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Chapter 9

Can Access to Microfinance Reduce HIV Prevalence among Women? Evidence from the Literature

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ABSTRACT

Microfinance has been heralded by many as the magic bullet, able to empower marginalized populations by investing into their agency. It has been growing at an average rate of about 40%, and providers have shown interest in reducing HIV prevalence and promoting health educational attainment among beneficiaries' children especially among women who are vulnerable in most societies. Advocates of microfinance interventions have often stated it aims at improving lives by enabling clients to launch and nurture their own small businesses and enterprises so that they can become independent and improve their livelihoods. However, complementary to microfinance strategy is to assist clients in generating income and growing assets from the impact of crises events such as HIV and related diseases such as malaria and tuberculosis. Sub-Saharan Africa as compared to the rest of the world faces a serious HIV epidemic and the poor in general and women in particular are mostly at risk. This group of people is also the target for microfinance initiatives. The study reviews some theoretical and empirical literature about poverty, HIV and microfinance. The chapter establishes the fact that if microfinance can reduce poverty then it could also be used as a tool for preventing HIV infection. Policy recommendation that will enable microfinance institutions to contribute to the prevention of HIV, and its related diseases are offered.

INTRODUCTION

As of February, 2011, about 11 countries had achieved a two-thirds reduction in their under-five child mortality rate. Another 25 countries are on track to do so. Even though this is a remarkable improvement since 2004 (World Bank, 2011), more than 100 countries remain off track and only a few of them are likely to reach the MDG target on maternal health and child mortality by 2015. The issue of maternal and infant mortality cannot be discussed outside the context of HIV, poverty and hunger. Approximately half of the world's population live on less than two dollars a day and extremely cases of poverty and it accompanying problem beckons explicitly in many countries. In the world over, some 125 million children are not in school and more than 500 million women are illiterate. About 1.5 billion people do not have access to safe drinking water within some communities in the Sub-Saharan Africa and Asia and one child in five will not live to see his or her birthday (Chen & Ravallion, 2004).

In addition, about 33 million people are infected with HIV/AIDS globally and HIV/AIDS has claimed more than 25 million lives over the past three decades (WHO, 2011) mostly leaving behind orphans. Every year, about 2.2 million people get infected with the virus. The global picture of HIV/AIDS presented on Table 1 seems to be frightening.

Table 1 shows that more than 50% of infected adults die of AIDS globally and again about 70.3% of infected children die of AIDS globally. It is therefore not possible that by 2015 the world will be able to meet MDG targets on HIV/AIDS.

According to International Labour Organisation (ILO) Report, one out of every five women in Zambia is infected with the HIV virus and there has been an increase in the socio-economic problem of high dependency ratio with about 200,000 orphans left for few to cater for. In Brazil, the story is not different in effect, it is estimated that about 220,000 women are living with the HIV virus.

Table 1. Global summary of HIV/AIDS, 2009

Category	PLWHA	New Infections	AIDS Deaths
Total	33.3m	2.6m	1.8m
Adults	30.8m	2.2m	1.6m
Women	15.5m	N/A*	N/A
Children < 15 yrs	2.5m	370,000	260,000

WHO and UNAIDS, 2009 *N/A= not available

UNAIDS estimates that between 210,000 and 560,000 adults and children respectively in Ghana were living with HIV at the end of 2003 (UNAIDS, 2004). Ghana Health services has indicated that the national HIV prevalence rate increased from 2.4 percent in 1994 to 3.6 percent in 2003 (GHS, 2003). These devastating effects of HIV infections and its' attendant conditions have worsened the poverty situation in the world. The impact of HIV has therefore ignited policy interventions necessary to combat the issue; notably the Millennium Development Goals (MDGs) - a millennium project with major goals to be achieved by 2015 has succinctly placed premium on reduction of HIV/AIDS and its related diseases commonly referred in the literature as opportunistic diseases such Tuberculosis and Syphilis, etc.

The two Millennium Development Goals directly: Eradication of extreme poverty and hunger and the combating of HIV/AIDS, malaria and other diseases by the year 2015 are far from being achieved for many countries in Sub-Saharan Africa and Asia. Poverty and HIV/AIDS epidemic are still predominantly the ills of socio-economic development of many countries and a lot of economic energies and resources are needed to arrive at a solution. Such dreams can be materialised through a tactful and responsive intervention and placing major priority on fighting against the spread of the disease among which microfinance has been proposed. In the early seventies, experimental programmes extended small loans to groups of poor women to invest in micro-business, and that

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gave birth to what is now called microcredit. Some pioneers of the microfinance industry include the Grameen Bank in Bangladesh; ACCION International in Latin America and the Self Employed Women's Association Bank (SEWA) in India. The Grameen Bank (GB) model however provided a successful framework of poverty reduction among many women through the initiative of Mohammed Yunus. All this while, what is still practically missing is the use of microfinance interventions to target the reduction HIV/AIDS prevalence.

Microfinance has proved to be a reliable tool for deepening the financial sector's growth and poverty reduction. It is on record, according to Norwood (2005), that microfinance has three big promises: 1. to reduce poverty; 2. to empower women and 3. to enhance family planning knowledge especially among women who are responsible for child birth and victims of HIV. These dreams fit appropriately into the MGDs.

With these promises, microfinance seems to be a powerful tool for reducing HIV via poverty reduction. As a poverty reduction tool, microfinance has the potential for creating opportunities for wage employment, raising agricultural productivity among small and peasant farmers, and increasing opportunities for self-employment. This will in turn increase incomes of the poor and the marginalized in societies thereby offering them coping strategies for mitigating risks including HIV risk factors. Microfinance as a poverty reduction strategy also provides avenues for effective use of limited assets of the poor and offers them social services as safety nets. These two elements are mutually reinforcing because increase in productivity and income will make it easier for the poor to access social services such as healthcare and education, through the establishment of targeted policies; will enable the poor work more productively (Adjei, 2010). As an empowerment tool, microfinance is believed to transfer power to the vulnerable through asset building and creation of wealth.

Through microfinance, empowerment may also manifest itself in greater control over household resources particularly over incomes accruing from assets acquired through small loans (Gaiha & Thapa, 2006). This may imply changes in household patterns of expenditure – for example, higher shares devoted to children's needs and acquisition of basic household equipment. There may be manifestations of empowerment in the broader social sphere as well. These include campaigns against social ills such as alcoholism (Gaiha & Thapa, 2006) (which is a major risk factor of HIV), more active participation in local institutions and political activism particularly by women.

Microfinance does not only offer financial resources for productive activities but also offers other non-services that enhance family planning among recipients especially women since the intervention targets majority of women. In this regard the assumption is that when microfinance is targeted towards women, they will become less vulnerable to HIV infection.

This notwithstanding, some recent studies have found no effect of microfinance intervention on family planning. For example, in a randomized control trial in Ethiopia, Desai and Tarozzi (2010) evaluated the effect of linking microcredit and family planning services. The authors found that none of the interventions significantly increased contraceptive use or the intent to use family planning over the control group. This suggests that many women in less developed countries are still not getting the message on HIV prevention educational campaign.

The argument is that mainstream HIV prevention messages have little relevance to the lives of highly vulnerable female adolescents because they assume that these adolescents exert some control over the timing and frequency of sexual encounters, use of condoms, and HIV status of their partners, when in reality they do not. (USAID, 2008) Again financing health care seem to be a major problem in most less developed countries which makes access very limited thus affecting

health care utilization by the poor. As of now we are not sure of the link between microfinance, poverty and HIV apart from a few studies done in Zambia and a few countries in Africa. In Ghana for example, microfinance provider shun potential clients suspected to be HIV positive. In Ghana, apart from earlier research by Peprah (2008) which focuses on a review of literature, no other work has been done on the subject matter. There are some assertions that microfinance is 'oversold' and lacks the 'magic' associated with it. Thus, whether microfinance can be used as a tool for reducing HIV has not been given much attention. The main objective of the paper is to verify whether there is a link between MDG one which is to reduce extreme poverty and hunger eradication and MDG six which is to combat HIV/AIDS, malaria and other diseases by the year 2015 and also to find out if microfinance intervention can reduce HIV infection especially among women. The focus is on women because microfinance programmes usually target women. The rest of the paper is organized as follows: the next section looks at HIV and poverty situations in Ghana. Section three focuses on literature review that establishes a link between microfinance, poverty and HIV. Section four discusses the conceptual frame work while section five discusses findings and section six concludes with policy recommendations.

HIV in Ghana

It is said in the literature that the first case of HIV in Ghana was reported in 1986 and the disease has since spread slowly but steadily until 2003, when prevalence peaked at 3.1 percent. According UNAIDS 2007 AIDS epidemic report, the estimated adult HIV prevalence was 1.9 percent, and the rate of infection is still a cause for concern. According to 2011 HIV Sentinel Survey Report, HIV prevalence in Ghana for the next three years (2012-2015) is expected to decline from the current 1.5 per cent in 2011 to 1.3 per cent in 2015. However, the number of Persons Living with

HIV and AIDS will continue to increase, due to the combined effects of population growth and an increasing number of HIV infected persons that are living on Anti Retroviral Therapy (ART). The total number of HIV persons expected to be on ART will increase over the period to 113,723 with 96,854 being adults and 16,986 children. The Annual HIV positive births were projected to reduce due to the improved Mother to Child Transmission (MTCT) strategy, while positive mothers who would need PMTCT would decline over the period as the numbers receiving MTCT increased (Addo, 2001)). Among the general population, married women are nearly three times as likely to be HIV-infected than women who have never been married, while mobility appears to be a risk factor among men. HIV prevalence differs very little between urban and rural areas in Ghana. However, regional differences are more apparent; prevalence among pregnant women range from 1.2 percent in the northern region to 4.7 percent in the eastern region, according to the Joint United Nations Program on AIDS (UNAIDS). UNAIDS estimates that 260,000 people in Ghana were tested HIV positive in 2007. This is an indication that without effective preventive measures, the disease could spread tremendously. The national HIV prevalence for 2011 estimated at 1.5 per cent with an estimated 225,478 persons, made up of 100,336 men and 125,141 women living with HIV and AIDS. Though 2010 had the same prevalence of 1.5 per cent, 2011 had 12,077 new infections and 15,263 AIDS deaths as against 14,165 new infections and 17,230 deaths in 2010. Children living with HIV were 30,395 with 1,704 new child infections that occurred in almost equal proportions by gender while annual AIDS deaths among children were 2,080. (Quartey, 2012) Unfortunately, the declining HIV prevalence in Ghana's young population witnessed over the past few years was reversed in the 2011 survey report. Prevalence among young persons aged between 15- 24 years which was used as a proxy

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for new infections was 1.7 per cent as against 1.5 per cent in 2010. (Addo, 2011).

USAID/Ghana's key strategic priorities for the fight against HIV/AIDS are embarking on preventive interventions. Therefore greater economic energies have been expended on HIV high-risk populations such as female sex workers (FSW), men who have sex with men (MSM), and discordant couples, reducing HIV transmission from high-risk individuals to the general population, addressing stigma and discrimination, and providing comprehensive prevention and care and access to treatment for People Living With HIV/AIDS (PLWHA), their partners, and families and ensuring universal access to comprehensive HIV and AIDS services as enshrined in Ghana's Strategic Plan for the next five years. (USAIDS, 2008) The USG has developed multiple evidence-based, comprehensive behaviour change support materials for FSW, their clients and partners, MSM, and PLWHA. Additional programmes provide comprehensive prevention and care services, including voluntary counselling and testing, prevention of mother-to-child transmission, and tuberculosis (TB) and palliative care. (USAIDS, 2008)

The issue of HIV in Ghana and most parts of the world is more pronounced among women than men. HIV and its related diseases are thus gender phenomenon. Men easily pass the virus onto women than the vice-versa. Among women, also, the disease is more pronounced among pregnant women due to the fact that in most cases there is

mother-to-child transmission. Table 3 shows the prevalence rates for pregnant women who attended ante-natal care (ANC) from 2003 to 2008.

HIV prevalence in Ghana seems to be reducing meaning more progress is being achieved but in comparison with regional rates, there is still much to be done. Eastern region recorded the highest prevalence rate (6.1%) in 2003 far higher than the national (3.6%) whereas Northern region recorded the lowest (2.1%) which was lower than the national rate by 1.5 percentage points. In 2008, Eastern region maintained the first position with prevalence rate of 4.5% maintaining the first position and Northern region also maintained 10th position with prevalence rate of 1.1% less than the national rate. According to the Ghana 2011 HIV Sentinel Survey Report, five regions; Central, Eastern, Greater Accra, Ashanti and Volta, recorded an increase in HIV prevalence while Brong Ahafo's prevalence remained the same as the remaining four regions, Northern, Western, Upper East and Upper West recorded a decrease from their 2010 figures. Central Region recorded 4.7 per cent in 2011 as against 1.7 per cent in 2010, Eastern Region recorded 3.6 per cent in 2011 as against 3.4 per cent in 2010; Greater Accra recorded 3.2 per cent in 2011 as against 2.6 per cent in 2010, Ashanti recorded 3.1 per cent in 2011 as against 3.0 in 2010 while the Volta Region recorded 2.2 per cent as against 1.8 per cent. Central region now ranks first in terms of prevalence rate. (Addo, 2011). The reduction in the prevalence

Table 2. HIV/AIDS in Ghana

Total Population*	24.3million (mid-2010)
Estimated population living with HIV/AIDS**	260,000 (23,000-290,000) end of 2007
Adult HIV prevalence**	1.9% (1.7-2.2%) end of 2007
HIV Prevalence in Most-at-Risk Populations***	Sex workers: stationary sex workers 52% (Accra) (2006) and mobile sex workers 37% (Accra) (2006) MSM: 25% (2006)
Percentage of HIV-Infected People Receiving Antiretroviral Therapy****	15% (end 2007)

* U.S. Census Bureau **UNAIDS ***SHARP 2006 ****WHO/UNAIDS/UNICEF towards Universal Access, 2008.

Table 3. HIV prevalence among pregnant women attending ANC clinics by region

Region	2003	2004	2005	2006	2007	2008
Ashanti	4.7	3.0	3.0	3.7	3.8(2 nd)	3.0(2 nd)
Brong Ahafo	4.0	4.5	3.3	2.8	3.3(4 th)	2.6(5 th)
Central	5.4	3.5	2.9	2.5	2.9(7 th)	2.0(6 th)
Eastern	6.1	6.5	4.7	4.9	4.2(1 st)	4.5(1 st)
Greater Accra	4.3	3.9	2.1	3.4	3.4(3 rd)	3.0(2 nd)
Northern	2.1	1.8	1.2	1.3	1.7(10 th)	1.1(10 th)
Upper East	3.5	3.1	2.6	3.2	2.5(8 th)	2.0(6 th)
Upper West	2.2	1.7	2.6	2.5	3.3(4 th)	1.6(9 th)
Volta	2.9	3.5	1.9	3.0	2.0(9 th)	1.7(8 th)
Western	4.2	4.6	2.9	4.3	3.2(6 th)	2.9(4 th)
National	3.6	3.1	2.7	3.2	2.6	2.2

Source: Ghana Health Service, 2009

rate across the country is due to many factors including sensitization, peer education, voluntary counselling, ante-natal screening, awareness creation, HIV road shows, and many more.

Poverty in Ghana

Poverty is caused by context-specific and core elements. Among the context specific causes are political, economic and socio-cultural context which for instance translates to inequality in income, gender or political participation and vulnerability leading to HIV infection. The core causes are direct (nutrition deprivation) or indirect (food insecurity) which are almost always linked to consumption (Summer & Tiwari, 2009). Poverty in Ghana is predominant in rural areas. However there are some peri-urban areas in Ghana where poverty is very pervasive and better still there are even some urban areas in Ghana where poverty and its attendant effects are bloodcurdling. In Ghana an improvement has been made with regards to income poverty across the extremely poor and the poor since 1991/92. Unfortunately the three northern regions remain the poorest over the last three surveys (Table 4).

The northern ecological zone of the country has persistently remained the poorest zone. However evidence of intra-zonal competition in terms of poverty ranking is observed. The ranking of central and the eastern regions showed marked variations. The inter-regional and intra-zonal variations over the three rounds of the Living Standard Surveys provoked concern as to what is being measured and the potential impact of regional level policies over the period. In the poorest communities, access to finance is limited by a number of factors including limited number of financial institutions, lack of collateral security, high interest rates (cost of borrowing), etc. It likely that this could have serious implications for health needs of the people in these communities and the country at large. Therefore, microfinance could be a prominent way of reaching these unserved and the underserved in several ways as have been alluded to in the preceding paragraphs.

Linking Microfinance, Poverty and HIV

Norwood (2005) provided insight into the understanding the benefits of microfinance interventions but his illustration does not give the environment

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Table 4. Incidence of poverty by region in Ghana

Regions	Extremely Poor			Poor		
	1991/92 %	1998/99 %	2005/06 %	1991/92 %	1998/99 %	2005/06 %
Western	42.0	13.6	7.9	59.6	27.3	18.4
Central	24.1	31.5	9.7	44.3	48.4	19.9
Greater Accra	13.4	2.4	6.2	25.8	5.2	11.8
Volta	42.1	20.4	15.2	57.0	37.7	31.4
Eastern	34.8	30.4	6.6	48.0	43.7	15.1
Ashanti	25.5	16.4	11.2	41.2	27.7	20.3
Brong Ahafo	45.9	18.8	14.9	65.0	35.8	29.5
Northern	54.1	57.4	38.7	63.4	69.2	52.3
Upper East	53.5	79.6	60.1	66.9	88.2	70.4
Upper West	74.3	68.3	79.0	88.4	83.9	87.9
All	36.5	26.8	18.2	51.7	39.5	28.5

Source: Ghana Statistical Service, 2007

within which microfinance could achieve the above three objectives. The pathways through which microfinance works are not explicitly illustrated. It is important, however, that credit be given to Norwood for including family planning issues to microfinance interventions. Norwood also provided the platform for appreciating the benefits of the inclusion of non-financial services in microfinance interventions. To a large extent, this can be achieved with the assistance of the government. MicroSave, a think-tank microfinance research organization argues that microfinance is widely seen as improving livelihoods, reducing vulnerability, and fostering social as well as economic empowerment. The implication here is that microfinance should be recognised as an attractive tool to help the poor and the vulnerable.

A number studies has being done to tract the relationship poverty and diseases more especially malaria and HIV/AIDS. An understanding in the literature is it is possible to label HIV/AIDS as the disease of the poor and also the cause of poverty for many nations. Bloom et al. (2001) established the fact that poverty has a direct link with HIV. In a survey of 15,557 adult women conducted,

interesting results were found. Evidence from the study suggests that the poorest young women are likely to have engaged in early unsafe sex than their rich counterpart, an important risk factor. In addition, the wealthiest women are as twice likely to practice safe sex as the poorest women. A very significant lesson can be inferred from Blooms' findings that the poor are at higher risk than the rich all else equal. The pathway that is much convincing in providing an explanation to how microfinance can provide the magic in reducing HIV/AIDS is that, if the poor are engaged in income-generating legal economic activities, they would be occupied and there is the possibility of reducing the risk of HIV.

Natrass (2004) conceptualised the term 'sexual economy' in his study to describe sexual activities that men and young women engage in exchange for money. Poverty has the high propensity to prey young women in particular in to the participation of sexual congress as a result places them at higher risk of HIV infection and transmission. According to Akeroyed (1997) as cited by Natrass quotes, sexual culture places women in vulnerable situations regarding HIV infection and poverty

Table 5. Regional ranking of incidence of poverty (upper poverty line) in Ghana

Regions	Rounds of Living Standard Measurement Surveys (LSMS)		
	1991/92	1998/99	2005/06
Western	5 th	2 nd	3 rd
Central	2 nd	7 th	4 th
Greater Accra	1 st	1 st	1 st
Volta	6 th	5 th	7 th
Eastern	4 th	6 th	2 nd
Ashanti	3 rd	3 rd	5 th
Brong Ahafo	7 th	4 th	6 th
Northern	9 th	8 th	8 th
Upper East	8 th	10 th	9 th
Upper West	10 th	9 th	10 th

Source: Based on the Table 4

exacerbates it by encouraging women to engage in sex as an economic activity for survival.

A forward and backward linkage between poverty and HIV is not farfetched. As poverty can cause one to contract the disease as illustrated above, the person becomes poorer at the post infection period. It means that HIV worsens the poverty situation of the individual as the infected person would have to deplete his/her resources to cope with the medical expenses of opportunistic disease. The Canadian Aids Society confirms that living in poverty is a determinant of health that increases vulnerability to HIV (CAS, 2004). Poverty pushes the vulnerable in the society to engage in indiscriminate and unprotected sex with the view of earning a living as well as catering for their dependents. Single parents (mostly women find it difficult to cater for their children and may therefore resort to any ‘loose’ means of livelihood including indiscriminate sexual behaviour. Another channel through which poverty makes people predisposed to HIV/AIDS infections is the fact that these families or households share basic household equipment/tools like Sponge, towels, blades, needles etc. People sharing these

household equipment are at high risk of contracting infectious and communicable disease including HIV/AIDS. Poverty excludes people from formal/orthodox healthcare services thereby being prone to traditional healers who make them vulnerable to many infectious diseases including HIV/AIDS.

Poverty also has the potential of leading people to same-sex relations where the vulnerable or the host aims at making money to survive. As part of survival strategies, the poor and vulnerable expose themselves to precarious situation all in the name of “making do” every little opportunity. The issue is, if microfinance is a powerful tool of alleviating poverty, then it is an equally a powerful tool to reduce the risk of HIV/AIDS and its attendant ailments.

Several studies has recommended the need as a matter of urgency for every nation to develop effective programs and strategies for the prevention HIV infection among highly vulnerable groups and people within high risk brackets such as the poor, female adolescents and socially excluded groups in sub-Saharan Africa. An understanding so far is that, current strategies and programs are not reaching this population because they are operating on untested assumptions about the population itself and the nature of the risk of HIV infection. Many assume that information and services can reach vulnerable female adolescents through urban, school, or youth-centered programs, yet evidence indicates that they are not being reached (Chiweshe, 2012). Evidence from many countries with regard to the spread of HIV also suggest that the fight against HIV should go beyond Knowledge sharing, health promotion and the concentration should now be geared towards economic empowerment of the vulnerable groups.

Methodology

The study adopts the desk review of various studies that have been conducted on microfinance and health outcomes including HIV prevalence in some parts of Africa and Ghana. We reviewed

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papers that have been published in journal articles without considering the kind of methodology used. Irrespective of the methodologies adopted for selected studies, we were only interested in the impact of such programmes on health outcomes with emphasis on HIV. To establish a simple causal link between poverty and HIV prevalence rates we use a simple ordinary least square regression using data on adult HIV prevalence rates (15-49 years) in Africa and absolute poverty rates (at purchasing power parity). The argument is that once microfinance can reduce poverty then we infer that as poverty is reduced all things being equal HIV prevalence is also likely to be reduced. The underlying assumption is that other socio-economic factors are assumed to be under control. However, once socio-economic factors are allowed to operate then the relationship between poverty and HIV prevalence can be challenged in the sense that in countries where poverty rates are low, prevalence rates are sometimes high due other social behaviours.

To support our assertion that microfinance has the potency of reducing HIV prevalence via poverty reduction, we also construct a simple conceptual framework which demonstrates the channels through which our assertion is supported.

Microfinance-Poverty-HIV: A Conceptual Framework

Poverty is one of the leading causes of mortality in the world today, even outranking smoking as one of the leading causes of death (Haines and Smith, 1997; Rowson, 2001). The reason is evident: poverty exacerbates health and progressively pushes sufferers into declining well-being which sequentially instigates disease and death. Poverty and ill health have a two-way relationship. Poverty leads to, and aggravates physical living conditions, poor sanitation, hygiene, and insufficient nutrition. As disease spreads, it leads to lower productivity, prevents people from working and drains their resources, thus driving them deeper and deeper into poverty (Ghalib, 2009).

Conceptually, microfinance can be explained as the provision of a broad range of financial and non-financial services to low-income micro enterprises and households that generate income and social capital, allowing them to care for themselves and their families (Microcredit Summit Campaign Report, 2002). The range of financial services usually includes savings, loans, insurance, leasing, money transfers, and others. Non-financial services also include family life education, health promotion, counselling services, business advisory services, training skills, and others.

Theory has it that the underlying cause of most diseases worldwide is poverty though admittedly there are diseases of the rich. This lends credence to what Thabo Mbeki, The former president of South Africa said about HIV/AIDS. Mbeki has received worldwide criticism for his AIDS stance for questioning the link between viruses and AIDS and believes that the correlation between poverty and the AIDS rate in Africa was a challenge to the viral theory of AIDS. Though his notion of the disease received global condemnation, it still provided a useful insight of understanding and not downplaying the link between poverty and health outcomes. One thing that is clear is that the poor do not have access to quality health care services: they are more likely to be exploited by others for their selfish interests. The family is burdened by working to take care of affected household members; labour productivity reduces thus affecting GDP. Once income levels become unsecured, consumption decisions are also affected. Not only is consumption affected but also in some countries educational standards have fallen because teachers are infected with the virus and are out of school. The cases of Uganda and Zimbabwe are but clear examples to elucidate this. Other causes of HIV/AIDS such as indiscriminate sex and the use of shared tools (blades, shaving equipment, etc) are secondary factors that emanate from poverty. It is therefore indisputable fact that poverty is one of the major causes through which HIV is transmitted. Therefore, the vulnerable poor women are likely to involve in indiscriminate sex which put them

at risk as put forward by Weinreich and Benn (2004) and world Council of Churches.

Following Thabo Mbeki stance on the spread HIV: “The world’s biggest killer and the greatest causes of ill health and suffering across the globe, including South Africa, is extreme poverty” as cited in Horton (2000), at the 13th international Conference on AIDS in Durban in 1999, poverty is often perceived by many as a major factor that contribute to the progression of HIV. This assertion is however based on two types of arguments. On the one hand, at the empirical level, one observes that 95 percent of the world population infected by HIV is localized in transitional or developing countries particularly Sub-Saharan Africa and Asia, when the latter include 85 percent of the inhabitants of the planet. Under these conditions, the macro-economic empirical evidence suggests a statistically robust association between high HIV prevalence and the weak socio-economic performance, in terms of income per capita, inequality, monetary poverty or human development (Bloom, River Path Associates & Sevilla, 2002). The countries which are adversely affected by HIV/AIDS precisely Zimbabwe to give an example, is a country struggling to cope economic instabilities and hardship. This explains that, one can easily relate Poverty or poor economic performance to HIV infection and such relationships can also easily be verified.

A plethora of studies, in particular in Asia, tend to show that the poorest and the least educated individuals have a greater susceptibility to HIV infection (Bloom and Goodwin, 1997). In addition, the association between poverty and HIV prevalence is based on several explanations. First of all, poverty increases the biological susceptibility to HIV, in the same way as all other infectious diseases or deficiencies. The poor population is mostly as a disadvantage even at information and knowledge gathering, they are mostly engrossed with survival skills and therefore pay less attention to health information and promotion even when it is free.

Again at the macro level, whereas the absence of instructional materials is a handicap for the efficiency of HIV prevention, the lack of financial resources raises the cost of this action, insofar as the poorest groups do not have the necessary resources to acquire condoms, for example. At the same time, the survival of the poorest households generates high-risk behaviours which augment the propensity to the transmission of HIV, in particular labour migrations and prostitution (Collins, Rau, 2000). One would always expect that the better educated and richer population can adapt their behaviour better, as they are better informed of the causes and attitudes which increase the risk of infection among the population. Admittedly though, there are some isolated cases of the rich using their resources to “buy risky lifestyles” by engaging styles that make them prone to the contraction of these sexually transmitted disease. Lastly, more generally, the poor can have difficulty in perceiving long term risk management as the question of immediate survival is their principal problem.

Microfinance, Poverty and HIV/AIDS Linkage

Conceptually, poverty plays an intermediary role and serves as a pull or push factor. As a pull factor, if poverty is reduced, it will serve as a preventive measure but not a curative one. Even though HIV/AIDS has no cure, it is preventable. As a push factor, high levels of poverty are likely to push the poor women into indiscriminate sex due to their vulnerability and low levels of economic empowerment. Looking at poverty from the economic point of view, a combination of financial and non-financial services to poor women will empower them and give them some control and strong bargaining power, make them self-confident and independent which are likely to prevent HIV infection. This has a trickle-down effect on the family as well as the society and the nation as a whole. The model (Figure 1) suggests that microfinance provide two

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main services namely financial and non-financial services. The right wing shows financial services that microfinance provide such as credit, savings, leasing, insurance and micro-money transfer to the poor. The services provided as intended to generate positive outcomes for beneficiaries with the main purpose being poverty reduction and improvement in livelihood and welfare.

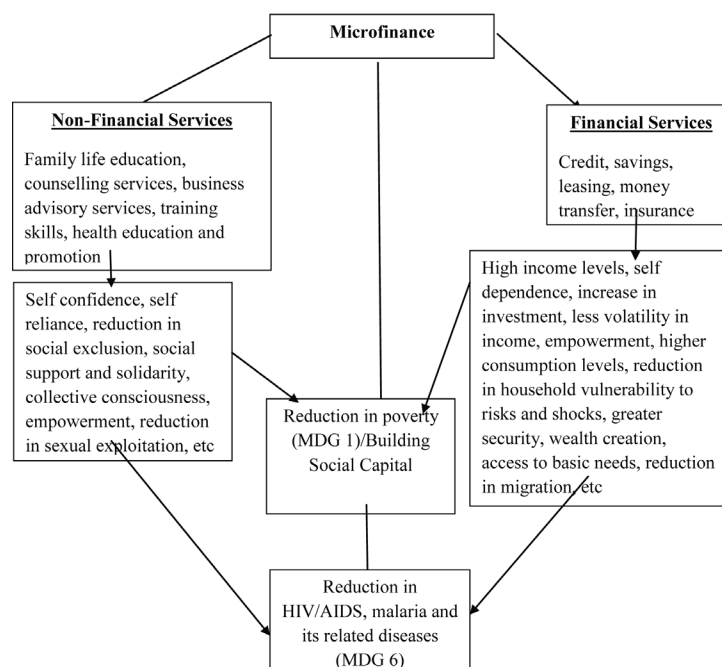
Not only can the financial services reduce poverty, these services can contribute to the reduction in HIV prevalence. The model clearly shows the pathways through which the financial services can reduce incidence of HIV. From the model financial services from MFIs will result in high income level of individuals, increase in self-dependency, increase in the level of investment of individual, make individual incomes less violated, empower women, provides high consumption levels, reduce household vulnerability to risks or shocks, gives greater security, enable household to acquire wealth, provide access to basic needs and reduce migration because beneficiaries are

occupied with some income generating activities. These services reduce the individual risk of HIV contraction by providing them livelihoods and comfort. They can afford basic necessities of life which they hitherto could not afford.

The left wing of the model also shows the non-financial services that microfinance institutions provide to their clientele. These services are mostly in the form of health promotion and education, business advisory services, monitoring of business activities, family planning counselling services, and training skills to the clients. Many institutions also provide a rich platform for social support. Clientele offer each other some basic support mostly in times in need. For example clients who engage groups borrowing lend support to each other in times of funerals, outdoorings, weddings etc. The non-financial services also provide an enabling grounds for women empowerment as women do interact and share ideas on issues on the social domain. Clients also benefit by being them self-reliant and for case of women reduce

Figure 1. Microfinance, poverty and HIV/AIDS linkage

Source: Author's own construct



burden on husbands, beneficiaries become self-confident, well informed and ultimately escape the ills of poverty. There is likely to be a reduction in social exclusion and sexual exploitation that are risk factors of HIV. The health information shared among members provides fertile group mentoring and adaptation of healthy lifestyles as members emulate each other. Again as poverty levels are reduced all things being equal, the probability of spreading the disease will also reduce. Since poverty delays access to health care and inhibit treatment adherence (Bates et al., 2004), common preventable and curable disease like malaria, tuberculosis and sexually transmitted diseases that serve as entry points and co-factor of HIV (Stillwagon, 2001) cannot be treated early as cited by Pehrah (2008).

Can Microfinance Reduce HIV Infection Among Women?

Campaign against HIV is a health outcome. Before proceeding to provide evidence of microfinance and HIV reduction, there is the need to offer some empirical evidence about micro-credit and health outcomes in general. This section therefore discusses some empirics of microfinance and health outcomes and further moves to establish a link between access micro-credit (a component of microfinance) and HIV prevalence.

Microfinance and Health Outcomes

Many countries in the world over are expending a lot of their economic energies into achieving positive health outcomes. The Abuja declaration admonished countries to allocate 15% of the GDP to health sector is worth mentioning here. Well-established programs in Bangladesh have demonstrated that relevance of every program depends on its implementation. A well-established program in Bangladesh have yielded positive effects on nutrition, where significant improvements in upper arm circumference in children 6 to 72 months old

and lower rates of general malnutrition have been noted among microfinance households relative to control groups (Paul et al., 2007). In 2000, a survey conducted by 22 microfinance institutions in 14 African countries found that 43 percent provided health information to clients (Parker 2000). In late 2004 and early 2005, Freedom from Hunger (FFH) and the Microcredit Summit Campaign (MSC) offered three and five-day workshops on the integration of health education with microfinance services to over 160 institutions in eight countries across Asia and Africa. Following the training, 46 institutions began offering combined services for close to half a million clients, affecting 2.3 family members per household (USAID, 2010).

In a recent study by Hamad and Fernald (2010), it was evident that longer participation by a large sample of adult women in a micro-credit programme in Peru was strongly associated with higher haemoglobin concentration and improved food security, but not Body Mass Index (BMI), when controlling for a wide range of potential confounders. The research shows that, women who had participated for five years in micro-credit programme had haemoglobin levels that were higher by 0.3 g/dl on average than those of new clients, and food insecurity scores that were lower by 0.8. This evidence provided in this study indicates that, giving women access to and control financial resources will ultimately enhance their ability to mitigate health hazards and reduce their vulnerability to many diseases including HIV.

In a comprehensive evaluation of Credit with Education programs in Ghana (1998) and Bolivia (1999), McNelly and Dunford (1999) found that, for the case of Ghana, participants experienced an increase in monthly nonfarm income of \$36 as with compared \$17 of the comparison group. It was also found that participants were more likely to breastfeed their children and more likely to delay the introduction of other foods into their babies' diets until the ideal age, and they were more likely to properly rehydrate children who had diarrhoea by giving them oral rehydration solution.

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These impacts paid off in a significant increase in height-for-age and weight-for-age for children of participants. Evidence for the case of was not different from that of Bolivia. In a similar study in Rural Bangladesh by Pitt, Khandker, Chowdhury and Millimet (2003), “Credit Programs for the Poor and the Health Status of Children” it was found children’s health (as measured by height and arm circumference) was substantial and positively impacted from women’s borrowing, but not from male borrowing, which had an insignificant or even negative effect. This study has provided a gender dimension to the story. It implies targeting women for health promotion and health outcomes should be the way to go. This study however failed to provide an explanation to why incomes accruing to men do not enhance health outcomes in the household as compared to that of women.

Mohindra, Haddad and Narayana (2008) undertook a study in India on micro-credit and health outcomes of some selected women. Cross-sectional data were used from a household survey implemented in 2003 as part of their action research project. Trained local female surveyors canvassed all 3,352 households identified in the Panchayat, a district in India. The questionnaire used for the study contained several modules, including questions pertaining to demographics, socioeconomic characteristics, health, and Self Help Group (SHG) participation. One woman from each household, the head or spouse of the head, was also invited to participate in a women’s well-being module, which collected information on markers of mental health and women’s decision-making agency. The primary finding of the research was that SHG participation appeared to offer protection against exclusion to health care and that microcredit could be considered as an effective risk mitigation strategy that prevent women from being excluded to health care programmes. Based on this finding from India, we argue that once women are protected against exclusion to health care through microfinance, their health are

properly addressed and thus any they could seek early treatment for those diseases that served as entry point to HIV infection.

The popular Grameen model, group lending has been replicated around the world. The simple reason being that group-based lending reduces strategic default among microfinance clients. Beyond that, group-based lending offers opportunities for women which produce positive health outcomes. Group-based microfinance brings poor women together on a regular basis over periods of months and years to repay loans and deposit savings. These meetings are also opportunities to provide reproductive health education over extended periods. Services can be provided to mothers and also younger and older women who would not normally be reached by reproductive health education (Watson & Dunford, 2006).

In Ghana, a study by Adjei (2010) showed that microfinance programme participants were able to increase their health care expenditure as compared with non-participants. The study which was conducted on Sinapi Aba Trust (SAT), a microfinance institution in Ghana, revealed that for every 100 cedis increase in loan amount, health care expenditure increased by five cedis. The reports goes to indicate that established clients of SAT in general contributed significantly towards health care either on their own or with support from their partners. Specifically the report concluded that while established clients contributed 340,905 cedis to health care, new clients contributed 196,978 cedis (which is about less than halve of that of the established clients.) The implication is that in terms impact length of stay on the programme is very important. Whatever the case for both new and old clients, microfinance produces positive outcomes.

Microfinance and HIV: Any Impact on Women?

Empirical evidence put weight the type of relationship between microfinance and HIV/AIDS

that the authors has espoused in this study. To start with, Costigan et al. (2002) and Odek et. al (2002) as cited by Peprah (2008), reported that in Kenya, the STD/AIDS Control Your Project of University of Nairobi and Improve Business undertook a project to help 209 commercial sex workers. They report that there is notable reduction in sexual risk behaviour among borrowers of the scheme. Twenty percent of the women abandoned sex work completely and those who remained in the industry reduce the average number of clients. It could be argued that irrespective of the transmission mechanism, microfinance is able to prevent HIV/AIDS infection. The motivation to engage in commercial sex is being “bought” by the services provided to these hitherto commercial sex workers. As they engage in economic activities to repay loans, increase their savings or expand their businesses, they have less time for commercial sex or need for commercial sex is reduce.

A study by Carolyn Barnes et al. (2003) in Zimbabwe on Zambuko’s Trust, the largest microfinance institution in the country as cited by Peprah (2008) revealed that affected client’s household had more sources of income than the affected non-microfinance clients, indicating that these clients had pursued an income smoothing strategy. Also, the affected clients’ households, compared to the affected non-clients households, had a higher proportion of the household boys of ages between 6 to 16 years enrolled in school, indicating investment in the human resources of its members. In addition, Zambuko’s program appears to have had an impact on the way affected clients managed their finances. In 1999, 13% more of the affected clients than affected non-clients insisted on a deposit when they extended credit to their matched enterprise customers. Also, 16 percent more affected clients than affected non-clients had an individual savings account within a 22 formal institutions. This is an indication that if a microfinance client is successful he or she can move away from non-formal banking to formal banking (a form of vertical graduation). In addi-

tion, the average number of ways the respondent saved was higher for the affected clients than affected non-clients. These differences imply that Zambuko’s business management training has a positive impact on the way affected clients managed their money. Carolyn Barnes and her friends are criticised on the grounds that microfinance should be seen as a preventive tool of HIV but not management tool. It is important for practitioners to be proactive instead of dealing with affected households. This notwithstanding, one cannot despise the findings because they serve as evidence of positive impact of microfinance on HIV/AIDS. Again though the study was mainly on women which seem a little bias though, their findings were however intriguing and provides a useful insight into appreciating the issues.

A very important issue that has not been stressed by researchers in this area is that researchers have not been able to determine in quantitative terms what percentage reduction in poverty will cause a certain percentage decrease in HIV prevention in terms of prevalence rate. Quantification of the impact of poverty on HIV prevalence is scanty. A relationship between HIV prevalence rate (adults 15-49 years) (see Annex 1) and people living below the poverty line (absolute poverty) using the purchasing power parity (PPP) was established using data from 21 Africa countries including Ghana. The result of the estimation is as follows:

$$PR=5.7+0.12POVL$$

$$p>0.003, t=2.7$$

$$n=21$$

where PR= prevalence rate (as a proxy for HIV) and POVL = people living below the poverty line (as a proxy for poverty level). The result shows a positive relationship between poverty level and prevalence rate. At 5% level of significance and t-value of 2.7 one is made to accept that the percentage of people living below the poverty

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line significantly explain HIV prevalence rate. As the number of people living below the poverty line increases, the prevalence rate also increase. The implication is that if microfinance is a tool of creating wealth and reducing poverty, then it is expected that it should be able to reduce the number of people living below the poverty line. Mathematically, a reduction in the number of people living below the poverty line will lead to a reduction in the prevalence rate of HIV/AIDS. This will ensure a direct positive linkage between millennium development goal one and six which are the core issues affecting development. Even though this estimation seems weak in theory, it still provides a useful basis for appreciating the relationship between poverty and HIV. The estimation is constraint and can be criticised for not including other important that can explain HIV prevalence. This seems to be a genuine critique owing to the fact the literature abounds with several factors that explains HIV prevalence. This study over concentrated on Poverty and as such the real effect of poverty may be biased either upwardly or downwardly.

CONCLUSION AND POLICY RECOMMENDATIONS

The aim of the paper was to review related literature on evidence of microfinance and HIV prevention among women. The review of cases from previous studies has shown that financial and non-financial aspects of microfinance have the potency of reducing HIV infection through poverty reduction. When the MDGs results will be counted in 2015, there will be a significant decline in the number of PWLHA, probably with the help of sustainable microfinance programmes. Bold actions must therefore be taken to combine microfinance with HIV education and empowerment training as the cornerstone of economic empowerment efforts to reduce the risk of HIV and to assist with the economic stressors of HIV. There must be a criti-

cal focus on gender norms and relations and the construction of gender identities to counteract the underlying ideas of masculinity that are often the basis of gender inequity that contribute to women's risk of contracting HIV. Evidence however shows that microfinance can be a key instrument that bridges the gender differences and inequalities.

Because there is still little statistical evidence to show that microfinance reduces poverty (Roodman & Murdoch, 2009), a critical success factor will be to focus on developing an economic empowerment model that encourages gender equality in control of one's money, empowerment training, and HIV prevention, as well as increasing access to loans and savings (Mayoux, 2006). Donors should fund MFIs with economic empowerment models that incorporate gender equality, empowerment training, and HIV prevention, as well as increase women's access micro-credit and control over other economic resources.

Micro-insurance programmes could produce effective ways of preventing HIV and its risk factors at the early stages before the epidemic develops into AIDS. It is obvious that in Ghana MFIs have not been able to develop micro-insurance products for the rural and urban poor to the extent that minor ailments such as sexually transmitted diseases which serve as entry point to HIV infections are common. Evidence from Sub-Saharan Africa using Kenya and Zimbabwe as examples shows that commercial sex workers who benefited from microfinance moved away either fully or partially from the activities. Giving women access to and control of vital economic resources have the propensity of ultimately enhancing their ability, economic capacity and agency and therefore can mitigate the impact of HIV/AIDS by reducing their vulnerability and risk level to the disease. Additionally the study has shown that there is positive relationship between HIV prevalence rate and people living below the poverty line. Furthermore, it has been established through this research that poor nutritional status, inaccessibility to safe drinking water, lack of early health care services

to treat minor ailments that serve as entry point to HIV/AIDS has worsened the state of poverty of people in Sub-Saharan Africa and Asia. The study also indicates that poverty is not the only cause of HIV/AIDS. Other factors such as the use of blood and blood products, and the sharing of needles and other sharp instruments also transmit HIV. There should a renewed interest and increased focus in addressing the deeper structural and economic realities that limit the spread and impact of the current trend of the disease.

Donors need to be aware of the risky environment within which microfinance institutions operate. However risky the environment may be, it should be noted that clients are important when they are in good health. Thus investment should be made in their health. MFIs need to incorporate National Health Insurance Scheme in their programmes. In this direction micro-insurance products could be an innovative way to meet the health needs of the poor.

Programme planners of various microfinance institutions need to strengthen their delivery services and methodologies (*modus operandi*) that will enhance poverty reduction. It must be understood that microfinance is not an end in itself but a mean to an end. It is through this that microfinance can contribute to health development needs of the vulnerable.

Evidence from the literature points to the fact microfinance is a powerful tool for poverty reduction and thus can be used as medium to reduce the prevalence of HIV, however government support and regulation cannot be neglected. In some Sub-Saharan African countries like Ghana, Kenya, Uganda, Tanzania, regulation of MFIs has already started in earnest. It is therefore not by chance that the Bank of Ghana has taken a bold step to regulate MFI activities in Ghana. However, it seems the regulation is only focusing on prudential requirements with no recognition for social impact of MFIs. Holistically, regulatory authorities need to emphasise on achieving social

impact alongside meeting prudential requirement and ensuring sustainability as a way of fulfilling the triple bottom line objective of microfinance. Issues of microfinance financial sustainability and need to channel microfinance interventions towards social change have generated considerable debate. However, this debate is of little essence here. What should matter most for policy makers is how microfinance intervention can be used as effective tool for reducing poverty and enhancing the entrepreneurial capacity of clients. Despite the fact that HIV/AIDS poses a fundamental threat to the financial sustainability of MFIs when MFIs consider rendering services to the infected populations, if the non-financial services are well packaged this threat can as well be taken care of and there will be social change which will in turn sustain MFIs.

Even though it has been shown that microfinance has the potency of up-scaling HIV prevention, in the opposite direction the epidemic can seriously affect the activities of MFIs. It is also true that targeting HIV affected clients can affect the portfolio of MFIs. Amha (2002) argues that it is practically not sound for MFIs that are financial intermediaries to be directly engaged in public health intervention. We propose that MFIs are to collaborate with HIV/AIDS support organisations to respond to the epidemic by building on respective institutional and technical strengths. Policy should be directed toward not only credit and savings but also HIV/AIDS preventive services to complement the financial services. These services should be designed in collaboration with HIV/AIDS support Organisations.

In conclusion, the assertion that microfinance is 'oversold' and lacks the 'magic' associated with it are widely off the mark, if not largely mistaken, hence microfinance can be used as preventive and risk coping strategy to reduce HIV prevalence and its related diseases among poor women at least to some small extent.

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KEY TERMS AND DEFINITIONS

Beneficiaries: These are clients of microfinance institutions who have applied and received credit/loans from them.

HIV: This is a virus that attacks and weakens the immune system thereby making it difficult for the body fight infections.

HIV Prevalence: The percentage of people living with HIV/AIDS and is usually expressed as a fraction or a percentage or as the number of cases per 10,000 or 100,000 people.

Micro-Credit: The provision of small loans to low income earners or the poor for either capital expansion or reduction of poverty.

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Microfinance: This provision of financial services such as loan disbursement, savings, insurance to low income earners as well as non-financial services such as training on good accounting practices.

Poverty: This is a situation that is characterised by severe deprivation of basic necessities of life and also stems from a denial of choices and opportunities which amounts to a violation of human dignity.

Women Empowerment: This is the encouragement, and development of women to acquire/enhance their skills for self-sufficiency with the aim of making them economically and socially independent of their husbands or immediate families.

APPENDIX

Table 6. HIV/AIDS in Africa

Country	People Living with HIV/AIDS	Adult (15-49) Prevalence %	Women with HIV/AIDS	Children with HIV/AIDS	AIDS Deaths	Orphans Due to AIDS
Angola	200,000	2.0	110,000	22,000	11,000	140,000
Benin	60,000	1.2	32,000	5,400	2,700	30,000
Botswana	320,000	24.8	170,000	16,000	5,800	93,000
Burkina Faso	110,000	1.2	56,000	17,000	7,100	140,000
Burundi	180,000	3.3	90,000	28,000	15,000	200,000
Cameroon	610,000	5.3	320,000	54,000	37,000	330,000
Central African Republic	130,000	4.7	67,000	17,000	11,000	140,000
Chad	210,000	3.4	110,000	23,000	11,000	120,000
Comoros	<500	0.1	<100	...	<100	<100
Congo	77,000	3.4	40,000	7,900	5,100	51,000
Côte d'Ivoire	450,000	3.4	220,000	63,000	36,000	440,000
Dem. Republic of Congo	(430,000-560,000)	(1.2-1.6)	(220,000-300,000)	(33,000-86,000)	(26,000-40,000)	(350,000-510,000)
Equatorial Guinea	20,000	5.0	11,000	1,600	<1,000	4,100
Eritrea	25,000	0.8	13,000	3,100	1,700	19,000
Gabon	46,000	5.2	25,000	3,200	2,400	18,000
Gambia	18,000	2.0	9,700	...	<1,000	2,800
Ghana	260,000	1.8	140,000	27,000	18,000	160,000
Guinea	79,000	1.3	41,000	9,000	4,700	59,000
Guinea-Bissau	22,000	2.5	12,000	2,100	1,200	9,700
Kenya	1,500,000	6.3	760,000	180,000	80,000	1,200,000
Lesotho	290,000	23.6	160,000	28,000	14,000	130,000
Liberia	37,000	1.5	19,000	6,100	3,600	52,000
Madagascar	24,000	0.2	7,300	...	1,700	11,000
Malawi	920,000	11.0	470,000	120,000	51,000	650,000
Mali	76,000	1.0	40,000	...	4,400	59,000
Mauritania	14,000	0.7	4,000	...	<1,000	3,600
Mauritius	8,800	1.0	2,500	...	<500	<1,000
Mozambique	1,400,000	11.5	760,000	130,000	74,000	670,000
Namibia	180,000	13.1	95,000	16,000	6,700	70,000
Niger	61,000	0.8	28,000	...	4,300	57,000
Nigeria	3,300,000	3.6	1,700,000	360,000	220,000	2,500,000
Rwanda	170,000	2.9	88,000	22,000	4,100	130,000
Senegal	59,000	0.9	32,000	...	2,600	19,000
Sierra Leone	49,000	1.6	28,000	2,900	2,800	15,000

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Table 6. Continued

Country	People Living with HIV/AIDS	Adult (15-49) Prevalence %	Women with HIV/AIDS	Children with HIV/AIDS	AIDS Deaths	Orphans Due to AIDS
South Africa	5,600,000	17.8	3,300,000	330,000	310,000	1,900,000
Swaziland	180,000	25.9	100,000	14,000	7,000	69,000
Togo	120,000	3.2	67,000	11,000	7,700	66,000
Uganda	1,200,000	6.5	610,000	150,000	64,000	1,200,000
United Rep. Of Tanzania	1,400,000	5.6	730,000	160,000	86,000	1,100,000
Zambia	980,000	13.5	490,000	120,000	45,000	690,000
Zimbabwe	1,200,000	14.3	620,000	150,000	83,000	1,000,000
Total sub-Saharan Africa	22,500,000	5.0	12,100,000	2,300,000	1,300,000	14,800,000