impact of the accident can have a more permanent impact on the human capital of the households (long term or medium term disability or chronic illness). In the study, three respondents have experienced accidents and have not been treated within the appropriate time (because of lack of knowledge, cash or availability of health services) and now suffer long-lasting damages, injuries or disabilities. In cases of diseases or illness (i.e. fever, diarrhoea, cold), the patients need a clear diagnosis and often the available medical centre is not qualified to deliver the required services. Often the patients made multiple attempts to cure themselves with tablet paracetamol and after a lengthy process they were diagnosed with a serious illness such as malaria, typhoid or jaundice- all common illnesses in the region. These diseases are easily curable when diagnosed early, but if left untreated, they can lead to complications. The extreme poor adopt a few specific strategies to cope during the treatment-seeking process which is the focus of the next sub-section.

4.3 Coping strategies

Health seeking behaviours and processes are influenced by few factors that were analysed in the earlier section. This process is often long and involves huge immediate costs as well as longer term ones. There are generally two main reported forms of coping strategies- one is to increase income or money flow in the household and another is to reduce expenses. Sometimes patients use what little savings they might have to cope with ill-health; other times they sell their property or sometimes take out loans. Not only the patients but other household members also get involved in the process to mobilize resources, often having to sacrifice their well-being, belongings, time and labour. The longer the process, the higher the costs and negative effects on extreme poor households' resilience.

i. Cash in Hand

The first resource to be used in the health-seeking process is drawing on household cash and/or savings. In the context of the study, extreme poor households in the CHT have a very low propensity

to save. The baseline survey[10] results indicate that less than 1% of Caritas beneficiaries (out of 10,000 households) had savings. Through qualitative research it was identified that there is no scope for them to save formally through institutions in Bandarban (there are few banks and few microfinance institutions in the upazilla town). Extreme poor households in Bandarban do not develop informal savings systems. Occasionally households save for a particular purpose (house or asset investment) but rarely for unpredictable emergencies. In some cases, the small amount of money saved is used for seeking a cure to an illness of a household member but often the amount cannot cover the costs of serious illnesses. Chain Sing Chak had saved about BDT 3000 to repair and rebuild his house, but he could not do so because he had to use BDT 2000 for his mother's, his daughter's and his own medical treatment. This increased his vulnerability to bad weather conditions, especially during the monsoon. Most households sacrifice small savings amounts which were meant to be invested for other purposes. Unsuccessful treatments combined with high costs (direct and indirect, financial and human costs) and time consumption worsens the situation of extreme poor households who generally keep seeking various types of treatment until cash and savings run out. Sometimes they wait for the harvest season to be able to try again.

ii. Assets

When households have little to no cash savings to afford treatment, or when they are searching for effective treatment options, they tend to mobilize financial resources by selling or mortgaging assets. They also sacrifice their livestock as a part of shamanism. Although this enables them to gather cash to cover health related costs, selling and using physical assets (productive or non-productive) often has long-term impacts on household's resilience. Commonly, households sell livestock (if available) or fruits, crops, spices and vegetables that were initially kept for their consumption. For example, Aung in Naikhangchori sold his livestock, and Cranu and Swehla in Ruma sold their chicken and pig. Cranu said:

> *"Caritas gave me two pigs. I have reared them. But, I had to sell one to manage money. If I hadn't sold it for treatment costs, I could have reared it for a few more days and sold it at a higher price. I could have used the money to buy more pigs or some other asset."*

Ba Thawa and Andrey in Lama sold bananas from his garden to manage money immediately after a health shock. Sometimes households sell input supports provided by their NGO[11] since selling an asset makes up for an immediate liquidity shortage. On the other hand, it often impoverishes them further in the long-run as they are compromising future financial returns and/or well-being. A sufferer in Ruma said:

> *"While trying to cure a life-threatening disease (cancer tumour), we were forced to sell our assets and take out a loan. However, we did not receive good treatment from the specialised doctor. We ended up assetless and unable to work, forcing my family into destitution."*

iii. Borrowing

In cases where extreme poor households do not have savings or assets (or not enough of), or have exhausted those resources to afford effective treatment, they often resort to borrowing money. There are a few informal sources of loans available such as relatives and friends, landowners, money lenders, community-based societies[12] and rarely Micro Finance Institutes (MFIs)[13]. These options

[10] Conducted in 2011 by Caritas
[11] In this case Caritas
[12] Only one found in the study in Mohanjon *para* in Tripura community

have different terms and conditions. Borrowing from neighbours and relatives is generally preferred because although the available amount is small, the interest is generally low compared to other options. CMS1 base line data shows that out of 10,000 beneficiaries of ESLEP-CHT project, 90% are living on *Jhum* cultivation as well as day labour. However, loans from neighbours and relatives are less available during lean period, one or two months before harvesting.

Generally, patients during this time have little scope and borrow at high interest rates (Appendix 9) from money lenders and employers who generally are the richest households in the community, often Bengali businessmen. These loans are expensive for the extreme poor (50% annual interest rate) but they are available throughout the year and repayable after the *Jhum* cultivation season. If they fail to repay, then they often have the opportunity to repay during or after the harvesting season (applying another 50% interest on the loaned amount). For example, Mong Ching Wai Marma of Naikkhanchori took BDT 20,000 from his sister (with no interest) and BDT 15,000 from Karbari[14] (5% interest rate monthly). The study identified that sufferers have accumulated a lot of debt from various sources. In some severe cases (about three cases) their due amount can be more than BDT 50,000 which they struggled to repay due to their inability to provide physical labour. This is not much different to what Mclntyre and Thiede (2008) states, "There is a high risk that repayment of the initial loan plus (possibly ruinous) interest can plunge a household into further distress."

The ability of extreme poor households to borrow money from informal sources is highly dependent on their level of social connectedness in their community. As households get sicker and more indebted (if consecutive attempts to get treatments are not effective), they see their options to borrow from their peers reduce significantly. When access to informal loans is denied to them, they have little options to mobilize money as they have exhausted the resources they could mobilize from social networks. Caritas social safety net support provides some help to the sufferers. For instance, if patients can reach respective Caritas staff members of the Shiree project, they get BDT 1000 for primary treatment costs. This money helps the Caritas beneficiaries to face the situation instantly. But most of the time sufferers cannot reach this support due to lack of mobility (i.e. remoteness or ill health).

iv. Extra labour

While income-earners get sick, there is an invisible opportunity cost. Extreme poor income earners do not stop their work until they get seriously ill. When they remain at home for their sickness, they lose their daily income. The person who cultivates their own agricultural land misses the ultimate production of crops as an income. If the illness lasts for a long time, the financial loss and/or crop production loss for the household can be significant. Sometimes two income earners will get involved to support the patient to find treatment or at least supplement their income. However, there is still a loss in income. This opportunity cost is higher for female income earners. Women tend to face more linguistic and security barriers than men and when ill are generally in greater need of male company in order to travel. This is much more difficult for female headed households and single women. This loss increases with time required for the treatment. Khenia U's husband said:

> *"She has been suffering for about a month. There is no adult person in our household who can take care of her as well as our children's. So, I have to maintain everything. I can't go to Jhum regularly and this will hamper crop production. While she was severely sick, two of my neighbours helped me to carry her to the hospital. But, I didn't pay them. So, they lost their two*

[13] Available in *Chagokhoiya para* in Lama upazilla
[14] community leader

days worth of wages. For her illness, both of us as well as two other people lost their income and our crop production was less than usual"

In times of illness and during the health-seeking process extreme poor households are likely to experience two kinds of financial loss- expenditure for medical treatment and loss of their income.

v. Compromising on children's needs

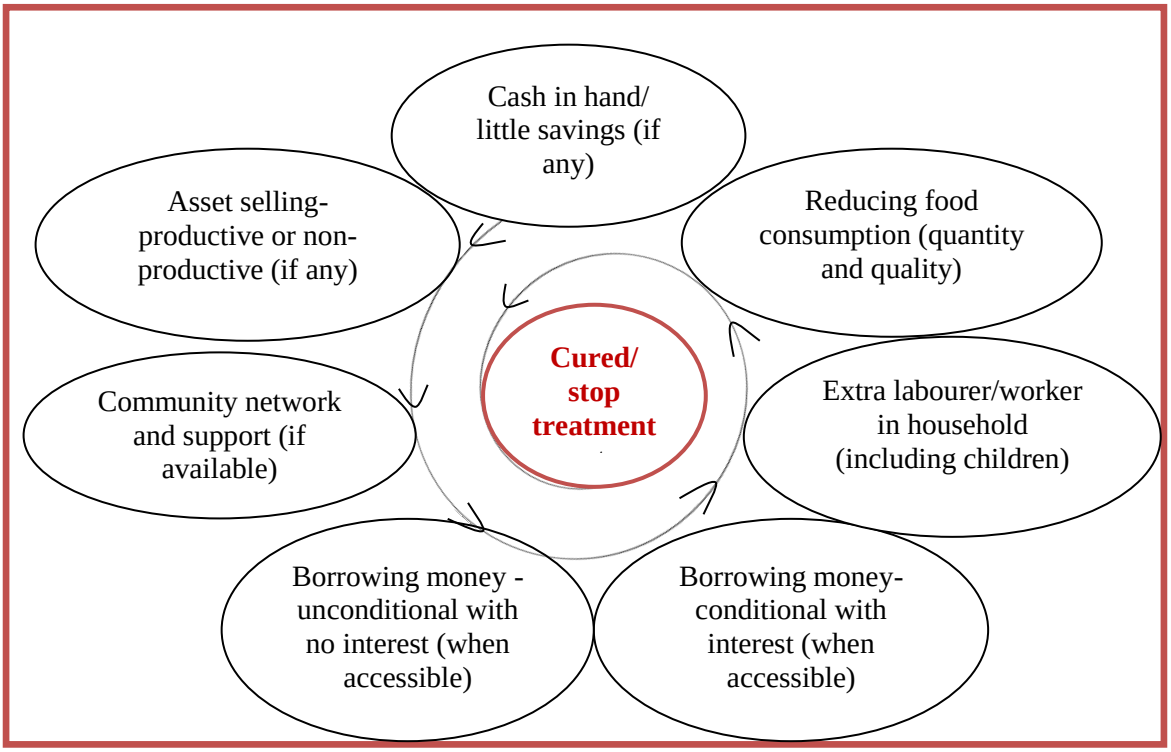
Most of the time coping strategies of extreme poor ill health sufferers directly affect children's well-being and education. While households struggle to accommodate the expense of treatment, they start cutting back on daily expenditures. One of the areas of compromise is withdrawing children from school. If income earners suffer from chronic illness or become unable to work, the impact of this on the household's well-being is immediate as the household income reduces significantly (if not totally). In such situations, extreme poor households need treatment but have no cash to afford it. They need to recover from their illness in order to work and afford treatment and regular household expenditures. To increase their earnings and reduce expenses, households often withdraw children from school and (if the child is old enough) engage them in labouring activities (paid or unpaid). They often work in their own *jhum* land, sometimes as wage labourers. For example, Aung's daughters were engaged in *Jhum* cultivation because of his illness. He had taken out a huge loan and without a good yield he would not be able to pay back. As a result, his daughter had to work. Kamang's 13 years old son was studying in class three in Bandarban. Now he is working on their *jhum* land. Children are contributing their income for the treatment of the extreme poor income earner. This mainly happens in cases of long term illness or disability, and is less frequent in cases of short term sickness.

vi. Food

Households make significant compromises on the quantity and quality of food consumption for reducing their daily expenses in order to meet the costs of health care and *to mobilize more cash savings and repay loans*. They will eat less protein (fish and meat are expensive) and prefer to collect vegetables from fields and forests. They compromise on nutritional food intake (Jones, 1991; Krishna, 2007). After reducing the quality of nutritional intake, households reduce the number of daily meals. For example, Pu Thowai Mong in Ruma had BDT 500 cash in hand to buy food for his family. When he was attacked by a viral fever, he spent BDT 120 to buy medicine. When he was interviewed, it was only on his third day of suffering. He had to readjust his expenses by cutting his consumption. When sufferers sell their food directly, their compromises are more obvious. Khenia sold 100 kilos of rice from her yearly food stock. She said,

"I am worried about the future. I have sold rice that could feed my family for about two months. We have lessened the regular amount of rice intake to eat more days. If we eat more, our rice stock will run out early and then we might need to borrow. So, it is better to reduce our daily food intake and save for future days."

FIGURE 4: ADOPTED COPING STRATEGIES



All the coping strategies explored in the previous section (savings, asset selling, loans, food consumption) have some degree of impact on the sufferers' livelihood. These affect the households' wellbeing, nutrition, savings, children's education, child labour and in the end, their resilience is affected.

i. Impact of using small savings and selling assets

Sufferers using their savings for treatment often have severe difficulties in the future. Most of the time they use their cash for daily expenditure. As a result, they have to compromise with daily consumption as well as reducing all kinds of expenses. Sometimes they save money for particular purposes (e.g. home repairs, buying livestock, cultivation, local/religious festivals etc.). Using that money for treatment purposes prevents them from doing what they had planned. As a result, they cannot add more income sources. Chain spent BDT 3000 saved for home repairs on his treatment. He shared:

> *"If I had not spent money on treatment, I could have repaired my house. But illness left no other choice except suffering during monsoon. Now rainwater will pour through the holes in the roof. I have to save money again squeezing my household costs. To cope with ill-health, I have compromised on my housing".*

When they do not have any livestock or agricultural products, they sell other assets such as jewellery and food stock which leads to major asset depletion. If they do not sell their agricultural products to arrange money for treatment, they could use the money to expand their consumption or to invest in other income generating sources. When extreme poor households sell their livestock, they lose their income and protein intake sources.

ii. Impact of food expenditure reduction

Compromising on food consumption has long term impacts on the nutritional status of the household members as well as on the sufferers. Taking less quality and quantity food reduces work capability and has long term impacts on physical and mental health. This will put them at risk of being attacked by illness more often. Furthermore, children's physical and mental growth slows down. Malnourished children suffer 75% of their lifetime from illnesses (World Health Report 2005). Sufferers consume less food although they need nutritious food especially during times of illness. So, it takes more time to recover than usual. This also reduces their future working capacity and resistance power. They live with constant risk of getting sick again.

iii. Impact of extra labour

Young household members and wives are usually the ones who have to adjust their livelihood and compromise their well-being when the income earner is unable to work. They tend to work (at home) more than they used to in order to cope. While women spend increasingly more time working in the fields, they still remain in charge of most household chores (cooking, taking care of children and so on). Extra labour adds extra work load on household members and hampers normal life. Kamang cannot think of marrying his daughter because she has replaced him as the main income earner. An important long-term impact of child labour is that it hampers children's mental and physical growth and in the long run weakens their working capacity and physical strength.

iv. Impact on other members' health

If income earners or any other family members get sick at the same time, it creates major difficulties. Various issues are raised such as who gets priority, type of treatment to seek, how to arrange money, etc. Sometimes, ill income earners get engaged in this process; other times the ill person gets less attention. If a female income earner gets sick, the other sick person will not receive proper care (usually women take care of household members). If the household runs short of money, it puts extra stress on the household members including the income earning sufferers. For example, while Aung in Naikkhangchori was ill, his 11 years old son had broken his leg which required surgery. He said,

> *"It was a frustrating situation. I was the only one earning in our household (sometimes my wife helped with cultivation). When my son had an accident, I was in a huge debt for my own treatment. Instead of resting, I had to run to people to borrow money as I that urgently. Arranging the money was very stressful."*

Mong exhausted all loan sources for his own treatment. His 2 years old daughter was suffering from a fever during the interview, but he could not do anything for her treatment. When Khenia was severely ill, her elder daughter (5 years) was ill at the same time. She was unable to take care of her daughter. Khenia said:

> *"My daughter required special care. But, I couldn't do anything for her-could not even ensure timely food and medicine intake. I couldn't breastfeed my youngest daughter either. For that, they will face health problems in the future."*

v. Behavioural changes

Changes occur in households in terms of decision making for the disabled or chronically ill. When an income earner loses his earning ability and other family members sacrifice their well-being, a change naturally comes in the household dynamic. Behavioral changes of other household members and changes in the household roles can often worsen the situation. Though women in CHT are hard-

working and always involved in earning, they have very little rights in the decision making process compared to women in plain land. When the main income earner (male) suffers from chronic diseases or becomes disabled, women take his position. In some points, it is an opportunity for women to make households decisions. Swelha's wife is now the main earner and decision maker in their household-a role she did not play in the past. Swelha expressed his mental situation:

> "*My wife has taken all the responsibility to run the family. She knows better about household needs, how to manage everything and above all, she is the main earner. It is very natural that she plays the main role in decision making. Sometimes I feel quite inferior to her. I don't earn, can't work, so why bother about my feelings. They are sacrificing lots of things, so I have to accept the situation."*

5. Conclusion

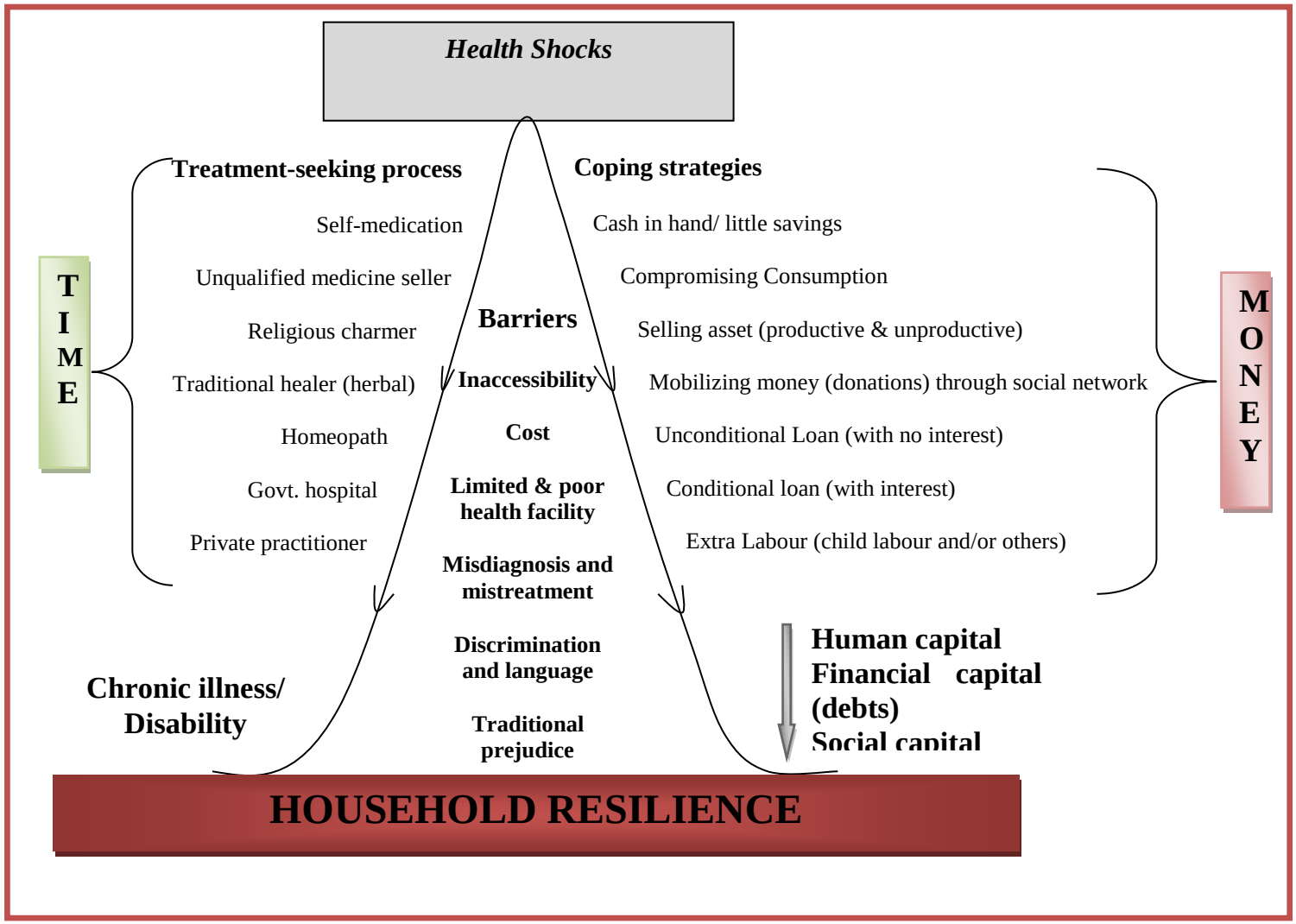
This study investigates the impact of ill-health on income earners in the CHT and identifies considerable barriers and factors which make it difficult to access medical care and lengthen the treatment-seeking process as well as makes it more costly.

In the CHT, it seems that it is very rare that extreme poor households are able to face health shocks. As the paper demonstrated, extreme poor households in the CHT adopt different coping strategies during the treatment-seeking process of the income earners. This often significantly affects the entire household's wellbeing in the long-term. During this period, all the household members contribute their time, energy and money to cope with the situation. They compromise food intake to reduce expenses. The household is left with long-term liabilities and vulnerabilities. During the time of illness or treatment, households compromise on important investments (home repairs, share cropping). Coping strategies in these cases are often not sufficient to allow households to maintain a stable economic status, and often this status declines because of these strategies. Households that face an important health shock or a minor health problem that was mistreated (and turned into a chronic or long term illness) are more likely to see their resilience suffer in the longer-term.

Also, the study identifies that ethnic minorities transform their traditional health-seeking behaviour and practices. Self medication and medicine sellers are taking the place of traditional healing and herbal treatment processes. As a result, their indigenous knowledge of herbal medicine is declining. Further research could be conducted to explore this issue. The study also identifies extreme poor respondents who faced health shocks and benefited from community support (depending on the type of illness and the length of the recovery process), and that those who did face a health shock appeared more inclined to save cash for future shocks (insurance). Savings could significantly contribute to improving (if not guaranteeing) their resilience to health shocks.

Based on the findings and arguments explored in this paper the authors conclude that quality medical services are missing in the Chittagong Hill Tracts and that providing basic health training can help them change their behaviours and prevent ill-health. Nonetheless the effectiveness of these initiatives will remain limited, if extreme poor households still resort to extreme coping strategies during their lengthy treatment-seeking process. Having no savings had been clearly identified as a major factor which lead to long treatment seeking-processes, inadequate treatment, late treatment and the adoption of coping strategies. This will have long-term (if not permanent) negative effects on their resilience. GO and NGO organizations can play a significant role by extending their savings programmes and can even motivate them to start community based informal savings and/or individual savings of extreme poor households in CHT. Savings will help them to choose their desired treatment method and recover faster, potentially reducing the long-term negative impact on the households' resilience.

FIGURE 5: RELATIONAL ANALYSIS OF TREATMENT-SEEKING PROCESS, BARRIERS TO TREATMENT, COPING STRATEGIES AND EXTREME POOR HOUSEHOLDS' RESILIENCE



Bibliography

1. Ahmed, S. M., Adams, A.M., Chowdhury, M., and Bhuiya, A., (2000). Gender, socioeconomic development and health-seeking behaviour in Bangladesh. In: *Social Science & Medicine. 51, 361-371*
2. Ahmed, S. M, (2005). Exploring Health Seeking Behaviour of Disadvantages Population of Rural Bangladesh Karolinska University Press, Stockholm Sweden, ISBN 91 -7140- 435, X p- 20
3. Barkat, A., et al. (2009) "Socio-economic baseline survey of Chittagong Hill Tracts. Dhaka: Human Development Research Centre (HDRC)/Chittagong Hill Tracts Development Facility (CHTDF)/UNDP. URL."
4. Bender, E.D. and Ewbank, D., (1994). The focus group as a tool for health research: issues in design and analysis. *Health Transition Review Vol. 4 No.1*
5. Bennett, S., Gilson, L., & Mills, A. (Eds.). (2005). Health, economic development and household poverty: From understanding to action. Routledge. http://books.google.com.bd/books?id=-wdwXL3BS6wC&printsec=frontcover&dq=health+and+poverty&hl=en&sa=X&ei=hlm5UdOONYSyrgf3jIDwCw&redir_esc=y#v=onepage&q=health%20and%20poverty&f=false
6. Breman, J. G., Alilio, M. S., Mills, A., & Russell, S. (2004). The economic burden of illness for households in developing countries: a review of studies focusing on malaria, tuberculosis, and human immunodeficiency virus/acquired immunodeficiency syndrome.
7. Budhathoki, C. B., (2012) Socioeconomic Status and Access Barriers to Healthcare Services in Kushbadiya Community.
8. Burries, S., and Anderson. D., (2010). A Framework Convention on Global Health: Social Justice Lite, or a Light on Social Justice? http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1685858 (last retrieved 23.6.2013)
9. Chandra,R., & Roy,K., (2000). Land Rights of the Indigenous Peoples of the Chittagong Hill Tracts, Bangladesh. P.112-113)
10. DAC Guidelines and Reference Series. (2003). Poverty and Health (electronic resource), World health organization. http://books.google.com.bd/books?id=ykriGmCkWOkC&printsec=frontcover&dq=bibliogroup:%22Dac+Guidelines+and+Reference+Series%22&hl=bn&sa=X&ei=bVq5Ue77DMKqrAfc44CwBA&ved=0CDMQuwUwAA#v=onepage&q&f=false
11. Fischer, I., & Salehin, M. M. (2009). Health and poverty as challenges for human security: two case studies on Northern Vietnam and Bangladesh. InFacing Global Environmental Change (pp. 563-572). Springer Berlin Heidelberg.
12. Gan, L., Xu, L. C., & Yao, Y., (2006). Health shocks, village elections, and long-term income: evidence from rural China (No. w12686). National Bureau of Economic Research. http://ir.pku.edu.cn/bitstream/211010/3887/1/HEALTH%20SHOCKS,%20VILLAGE%20ELECTIONS,%20AND%20LONG-TERM%20INCOME%20%20EVIDENCE%20FROM%20RURAL%20CHINA.pdf
13. Grad, F. P. (2002). The preamble of the constitution of the World Health Organization. Bulletin of the World Health Organization, 80(12), 981-981
14. Grant, U., (2005). Health and Poverty Linkages: Perspectives of the chronically poor. Background Paper for *the Chronic Poverty Report 2008-09.*
15. Grundy, J., and Annear, P., (2010). Health –seeking behaviour studies: a literature review of study design and methods with a focus on Cambodia. *Health Policy and Health Finance Knowledge Hub.* Working paper series. The Nossal Institute for Global Health.
16. Huang, X., Audibert, M., Mathonnat, J., & Pelissier, A. (2012). Financial and Income Losses From Illness Shock in China: Results from Surveys in Eight Provinces. Journal of US-China Public Administration, 9(4), 355-373.
17. Islam, M. R, (2010). Maternal Morbidity and Mortality among Indigenous People in Bangladesh: A Study of the Mru Community, Faculty of Social Sciences, University of Tromsø, Norway.
18. Jones, L. (1997). The Health Consequences of Economic recessions. In: Michael J Holosko and Marven D Feit, eds. *Health and Poverty.* Rutledge 1997. Page 49-64. (Originally publish in *Health & Social Policy. Vol. 3(2)* 1991). http://books.google.com.bd/books?id=oUYy4XG0BbIC&pg=PA49&dq=health+and+poverty&source=gbs_toc_r&cad=4#v=onepage&q=health%20and%20poverty&f=false

19. Kenjiro, Y. (2005). Why Illness Causes More Serious Economic Damage than Crop Failure in Rural Cambodia.
20. Krishna, A., (2007). "Poverty and health: defeating poverty by going to the roots". Development 50.2, page 63-69
21. Kothari, C. R. (2006). Research Methodology: Methods and Techniques (online). New Age International (P) Ltd., Publishers, Delhi, India. 2nd Edition. http://books.google.com.bd/books?id=8c6gkbKi-F4C&printsec=frontcover&dq=research+methodology&hl=en&sa=X&ei=TBqgT5TgBYnZrQec2NjGAQ&redir_esc=y#v=onepage&q=research%20methodology&f=false (last accessed- 7.5.2012. 11.58PM BST)
22. MacKian, S. (2003). A review of health seeking behaviour: problems and prospects. Health Systems Development. University of Manchester, Manchester, UK.
23. McIntyre. D and Thiede. M. (2008). Illness, heath service costs and their consequences. Health, Economic Development And Household Poverty: From Understanding To Action. Page 84. http://books.google.com.bd/books?id=-wdwXL3BS6wC&printsec=frontcover&dq=health+and+poverty&hl=en&sa=X&ei=hlm5UdOONYSyrgf3jIDwCw&redir_esc=y#v=onepage&q=health%20and%20poverty&f=false http://r4d.dfid.gov.uk/PDF/Outputs/HealthSysDev_KP/05-03_health_seeking_behaviour.pdf http://www.cwru.edu/med/epidbio/mphp439/healthcareutil.pdf http://currentnursing.com/nursing_theory/health_belief_model.html http://www.dcp2.org/file/30/ . http://www.ncbi.nlm.nih.gov/books/NBK3768/
24. Monitoring the Situation of Children and Women, Multiple Indicator Cluster Survey 2009. (2010). Progotir Pathey, Volume I: Technical Report
25. Multiple Indicator Cluster Survey (MICS) 2009, (2010). Progotir Pathey, Volume 1: Technical Report, Author- BBS, UNICEF - http://www.unicef.org/bangladesh/MICS-PP-09-v10.pdf
26. Mushtaq, M. U., Shahid, U., Abdullah, H. M., Saeed, A., Omer, F., Shad, M. A., & Akram, J. (2011). Urban-rural inequities in knowledge, attitudes and practices regarding tuberculosis in two districts of Pakistan's Punjab province.International Journal for Equity in Health, 10(8).
27. Palmer. N. (2008). Health, Economic Development Andn Household Poverty: From Understanding To Action.http://books.google.com.bd/books?id=-wdwXL3BS6wC&printsec=frontcover&dq=health+and+poverty&hl=en&sa=X&ei=hlm5UdOONYSyrgf3jIDwCw&redir_esc=y#v=onepage&q=health%20and%20poverty&f=false (page 62)
28. Pasteur, K., (2011). From Vulnerability to Resilience: A framework for analysis and action to build community resilience. Bourton on Dunsmore: Practical Action Publishing.
29. Phillips, D., & Verhasselt, Y. (Eds.). (2002). Health and development. Psychology Press.
30. Phillips, D., Groenewegen, P., Verhasselt, Y., (1998). Health, Environment and Development: issues in developing and transitional countries. In: Geo Journal 44.2:97-102 http://nvl002.nivel.nl/postprint/PPpp1160.pdf http://www.jpma.org.pk/full_article_text.php?article_id=3188
31. Pryer, J., Rogers, S., & Rahman, A. (2003, April). Work, disabling illness, and coping strategies in Dhaka Slums, Bangladesh. In International conference on staying poor: Chronic poverty and development policy, Manchester.
32. Rafi, M., (2001). Counting the hills: Assessing development in Chittagong hill tracts/edited by Mohammad Rafi, A. Mushtaque R. Chowdhury. University Press Limited.
33. Rahman, H.Z. (1995), 'Crisis and Insecurity: the Other Face of Poverty' in Hossain Zillur Rahman & Mahabub Hossain (ed), *Rethinking Rural Poverty: Bangladesh as a Case Study*, SAGE Publications
34. Rahman H Z., (2011), Extreme Poverty and Graduation Processes, Insights from Practical Action SHIREE Experience, PPRC, p-11
35. Rahman, S., & Kielmann, T Mcpake, B., and Normand, C.(2012). Healthcare-seeking Behaviour among the Tribal People of Bangladesh: Can the Current Health System Really Meet Their Needs? *Journal of Health, 30*(3), 353–365.
36. Rahman, H., and Mansoor, A., (2000). "Healthcare waste management in developing countries."
37. Russell, S., (1996). Ability to pay for health care: concepts and evidence. *Health policy and Planning,* 11 (3): 219-237

38. Russell, S., (2001). Can households afford to be ill? The role of the health system, material resources and social networks in Sri Lanka. PhD thesis. London School of Hygiene and Tropical Medicine, University of London. http://researchonline.lshtm.ac.uk/682239/1/248140.pdf
39. Russel, S., (2003). The economic burden of illness for households. A review of cost of illness and coping strategy studies focusing on malaria, tuberculosis and HIV/AIDS. Working Paper. DCPP.
40. Ruger, J. P., (2010). "Health capability: conceptualization and operationalization." Journal Information 100.1
41. Schulpen, T. W. J., & Swinkels, W. J. A. M. (1980). Machakos Project Studies: agents affecting health of mother and child in a rural area of Kenya. XIX. The utilization of health services in a rural area of Kenya. Tropical and geographical medicine, 32(4), 340-349.
42. Strauss, J. and Thomas, D., (1998). Health, Nutrition, and Economic Development. Journal of Economic Literature, vol. 36, No. 2. Pp. 766-817.
43. Tribal/Ethnic Health Population and Nutrition Plan for the Health, Population and Nutrition Sector Development Program (HPNSDP) 2011 to 2016, (2011). Ministry of Health and Family Welfare Dept. P-22
44. UN Millennium Project. (2005). (Retrieved from internet on 13.06.2013 at 3.42 pm http://www.unmillenniumproject.org/reports/fullreport.htm)
45. University of Queensland and University of Southern Queensland. (2008). Toolkit. Building Resilience in Rural Communities.
46. Wag staff, A. (2002). Poverty and health sector inequalities in Bulletin of World Health Organization 2002; 80:97-105.
47. Wagstaff, A., and Lindelow, M., (2010). Are Health Shocks Different? Evidence from a Multi-Shock Survey in Laos. Policy Research Working Paper, WPS 5335, the World Bank, Development Research Group, Human Development and Public Service Team.
48. Weerasinghe, M. C., and Fernando, D. N. (2009). "Access to care in a plural health system: Concerns for policy reforms." Journal of the College of Community Physicians of Sri Lanka 14.1: 39-45.
49. World Bank. (2013). http://issuu.com/world.bank.publications/docs/9780821385876?mode=embed&layout=http%3A%2F%2Fskin.issuu.com%2Fv%2Flight%2Flayout.xml&showFlipBtn=true (Retrieved from internet on 13.6.2013 – 1.26pm)
50. World Health Report. (2005). Van L.W., Manuel, A., Matthews, Z., & Cathy, W. (2005). Make every mother and child count. World Health Organization.

Appendix 1

Ensuring Sustainable Livelihood of Extreme Poor Households of Chittagong Hill Tracts (ESLEP-CHT) Project:

ESLEP-CHT is a project implemented by Caritas Bangladesh with support from Shiree/EEP and funded by DFID. The project was initiated in September, 2011 in the 5 *upazilla's* of Bandarban district; Ruma, Thanchi, Alikadam, Lama and Naikhangchari. Within these *upazillas*, Caritas Bangladesh aims to sustainably graduate 10,000 extreme poor households from extreme poverty through increasing monthly income, food security and access to health and education by 2015. The graduating process of the extreme poor focuses on train up 10,000 household heads in tree plantation & nurturing, cash crop cultivation, livestock rearing, etc. Technical skill training through Mobile Trades School and Residential Technical Schools is also provided to youngsters who have dropped out from school. Caritas then support the beneficiaries' new occupations by developing linkages and carrying out advocacy, networking and lobbying with related companies and businessmen for marketing their products at a fair price. Caritas project has a health (nutrition) component, which centres on monthly educative discussion sessions facilitated by Field Facilitator's, (Nutrition worker/PustiKarmi), where all beneficiaries are invited to attend. All eligible beneficiaries are included and receive support from the project during emergency/lean period.

Appendix 2

PHASE 1: RESEARCH TOOLS

Activity	Research Participants	Type of Group	Number	Location
Focus Group Discussions (FGD)	People who have recently suffered from ill health	Male Female Adolescent	3 FGDs per upazila	Lama/Naikhanchari/Ruma Upazilla
Key informant interviews	Traditional Healers		9(3from each upazilla)	Lama/Naikhanchari/Ruma Upazilla
	Traditional birth attendant (*dhai*)		9	(3 from each Upazilla)
	Medicine Seller		6	(2 from each Upazilla)
	Karbari (Para leader)		6	(2 from each Upazilla)
	Union Parishad Representatives		6	(2 from each Upazilla)
	Private Medical Practitioners,		6	(2 from each Upazilla)
	Upazilla Health Administrator		3	(1 from each Upazilla)
	Union heath/ family planning assistant.		3	(1 from each Upazilla)
	Family Planning officer		3	(1 from each Upazilla)
	Donor's representative e.g UNDP/ UNICEF		2	Bandarban District Head Quater
	Civil surgeon of BandarbanDistrict		1	Bandarban District Head Quater
	Deputy Director Family Planning Office, Bandarban		1	Bandarban District Head Quater

Appendix 3

GENERAL DISEASE SCENARIO BY SEASON CHT RESPECTIVE UPAZILLA

Name of *Upazilla*	Summer	Rainy Season	Winter
Ruma	1.Diarrhoea 2. Malaria 3. Typhoid	1.Malaria 2.Viral Fever 3. Dysentery	1.Pheumonia/ Asthma 2.Cold Attack/Cough 3.Scabis
Naikhangchari	1. Diarrhoea 2.Viral Fever 3.Malaria 3.Jaundice 5. Chicken Pox	1. Influenza 2.Malaria 3. Jaundice 4. Pneumonia 5. Diarrhoea	1Cold Attack/Cough 2. Viral Fever 3.Pneumonia/ Asthma 4. Typhoid 5. Cold Diarrhoea
Lama	1.Diarrhoea 2.Viral Fever 3.Malaria 3. Jaundice 5. Chicken Pox	1. Influenza 2.Malaria 3. Jaundice 4. Pneumonia 5. Diarrhoea	1. Cold Attack/Cough 2. Viral Fever 3. Pneumonia/ Asthma 4. Typhoid 5. Cold Diarrhoea

Source: Rural Medical Practitioner, Pharmacists (Medicine Seller) of Lama, Naikhangchari and Ruma upazillas, December 2012 and January 2013

Appendix 4

MAIN DISEASES SUFFERED FROM BY THE BANDARBAN BY SEASON

Disease suffered summer	Disease suffered Rainy season	Disease suffered winter
Elderly people suffer by body pain Measles Pox Malaria Diarrhoea Typhoid Viral fever Skin Diseases	Influenza Malaria Pneumonia Diarrhoea Typhoid	Pneumonia/ Asthma Skin diseases Common cold fever Cough Dysentery

Source: Nine focus groups with community member

Appendix 5

FOOD INTAKE SCENARIO BY SUFFERS

Upazilla	Name of respondent	Usual food intake
Lama	U Sa Thowing Marma,40	Generally takes two meals in a day. Food menu in generally rice with seasonal vegetable and Nappie. Live fish intake monthly one day. Meat in take occasionally.
	Thowi Owng Marma,45	Generally takes two meals in a day. Food menu in generally rice with seasonal vegetable and Nappie. Live fish intake monthly one day. Meat in take yearly two three times.
	Ba Thawa,45	Three meals in a day. Food menu in generally rice with seasonal vegetable and Nappie. Live fish intake monthly one day. Meat in take monthly one day.
	Andry JoyTripura,35	Usually takes three meals in a day. Food menu contents of rice seasonal vegetable and nappie is most common item which intake regular. Intake weekly one day live / dry fish and fortnightly intake meat.
	Ba Rai Tee,48	Usually takes three meals in a day. But in lean season when day labouring not gets then take two meals. Food menu contents of rice seasonal vegetable and nappie is most common item which intake regular. Intake two days' live / dry fish in a month and one day in a month intake meat.
	Swea Mra Marma,36	Have three meals with one and half kg of rice every day. Dry fish three days a week, totaling about 500 grams in a month, and 500gm of fresh fish once a month. They have egg twice a month, but vegetables regularly. Meat only once every 1-2 months. She was only able to buy 250-500 gm and this was for her son.
Ruma	Cham Sim Bawm ,55	Two meals in a day with rice, seasonal vegetable. Dry fish one day in a moth, live fish 1 to 2 days in a week, One day chicken meat in a month, Does not eat pork.
	Swehla Ching Marma,46	Three meals in a day with rice, seasonal vegetable. Dry fish one day in a week, live fish 1 day in a week, One day chicken meat in one to three months interval, Does not eat pork and egg.
	Cranu Ching Marma ,32	Two meals a day consisting of rice with seasonal vegetables. Sometimes they collect jungle leaves from the forest. Now they have dry fish as protein 2 to 3 days a week.
N.Chari	Kaing Ching Pru,40	Usually take meals twice in day rice with seasonal vegetable. Dry fish 250 gram 3 days in a week and live fish one day two meals in a week. Monthly one day meat and two days egg.
	Ma ching Yoei Chak,44	Usually take three meals in day rice with seasonal vegetable. Dry fish 250 gram 3 days in a week and live fish two days in a month. Two three months interval one day intake meat.
	Mong A Chak,65	Usually take meals twice in day rice with seasonal vegetable. Dry fish 250 gram 3 days in a week and live fish one day two meals in a month. Three four Months interval one day meat.

Appendix 6

TOP 10 DISEASES ACCORDING TO THE NUMBER OF PATIENTS ADMITTED IN THE UHC AND SADAR HOSPITAL DURING THE REPORTING PERIOD (JANUARY-DECEMBER, 2011)

Naikhangchari			Lama			Ruma			Bandarban (Sadar Hospital)		
Disease name	No. of cases	%	Disease name	No. of cases	%	Disease name	No. of cases	%	Disease name	No. of cases	%
Diarrhoea	787	15	Pneumonia	992	41	Pneumonia	332	22	Diarrhoea	800	18
ARI[15]	1195	24	Diarrhoea	326	13	Diarrhoea	287	19	Hypertension	793	18
Fever	1233	24	Assault	447	18	Malaria	175	12	Urinary Tract Infection	785	18
Peptic Ulcer diseases	237	5	Peptic ulcer	148	6	Peptic Ulcer	75	5	Pneumonia	719	17
Others skin disease, allergy	15	0	Skin disease	07	0	Fever	347	23	Rheumatic Fever	437	10
RTA[16]	155	3	Fever	244	10	Enteric fever	67	4	Malaria	294	7
Assault	475	9	Respiratory Tract Infection	154	6	Urinary tract infection	43	3	Road Traffic Accident	187	4
Malaria	102	2	Pain	115	5	Hypertension	69	5	Asthma (COPD)	181	4
Respiratory tract infection	380	7	Eye Disease	0	0	Assault	26	2	Anaemia	81	2
Pain	505	10	Ear Disease	02	0	Others	87	6	Poisoning	66	2
# of patients admitted during the reporting period		5084	2435			1508			4343		

Source: Secondary source information collected at the hospitals re-arranged by the researcher

[15]Acute Respiratory Infection
[16]Renal Tubular Acidosis

Appendix 7

REMOTENESS OF THE PARAS FROM THE UPAZILLA HEAD QUARTERS.

Upazilla	Union & Para Location	Distance Para to Upazilla HQ	Transportation	Duration to reach	Cost of travel each way @ per person	Remarks
Ruma	Remakripransha Soiratong Para	62 Km	Jeep Foot	6 hours	100 taka when jeep service can use, Otherwise to be reserve jeep-2300 taka.	In rainy season mostly on foot. Often involves staying overnight at Upazilla HQ: 500 taka for food and lodging.
	RemakriPransha .Sankrait Para	75 Km	Jeep Foot	8 hours	100 taka when jeep service can use, Otherwise to be reserve jeep-2300 taka.	In rainy season mostly on foot. Often involves staying overnight at Upazilla HQ: 500 taka for food and lodging.
	RemakriPransha .Jadipai Para	52 Km	Jeep Foot	5 hours	100 taka when jeep service can use, Otherwise to be reserve jeep-2300 taka.	In rainy season mostly on foot. Often involves staying overnight at Upazilla HQ: 500 taka for food and lodging.
	Galenga , Monglung	37km	Boat Foot	3-4 hours	To be reserve -1200 taka	Often involves staying overnight: 500 taka
	Galenga , Chini	41km	Boat Foot	3-4 hours	To be reserve -1200 taka	Often involves staying overnight: 500 taka
	Paindu,Khamtang	21km	Jeep Foot	2- 3 hours	To be reserve jeep-2300 taka.	Often involves staying overnight: 250 taka
	Paindu,Sukromoni	23km	Jeep Foot	2- 3 hours	To be reserve jeep-2300 taka.	Often involves staying overnight: 250 taka
	RumaSadar , Saikot Para	20km	Jeep Foot	2- 3 hours	To be reserve jeep-2200 taka.	Often involves staying overnight: 250 taka

	RumaSadar , Naitong Para	17km	Boat Foot	3-4 hours	To be reserve boat-2000 taka.	Often involves staying overnight: 250 taka
Naikhan chari	Baisari, Alekhong	40 km	Jeep, Motor bike Foot	6 hours dry season in rainy season 8 hours	250 taka	Dry season: irregular jeep and motorbike service only up to 12 km.
	Baisari, BhadurJhiri para	37 km	Jeep, Motor bike Foot	6 hours dry season in rainy season 8 hours	175 taka	Dry season: irregular jeep and motorbike service only up to 12 km.
	Douchari, Manway Mru Para	42 km	Jeep, Motor bike Foot	7 hours dry season in rainy season 9 hours	300 -500 taka	Dry season: irregular jeep and motorbike service only up to 15 km. Note : if single person in motorbike
	Douchari, Krokhawng Chak Para	32 km	Jeep or Motor bike Foot	6 hours dry season in rainy season 8 hours	300-500 taka	Dry season: irregular jeep and motorbike service only up to 15 km. Note : if single person in motorbike
	Ghundhum,Baispari Para	70Km	Jeep, Baby taxi Foot	3 hours	250-300 taka	Rainy reason: service become irregular
Lama	Sadar, Kanku Para	68 Km	Jeep Foot	11 hours	50 taka when jeep service can use only 6 km, Rest distance on foot.	In rainy season mostly on foot. Often involves staying overnight at Upazilla HQ: 500 taka for food and lodging.

	Sadar, Noa Para	65 Km	Jeep Foot	9.30 hours	50 taka when jeep service can use only 6 km, Rest distance on foot.	In rainy season mostly on foot. Often involves staying overnight at Upazilla HQ: 500 taka for food and lodging.
	Sadar, Kai Rang Para	61 Km	Jeep Foot	9 hours	50 taka when jeep service can use only 6 km, Rest distance on foot.	In rainy season mostly on foot. Often involves staying overnight at Upazilla HQ: 500 taka for food and lodging.
	Sadar, Rom Rui Para	52 km	Boat Foot	7 hours	50 taka when jeep service can use only 6 km, Rest distance on foot.	Often involves staying overnight: 500 taka
	FasiaKhali , Roaja Para	40km	Boat Foot	6 hours	70 taka for 25 km jeep service rest distance on foot.	Often involves staying overnight: 500 taka
	FasiaKhali , Rengle Para	41 km	Jeep Foot	6 hours	70 taka for 25 km jeep service rest distance on foot.	Often involves staying overnight: 500 taka
	FasiaKhali , Sesai Para	30km	Jeep Foot	4 hours	50 taka for 25 km jeep service rest distance on foot.	Often involves staying overnight: 500 taka
	FasiaKhali , Kristian Para	29km	Jeep Foot	4 hours	50 taka for 25 km jeep service rest distance on foot.	Often involves staying overnight: 500 taka
	Sorai , Bang Para	56 km	Boat Foot	8 hours	120 taka for 44 km Jeep and rest distance on foot	Often involves staying overnight: 500 taka
Lama	Sorai , Amtoli Para	51 km	Jeep, Motor bike Foot	7.30 hours dry season in rainy season 8 hours	120 taka for 44 km Jeep and rest distance on foot	Often involves staying overnight: 500 taka
	Sorai , Natun Dewan Para	54 km	Jeep, Motor bike Foot	7 hours dry season in rainy season 8	120 taka for 44 km Jeep and rest distance on foot	Often involves staying overnight: 500 taka

				hours		
	Sorai , Mangli Para	57 km	Jeep, Foot	7.30 hours dry season in rainy season 8 hours	120 taka for 44 km Jeep and rest distance on foot	Often involves staying overnight: 500 taka
	Gojalia, Natun Mongla Para	90Km	Jeep, Baby taxi Foot	12.30 hours	160 taka for 42 km jeep and rest distance on foot	Often involves staying overnight: 500 taka
	Gojalia, Upor Mongla Para	85 km	Jeep, Baby taxi Foot	11.30 hours	160 taka for 42 km jeep and rest distance on foot	Often involves staying overnight: 500 taka
	Gojalia, Kala bor Para	63 km	Jeep, Baby taxi Foot	6 hours	60 taka for 40 km jeep and rest distance on foot	Often involves staying overnight: 500 taka
	Gojalia, Thong Y Mru Para	60 km	Jeep, Baby taxi Foot	6 hours	60 taka for 40 km jeep and rest distance on foot	Often involves staying overnight: 500 taka
	Ruposhi Para, Mai Kau Para	73 km	Jeep, Baby taxi Foot	10 hours	40 taka for 10 km jeep and rest distance on foot	Often involves staying overnight: 500 taka
	Ruposhi Para, Bulu Member Para	71 km	Jeep, Baby taxi Foot	10.30 hours	40 taka for 10 km jeep and rest distance on foot	Often involves staying overnight: 500 taka
	Ruposhi Para, Oliang Babu Para	86 km	Jeep, Baby taxi Foot	11.30 hours	40 taka for 10 km jeep and rest distance on foot	Often involves staying overnight: 500 taka
	Ruposhi Para, Ruiang Para	78 km	Jeep, Baby taxi Foot	11 hours	40 taka for 10 km jeep and rest distance on foot	Often involves staying overnight: 500 taka

Source: Based on the researcher's personal experience during the field study and observation, suffer experience.

Appendix 8

A CONTRAST TREATMENT COST SCENARIO GETS THROUGH SERIES OF CONSULTATION WITH SUFFERS

Cost of treatment in BD Taka							
Type of treatment	Self care treatment	Baddya (traditional healer)	Medicine seller	Rural doctor	Qualified doctor	Upazilla Health Centre	Missionary Hospital
General sickness like fever	No cost. Some time for purchase medicine up to ten taka.	Up to fifty taka	Up to thirty taka	Up to three hundred taka	Up to five hundred taka	Officially free, but some cases need to purchase medicine with in fifty taka	It's about one hundred taka

Appendix 9

EXPENSE FOR TREATMENT AND SOURCES

Name of the sufferer	Place	Group	Money spent	How managed
Kaing Ching Pru	Naikhangchori	Group 1	45000	1. Tk 600/ from mortgage of his daughter's gold ear ring. 2. Tk 10000/ as loan without any interest from his sister in law. Tk 30000/ from mortgage of a land. 3. Tk 5000/ as loan from a relative working at Ctg.
Mong Ching Wai Marma	Naikhangchori	Group 1	80000-100000	1. Savings + loan {Sister- 20k+karbari 5k (auntie gave gold ring for mortgage) + neighbour 15000+ saving 20-25K}+1200 (pig selling)
Aung Se Pru	Naikhangchori	Group 1	141400	1. Running income, livestock selling (56K for surgery before two years), livestock selling (45K for son's accident before two years), loan from Bangali Muslims (100000) (have to give 150000 taka after 7 months after paddy harvest. Previous loan 3000 (main loan 1000+interest 2000 from last season)
Chain Sing Chak	Naikhangchori	Group 2	150(self), 1500(mother), 130 (daughter viral fiver)	Savings
Mong A Chak	Naikhangchori	Group 1	500	Savings of old age allowance.
Maching Yoei Chak	Naikhangchori	Group 2	1200	1. Tk 600/ was with her. Tk 2000 was sent by her daughter Miya Sing who is working in a parlour at ctg. 2. Tk 1000/ was given by a dry fish seller on loan without any interest.
Cham Sim Bawm	Ruma	Group 1	1000+ 2000 food cost by sister (stayed at her house and she bore all the expenditure)	1. Tk 4500 was paid by His son who works in Dhaka 2. Tk 1000/ was given by his sister as a gift & Tk 2000/ as a loan without any interest.
Cranu Ching Marma	Ruma	Group 1	1000	1. Tk 2500/ from sale of Pig (given by Caritas as input)

Swehla Ching	Ruma	Group 1	19500 (including about 6000 tk for food, lodging)	First source: Tk 2000/ from Chicken sale Second source: Tk 4000/ from Pig sale Third source : Tk 5000/ from Relative's assistance 1. Fourth source : Tk 600/ from Wife's earning from day labouring (usually she don't do this) Fifth source : Caritas Grant for treatment. He expenses more or less same amount. For this he did not take any loan.
Kamang U Marma	Ruma	Group 2	2500 (not cash. Assist)	1. Son-in-law gave chicken's price. Charmer's money and goat's price will be given after harvesting jhum crop.
Pu Thowai Mong	Ruma	Group 2	120	Savings
Mui Hla Marma	Ruma	Group 1	2500	Neighbour's help and livestock selling
Khenia U	Ruma	Group 2	total doc's fee and medicine cost about 2000 and food cost 500tk.	1. Tk 2000/ from Her father in law. Tk 1000/ from a Bengali businessman (father's friend). Tk 3000/ from selling stocked rice (100kg. Per kg 30tk)
Ba Rai Tee	Lama	Group 1	12000	1. Tk 5000/ from Durgacharan's brother at 5% interest per month 2. Tk 5000/ from their Para Tripura association with interest
U Sa Thowing Marma	Lama	Group 2	3000 for treatment and 500 for food (Noted that, during suffering period he and his wife can not engage in earning about a month)	1. Taking loan from Caritas Bangladesh implemented another micro credit project with interest
Thowi Owng Marma	Lama	Group 1	25000 for medicine and doctors visit and 5000 for food and lodging	1. Tk 2000 from savings. 2. Tk 30000/ as loan from four neighbour money lenders with high interest 3. Tk 5000/ from Rupashi Para Union chairman as grant 4. Tk 1000/ From Caritas ESLEP –CHT project as social safety net assistance to met treatment cost 5. Tk 5000/ from Para somitee against savings.

Ba Thawa	Lama	Group 1	900	1. Tk 500/ by selling banana which he planted in leased land 2. Tk 400/ will be paid through day labouring income and selling banana.
Andry Joy Tripura	Lama	Group 2	400	Sold banana form garden
Swea Mra	Lama	Group 2	3000	Sold fire wood, collect from sister in law's lend land

Appendix 10

Upazilla	Name	Type of suffering/ disease name	Suffering duration	Duration type	No of earner in a HH	No of HH member	Average monthly income
Lama	U Sa Thowing Marma(M)	First symptom was itching in throat, cough mixed with blood. It was associated with pain in whole body.	30 days	Long term	2 earner	5	4000
	Thowi Owng Marma (M)	First time suffered from jaundice 2nd time from viral fever	60 days 1st and 2nd time 3 days	Long term	1 earner	6	3500
	Ba Thawa and (M) Her Mei Tee(F)	For the sickness Ba Thawa suffered from vertigo (faintness) and sever weakness for 5 days , and his wife Har Mei Tee suffered from pain abdomen	Ba Thawa - 5 days Har Mei Tee 3days	Short term	4 earner(within two occasional)	9	3500
	Andry Joy Tripura(M)	Suffered from viral fever.	3 days	Short term	2 earner	4	4000
	Ba Rai Tee(F)	Pain in back with weakness of lower limbs and fever.	90 days continuing	Long term	1 earner (before that 2 earner)	5	4000
	Swea Mra (F)	Suffered from typhoid	15 days	Short term	1 earner	2	2000
Naikhangchari	Mong A(M)	Suffered from arthritis. legs were swollen associated with common cold and fever.	9 days continuing	Short term	2 earner	4	2500
	Maching Yoei Chak(F)	Suffered from typhoid fever.	21 days	Short term	2 earner	5	3000
	Kaing Ching Pru, (F)	Suffered from typhoid fever, bodyache, liver infection and anaemia	90 days	Long term	1 earner (before that 2 earner)	6	3000
	Mong ChingWai Marma(M)	Suffered from Pain in stomach	About 8 months	Long term	3	10	7000

	Aung Se Pru(M)	Suffered from gallbladder stone	About 5 years	Long term	3	8	8000
	ChainSing Chak(M)	Suffered from viral fever	5 days		2	6	6500
Ruma	Cham Sim Bawm,(M)	Accident. H/o fall from tree which leads to difficulty in movement due to severe backache, It was associated with difficulty in urination.	90 days	Long term	1 earner(before that 2 earner)	4	2000
	Swehla Ching Marma(M)	It was not diagnosed properly. It looks like a tumour.	60 days	Long term	1 earner	5	3500
	Cranu Ching Marma(F)	suffered from abscess in right hand	90 days	Long term	2 earner	4	3200
	Kamang U Marma (F)	Accident. H/o fall from tree with injury to right leg & knee.	9 days 1st term 7days 2nd term (3 months later)	Short term	1earner	4	2000
	Pu Thowai Mong (M)	Suffered from viral fiver	3 days	Short term	2 earner	3	4000
	Mui Hla Marma (F)	Accident. Accidentally fell down due slippery ground. Couldn't walk properly due to pain in leg & knee.	90 days	Long term	1 earner	1	1000