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## **Social and economic implications of HIV/AIDS: evidence from West Bengal**

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Social and Economic Implications of HIV/AIDS:

Evidence from West Bengal

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## Social and Economic Implications of HIV/AIDS:

### Evidence from West Bengal

[Abstract: Based on household level' field survey in West Bengal State in Indian context, this study suggests that poverty and lower level of human capital provide the basic initiatives for both rural –urban migration and risky occupational choice for household's income, and thus contributes to the spread of HIV/AIDS. Also, the HIV/AIDS epidemic of those economically and socially disadvantaged households leads to the consequence of absolute economic and social poverty within a short period after its detection. Despite such a consequence of absolute economic and social poverty, the benefit of actions by government or non-government organizations is insignificant for them.]

Why is, till now, poverty one of the main reasons for the spread of HIV/AIDS infection, which is recognised worldwide as the fourth foremost reason of death(Lamprey, et al.,2002) and that is a global pandemic humankind has ever faced (Palo,2008:369)? Why does the socio-economic impact of HIV/AIDS create a vicious cycle of poverty? Why is it demonstrated the lack of government's willingness to finance services for people suffering a potentially devastating disease (HIV/AIDS) from the economic perspectives? These important issues seem to be an important area of research for fighting against such global inhuman disease, the fourth foremost reason of death in the world. This paper attempts to examine socio-economic reasons and implications of PLWHIV/AIDS( person living with HIV/AIDS) and to the benefit of action provided by government and non-government organisations to help them in the context of a field survey at household level in West Bengal State in Indian context.

As regards the first issue is concerned, there is a significant literature on how poverty provides the basic initiatives for both rural –urban migration (transient and permanent) and risky occupational choice in the destination, and thus contributes to the spread of HIV/AIDS (Sorensen, et al., 2002; Waddington and Sabates-Wheeler, 2004). It also examines as to how people migrate, particularly in the Indian Context, to reduce the uncertainties of family income, provide investment funds, and earn livelihood, and thus contributes to the spread of HIV/AIDS( De Haan, 2000; Deb,*et al.*, 2002; Rogaly and Coppard, 2003). There is ample empirical evidence which upholds a higher level of positive correlation between labour migration and HIV

vulnerability ( Anderson,1996; Brummelhuis and Herdt, 1995; Gras, *et al.*,1999; Organista and Organista, 1997; Wallmasn, 2001). In India, available literature reveals that HIV/AIDS has spread largely with high level of migration (in high rural to urban movement), itself a reflection of limited employment opportunities, poverty and economic restructuring ( Ghosh, 2002) . Poor working conditions in the workplace for migrant workers in urban areas, dissatisfaction with the new living and working style, fretfulness associated with the migration process, substance abuse, poor living arrangements in the destination place play the increasing vulnerability of the migrants( Palo,2005; Gupta and Singh, 2003; Mishra, 2004; Poudel, *et al.*,2003). Migrants typically exhibited lower levels of healthcare utilisation and medical treatment, linked to a lack of knowledge concerning health services availability at destination, issues of access and expenses. Poor employment condition along with little access to HIV information and health services at the new workplace play a heightened role in HIV risk (ibid). That poverty has a compound connection with HIV/AIDS which creates a vicious cycle of poverty has been also explored in the works of Barnett, et al.,2001; Poku, 2001; Booysen, *et al.*,2002).This study tries to examine the socio-economic reasons that contribute to the spread of HIV/AIDS vulnerability for the households under study.

As regards socio-economic implications of HIV/AIDS is concerned, the HIV epidemic affects people in their most productive ages with adverse impacts on life expectancy, the productivity of the labour force, and household incomes. Mahal (2002) summarises data provided by UNAIDS which shows that more than 90 per cent of the world's HIV-positive cases belong to the age-group 15-49 years. Some researchers also suggest that the economically more productive groups could be potentially at greater risk of infection, especially in the early phases of the epidemic (Over 1992). According to ILO (2005) estimates, nearly 36.5 million persons worldwide, who are engaged in some form of productive activity, are HIV positive. ILO also estimates that 28 million labour force participants (LFP) have been lost to the HIV/AIDS epidemic globally till now. Moreover, each year 2 million workers leave the labour market because HIV/AIDS renders them too ill to work. It is expected that by 2015, 4 million workers will become unable to work each year, without adequate intervention (ILO, 2005).The cumulative loss of labour force participants worldwide is projected to reach 48 million in 2010 and 74 million in 2015 in the absence of increased access to treatment.ILO estimates also explicate that in the affected countries where the effect of HIV is measureable, there was loss of 0.2 per cent of the annual rate of growth of GDP on average between 1992 and 2002,which is equivalent to a total average annual loss of USD 25 billion. The large size of the epidemic and its impact on the more productive members of the labour force suggests a large negative effect on growth in real income per capita in the context of standard models of economic growth (Over 1992). Moreover Bloom and Williamson (1998) imply a third way in which economic growth can be adversely affected – a ‘reverse demographic gift’ because of the deaths and morbidity among people in prime working ages. There are other channels through which HIV/AIDS

could have negative consequences for economic growth as well. These could include a decline in savings rates that result from increased medical treatment costs associated with HIV/AIDS (Cuddington 1993; Over 1992). Saving rates could also decline if people expect to live for a fewer number of years owing to HIV/AIDS, and so feel less need for savings to meet their old age consumption needs. The HIV epidemic affects people in their most productive ages with adverse impacts on life expectancy, the productivity of the labour force, and household incomes. In similar vein, high rates of AIDS-rates' deaths among the more educated age-groups could directly act to reduce the stock of human capital, as well as indirectly, because people will have less incentive to acquire costly educational capital, if they do not expect to live long enough to enjoy substantial gains from acquiring it. Future stock of educational capital could also be affected if children whose parents die prematurely due to AIDS face economic bottlenecks in efforts to continue their education. The HIV/AIDS epidemic reduces the stock of skills and experience of the labour force by causing the illness and death of workers, and this loss in human capital is a direct threat to goals to poverty eradication and sustainable development (ILO,2004).

There are several ways in which individual households are likely to be economically and socially affected by AIDS. There is mounting evidence from around the world to indicate that individuals and households are economically affected and poor households are more vulnerable to the impacts than economically stable households. To date, only a handful of studies in India examine the socio-economic well-being of the households affected by HIV/AIDS (Basu et al., 1997; Gupta, 1998; Bharat and Aggleton 1999 , Bloom and Mahal ,1997 ). The most visible impact is the expenses associated with treatment of individuals that are borne by the household(s) to whom the individuals belong. If the affected individual is an earning member, as he or she is most likely to be, there will be loss in earnings and also increased medical expenditure will mean less resource per capita in the household. This will certainly affect the resources available for basic needs consumption like food, clothing and other utilities. This is especially crucial for the growing needs of children whose nutrition and health are likely to be adversely affected. The storage of financial resources may also affect the schooling of children. To maintain its standard of living, or even to cope with a reduced standard, the household will have to draw upon savings and possibly sell assets, or incur debts. The ill health of the earning individual would also mean that other household members have to devote more time to care for him or her, and this would in turn directly reduce the leisure time available to them as well as affect time available for tending to the children. This will be especially true for women household members of the household who often end up caring for the sick. There is possibly another effect also on children such as in households where there are not enough adult members to attend to household activities-children may have to be withdrawn from school to take up some of the responsibilities of the household. Another important point to note here is the discrimination meted out to the infected persons. Evidences for which are numerous discrimination, thus reduced earnings is a phenomenon not only for the people who are ill, but many individuals who may come

out in the open about their positive status on HIV/AIDS and hence may have to suffer the economic and social consequences. There could be all or some of these mentioned effects that could hit a household and the final impact would depend on the initial endowments of the household. Needless to say, economically and socially disadvantaged households will suffer the most because of their already precarious status. This study also tries to examine the socio- implications of PLWHIV/AIDS for households under study.

What are the direct costs to government for PLWHIV/AIDS? Direct costs to government for PLWHIV/AIDS are of two types: the cost of treating PLWHIV/AIDS and the costs other than treating PLWHIV/AIDS. The Direct costs to government for PLWHIV/AIDS, that appear from the study of different countries of the world, are, usually, the costs of treating PLWHIV/AIDS ( the health care system). These costs can be high on a per-case basis, because of the intensity of treatment required for some opportunistic infections and other ailments associated with HIV/AIDS, as well as the relatively high cost of antiretroviral agents prescribed to HIV patients. Regarding costs other than treating PLWHIV/AIDS, there are hardly studies that the government of any country explicitly bear any proportion of its health expenditure for PLWHIV/AIDS regarding the costs. However, it is said that while HIV causes only 3.7% of all global mortality, it receives 25% of all health aid ((Chinai, 2009:80). Additionally, it receives a large proportion of domestic expenditure, which often exceeds domestic health budgets, says Robert England, chairperson of the Health system workshop, an independent think tank promoting comprehensive primary health systems reform in developing countries (ibid).

Preliminary estimates of financing and expenditures in eight Latin American countries in 2000 indicate that the expenditure borne by Government in Argentina, Bolivia, Brazil, Chile, Costa Rica, Mexico, Peru, and Uruguay on HIV/AIDS is large proportions of treatment-between 60 per cent and 80 per cent total HIV/AIDS expenditures( Abreu *et al.*,2003). The vast majority of HIV/AIDS expenditures are financed by public sources. This includes direct government (i.e., ministries of health) or social contributions as in Argentina, Brazil, and Costa Rica. In Mexico, Chile, Peru, and Uruguay, the private sector contributes more to HIV/AIDS expenditure. The estimated average per capita expenditure devoted to care in Bolivia was 18 per cent , but in the other countries it was higher than 64 per cent ( the average was 78 per cent). None of the countries except Bolivia depended heavily on external international cooperation; 25 per cent of Bolivia's health expenditure was out of pocket expenditure, 64 per cent was from external source, and only a small fraction was covered by direct government funding. In the seven countries, where the government provides antiretroviral therapy (ART), most financing is provided by government resources through universal health systems (e.g., Brazil) or social security institutions. These facts , however, seem to suggest that government of Latin American countries bear a large proportion of treatment cost of total HIV/AIDS expenditures for PLWHIV/AIDS in those countries (ibid).

Despite the fact that India has an increase in the number of its people living with Human Immunodeficiency Virus (HIV), which causes Acquired Immunodeficiency

Syndrome ( AIDS), from a few thousand in the early 1990s to around 2. 47 million in 2006, out of which 39 per cent are women and 3.8 per cent are children ,and the main aim of NACO(National AIDS Control Organisation) -III is to halt and reverse the tide of the HIV epidemic in India by 2012, there is hardly any report from Indian governments for the proportion of direct costs( health aid and/or non-health aid)to government for each HIV/AIDS infected person's budget. This study however, tries to explore the proportion of direct costs (health aid and/or non-health aid)to government and non-government ends for PLWHIV/AIDS based on the household survey under study.

In the light of discussions regarding all these important issues, this paper, however, attempts to examine socio-economic reasons and implications of PLWHIV/AIDS and the benefit of action provided by government and non-government ends to help them in the context of a field survey at household level in west Bengal State in Indian context. The underlying hypotheses are: i) poverty and low human capital provide the basic initiatives for both rural –urban migration and risky occupational choice for household's income, and thus contributes to the spread of HIV/AIDS, ii)the HIV/AIDS epidemic of economically and socially disadvantaged households leads to the consequence of absolute poverty, and iii) it demonstrates the lack of government's willingness to finance services for people suffering a potentially devastating disease (HIV/AIDS) from the economic perspectives.

The paper is organised as follows: Introduction appears in section 1; section 2 presents the data set and methodology; the results of field survey are contained in section 3. Section 4 concludes.

## Section 2

In order to examine our stated objectives we depend on field survey in five districts in West Bengal- north 24 pgs., south 24 pgs., Murshidabad, Kolkata and Darjeeling. Household data were collected from PLWHIV/AIDS who are the members of district level PLWHIV/AIDS societies. 30 samples (SRSWOR) from each district were selected for final survey from the list of their total male members of each district. However the final survey was conducted from 150 sample households spread over 5 districts in West Bengal during one year period from February 2009-March 2010. Simple procedures like Percentage analyses, descriptive statistics, tabular analyses and graphical presentation are used to achieve the stated objectives of this study.

## Section 3

3.1. This study tries to examine the socio-economic reasons that contribute to the spread of HIV/AIDS vulnerability for the households under study.

### a) Social Issues

The heads of the families (here, all are male members) belonging to PLW HIV/AIDS under our study are almost within the age of 40 or below( Table 1). Only

9 per cent heads of households belong to the age group of above 40. It shows that HIV/AIDS infected heads of households under this study almost belong to the young age group. But the majority of HIV/AIDS infected heads belong to the age group of 30-40( 58 per cent of households). Also important is that all the HIV/AIDS infected heads of this study have been suffering from the said infection for about 6 years or lesser (Table 2)i.e., in no case of HIV/AIDS infected heads was infected with this disease for above 6 years. All these facts reveal that all HIV/AIDS infected heads belong to the young age group and have been suffering from the devastating disease (HIV/AIDS) for a short period suggesting that the economically more productive age groups are at greater risk of infection with HIV/AIDS.

As regards educational status is concerned, 97 per cent HIV/AIDS infected heads of households are literates(Table 3). But the literacy level beyond secondary level for HIV/AIDS infected heads works out to only 7 per cent . However the literacy level for majority of HIV/AIDS infected heads is at secondary level ( 52 per cent heads of households). It implies that all heads of HIV/AIDS infected households belonging to economically more productive age group possess lower level human capital.

Interestingly, the wives of all HIV/AIDS infected heads of households under this study are also infected with HIV/AIDS , and in all cases HIV/AIDS infection were detected at the same time when their husbands were reported HIV/AIDS infection by medical treatment. It is important to mention that when the doctors could demonstrate the germ of HIV/AIDS infection in the blood cells of the heads(male), the latter were asked to examine the same to their wives and children. The medical practitioners, however, could demonstrate HIV/AIDS infection to the blood cells in all cases for heads of the households and their wives. But there was no issue for 12 per cent cases. Out of the remaining cases (households having children), 91 per cent cases of HIV/AIDS infected households having children were observed HIV/AIDS infection for at least one child of those household . It, however, indicates that all husbands and wives of all families and at least one child in almost all families were simultaneously detected HIV/AIDS infection at the same when heads of households were primarily detected HIV/AIDS infection by medical treatment, and all they were detected with HIV/AIDS for 6 years or lesser when HIV/AIDS infection was detected to the heads of households.

Concerning to the age of HIV/AIDS infected wives of heads(Table 4) , the significant majority of HIV/AIDS infected wives belong to the age group of 20-30( 83 per cent wives of households).The rest belong to the age group of 30-40 . It indicates that all HIV/AIDS infected heads and their wives belong to the young age group and have been suffering from the devastating disease (HIV/AIDS) for a short period.

As regards to the literacy level is concerned (Table 5), although majority of HIV/AIDS infected wives are literates ( almost at the primary level), a little less than 50 per cent of HIV/AIDS infected wives are illiterate( 44 per cent of HIV/AIDS



infected wives of households). The literacy level of wives for HIV/AIDS infected households beyond secondary level is nil. When the literacy level between HIV/AIDS infected wives and HIV/AIDS infected husbands(heads) are compared, it might be clear that almost all HIV/AIDS infected husbands are literate, whereas little higher than 50 per cent of HIV/AIDS infected wives are literate; majority of HIV/AIDS infected literates husband are at secondary level, whereas majority of HIV/AIDS infected literates wives are at primary level; The literacy level of HIV/AIDS infected husband and wives beyond secondary level is insignificant and nil respectively. It might suggest that despite the fact that the percentage of literacy of literacy of HIV/AIDS infected husband is higher than that of HIV/AIDS infected wives, the grade of literacy between these two does not differ much. It might be indication that all heads of HIV/AIDS infected households and their wives not only belong to the economically more productive age groups but also possess lower level of human capital.

## **b) Economic Issues**

### **i) Employment**

Researchers have tried to examine the relationship between population mobility and the spread of HIV/AIDS infected disease. Evidently, this study shows that in 100 per cent cases migration is the spread of HIV/AIDS infected disease. In as many as 90 per cent cases of households this migration prevailed in inter-state cases-i.e. migration from one state to another (in all cases this migration was effective from West Bengal to Bombay). However, the rest cases of migration persisted in intra-state migration, i.e. migration within same state (in all cases of intra-state migration was executed from rural area to urban area within West Bengal). When asked the causes of migration to the heads of HIV/AIDS infected households under our study, 98 per cent cases of households reported that poverty was the main cause for their migration. They were obliged to migrate, they argued, because of earning higher wage in order to support their family out of poverty. This is also supported by the income and asset status of HIV/AIDS infected households under our study (Figures 1 & 2). However, migration helps to the spread of HIV/AIDS infected disease for all cases.

In no case, all heads of HIV/AIDS infected households under our study were employed in government enterprise. All were employed in private enterprises. Almost all heads of HIV/AIDS infected households had to be employed with lower income range due to their lower educational status( lower level of human capital).

### **ii)Income**

Worthwhile to mention that before the detection of HIV/AIDS, no member except the head of the heads of all households is engaged in income generating activities (Figure 1). But after the detection of HIV/AIDS many wives of head of households are

obliged to engage in income generating activities to provide for their households. Monthly Income level for overwhelming majority of HIV/AIDS' infected households was under the range of Rs. 5000-Rs.10000 ( 82 per cent cases of households ) before their medical detection of HIV/AIDS ; 11 per cent cases and 7 per cent cases had monthly income under the range of Rs. 10000-Rs. 20000 and Rs. 3000-Rs.5000 respectively.

That almost all HIV/AIDS infected households belonged to the poor category before HIV/AIDS infection seem to be evident from their asset status also (Figure 2). Before HIV/AIDS, the asset position for most of households were under the range of Rs. 50,000-Rs.100000 ( 61 per cent of households). Before HIV/AIDS, 22 per cent of households and 17 per cent of households had asset level in the range of Rs. 1 lakh – Rs. 3 lakh and Rs. 3 lakh-Rs. 5 lakh respectively.

However the socio-economic status of HIV/AIDS infected households during the period of the detection of such devastating disease reveals the following facts: i) All HIV/AIDS infected heads belong to the young age group suggesting that the economically more productive age groups are at greater risk of infection with HIV/AIDS; ii) all husbands and wives of all families and at least one child in almost all families were simultaneously detected HIV/AIDS infection at the same when heads of households were primarily detected HIV/AIDS infection by medical treatment, the range of the period of detection of HIV/AIDS being 6 years or lesser; iii) the literacy level of almost all HIV/AIDS infected heads is either at primary or at secondary level and the level of literacy for little higher than 50 per cent of their HIV/AIDS infected wives are at primary level with zero per cent cases above primary level implying that earning members of HIV/AIDS infected households not only belong to the economically more productive age groups but also possess lower level of human capital; iv) for all cases poverty and lower human capital provide the basic initiatives for both rural –urban migration ( inter-state migration in almost all cases) and obliged to take risky occupational choice for earning higher wage in order to support their family out of poverty ;v) before the detection of HIV/AIDS none but the heads of all households are engaged in income generating activities, and monthly Income level for overwhelming majority of heads of households were under the range of much lower level of income from non-government source( 82 per cent cases of households were employed in the monthly income range of Rs. 5000-Rs.10000 before their medical detection of HIV/AIDS); their asset status also belonged to the poor category. These facts, however, seem to suggest that poverty and low human capital provide the basic initiatives for both rural –urban migration and risky occupational choice for household's income, and thus contributes to the spread of HIV/AIDS( supporting hypothesis i).

3.2. An attempt has also been made to examine the socio-economic implications for HIV/AIDS infected households under study.

**a) Economic consequence**

### i) Income and Asset

As mentioned earlier (Figure 1), monthly Income level for overwhelming majority of HIV/AIDS' infected households was under the range of Rs. 5000-Rs.10000 ( 82 per cent cases of households ) before their medical detection of HIV/AIDS. But after their medical detection of HIV/AIDS within a range of 6 years or lesser, monthly income level for considerable majority of households, in which both heads and their wives are engaged in income generating activities, have been substantially reduced in the range of Rs.1000 or below (79 per cent of households). As regards asset status is concerned (Figure 2), all the households had the asset range of Rs.50000-Rs. 5 lakhs, whereas after HIV/AIDS within a period of six years or lesser, there is no any household which belonged to said status. Also important is that before HIV/AIDS, the asset position for most of households (61 per cent of households) was under the range of Rs. 50,000-Rs.100000, whereas after HIV/AIDS majority of households (51 per cent of households) belong to asset range of Rs. 3,000 or lesser. What it implies is that the HIV/AIDS epidemic of economically and socially disadvantaged households leads to the consequence of absolute economic poverty within a short period after the detection of HIV/AIDS<sup>1</sup>.

### ii) Productivity

All HIV/AIDS infected heads were employed in return of physical labour before and after the spread of this infectious disease. Significantly, the considerable majority of HIV/AIDS infected heads of households had to work more than 8 hours per day( 66percent cases of households); but surprisingly, in majority of cases of households are incapable of doing any work (55 per cent cases of households) after HIV/AIDS infection ( Figure 3) . 12 percent cases of households can now work below 2 hours a day. In no case can work for 6 hours or more per day after HIV/AIDS infections. The results however, show that for the spread of the HIV/AIDS infection for at best 6 years or lesser, in as many as 67percent cases of households can work either below 2 hours or zero hour after HIV/AIDS infection. This might imply that the spread of this infectious disease have severely deteriorated the productivity level of heads of households within a short period.

## **b) Social consequence**

### i) Impact on health

Weight: Before HIV/AIDS infection the weight of heads in major cases of households was in the range of 70 kg- 90 kg (63 per cent of households), but after the spread of HIV/AIDS infection for a range of 6 years or lesser ,the weight of major cases of households (63 percent cases ) has been reduced in the range of 60-80 kg (Figure 4) . However, the incidence of HIV/AIDS infection has severely deteriorated the health conditions for most of the heads of households.

As mentioned earlier, wives of all HIV/AIDS infected heads are also infected with the same infectious disease (HIV/AIDS) which also adversely effected the former's health status (Figure 5) .Before HIV/AIDS infection the weight in major cases was within the range of 50-60 kg(52 percent cases of total).However ,after HIV/AIDS infection the weight of majority of cases substantially deteriorated in the range of 40-50 kg. Before this infection, in 86 percent cases weights were in the range of 40-60 kg. After the infection of HIV/AIDS, in 75 percent cases the weights have been reduced in the range of 30-50 kg.

The results also show that at least one children of almost all HIV/AIDS infected heads was also infected by same disease. In order to examine the extent of incidence on health conditions of children regarding HIV/AIDS infected households, this study examines the implication of health status of the children of HIV/AIDS infected households, who are the youngest in age ( Figure 6). Out of 100 per cent cases, 63 per cent were in the range of weight of 5kg-15 kg before HIV/AIDS infection. After HIV/AIDS, the weight of 75 per cent have been shifted downward in the range of 5-15 kg.

Other diseases(other than HIV/AIDS): As may be seen in Table 6,not only does the HIV/AIDS infection reduce the weight of all heads of households ,almost all heads have been also ensnared with long term illness by other diseases(like TB, heart problem etc.).Before HIV/AIDS infection, only 29 percent heads of households were caught into short term illness like cough, fever or diarrhoea with zero percentage of long term illness. Significantly, after HIV/AIDS infection within a period of 6 years or lesser, 85 percent heads of households have been entrapped into long term illness (like TB, heart problem etc)together with their existing HIV/AIDS infection.

Before their infection, 91 per cent wives of households had short term illness with insignificant cases of long term illness. However, after their HIV/AIDS infection with a period of 6 years or less, 89 percent of wives in the households have been suffering from long term illness with other diseases (like TB, heart problem etc.) along with existing HIV/AIDS infection. Also important is that none of the children, youngest in age, had long term illness before their infection. However, after infection in majority of cases, they have been sufferings from other long term diseases along with their prevailing HIV/AIDS infection. All these facts, however imply that the health status of almost all members of HIV/AIDS infected households have been severely deteriorated on account of HIV/AIDS infection for heads of households.

#### ii) Education:

The spread of the HIV/AIDS infection have adverse impact in the education status of children in HIV/AIDS infected households (Table 7). In as many as 42 per cent cases children received private education before HIV/AIDS infection .After infection not a single case receives private education; rather 55 per cent drops from education and the rest studies in government(public) school. However, the HIV/AIDS

infection has significantly deteriorated the education status of the children of HIV/AIDS infected households.

iii) Impact on Family system

Before infection (HIV/AIDS), all heads of households were under joint family system (Table 8). But after HIV/AIDS, 98 per cent of households are observed to be operating in the nuclear family system within a period of 6 years or lesser. Also important is that hundred per cent heads of households are reported to get marry before their HIV/AIDS infection. Almost all HIV/AIDS infected heads (91 per cent cases) were separated from joint family system within a period of 2 years after the detection of HIV/AIDS disease. This results however show that HIV/AIDS infection is the significant factor for almost all heads of HIV/AIDS infected households to set up the nuclear family system from the separation of joint family system. The underlying reasons are that the members of joint family other than HIV/AIDS infected member (s) were separated from HIV/AIDS infected members due to avoiding the financial burden of HIV/AIDS infected patients and social issues including health problems.

iv) Impact on society:

As regards empowerment issues within joint family system for HIV/AIDS infected heads of households is concerned (Table 9), before HIV/AIDS, ability to influence decision making ,mutual trust within family ,presence in asset-management decision ,collective action in family affairs, ability to raise issues in family matters ,ability to resolve conflicts, sense of responsibility and network of relation within their families were usual phenomenon for almost all heads of HIV/AIDS infected households . But after HIV/AIDS, they are hardly present among heads of HIV/AIDS infected households within a period of 6 years or lesser after their medical detection .

In addition to the issues related to the social issues within their households, almost all heads of HIV/AIDS infected households had greater individual influence on social matters outside their households before HIV/AIDS infection (Table 10). These are: group membership, ability to influence decision making, mutual trust in recommendation of action plan, presence in any community development programme, collective action in community development programme, ability to raise issues in group meeting, ability to resolve conflict, sense of responsibility and network of relation. But within a period of 6 years or lesser after their medical detection of HIV/AIDS infection, those issues of social influence outside their households are hardly present among heads of households.

The important facts that appear from the study of socio-economic consequences on HIV/AIDS infected households are in the following lines.

1)The incidence of HIV/AIDS infection for economically and socially disadvantaged households has highly deteriorated not only the health condition of all

the heads of households and their wives infected with HIV/AIDS but also severely affected the health conditions of most of the members of HIV/AIDS infected households. 2) the HIV/AIDS epidemic of economically and socially disadvantaged households have to bear immense medical expenses for all member of households which lead to mountainous reduction of the asset level per capita in the household. 3)The spread of this infectious disease among all members of households, who were more productive age group with lower human capital, have severely deteriorated the productivity level not only of heads of households, who was the only earning members of all households before the infection of HIV/AIDS, but other members of same households leading to stern a dreadful reduction of the income level for households for the loss of earnings within a period of 6 years or lesser. 4) HIV/AIDS infection not only destroys the existing human capital of their households by severely deteriorating the education status of the children of HIV/AIDS infected households but also lead to collapse the human capital and productivity for the households in future.5)The HIV/AIDS infected households were more vulnerable in the society , because the economic and social support and the influence they enjoyed in the joint family system before their infection was removed after the their infection and all the social influence they enjoyed before their infection out side their own households was, almost, put an end. What it implies is that the HIV/AIDS epidemic of economically and socially disadvantaged households leads to the consequence of absolute economic and social poverty within a short period after the detection of HIV/AIDS (supporting hypothesis ii).

### 3.3. How does government or non-government source help HIV/AIDS infected households under study?

The benefit of action government/non-government agencies undertaken for HIV/AIDS infected household under our study is in the following lines: **First**, Government provides with all ART to all members of HIV/AIDS infected households. **Secondly**, she grants below 10% of the requisite of antibiotic for all members of HIV/AIDS infected household. **Thirdly**, the only help that non-government source (like NGO) provides to the HIV/AIDS infected households is below 10 percent requirement of antibiotic to 42 percent of households. **Finally**, both government and non-government source provide no help to other issues to the HIV/AIDS infected households except some help of medicine mentioned above to the latter.

These facts however provides an evidence that except ART ,more than 90 percent medical expenses of HIV/AIDS infected households and all non-medical expenses for their households have to bear by the HIV/AIDS infected households themselves . It however implies that benefit of action by government or non-government organizations is insignificant to meet up expenses of HIV/AIDS infected households under this study. Very scanty help (none but less than 10% of the requisite of

antibiotic for all members of HIV/AIDS infected household including ART) by government and non-government organizations however leads to the HIV/AIDS infected households into the absolute poverty and acute vulnerability (supporting hypothesis iii).

## 4. Conclusions

This study lends credence to the fact that poverty and low human capital provide the basic initiatives for both rural –urban migration and risky occupational choice for household's income, and thus contributes to the spread of HIV/AIDS. Added to it, this study also suggests, the economic and social consequences of economically and socially disadvantaged HIV/AIDS infected households lead to absolute poverty, acute malnutrition, severe ill-health and other long term disease, destroy human capital and productivity at most productive ages, lead to vulnerability to joint family system and society. How does economic consequence lead to absolute poverty? As the study suggests, when the only earning member of the family is affected with HIV/AIDS, almost all members of households are observed to be affected with the same disease, which leads to mounting medical expenses for the households, destroying human capital and productivity, reducing households' resources available for basic needs consumption like food, clothing and other utilities, leading to malnutrition, severe ill-health and other long term disease, all influencing thereby the vicious cycle of poverty within a short period of time. Added to it, the joint family system leads to HIV/AIDS infected households more vulnerable by avoiding to bear their financial burden and isolating them from their society. The HIV/AIDS infected households are more vulnerable in the society, because the economic and social support and influence they enjoyed in the joint family system before their infection has removed after the infection and all the social influence they enjoyed before their infection outside their own households has, almost, put an end. As regards the benefit of action is concerned, what is most disappointing is that despite the consequence of absolute economic and social poverty within a short period after the detection of HIV/AIDS, the benefit of action taken by government or non-government organizations is insignificant. Very scanty help (none but less than 10% of the requisite of antibiotic for all members of HIV/AIDS infected household including ART) by government and non-government organization however leads to the HIV/AIDS infected households into the absolute poverty and acute vulnerability.

The policy instruments available to our government together with non-government institutions in this situation are: First, they should bear all medical expenses to those infected with HIV/AIDS and face with high incidence of poorer socio- economic conditions, as most of the Latin American countries. Treatments must be proven to work not only in 'ideal' clinical treatments, with closely monitored patients in a hospital setting, but also in a context that is likely if the programme is scaled up. Regularity in taking treatment and its long term continuity that ensures quality of treatment will properly execute if the programme is scaled up. Second, government together with non-government institutions should bear with substantial consumption expenditure for them regularly, because it is said that being HIV

positive does not mean death; rather it is the body's red alert that immune system should be immediately repaired with nutrition through real food and changed lifestyle. Third, in order to save existing human capital of HIV/AIDS infected households, which affects mainly young adults and that weakens the mechanism from one generation to transmit knowledge and abilities to the next, the institutional source should provide all educational expenditure to the HIV/AIDS infected children. Finally, as the study suggests, migration is the main factor that led to the HIV/AIDS vulnerability, and most of the migrated people are ignorant about the connection between HIV and the migratory process, or how migrants can protect themselves from the infection. The introduction of better access to information and services would help to protect them. In this regard, government and non-government institutions should develop national and regional strategies that facilitate access to HIV/AIDS prevention programmes for migrants and mobile workers, including the provision of information on health and social services.

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### **Notes**

1. One may argue that the mountainous reduction of money income and money asset value at present (during the period of survey) for HIV/AIDS infected households as compared with their before HIV/AIDS situation for a period of six years or lesser may not lead to such a reduction of their real income and real asset value at present in relation to their before HIV/AIDS situation. If one looks into the General Index of consumer price index of agricultural labourers(CPIAL) for a period of six years from 2004-05 to 2009-10 (April), the index varies between 340 to 468(Economic Survey, 2009-10), when 1986-87 is considered as the base year(1986-87=100). It implies that a hundred per cent decrease in money income or money asset value for HIV/AIDS infected households indicates about 62 per cent decrease in real income or real asset value at best for them during a period of six years or lesser. It might suggest that HIV/AIDS infection for HIV/AIDS infected households not only brings about the mountainous reduction of their money income and money asset value at present as compared with their before HIV/AIDS situation, but also a substantial reduction of their real income and real asset value at present in relation to their before HIV/AIDS situation.



Table 1: Age ( in years) of HIV/AIDS infected heads of households(in percentage)

Age class(in years)	PLW AIDS/HIV
Below 10	Nil
10-20	Nil
20-30	33
30-40	58
40-50	9
50-60	Nil

Table 2: Detection of HIV/AIDS infection (in years) for heads of households (in percentage)

HIV/AIDS infection detected (age) years in range	Number of PLWHIV/AIDS
Below 1year	Nil
Between 1-2	24
2-4 years	64
4-6 years	12
6-8 year	Nil
8-10 years	Nil
Above 10 year	Nil

Table 3: Literacy level for heads of households (in percentage)

Literacy:	Number of PLW HIV/AIDS
Illiterate	03
Primary	38
Secondary	52
Above Secondary	07

Table 4: Age( in years) of HIV/AIDS infection (in years)for wives of households' heads(in percentage)

Age class (in years)	PLWAIDS/HIV
Below 10	Nil
10-20	Nil
20-30	83
30-40	17
40-50	Nil
50-60	Nil

Table 5: Literacy level for wives of households' heads (in percentage)

Literacy:	Number of PLWHIV/AIDS
Illiterate	44
Primary	46
Secondary	10
Above Secondary	Nil

Figure 1: Income (in Rs.) of households (in percentage)

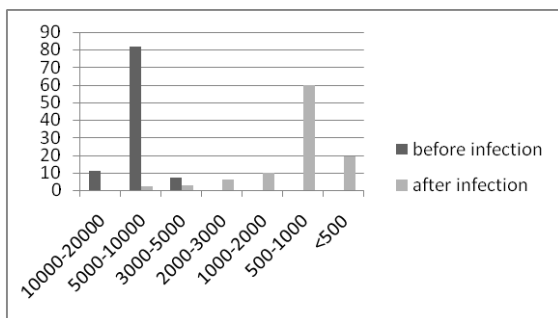


Figure 2: Asset (in Rs.) of households (in percentage)

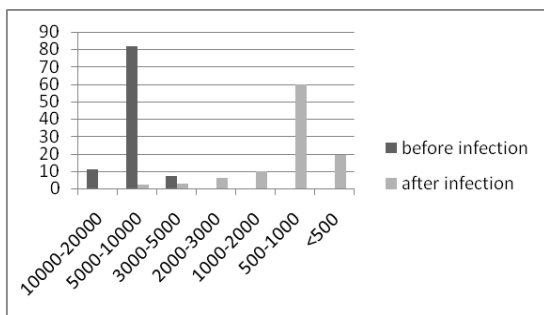


Figure 3: Wage employment (in hours) per day for the heads of households (in percentage)

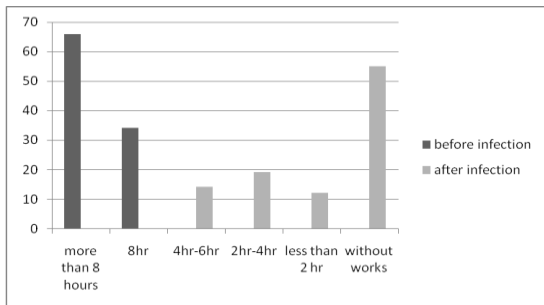


Figure 4: Weight (in kg.) for the heads of households (in percentage)

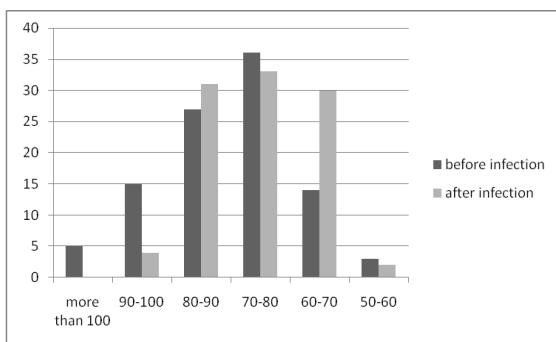


Figure 5: Weight (in kg.) for wives of households' heads (in percentage)

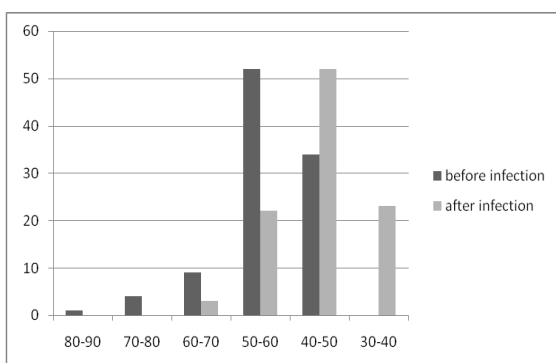


Figure 6: Weight (in kg.) for child (youngest in age) of households (in percentage)

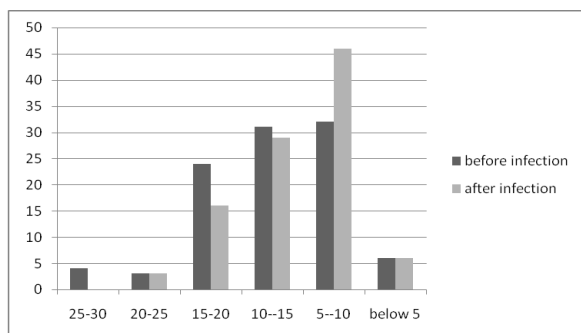


Table 6: Illness (short/long) with non HIV/AIDS' disease for households (in percentage)

	Before HIV/AIDS	After HIV/AIDS
<u>Heads of households</u>		
Short-term Illness (Cough, Fever, Diarrhoea etc.)	29	15
Long-term Illness (like TB, heart problem etc.)	Nil	85
<u>Wives of households</u>		
Short-term Illness (Cough, Fever, Diarrhoea)	94	11
Long-term Illness ( like TB, heart problem etc.)	06	89
<u>Child of households(lowest in age)</u>		
Short-term Illness (Cough, ever, Diarrhoea)	73	24
Long-term Illness( like TB, heart problem etc.)	Nil	76

Table 7: Literacy level and type of institution for children (youngest in age) of households (in percentage)

<u>Primary Education</u>	Before HIV/AIDS	After HIV/AIDS
(Type of School)		
Private School	42	Nil
Government School	45	23
Dropped	Nil	55

Table 8: Impact on Family System for HIV/AIDS infected households (in percentage)

	Before HIV/AIDS	After HIV/AIDS
Joint Family	100	2
Nuclear Family	Nil	98
Time of marriage	100	Nil
Separation from joint family within 1 month after detection of HIV/AIDS	Nil	03
Separation from joint family within 6 months after detection of HIV/AIDS	Nil	11
Separation from joint family between 1-2 years after detection of HIV/AIDS	Nil	77
Separation from joint family after 2 years after detection of HIV/AIDS	Nil	09

Table 9: Impact on empowerment issue on joint family system for HIV/AIDS infected heads of households (in percentage) .

	Before HIV/AIDS	After HIV/AIDS
Ability to influence decision-making	78	Nil
Mutual trust within family	100	Nil
Presence in asset management decision	78	3
Participate in asset management decision	43	1
Collective action in family affairs	96	Nil
Ability to raise issue in family matters	100	Nil
Ability to resolve conflict	72	Nil
Sense of responsibility and network of relation	91	Nil

Table 10: Impact on empowerment issue on society for HIV/AIDS infected heads of households (in percentage)

	Before HIV/AIDS	After HIV/AIDS
Group membership	89	Nil
Regular attendance with friends/neighbour	2	Nil
Ability to influence decision-making	72	Nil
Mutual trust in recommendation of action plan	71	Nil
Presence in any community development programme	12	Nil
Collective action in community development programme	82	Nil
Ability to raise issue in group meeting	82	Nil
Ability of to resolve conflict	68	Nil
Sense of responsibility and network of relation	82	Nil
Presence of hierarchy in group network	26	Nil

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