The effects of ill health on the livelihoods of extremely poor Adivasis in Bangladesh

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The effects of ill health on the livelihoods of extremely poor *Adivasis* in Bangladesh

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Abstract

This paper presents findings from a study of the effects of ill health on selected extremely poor ethnic minority *Adivasi* groups (sometimes referred to as tribal groups) in the northwestern Barind region of Bangladesh. It outlines causes of ill health and explores how these are linked to poverty or marginalization. It also explores how problems of ill health and poverty are exacerbated by poor access to health services for extremely poor *Adivasis* who often live in remote areas and have limited access to information about health services. The findings support arguments for better health provision for extremely poor *Adivasi* people in Bangladesh, and for more inclusive and effective health services tailored to their linguistic, cultural, locational and livelihood circumstances. The findings support the view that both the provision of inexpensive and effective health services, and measures to help people protect their livelihoods when coping with illness, are vital for the reduction of extreme poverty in Bangladesh.

Keywords

Health, Adivasi, extreme poverty, distress sale, infectious disease, reproductive health, village doctor, barind tract, isolation, and stigmatization

Introduction

This paper presents findings from research into the effects of ill health on extremely poor *Adivasi* people (sometimes referred to as 'tribal people') in the northwestern Barind region of Bangladesh. The ethnic groups represented in this study were Barman/Coach, Oraon, Pahan, Rabidas, Rabidas Vunger, and Santal. The study was motivated by observations of the detrimental impact of ill health while implementing a poverty reduction project in this area. We explore a number of issues important in understanding the relationship between ill health and poverty among ethnic minorities, including patterns of ill health, health service-seeking and wider coping practices, and problems of access to health services. We also explore the longer-term consequences of ill health on poor people's livelihoods.

Our findings support the view that affordable and effective health provision, combined with protection of livelihoods during ill health, are of vital importance for poverty reduction among ethnic minorities in Bangladesh. The research also shows that extremely poor people from minority ethnic groups have particular health needs arising from their linguistic, cultural, locational and livelihood circumstances, which need to be better recognized and catered for when designing and implementing health services.

Research rationale

The research was linked to NETZ's Advancement of the Marginalized and Deprived of Economic Resources (AMADER[1]) project. The project's baseline and monitoring surveys showed that the prevalence of common illnesses was high and remained high despite significant livelihood-supporting inputs. We also recorded very low usage rates of sanitary latrines among these groups.[2]

As part of the AMADER project, initiatives were taken to link extremely poor ethnic minority people with existing health services. However the benefits of such linkages were disappointing, especially since these

[1] The NETZ AMADER (Advancement of the Marginalized And Deprived of Economic Resources) is a Shiree/DFID/GoB funded project that covers 9000 Extreme Poor Households (80 percent *adivasi*) enrolled in two batches - 3000 in the first year (2009) from five upazilas and 6000 in the second year (2010) from 9 upazilas in 4 districts in the northwestern *Barind* region of Bangladesh - to improve livelihoods. The project is implemented by NETZ along with its 3 local partner NGOs over a period of 3 years.

[2] Shiree is currently funding five additional scale-fund projects similar to the AMADER project. Shiree is a joint management consortium established in cooperation with the Government of Bangladesh and UK aid to contribute to the removal of hunger and poverty in Bangladesh by 2015, as stated in Millennium Development Goal 1. The project baseline showed that of the 3000 beneficiary households targeted in the first year of intervention, 93.8 were not using sanitary latrines.

groups are among the most adversely affected by ill health directly, and indirectly through damaged livelihoods. This led to recognition of the need to research the particular health problems and challenges encountered by extremely poor ethnic minorities in accessing and using health services in this area. Through this research we aimed to help inform policy which could help improve health services and support people's livelihoods during illness, and thus help reduce preventable illness and poverty in these communities.

The AMADER project also runs a referral system, which is planned to be managed by beneficiaries when project support is withdrawn. It is hoped that information from this research will also help in the design and implementation of this system.

Significant progress has been made in many key areas of health in Bangladesh. Child mortality, child malnourishment, maternal mortality and other key health indicators have improved markedly over recent years (Mannan et al. 2011). However many problems remain in health services: including poor governance in the health sector, widespread corruption, poor quality of care in public hospitals and local health centers, poor attendance of medical staff – particularly in government health complexes - low levels of health awareness and education among the general public and the extreme poor in particular, and lack of access to quality health services among marginalized communities (Rahman et al 2012).

The prevalence of ill health among *Adivasi* groups in Bangladesh is of particular concern. These groups have been historically marginalized in Bangladesh, have been deprived of land and livelihoods by more powerful groups, and tend to have low levels of education and live in remote areas with poor infrastructure. In addition they are more likely to have bad experiences with public services, including health services, due to language and cultural difficulties, and also due to more overt forms of discrimination and prejudice (Chowdhury et al 2003, Karim et al 2005, Rahman et al 2012). These negative experiences go some way in explaining low usage of, and lack of confidence in, mainstream health services among these groups.

Our findings are presented in the following sequence: we first focus on illness patterns. Then we present findings on problems of access of extreme poor ethnic minority groups to existing health services in the research area. We then explore how livelihoods are adversely affected by ill health, and finally we conclude with a summary of major findings and recommendations for improving health services and the protection of livelihoods during illness for extremely poor *adivasis*.

The major questions for investigation of the study were:

1. Are extremely poor ethnic minorities more prone to ill health than non-ethnic minority extremely poor people? If so, what are the major causes of these differences?
2. What are the major diseases and other health issues among the *Adivasi* target group?
3. What are the immediate and long-term effects of extremely poor ethnic minorities' poor health on their livelihoods (considering factors such as economic well-being, income generation, mobility, social inclusion and education of children)?

4. What are the major coping strategies employed by ethnic minorities during illness? How effective were these strategies (including analysis of determinants for the deficient access of ethnic minorities to health services and other official support)?

Methods

The research was conducted using three main methods in two phases. We first conducted a review of secondary sources to get both qualitative and quantitative insights into ethnic minority-specific vulnerabilities related to ill health. We reviewed the relevant literature and then used specific documents and reports to assess the costs of ill health for households in both monetary and non-monetary terms. These reports included the Quarterly Socio-Economic and Anthropometric Survey (CMS3), which identified monetary costs, and the life histories of extremely poor ethnic minorities (CMS5), which qualitatively explored other dimensions.[3]

In February 2012, also in the first phase of research, we conducted four focus group discussions (FGDs) to gather information on patterns of illness and their impacts. These groups were selected from the approximately 800 village-based groups formed under the AMADER project. Each of these groups consists of 10 female members on average.

Two groups were located in the Niamatpur upazila in Naogaon district and the others in Gomastapur upazila of Nawabganj district and in Godagari upazila in Rajshahi district. The group members in Niamatpur enrolled on the project in April 2009 and had therefore been involved longer than those in Gomastapur and Godagari who received interventions after May 2010. Ethnic minority people were in the majority in the first three groups while Bengalis were dominant in the last one.

Groups with higher numbers of ill members were selected for the focus group discussions based on incidence of illness among project beneficiaries from October to December, 2011.

In the second phase of the field work in June 2012, eight case studies were undertaken with older participants residing in two unions of Niamatputpur; Hazinagar and Sreemantapur in Naogaon district. Respondents were selected from illness reports over the period from February to April, 2012. Four respondents suffering from acute illnesses and four suffering from chronic illnesses were selected and a primary visit was made to all households to identify the type of illness.

The initial plan identified in the proposal involved identifying chronic and acute cases from the FGDs but this was not followed due to the time lag between the FGDs and case studies, and the fear that respondents may not be able to recall older diseases as accurately. Caregivers of the selected respondents were also interviewed when appropriate.

[3] CMS3 and CMS5 are research projects within Shiree with data publicly available at www.shiree.org.

The case studies also allowed us to identify service providers and interview them, while keeping the identity of the beneficiaries anonymous. We held informal talks with village doctors, government-employed medical officers, NGOs, churches and management staff of private clinics. We also attempted to understand how these service providers were viewed from the perspective of our respondents. In total we interviewed eight service providers: three village doctors, one formally trained medical officer with an MBBS degree, one NGO worker, one member of the management staff of a private clinic, one local pharmacy business owner, and one physician employed by a church.

Research Findings

The prevalence of ill health among extremely poor Adivasis

In a preliminary study of secondary data from previous *Shiree* studies, six life histories of extremely poor tribal people conducted under *Shiree'*s CMS5 were reviewed**.** Of these six, it was found that four beneficiary households (BHH) had fallen into extreme poverty because of the ill health of one or more of its members. Beneficiaries experienced either gradual or abrupt drops in household income whenever earning members were unable to work due to serious illness, or when they were recovering and could work only intermittently. During these times, households resorted to withdrawing children from school and putting them into work in order to smooth consumption, resulting in school dropout and increased chances of an intergenerational transfer of poverty.

The illnesses identified in the life histories were general weakness, probably due to poor nutrition and hygiene, heart problems, eye problems, and cancer. These illnesses interrupted work and reduced the income needed to maintain food intake, which is a precondition for maintaining sound health. In a case when a household member was diagnosed with cancer, and the sufferer eventually died, previously dependent household members were forced to resort to begging despite previously being considered non-poor.

We also reviewed health-related quantitative information for extremely poor *Adivasi* people in previous *Shiree* reports from a socio-economic and anthropometric survey, which had been repeated every quarter since March 2010, and provided information about the prevalence of six health problems on the day of survey. Livelihood indicators in the survey, such as income, reflected changes in livelihood condition while health indicators were used to provide an overall picture of morbidity amongst the extremely poor *Adivasi* participants. The survey looked specifically at the prevalence of diarrhea, fevers, coughs, skin diseases, eye diseases and worms. It was not possible to detect a long-term trend of reduction in ill health but many health indicators showed some reduction over the year of the project (see Table 2). However this was disappointing because it corresponded with the project intervention enhancing financial ability sufficiently to enable the beneficiaries to spend triple the amount on health expenditure in July 2011 compared with the previous year.

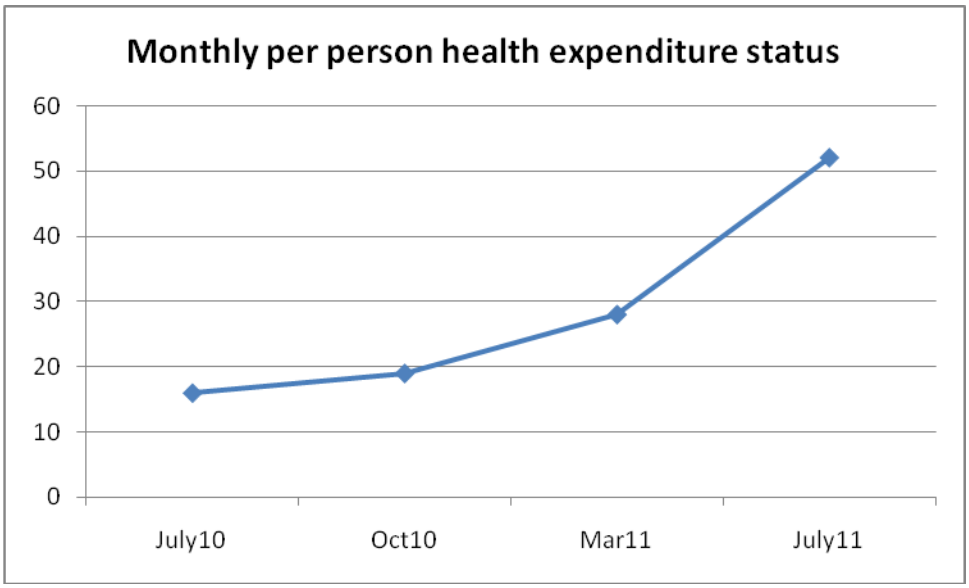
Table1: Health expenditure in the survey month

Survey month	Number of households surveyed	Monthly per person income in BDT	Monthly per person health expenditure in BDT
July 2010	62	750	16
October 2010	62	930	19
March 2011	59	960	28
July 2011	59	1200	52

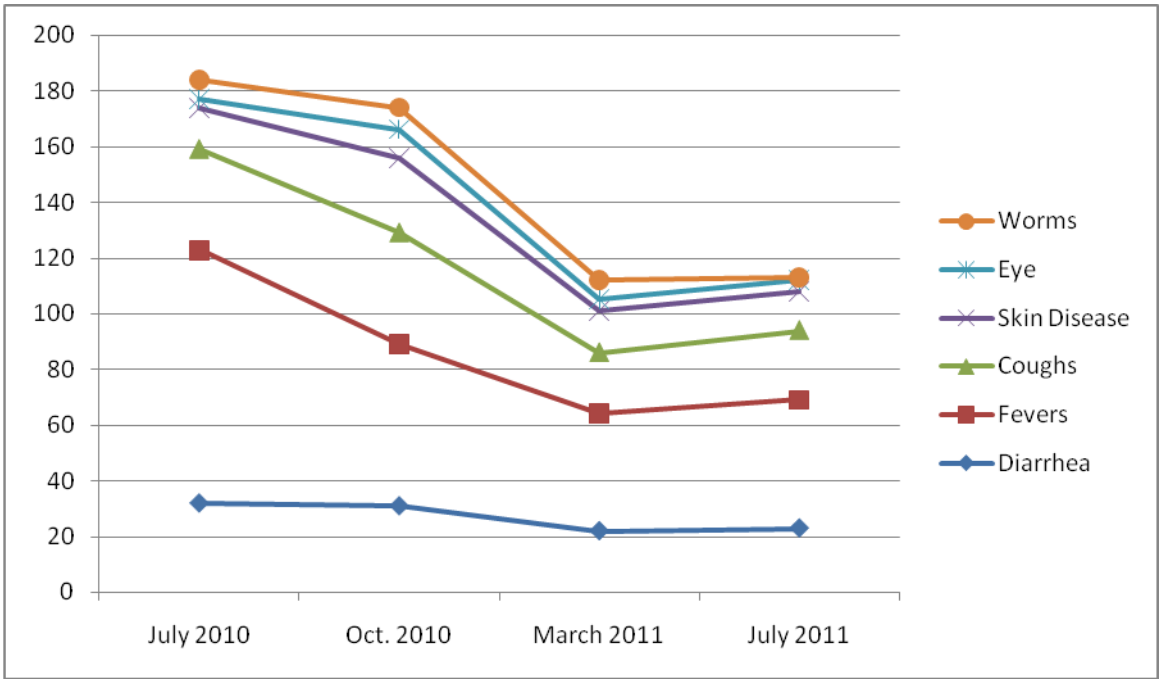
Table2: Prevalence of ill health in the surveyed month

Survey month	Total Member	Diarrhea	Fevers	Coughs	Skin Disease	Eye	Worms
July, 10	179	32	91	36	15	3	7
Oct, 10	180	31	58	40	27	10	8
March, 11	173	22	42	22	15	4	7
July,11	179	23	46	25	14	4	1

Health expenditure in the survey month



Prevalence of ill health in the surveyed month



In the quarterly socio-economic and anthropometric survey, 62 NETZ beneficiaries were interviewed to assess changes in their livelihoods. The monthly per capita income of NETZ respondents increased considerably over the year from 750 taka to 1200 taka, though their morbidity status did not improve markedly. According to a survey conducted in July 2010, the health-related expenditure for a single person stood at 2 percent of total income. This means that the monthly per capita expenditure on health was around 15 taka for an individual with a total income of 750 taka. This percentage of health expenditure had shot up rapidly to 4.33 percent by July 2011.

Although this represents a hundred percent increase within a year, the health status of beneficiaries is yet to reach a satisfactory level in terms of the prevalence of six health problems, most of which are preventable by maintaining hygienic practices. For example, hygiene awareness was expected to reduce the prevalence of diarrhea and skin diseases among the BHHs. This was not observed and suggests that the group-based discussions on health issues had limited impact on the overall health status.

Although cases of diarrhea reduced from 49 in July 2010 to 36 the following year, skin diseases remained almost constant in the same timeframe. The prevalence of eye problems went up by one more case. The only considerable decrease came with incidence of fever which declined from 91 cases to 46 over the year.

The qualitative research undertaken in this study showed that the most common diseases were fever, cough, diarrhea, dysentery, skin diseases, malnutrition, stomach pain, and menstrual problems.

Sometimes the respondents preferred to describe their problems rather than naming particular diseases as they had yet to consult with any physician for proper diagnosis.

The pattern of ailments varied considerably depending on age and sex as well as seasonality. Many women of reproductive age complained of menstrual and other reproductive health problems. The unavailability of female health workers in the area is likely to have exacerbated this problem, as women are often unwilling to visit males for advice on such health matters.

Infectious diseases

There was a relatively high incidence of infectious diseases such as leprosy and tuberculosis compared with other non-*Adivasi* extreme poor beneficiaries in the Shiree baseline survey. Also blood samples indicated that NETZ's respondents had the lowest levels of haemoglobin and highest levels of anemia among the respondents of the 6 scale fund NGOs of shiree. According to reports from The Damien Foundation, an international NGO working in an Upazila Health Complex in Niamatpur to reduce the prevalence of infectious diseases, of the eight leprosy patients that started medication over a period of two months from early April to the first week of June, 2012, seven were from ethnic minorities (see Table 3). Also although ethnic minorities constituted slightly more than two percent of the population in the researched upazilas, 39 of the 72 patients (54 percent) with TB were from ethnic minority groups.

Many of the extremely poor *Adivasi* research participants were coping with poor living conditions, poor housing, and were sharing living space with livestock. They also had low usage rates of sanitary latrines, poor nutrition, lived in more remote areas, had low levels of education and health awareness and tended to lack confidence in mainstream health services. Some or all of these factors may contribute to the high prevalence of infectious diseases such as tuberculosis and leprosy among extremely poor *Adivasis*.

The *Shiree* baseline study also recorded higher morbidity levels among extremely poor *Adivasis* compared with other populations of non-*Adivasi* extremely poor groups.

Table 3: Reported Leprosy patient started medication in Damien Foundation since April till 25 June 2012:

Start Date of Treatment	No of patients receiving treatment	
	Adivasi	Bengali
On June 25, 2012	1	0
May12, 2012	1	0
April	5	1
Total in 3 months	7	1

Table 4: TB patients on medication in Damien Foundation (started DOT since January till to 25 June 2012):

Date	Treatment started	
Bengali Hindu	Adivasi	Bengali Muslim
5	28	39

In order to further investigate patterns of ill health among *Adivasis*, 38 beneficiary households were selected for focus group discussions and 24 beneficiary households were selected for case studies. The households had an average family size of 3.12 members, and so in total our survey covered 200 family members. All family members and age groups were examined. The most commonly recorded acute health shock was appendicitis while a common chronic disease was gout among the older members.

Disease Domain

During this study we compiled a list of diseases encountered by respondent household in the near past, preferably within the last three months before their interview. The diseases reported were of three categories – general, acute, and chronic. We have defined acute disease as one with a rapid onset which requires immediate attention. Chronic diseases on the other hand are those where patients continued suffering from a particular disease despite taking medication, or as a result of not having proper medication. Table 5 shows all the diseases which were endemic among the BHHs in our study area.

Table 5: Disease domain for extreme poor BHHs

Common Sufferer	General Diseases attacked	Acute diseases endured	Chronic disease
Children (Under 16)	Fever, cough, diarrhea, dysentery, skin disease, malnutrition, stomach pain, , irregular period, yellow urine	Severe pain in abdomen, Kala azar	Severe pain in abdomen, white fluid discharge
Adult Male(16 to 60)	Fever, cough, stomach pain, gastric	Piles, appendicitis,	
Adult Female(16 to 60)	Fever, cough, diarrhea, headache, , back pain, irregular period, white fluid discharge, , skin disease, worm, hearing problems	Appendicitis, gout, Kala-Azar	Abdominal pain, gastric, white fluid discharge
Aged Male	Physical weakness, pain in joint (gout), pain in stomach, headache, gastric, fever Eye problem(chokh katrai)	Watering eye	Asthma, gout,
Aged female	Physical weakness, pain in joint, eye problem, gastric, eye problem (chokh katrai)	Stone in gallbladder,	Gout, gastric

Women working in rice transplantation were found to frequently get hand infections especially during rain-fed paddy transplantation in June to July. Chemical fertilizers in the water they worked in exacerbated these problems. We observed that *Adivasi* women tended to be active in agricultural labour as well as domestic work and suffer a number of work-related illnesses due to their heavy workloads.

The research area is also a high-risk kala-azar (also known as visceral leishmaniasis) area, which has been considered as a reemerging disease in this region since the 1990s. In 2005 a memorandum of understanding was signed among four South-Asian nations – Bangladesh, Bhutan, Indian and Nepal – to cut the prevalence of kala-azar in endemic districts.

Among our respondents there were reports of at least one death of a child from kala-azar. Vulnerability to illnesses such as kala-azar is likely to be exacerbated by poor living conditions. Access to adequate land for houses is a continual problem as *Adivasis* lose land to erosion or encroachment by more powerful groups. As a result many of the poorest are forced into cramped conditions sometimes on the edge of government (*khas*) land and on banks beside water bodies and in close proximity to livestock. These conditions can create a number of health problems associated with poverty and marginalization (Sadeka and Barkat 2009).

Access to health services

Community clinics

During the Awami League government from 1996 to 2000, community clinics were established in villages as a part of a mandate to increase primary health care to the rural population. It was planned that one community clinic would have the capacity to deliver services to 6,000 people. The government constructed 10,624 Community Clinics (CCs) out of which 8,000 had started service delivery by the year 2001. However with a change of government, community clinic services stopped from 2001 to 2008 and were resumed by the government in 2009 under the support of a 5 year-long project.

There were a number of problems with community clinics. For example during our visit during a working day, the Community Clinic was closed. The people of the community reported that three months previously a medical practitioner delivered services every day from 9.30 am to 2.30 pm but now only came once a week and provided services to pregnant and lactating mothers, and women seeking birth control. The change in the service delivery time was due to the practitioner's participation in a training program.

Union health and family welfare centres (UHFWC)

The Hazinagar Health and Family Welfare Centre was to the north of the union and provided primary health care and family planning services. The distance between the homes of respondents and the UHFWC ranges was between 5 to 8 kilometers, and none of our research participants reported visiting the UHFWC in the last five years.

Upazila Health Complexes

As in every sub-district of Bangladesh, there is one Upazila Health and Family Planning service, widely referred to as a Upazila Health Complex (UHC) or Upazila Hospital. These provide primary health care services and refer patients to the district hospitals and medical colleges. There was a UHC lying between 8-10 kilometres far from the households of our respondents in one union and 12-20 kilometres in another. Services are offered largely to outpatients and a limited number of inpatients by one Upazila Health and Family Planning Officer (in charge), three medical officers including a residential officer, four nurses and five medical assistants. Logistical support was provided by two pharmacists, one statistician, a store keeper, an office assistant and a peon (support staff).

Private Clinics

Private clinics tend to be run by the doctors who also worked in other government facilities. There were three private clinics in Niamatpur sub-district town. The doctors usually saw patients and conducted surgical treatments. Most of their income is raised conducting surgical operations for common problems such as appendicitis, and gastric and obstetric problems. These services were not available in the UHC due to insufficient equipment and inadequate expertise. Post-operative patients were kept in the clinic for one week and the charges for surgical operation services ranged from four thousand to eight thousand taka, though concessions were offered to poor clients.

Non-Government Organizations

Our respondents also mentioned that two churches and one NGO worked in the study area. The service facilities of one church were available once a week when a physician saw patients with limited medicine dispensation free of cost. The other church clinic, the Bangladesh Lutheran Mission, Finish (BLMF), provided general health care services every day except Sunday and other national holidays. Apart from general health services, BLMF had service provision for reproductive health, vaccination (polio and tetanus) and nutrition for children.

The Damien Foundation was working in the area in collaboration with the government to detect and treat infectious diseases such as tuberculosis and leprosy. The tuberculosis programme began in 1996 in collaboration with the government in testing and treatment, linked to the Upazila Health Complex and involved village doctors, pharmacy holders, ward commissioners, Family Welfare Assistants and Health Assistants. No fees were charged for diagnostic tests and for the treatment of leprosy and tuberculosis.

Problems with access to health services

Extremely poor Adivasi respondents accessed health service providers in this order of frequency:

1. *Kabiraj* (traditional healers)
2. Village doctors and local pharmacies
3. Mission health centres
4. Ward-based community clinics
5. Semi-trained homeopathy practitioners
6. Private clinics and Upazila health complexes

A number of problems in accessing health services were observed among extremely poor Adivasi respondents:

Coupled with a household's reduced financial capacity in time of illness, the distance of health services from their localities delayed visits to formal service facilities. Niamatpur UHC was comparatively well equipped to treat both inpatients and outpatients and had four trained doctors and clinical support staff. However the distance of the UHC from research participant's households was greater than the national average (Ahmed and Chowdhury 1999). Patients needed to travel between 8 and 20 kilometers in order to reach the UHC, which took an hour by *Bhutvuti* (a locally made vehicle powered by an agricultural engine) or more by van rickshaw. Patients had to pay transport costs of 20 to 30 taka. There is no public transport to our study area. Most extremely poor *Adivasis* could not afford both transportation and medicine costs, especially when a family member was ill and the household income was in jeopardy. As a result, most of the extreme poor are not able to visit a UHC for treatment.

Instead village doctors and *kabiraj*s were visited most frequently due to their close proximity and their provision of drugs along with consultation whereas at UHCs patients were required to buy most medicines. Also village doctors and medicine shop holders were able to provide prescription medicine available on credit so that payments could be made when cash became available; they were sometimes willing to wait until after harvest times.

Traditional healers and medicines

Among extremely poor *Adivasis* low levels of education and health awareness allowed widespread attribution of illness to *evil winds*, spirits or other supernatural causes. The use of a wide range of trained and untrained medical practitioners is common among poor people in rural Bangaldesh, and one cheap and readily available option are traditional and religious healers (such as *Kabiraj*, *Sannashi*, or *Baddya*) who provide treatments based on more 'spiritual' or supernatural diagnoses. We observed that extremely poor *Adivasis* made frequent use of these traditional and religious healers.

Traditional healers tended to be most commonly consulted during pregnancy to assure safe births, for treatment of ill health in infants and children and for general weakness, stomach pains or vomiting. One pregnant focus group participant in Hazinagar Union had *halud para* (enchanted turmeric) which she kept tied to her arm to avoid the possession of evil spirit. When asked about traditional healers, another mother said "*I took my child to the ayurvedic practitioner for treatment by charms and incantations. Because he was possessed by evil wind, his face had become smaller and he had diarrhoea, vomiting, and had stopped feeding".*

Extremely poor Adivasis reported that they consulted *Kabirajs* because they were more affordable and they were sometimes able to pay in kind. Focus group discussants explained that "we give *kobiraj* homemade wine as a drink (*chuani*); one glass of *chuani* is 20 taka".

They also consulted *Sannashi* (hermits) for incantations to avert death, especially of infants. This sometimes involved the sacrifice of a goat.

Extreme poor not relieved of Superstition: Case of Madhumala

Modhumala was married for 6 years. Her family consisted of 3 members - husband and 6 year old daughter including herself. Both Modhumala and her husband worked as agriculture labour. Her family had undergone two health shocks in a short span resulting in the distress sale of livestock. She fell victims to these shocks when she gave birth to a son and was diagnosed with the symptoms appendicitis just 6 months later. The delivery of her second child, a boy, took place at her parent house. She suffered a lot as the delivery delayed after going into labour. Her father called in a village doctor who somehow managed to deliver the baby. Madhumala and her parents said that although it was a live birth the baby had severe visual impairment and weakness and finally succumbed to death at the turn of 7 days while it was being taken to UHC for better treatment. Being shocked at the premature sudden death of the grandson Madumala's father went to a Kabiraj to discover the reason behind his death and to keep her daughter protected from future harms. The Kabiraj provided Madhumala with an amulet to avoid the possession of evil wind although he failed to make any strong point on death. He was given about 400 Taka (1 cock, 1.5 kg of rice and 200 taka). Sometime later Madumala's father also went to a palmist who explained that Madhumala had suffered misfortune because they cut down a crooked tree (Trophis asperas) with a dark canopy on which a deity had been living for many years. The deity raged at the felling of tree and

did harm to the child. Therefore, the palmist asked her father to appease the angry deity by arranging a Puja (worship) with the help of Sannashis. Also the palmist advised to plant the same tree at the same place and to sacrifice a goat. For worship her father had to come up with a goat, banana, vermilion, dried sweet etc. The total cost of the arrangement stood at around 2000 taka out of which 300 cash and the head of sacrificed goat were offered to the Sannashis.

The worship was arranged as Madhumala's parents had developed strong beliefs on keeping deities appeased for good luck. Her father said that 26 years back they arranged the same worship wishing a flawless birth of Madhumala who is his only offspring. In fact Madhumala's mother was struggling to conceive a child. So, the same worship was arranged then to avert any harm to be caused by any evil spirit or bad deities.

We also observed a lack of confidence among extremely poor *Adivasis* in trained health personnel, including concerns over the imposition of birth control on them instead of the treatment they actually sought. The provision of incentives to find poor clients at the service centres for permanent sterilization may have contributed to this. Poor people were afraid of permanent birth control methods due to insufficient counseling by medical staff and poor post-surgery care. Emphasis on birth control at community clinics and health centres seemed to promote these fears and discourage extremely poor people from visiting.

Quality of care

Many respondents who visited formal service delivery points, particularly the UHC, reported dissatisfaction with the services they had received. Most of them complained of long waiting times and lack of medicines. Many said that they had to spend more than they had anticipated because they had to purchase medicines in the market and were suspicious of the medicines that they received.

Focus group discussants in Gomastapur who had paid a visit to UHCs and UHFPCs also complained about the medicine. One remarked, "*oshod dai na, keno amra bhalo oshod pai na" (They don't give medicine, why don't we receive good medicine?)*

Another complaint is that health personnel did not spend enough time listening to problems, which they believed led to misdiagnosis. The lack of confidence in many aspects of these complexes discouraged them from taking long journeys with high transportation and opportunity costs. In contrast some inpatients made positive comments about the provision of food after being admitted to the UHC.

Access to health information

Focus group discussants and interviewees were not well informed about health services. Village doctors and traditional healers were the main source of information for many of the research participants and they rarely provided health information beyond their own services. For serious illnesses and operations

they tended to guide patients to private clinics where they received financial commissions for referrals. They usually failed to refer patients to *upazila*-level or higher-level government health services.

Insufficient sources of information about health services was a serious problem and there is scope for better access to information for poor people who cannot read and do not have access to information technology. When asked about seeking consultation from doctor's private chamber one respondent remarked, *"We don't visit Niamotpur because our village doctor never told us to go to Niamotpur, and we have no information about the Niamotpur government hospital."*

The impact of ill health

All study participants who were AMADER project beneficiaries were provided with productive assets, relevant training and links to various supports. Selected beneficiaries received skills training before accepting their first main asset, in the first six months. They were then linked with services and markets relating to their enterprise and provided with savings accounts.

In the second year beneficiaries were expected to diversify income by investing profits from sales and savings. At the same time beneficiaries were organised collectively as part of the project in order to facilitate better access to government services at union and upazila levels. In the third year beneficiaries are supported to take collective actions and continue their income generation but with reduced input from project staff.

The monitoring of economic and other wellbeing-related improvements of beneficiary households allowed us to observe the relationship between ill health and livelihoods. We discuss the financial and other impacts of ill health on livelihoods below.

Financial impacts

Most research participants, including caregivers, reported downward mobility due to distress sales of assets during illnesses. Often sales took place early on in the illness. Assets sold included goats, sheep, cows, poultry and household utensils. Often assets were sold at lower-than-market rates. When a surgical operation was required distress sales were very common.

Cases of surgical operations discussed were for appendicitis, gallstones, and complications in pregnancy. The reported surgical operations were all performed at private clinics rather than at government hospitals. Participants reported that village doctors made referrals to three private clinics in the sub-district town and received financial incentives for these referrals.

Treatment in private clinics was expensive and therefore placed large financial burdens on extremely poor households making distress sales more likely. The depletion of productive assets, such as livestock, reduced earning capacity and ability to absorb future shocks.

For example one research participant had an appendectomy in 2011, which cost 5,000 taka. She received 2,000 taka from her parents and 3,000 taka from the sale of three goats, which reduced her future income earning ability. In addition, after the operation her ability to earn income was further

reduced because of ongoing pain. She was also buying medicine from a local pharmacy. The overall effect was one of long-term decline from her initially small asset base.

In another case, a respondent's adolescent daughter had been suffering with severe abdominal pain since the start of menstruation, which required the consultation of a trained physician, after a traditional *Kabiraj* had failed to cure her. Treatment from the physician cost 5000 taka, which was partly raised by selling goats the project had provided, for 2000 taka. They borrowed the rest from a neighbour.

In addition to distress sales of productive assets as a means of coping during illness many research participants took advances on wages in order to pay for treatment. When research participants borrowed money from wealthier landowning employers this led to relationships akin to bonded labour and employers tended to exploit these workers, who tended to work off their loans at lower wage rates than other 'non-bonded' labourers.

Many of research participants struggled with income in the lean October- November period when the demand for agricultural labour was low.

Health shocks also resulted in beneficiaries borrowing money at very high interest rates (50 percent for four months) from landlords and moneylenders. For example, in February 2012 one fifty five-year-old female research participant started suffering from severe stomach pain and went to a traditional healer who provided her with some enchanted salt to be taken with food. When she did not recover she went to a doctor on a rented rickshaw van, at a total cost of 500 taka. Her family did not have enough money to pay for the treatment and when her husband failed to raise it within their community, he turned to a moneylender. He borrowed 500 taka at a 50 percent interest rate for four months. In April 2012 they paid the money lender 750 taka but in order to raise this money she and her husband had to cut back to two meals a day.

Some respondents complained that their project-supported businesses were hampered due to persistent ill health. When a family member became ill it was not always possible to run the business without outside help. One female informant had an appendectomy six months after having a baby and could not look after the cow she had received from the project. She gave it to her parents who lived nearby but they also struggled with tending the cow because they were looking after their daughter and new grandchild and had not received the training in keeping livestock. The cow suffered neglect and the benefits of keeping the cow were reduced.

Financial decline was much more likely in cases where more than one household member was ill. One example of this was one female participant who had received a rickshaw-van, a sheep, four ducks and some seeds and seedlings from the project. She then bought cattle from the rickshaw income and had established a small vegetable garden in front of her house and she and her family were able to live quite comfortably. However of the four members of her household, three developed health problems. She suffered from abdominal pains; her husband from piles, back pain and pain in his chest; and her son from low blood pressure and a low hemoglobin count. In 2009, in order to treat her son at a private clinic, she sold her cow for 7000 taka and some household utensils for 775 taka. Then for a follow up

visit she sold another cow for 5000 taka. Later her son became very ill and was admitted to a private clinic at a cost of 4000 taka, which her husband raised from driving the van-rickshaw. After this series of events they had declined into a condition of extreme poverty from a situation of relative comfort.

The ill health of one or more family members usually reduced financial resources available for the entire household. Often households cut back on food, withdrew children from school and earning members lost jobs.

Participants of a FGD at Bawaichandi explained how this affected workers involved in the rice transplantation, which normally continued for 15 days. The average wage was around 100 taka per day for women and 150 taka per day for men but 6 of the 10 research participants could not work for the whole period due to ill health. The illnesses that held them back were fevers, colds, stomach and abdominal pains, diarrhea, coughs and headaches. The number of missed days ranged from 3 to 10. At this time when relatively well-paid work was available these illnesses caused a significant loss of income for these participants.

In another FGD in Gomastapur, female participants mentioned that one person could not work for three consecutive days and another for ten days because of fungal infections between their fingers. These problems were common during the rainy season and were assumed to be caused by chemicals used in rice production contaminating water that was then held stagnant in the paddy fields after transplantation. They attempted to cure this by applying a liquid made from of smashed leaves of a *babla* tree. Another cause of fungal infections was working for long periods with hands in water during women's domestic work.

Another problem of income loss due to ill health was that for day labour workers had to be available from the morning in order to secure one day's work. It took about half of a day to visit the UHC, and if a patient went in the morning, a full day's wages were lost.

Impact on women

Apart from caregivers we interviewed eight female beneficiaries, most of whom were suffering from menstrual problems and vaginal discharge. They said this often occurred in the pre- and post-menstrual period and sometimes lasted for more than a week. Although they had experienced this for a long time, most were too shy to take the matter to a trained physician. One respondent reported to have visited a doctor but the treatment had not helped. All the village doctors were male and female patients were unwilling to visit them about matters relating to female health and hygiene, despite the fact that they were easily accessible compared to other formal health services. As a result for most of the respondents their problems had become chronic. They also reported that vaginal discharge reduced their mobility and diminished their ability to work. Also because they were unwilling to visit male doctors they took prescription medicines (widely available without prescription at local pharmacies) without professional medical guidance. One woman from Sreemantapur revealed that she had been suffering for two years but had not consulted a doctor or folk healer. She also reported discomfort during intercourse. She applied powder, but this was not effective. Another respondent from Hazinagar shared that she went to the local Bazar to get treatment from a female homeopathic practitioner, but it had not had any

noticeable results. Finally she turned to buying herbal syrup from a mobile vendor who carried his medicine in a rickshaw-van. She experienced some improvement when she took the syrup but could not afford it regularly.

The frequency of women experiencing such symptoms and not getting a professional diagnosis highlighted the problem of having all male village doctors with limited training in reproductive health. The village doctors interviewed had received primary health care training and, as with traditional birth attendants, had received some limited obstetric training. This situation made extreme poor women more susceptible to health shocks related to reproductive health. No health programmes aimed at the rural extreme poor deal exclusively with reproductive health, though there were various government and NGO programmes in urban areas.

Extremely poor *Adivasi* women's working capacity was further reduced by poor food intake during a family member's sickness. Women tended to be primary care givers and tended to prioritise the food for other family members, especially income-earning males and male children, above their own needs. Therefore when a household member was sick, causing a fall in income, they tended to sacrifice their own nutrition for the sake of the family. One focus group participant remarked that, "when someone in the household is ill we all consume less food and buy less rice, but mainly it is we female household members who eat less, because we rely on male income earners and if we gave them less food, they would became ill".

Other social problems due to illness

Begging

Begging is a stigmatized occupation in most parts of Bangladesh. Ill health was often found to force households to resort to begging to earn enough money to survive. The extreme poor households reported this to be more likely when a household head died.

In the FGD session in Godagari in one beneficiary explained how she had struggled to cope with the impact of her husband's death. He had been suffering from fever and stomach pain since Eid-ul-Azha in 2011. When he was admitted to the UHC, doctors told him that he had incurable cancer of the liver. The treatment required a lot of money, which they raised partly thorough the generous support of villagers, group members and relatives, as well as through the sale of a cow. Despite getting treatment her husband still died, and at the time of our visit the woman was struggling to live on handouts from other villagers. Her eldest son (8) had stopped attending school at the onset of his father's sickness six months before the discussion. Having lost all her capital she started to beg in order to provide for her three-member family.

Isolation and withdrawal from education

The illness or death of earning members was not the only cause of children dropping out of school. Long menstruation periods with severe pain often kept adolescent girls confined to home. One beneficiary reported that her daughter was suffering so badly that she preferred to stay in isolation in one room of

the home. The beneficiary took her daughter to visit a doctor at the UHC after being referred by their village doctor. However, the treatment prescribed by the doctor did not help the girl to recover. She stayed at home for six months without going to school and stated that the pain she felt was so bad that it did not permit her to move around on her own.

Exclusion from work

Some diseases prevented people from working, even if they still had the capacity to do so. Those with skin diseases are often stigmatised and excluded from work. One respondent whose husband had rash on his face reported that the day labour group her husband used to join restricted his entry, although he was unsure whether this was due to fear of contracting the diseases or that they believed he would be less productive, which reduce the output of the working group. She stated, "my husband has a skin disease on his face, for which he cannot go to work, no one wants to take him into their group".

Exposure to other dangers

Although ill health only directly affects one person, the resulting impacts make close relatives vulnerable also. One interviewee had a gall bladder operation and sold most of her assets to pay for it. Her daughter also sold her cow to help her pay for the post-op medication. After the sale of her productive assets, the interviewee has been dependent on sharing food with her younger brother's family, which has strained her relationship with her sister-in-law. Food is not always available at her brother's home and then she goes hungry. She has nowhere else to go and so in an attempt to contribute to the household, she takes care of her brother's child and other domestic work. She is however worried that land grabbers might take her homestead if her home remains empty for long, and so she sleeps alone at her own home. This situation has put pressure on her mental health.

Summary and Conclusions

The research draws attention to the extent to which extremely poor *Adivasis* become vulnerable as a result of poor health and provides examples of the ways this takes place. The prevalence rate of ill health among extreme poor *Adivasis* is very high. They are the minority in the research area, but outnumber the majority in terms of general disease contraction rates, especially infectious diseases. The diseases they are susceptible to are influenced by various factors including poor living conditions, remoteness, poor nutrition, low incomes, low levels of education and health awareness, and reluctance to seek effective treatment in early stages of illness.

Lack of access to government health services was a particularly serious problem. The medical staff available to them had very limited training and there was a general lack of confidence in government health services – which was often justified.

The ability of extremely poor Adivasis to move out of poverty with the help of income generating activities depends on maintaining good health and avoiding the kinds of ill health that will lead to further impoverishment. Improved health awareness and information and easy access to affordable,

quality health services, would improve the health of the extreme poor, and reduce the negative impact of ill health on livelihoods. Current coping mechanisms, such as distress sales of productive assets, taking advances on wages, and high-interest borrowing was a common cause of impoverishment. The provision of alternative ways of protecting productive assets is therefore important for extremely poor people.

Recommendations

We endeavored to get the reflections from service providers and service receivers on viable solutions to health-related problems identified during the course of the research. The recommendations put forward centered around two main issues: increasing access to quality health services and protecting people's financial viability during illness. Most of the recommendations call for taking both immediate and long-term steps to address these issues.

Improving access to health services:

a) Extreme poor Adivasis need to be briefed about information on available services and how they can access and benefit from them. Village doctors, health workers, community leaders and students working in Adivasi communities should carry out this knowledge dissemination, having been oriented first and given access to updated information.
b) Safe and cheap public transport should be ensured to allow extreme poor people to seek health services from upgraded service delivery points such as UHCs. In the research area there are currently rickshaw-vans and power tiller powered vehicles, but the extreme poor are not always in a position to afford these.
c) The extreme poor need to be supported with specialized privileges and be treated with a more understanding approach. This could be facilitated by issuing health cards which could be taken when visiting service centers and would entitle them to essential drugs from service delivery points with the cooperation of existing social welfare offices.
d) In order to provide services for disabled and homebound people, satellite service clinics should be expanded and continued for some years with institutionally trained doctors.

These measures will help prevent the degradation of the livelihoods of extremely poor people by improving their capacity to bear general health related expenses. In addition the following suggestions are expected to facilitate the prevention of infectious diseases in the short term and to reduce general morbidity of the extreme poor in the long run.

a) Extreme poor plain land Adivasis are living in an area that is susceptible to kala-azar. Use of chemically treated mosquito nets needs to be effectively promoted and they should be distributed free of charge.

b) Availability of safe drinking water and sanitation is a priority. Many *Adivasis* are currently forced to wash in the community water sources used by many people with a high risk for spreading germs and infectious diseases. The installation of water treatment plants to harvest rain water and purify tank water might be an option. Alternatively the network of deep tube wells which already exists could be extended. Such infrastructure is necessary to enable extremely poor *Adivasis* to maintain good health and hygiene throughout the year.

c) Behavioral change communication and health education should be undertaken in association with local organisations.

d) The waiting time of patients needs to be reduced by increasing the number of doctors at static service delivery points.

e) Recruitment of more female village doctors under community clinics is essential to reach disabled women, adolescent girls and women reluctant to seek reproductive health services.

f) Exploring the option of introducing a health insurance scheme with low premiums to allow adequate access to effective health services regardless of income.

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