

The Effect of Economic Hardship on Antiretroviral Therapy among Patients with HIV/AIDS

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ABSTRACT The purpose of this study was to explore the relationship of economic hardship to individual's ability to seek antiretroviral medication among patients with HIV/AIDS in a resource-poor country. A total of 77 patients residing in five marginalized communities of South Eastern region of Nigeria participated in a study that tested three hypotheses. Results indicated, that an inverse relationship exist of poverty status, household poverty, and Poor standard of Living, to individual's ability to seek antiretroviral therapy among HIV/AIDS patients as predicted. Result suggests that economic hardship negates the ability of people living with HIV/AIDS. One implication of our findings is that improvements in the continuity of care of patients with HIV/AIDS may be realized through further development of social assistance programs aimed at alleviating the poverty conditions leading to economic empowerment of patients with HIV/AIDS in resource poor countries to seek voluntary antiretroviral therapy. Socio-economic index of poverty were used to measure individuals' economic hardship.

INTRODUCTION

Several studies on HIV/AIDS in South Eastern region of Nigeria (Ezeokana and Nnedum 2007; Nnedum 2006; Smith 2007) suggest that economic hardship oils the wheel of HIV virus spread, undermines HIV prevention efforts and conditions individuals' psyche to obsessive helplessness in cognitive, affective and behavioral desire to seek voluntary care for Highly Active Antiretroviral Therapy (HAART). Empirical evidence (Chacham et al. 2007; Cluver and Gardner 2007; Foster 2007; Nosyk Li et al. 2007; Smith 2007) suggests that HIV/AIDS is a disease of poverty.

In South Eastern Nigeria, the increasing number of people living with HIV/AIDS lives in poverty, abject poverty to be precise (Nnedum 2006). It is apparent that in South Eastern regional states infested with severe HIV/AIDS epidemics, the overwhelming majority of those who are infected, afflicted and affected by HIV/AIDS are already living in severe poverty (Nnedum 2006; Smith 2007).

Poverty is known to negatively affect all aspects of HIV prevention, clinical diagnosis,

treatment, care and control (Bond et al. 2002; Brown et al. 2001). A cursory look at poverty as one of the plausibly possible contributing psychological factors to the development and spread of HIV/AIDS pandemic will be heuristically relevant and germane to our understanding of the nature of HIV/AIDS pandemic.

HIV/AIDS IN SUB-SAHARAN AFRICA

The HIV/AIDS disease has reached endemic proportions in some parts of Sub-Saharan Africa and there is a shift towards lower income, unskilled poor people being the worst victims (Williams and Ray 1993), with an increasing number of people testing positive for HIV/AIDS in rural areas (Linville and Fischhoff 1993; ZAINET 1993). Researches show the importance of recognizing that HIV/AIDS transmission is also influenced by a web of complex economic factors that shape understanding of HIV disease (Bond et al. 2002; Brown et al. 2001). Economic factors such as poverty is of particular importance to researchers, governments, faith based organizations (FBO) and humanitarian agencies.

HIV/AIDS and Poverty in Nigeria

Nigeria has the third highest number of people estimated to be living with HIV/AIDS (PLWHA) in the world after South Africa and India (Kaiser Family 2007). The National HIV Sero-prevalence

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Sentinel Survey (2004) estimated that about 70% of Nigerians are poor and the majority of them are women. The Human Development Report (2000) ranked Nigeria at 151 out of 174 countries and among the poorest 20 countries in the world. Nigeria has the largest number of adult HIV/AIDS cases in West Africa, accounting for "11 percent of all infections worldwide" (Bureau of Global Health 2003, p. 1). The HIV/AIDS Emergency Action Plan [HEAP] (2001), however reported that Nigeria has a prevalence rate of over 5%, placing it "in the explosive phase of the epidemic with potentially grave consequences" (p.1).

Poverty and HIV/AIDS

Extensive research have linked poverty to the spread of the AIDS virus in both developed and developing countries (Barnett and Whiteside 2002; Bureau of Global Health 2003; Catholic Agency for Overseas development [CAFOD] 2003; Lazzarini 2002). Lazzarini (2002) pointed out, "in the period from 1988 through 1999, rates of death from AIDS were consistently associated with poverty; the lower the income for a country, the higher the rate of death" (p. 2). Stillwaggon (2001) warned that AIDS leads to national poverty, predicting that not treating the AIDS virus will lead to the "early death of 25-35 percent of the work force in the next decade" (p. 2). People with little or no education have poor access to sex information (p.32). For instance, condom use was higher among individuals with higher levels of education in a study of young people and their counterparts in the Tudun Wada area of Jos in North Central Nigeria. Poverty increases vulnerability to HIV and other STIs. Under conditions of grinding poverty, the risk of HIV assumes a lower priority among people's daily concerns. Indeed, it has been argued that poverty is the greatest single facilitator of HIV transmission in Nigeria. The report pointed out "not only is poverty observable at the individual, family, local, and national levels, it has become a national culture and the chief index for measuring the degree of the nation's under-development". The reports highlights that Nigeria has abdicated all the international obligations it freely entered into, including the global conferences on Education for All and Reduction in Adult Illiteracy, Universal Access to Safe Water, Universal Access to Primary Health Care. The report adds that education and health, which hold the key to the alleviation and eventual eradication of human poverty, have

been neglected through inadequate investment, poor strategy and even poorer implementation since the mid – eighties. The result is increased human deprivation and poverty.

In Nigeria many of the foods that are known to supply essential vitamins and nutrients are priced beyond the reach of the average income-earner. Meanwhile, the breadwinners of a sizeable chunk of expectant families are unemployed or underemployed. Although, as Lazzarini (2002) pointed out, poverty may be a factor in the spread of the AIDS virus, Takahashi (1998) observed that AIDS leads to poverty. PLWHAs are poor because they are unemployed, live in low substandard housing, and can obtain only poor healthcare. It appears that poverty may both contribute to the spread of AIDS and result from that spread: "Conditions of poverty create circumstances that make people more vulnerable to HIV and drastically worsen the conditions of people already infected. Conversely, HIV increases the degree of poverty for the families and communities infected and affected" (CAFOD 2003, p. 1; UNAIDS 2004). Based upon the above review of literature the following hypotheses were suggested

Hypothesis1: Poverty will be inversely and significantly related to individuals' ability to seek antiretroviral treatment.

Hypothesis 11: Poor standard of living will be inversely and significantly related to individuals' ability to seek antiretroviral treatment.

Hypothesis 111: Poor family class will be inversely and significantly related to individuals' ability to seek antiretroviral treatment.

METHODS

Participants

In general, the population for this study consisted of people living with HIV/AIDS, adult born between the years of 1936 through 1993 with a mean of 32 years, who are Nigerians, and residing in either of the states of Abia, Anambra, Ebonyi, Abia, and Imo that comprise the south Eastern region of Nigeria. In particular, about 54.54% (84) of them are males while 45.45% (70) of them are females; 50% (77) medically confirmed people living with HIV/AIDS and 50% (77) medically confirmed HIV negative people; 53.25% (82) participants are single, 32.47% (50) of them are married, 1.29% (2) of them are divorced,

1.29% (2) of them are separated from their partners, and 11.69% (18) of them are widowed.

Procedure

The investigator introduced this research to three research assistants (two males and a female), explaining the purpose of the research, the proposal and consent form. The research assistants were trained on the procedures for administering the research. The investigator and the trained research assistants introduced the research and its purpose to the community development officer in the British department for international development (DFID) unit at the British council's office in Enugu. The DFID community development officer is familiar with the various associations of PLWA. He introduced the investigator and the research assistants to the office of the executives of the coalition of HIV/AIDS organizations in their unit within the British councils' complex. Access into the coalition organizations was secured through their coalition coordinators' office at the British councils' DFID office at Enugu. The executive secretary of the Coalition who had a fruitful contact with the various state chairmen of their coalition, introduced the investigator to their various state chapters. A date was scheduled to suite their major routine antiretroviral treatment days in each state. The executive secretary accompanied the investigator and the assistants to each state on the scheduled dates. In each state, the chairman of the coalition introduced the investigator to their members during the interactive session. The investigator introduced his research objectives to the PLWHA. The PLWHA had the opportunity of telling the investigator their problems. The investigator sought and obtained their informed consent to participate in the study individually. The medically diagnosed HIV positive participants and those that were not, were randomly selected on the scheduled days for routine testing and treatment in each of the five south eastern states VCT centers. The state chairmen of the coalition further introduced the investigator to the medical personnel in charge of VCT center in the state. The personnel in charge introduce the investigator to the chairman research ethics committee of the medical (Hospital) center for institutional approval for the use of tested HIV negative participants from their center for the study.. The HIV positive and negative participants were given financial honorarium for their respond

to the battery of tests individually. The battery of test issued to the participants accessed and explored the level of poverty status of the individual, and the ability of an individual to seek antiretroviral treatment, and certain critical demographic variables such as state of origin, place of residence, among others were collected from them.

Instrument

Socio-Economic Index of Poverty was used to assess poverty in this study. The participants were required to respond to items on the socio-economic index of poverty questionnaires. The socio-economic index of poverty (SEIP) was developed by Nnedum (2006).

The socio-economic index of poverty measures the extent to which an individual feels social and environmental hardship; it assesses the standard of living of the individual as well as their family class as a viable and stable index of poverty status of the individual (Nnedum 2006).

To assess the poverty status of the participants, this investigator required participants to respond to the twenty items of socio-economic index of poverty questionnaire, that was designed to assess two components of poverty index in particular and the overall poverty in general. The two dimensions are the Poor family class and poor standard of living subscales.

The reliability co-efficient reported by Nnedum (2006) are split half ($r = .72$) and Eight weeks interval test-retest ($r = .88$) and alpha ($\mu = .78$) reliabilities. Nnedum (2006) obtained a concurrent validity co-efficient of .66 by correlating SEIP with the economy scale (Verga 1997). The second instrument used is the help seeking behavior questionnaire. The help seeking behavior (HSB) scale was originally developed by Nnedum (2006) based on the literature Venier et al. (1997) using data collected from Nigerian participants. The help seeking behavior subscale: the

(3) Ability to seek antiretroviral treatment subscale was utilized in this study. Specifically, Nnedum (2006) found the reliability results of the ability to seek antiretroviral medication to yield ($\alpha = .77$) high internal consistency.

RESULTS

Hypothesis one predicted that poverty will be inversely and significantly related to indivi-

dual's ability to seek antiretroviral treatment. Using correlation, Poverty was found to be inversely ($r = -.087$, $p = .227$) related to the individual's ability to seek antiretroviral treatment. To further determine the strength, nature, and closeness of the relationship between poverty and individuals' ability to seeking antiretroviral treatment, regression analysis was completed. Results show a statistically negative relationship [$F(1) = .567$, $p = 0.454$; $t = -.753$, $p = 0.003$] between poverty and individual's ability to seek antiretroviral treatment. In other words, as poverty increases, the tendency for individuals to seek antiretroviral treatment decreases.

Hypothesis two stated that Poor standard of living will be inversely related to the individual's ability to seek antiretroviral treatment. The results of the correlation analysis did indicate a statistically ($r = -.035$, $p = .633$) inverse relationship between Poor standard of living and ability to seek antiretroviral treatment. To further determine the strength, nature, and closeness of the relationship between poor standard of living and individual's ability to seeking antiretroviral treatment, regression analysis was completed. Results show a statistically negative relationship [$F(1) = .229$, $p = 0.633$; $t = -.478$, $p = 0.000$] between Poor standard of living and individual's ability to seek antiretroviral treatment.

Hypothesis three stated that Poor family class will be inversely related to the individual's ability to seek antiretroviral treatment. The results of the correlation analysis did indicate a statistically ($r = -.158$, $p = .050$) inverse relationship between Poor family class and the individual's ability to seek antiretroviral treatment. To further determine the strength, nature, and closeness of the relationship between poor standard of living and the individual's ability to seek antiretroviral treatment, regression analysis was completed. Results show a statistically negative relationship [$F(1) = 3.90$, $p = 0.050$; $t = -1.976$, $p = 0.000$] between Poor standard of living and individual's ability to seek antiretroviral treatment.

DISCUSSION

A review of the major findings of this study indicates that there are inverse relationships between poverty and individuals' ability to seek antiretroviral treatment; between poor standard of living and individuals' ability to seek antiretroviral treatments; and

between poor Family class and individuals' ability to seek antiretroviral treatments. Consistent with the hypothesis that predicts that Poverty will be inversely related to individuals' ability to seek antiretroviral treatments, results of the present study supported the hypothesis. This finding is in consonant with previous research findings that have found this variable to be inversely related to individuals' ability to seek antiretroviral treatment (Caldwell and Caldwell 1987; Campbell et al. 2007; Foster 2007; Glynn 2003; Mendenhall et al. 2007; Merter and Haller 2007; Smith 2007). It is plausible that poverty exerts strong negative impact in the life of people living with HIV/AIDS. It is possible that poverty alienates, mitigates, subjugates and negates the ability of people living with HIV/AIDS to seeking voluntary antiretroviral treatment.

Hypothesis two predicted that Poor standard of living will be inversely related to individuals' ability to seek antiretroviral treatments. The results showed that this was supported as Poor standard of living was negatively related to the ability of individuals' infected with HIV to seek antiretroviral treatments. The negative influence of poor standard of living on individual's ability to seek antiretroviral treatment reflect the suggestion by Several research and reports (Federal Ministry of Health Report of HIV – Sero Sentinel Survey 2003, 2005; Foster 2007; Smith 2007; World Bank 1997) that the majority of people living with HIV/AIDS lack knowledge of available voluntary antiretroviral treatment and had less access to available health care information. The finding is in line with recent study in Uganda that implicated poverty, background poverty, as the barriers to adherence to antiretroviral therapy (Weide et al. 2006).

Consistent with the hypothesis three that predicts that Poor family class will be inversely related to the individuals' ability to seek antiretroviral treatment, results of the present study provided supported for this hypothesis. This finding is consistent with previous research findings that found these variable to be inversely related to poor family class (Rannie and Behets 2006; Nnedum 2005; Wu et al. 2005). It is plausible that the financial circumstances of people from low family class, residing in resource- poor countries tend to weaken their ability to seek antiretroviral treatment.

In general, the results of the analysis were therefore consistent with the hypotheses,

implying that the poverty status of people living with HIV/AIDS has negative, discouraging and debilitating relationship with an individual's ability to seek antiretroviral treatment.

To the people living with HIV/AIDS, the consequence of poverty is glaring. Poverty emasculates the cognitive thoughts and rational awareness of the PLWHA. It is plausible that poor people are not aware of available antiretroviral treatment. The poor possibly may languish in penury and poverty caused by ignorance; Ignorant of access to viable information. Lack of information of available routine life saving antiretroviral treatment and possible psychotherapy negates the efforts of the Federal government's and state government's Action Committee on HIV/AIDS to identify, manage and control HIV/AIDS epidemics in South Eastern Nigeria.

RECOMMENDATIONS

Consistent with the world health organization (WHO)'s recommendation, which states that individuals must be assured that "routine HIV" testing is linked to accessible and relevant "antiretroviral" treatment, care, and other services (WHO 2000), this study recommend Subsidized free antiretroviral treatment. Specifically, any attempt to address HIV/AIDS epidemics must equally address poverty because besides awareness and enlightenment, establishment of small scale industries and establishment of employment desirability benefits for PLWHA will not only alleviate their poverty but will also enhance their social relevance in their community.

Limitations of the Current Study

There were extensive limitations of the current study that should be considered. First, the use of people living with HIV/AIDS residing in selected states of the South Eastern Region of Nigeria was relevant to the design of the study, apparently the south eastern region of Nigeria is one of the six geo-political zones of Nigeria, but the findings of the study on PLWHA in this region do not represent that of PLWHA in the entire country because of the small sample size; this factor limits the generalizability of the results to the Nigerian multi-cultural population, taken as a whole.

Furthermore, this study did not address the cause of poverty in the South Eastern Region of

Nigeria because the focus was on house hold poverty only. Considering the Nigerian's fragile, emerging economy and the pandemic spread of the HIV/AIDS, it is possible to assume that poverty exacerbates the spread of the AIDS virus and results from the spread.

Suggestions for Future Research

Limitations of the current study raise several issues that could be explored in future research. It would be intellectually stimulating to explore the adult PLWHA'S level of poverty experience in other parts of Nigeria. It would be interesting to complete a study to compare the level of poverty experience among adult married and unmarried females in comparison to adult married and unmarried males living with HIV/AIDS residing in the South Eastern Region of Nigeria. The result of this study will be very significant in understanding the reasons for the spread of the AIDS virus. Additionally, an important study would be to follow up on the studies that focus on the causal relationship between poverty, gender inequality and religiosity in Nigeria.

CONCLUSION

In conclusion, the present study provides valuable and important research information on the economic and social experience of adults living with HIV/AIDS residing in selected states of the South Eastern Region of Nigeria. The finding of the study is valuable to the field of psychotherapy, clinical, economic, and behavioural psychology. This study provides better understanding of poverty experience as it impacts adult people living with HIV/AIDS residing in South Eastern Nigeria.

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