PERCEPTIONS OF INTERNATIONAL STUDENTS REGARDING THE IMPACT OF HIV/AIDS ON THE AGRICULTURAL SECTOR IN SUB-SAHARAN AFRICA

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Abstract

HIV/AIDS has had a drastic and devastating impact on sub-Saharan Africa. There are over thirty-four million people living with HIV/AIDS in the world today. Seventy-one percent of all individuals infected live in sub-Saharan Africa. Very little attention has been devoted to the impact of HIV/AIDS on agricultural production and agricultural extension in sub-Saharan Africa. Due to the impact of this disease on sub-Saharan Africa, this disease can no longer be viewed as a health issue, but must be viewed as a development issue. The overall purpose of this study is to examine the perceptions of international students from sub-Saharan Africa regarding the impact of HIV/AIDS on agricultural production and extension in their home countries. Specifically, this study (1) describes the impact of HIV/AIDS on farm households, (2) discusses the implications for agricultural extension education, and (3) identifies potential strategies that may be used by extension when planning programs for communities that have been devastated by HIV/AIDS. Using qualitative techniques, seven students from a large mid-western university were selected to participate in this study. The students were from sub-Saharan Africa countries with HIV/AIDS prevalence rates above ten percent. When asked to describe the impact of HIV/AIDS on the agricultural sector, the respondents indicated that HIV/AIDS has its greatest impact on the most productive members of African’s society. This has resulted in severe labor shortages. Potential solutions to combating the impact of HIV/AIDS include implementing programs that are culturally sensitive, require less implementation time, and incorporate the needs of rural women.
Introduction

HIV/AIDS has had a drastic and devastating impact on sub-Saharan Africa. The impact of this disease can be felt throughout sub-Saharan Africa, from the smallest villages to the largest urban cities. According to a report released by the Joint United Nations Program on HIV/AIDS (UNAIDS) (2000, June), there are over thirty-four million people living with HIV/AIDS in the world today. Seventy-one percent of all individuals infected with this disease live in sub-Saharan Africa. Ninety-six percent of all individuals infected in sub-Saharan Africa are between the ages of 15 and 49, the most productive members of African’s society. According to Baier (1997) “infection rates are higher among women, who account for seventy percent of the agricultural labor force and eighty percent of food production” (p. 1) These numbers are significant because Africa only accounts for ten percent of the world’s population (Okonmah, n.d.).

Very little attention has been devoted to the study of HIV/AIDS and its impact on agricultural production and the agricultural extension service in sub-Saharan Africa. Agricultural development and HIV/AIDS are terms that are rarely placed together. Due to the severe and drastic consequences that HIV/AIDS has had on sub-Saharan Africa, this disease can no longer be thought of as a health problem, but must be viewed as a development issue. HIV/AIDS can be viewed as a development issue, because many sub-Saharan countries have high morbidity and mortality rates due to HIV/AIDS, as well as excessively high HIV/AIDS adult prevalence rates. To add to this problem, many HIV/AIDS infected individuals participate in agricultural related activities. According to Cohen and Trussell (1996) “Agriculture constitutes the primary economic sector of most of the African countries severely affected by the HIV epidemic, employing a large percentage of the labor force and accounting for a major portion of gross domestic product and export earnings” (p. 233).

HIV/AIDS has had a significant effect on the agricultural population and has resulted in severe labor shortages due to an increase in sickness and death among the agricultural community. “As the epidemic progresses, agriculture like most economic sectors in Africa will be forced to adjust in some way to both the decrease in adult labor and the decrease in national demand” (Cohen and Trussell, 1996, p. 233). How sub-Saharan Africa adjust and respond to the impact of HIV/AIDS on the agricultural sector is largely dependent on their policies regarding food production, food security and the implementation of agricultural programs in HIV/AIDS infected regions by government officials and non-governmental organizations.

Government officials, administrators, researchers, and educators responsible for rural and agricultural development frequently receive training and graduate degrees at institutions in the United States. These students are the future researchers, policy makers, and program planners of sub-Saharan Africa. Their perceptions and knowledge of HIV/AIDS and its impact on agricultural production and agricultural extension education is crucial in determining how sub-Saharan Africa responds to the disease in the future. Traditionally the local Extension Service has ignored social and cultural connections to concentrate on “production-only” economics as their agency lifeblood; therefore, it is also crucial that the future leaders of sub-Saharan Africa place greater emphasis on holistic, system based problem solving.
Purpose of the Study

This study examined the perceptions of international students from sub-Saharan Africa regarding the impact of HIV/AIDS on agricultural production and agricultural extension in their home countries. Specifically, this study:
(1) describes the impact of HIV/AIDS on farm households and agricultural production,
(2) discusses the implications for agricultural extension education,
(3) documents the perceptions of international students from sub-Saharan Africa regarding the impact of HIV/AIDS on agricultural production and agricultural extension service, and
(4) identifies potential strategies as perceived by these students that may be used by extension when planning programs for communities that have been devastated by HIV/AIDS.

Study Methods

This research study was conducted using qualitative techniques. Qualitative research provides an opportunity for the researcher to describe and analyze individual’s perceptions, actions, beliefs, and thoughts without having to generalized to an entire population (McMillian & Schumacher, 1997). The sample for this study was selected using a combination of purposeful sampling techniques. Purposeful sampling is a technique that involves the selection of cases that are likely to be information-rich. In this particular case, the population was defined as international students from a large mid-western land grant university enrolled for the spring and summer 2000 semesters. This university was selected because of its unique and diverse international student population from countries located in sub-Saharan Africa. In order to protect the confidentiality of the participants, the name of the university will not be disclosed.

The selection of the sample was initially based on the identification of countries located in sub-Saharan Africa with HIV/AIDS adult prevalence rates above ten percent. Using a list obtained from the university’s registrar’s office, the research population for this study was selected with special emphasis placed on obtaining the perceptions of students from Botswana, Kenya, Ethiopia, Swaziland, and Zimbabwe. This sampling technique is commonly referred to as extreme case sampling. Extreme case sampling is a form of purposeful sampling that focuses on cases that are extreme, unusual, or have been identified as crisis events (Gall, Borg, & Gall, 1996). The list from the registrar’s office indicated that there were thirty-one students enrolled at the university for the spring and summer 2000 semesters from selected countries in sub-Saharan Africa. The data were collected through the use of semi-structured interviews. Gall, Borg, and Gall (1996) defined semi-structure interviews as a process that involves the researcher asking a series of structured questions and then probing more deeply using open-form questions to obtain additional information (p. 310). Seven interviews were completed. Each interview was completed in person. The interview time ranged between thirty to sixty minutes. A description of the study was given to each of the students. Participants were asked a variety of questions pertaining to the following general areas: (1) perceptions of agricultural extension system in their home countries, (2) perceptions and knowledge of HIV/AIDS, (3) perceptions and knowledge of the impact of HIV/AIDS on agricultural production and agricultural extension service in their home countries, and (4) potential strategies that they would implement as future leaders and policy makers in their home countries. Upon completion of each interview, the participants
were asked to recommend other international students from their home country as possible participants. The names of each individual recommended was cross-checked to ensure that they appeared on the original list obtained from the register’s office. This technique is commonly referred to as the modified snowball technique. The modified snowball technique involves asking well-situated people to recommend cases to study (Gall, Borg, & Gall, 1996).

**Description of the Participants**

The overall objective of this study was to examine the perceptions of students from sub-Saharan Africa regarding their perceptions of HIV/AIDS on agricultural production and the agricultural extension service in their home country. Seven students were selected to participate in this study. The students were from Kenya, Ethiopia, and Botswana. A description of the participants is listed below.

Respondent one and two were both female, Ph.D. students from Kenya. Respondent one was a middle aged, female farmer from Kenya who had left her family to pursue a degree in the United States. She was currently employed by the agricultural university in Kenya. As a rural farmer, this participant had utilized the services of the local extension service and had experienced first hand the problems confronting rural communities. Respondent one was very articulate and had a strong passion for empowering rural women in Kenya and improving their economic and social conditions. Respondent two on the other hand, worked exclusively in crop protection. Upon completion of her degree, her plans were to return to Kenya and work at the research center developing programs for rural farmers.

Respondents three, four, and five were all from Ethiopia. Respondent three was a young female pursuing a Masters of Science degree in Agricultural Education. Her educational background included a Bachelor of Science degree in Community Health. Her future plans included combining her experiences in community health with agricultural extension education to improve the health conditions of rural Ethiopians. Unlike the other participants, respondent three left Ethiopia when she was seventeen. She completed her high school diploma in the United States and had no previous experience working with extension or the university in her home country. Respondent four on the other hand was a middle aged female Ph.D. student from Ethiopia and represented a very unique case for this study. Unlike the other participants, respondent four had previously worked as a HIV/AIDS educator in Ethiopia. Her future plans included returning to Ethiopia and working in rural development. Participant five was a male Ph.D. student from Ethiopia majoring in Agricultural Education and Studies. This participant had previous experience working with the extension service in Ethiopia and upon completion of his degree would return to Ethiopia to teach at the university as well as work with extension.

Respondents six and seven were two males from Botswana pursuing a Doctor of Philosophy degree in agricultural engineering and a Master of Science degree in agricultural education respectively. These two students were currently employed by the university in Botswana and would return to that university to teach upon completion of their degrees. Respondent six had previous experience working with extension in the United States as well as in Botswana and also owned a small farm in Botswana.
Impact of HIV/AIDS on Farm Households and Agricultural Production

“I have seen a lot of people dying from AIDS. If you go to the graveyards and look at the ages of the people, all of them will be 30, 35, and 20. Young people! The graveyards used to be composed of people of old age, somebody in their nineties. We are losing experts in the field. People are dying. The able bodied people whose family members have the disease, have to stop working in the field to take care of their infected family members. So HIV/AIDS has a lot of impact”

These words were spoken by a young man from Botswana as he described the impact of HIV/AIDS on the farm household and its implications for agricultural production. His words are representative and characterized many of the sentiments expressed and reported by researchers studying HIV/AIDS and its impact on sub-Saharan Africa. This young man indicated that HIV/AIDS has contributed to the death of many young people in Botswana. The death of these young people has resulted in severe labor shortages. A reduction in the availability of labor has been observed in Kenya also. When asked to described the impact of HIV/AIDS and its implications for agriculture, respondent one replied,

“Of course, HIV/AIDS has an impact on agriculture, because Kenya is an agricultural country. We depend on agriculture for our foreign exchange. Most of the time, Kenyans are farmers and they are not large-scaled farmers. They are subsistence farmers. One thing that they do is grow crops to feed their families and of course, they hope that the excessive production will be sold to earn money. Now if the AIDS is infecting families, parents are dying, and the land people are being infected, who is left to work on the farms? We are having families..kind of ghost families where you have old people and very young people. The children are young. They can not work on the farms. Your find that it is affecting agricultural activities, in terms of growing food for substance and even economic growth.”

Several authors have suggested that the effect of HIV/AIDS can be felt in two key farm production areas: (1) reduction in labor and (2) availability of disposable cash income. These authors included Haslwimmer (1996); du Guerny (1999); Chilufya (1999); Barnett & Haslwimmer (1995); and Baier (1997). The conclusions reached by these authors corresponded with the sentiments expressed by the participants listed above. These same authors have also documented the specific effects on labor shortages as it relates to rural farm households that engage primarily in labor intensive activities with low levels of mechanization and agricultural input (Baier, 1997). In a study completed by du Guerny these effects on agricultural production as a result of a decrease in labor were described as: (1) reduction in area of land under cultivation, (2) declining crop yields, (3) decline in crop variety and changes in cropping patterns, (4) decline in livestock production, and (5) loss of agricultural skills and management.

In addition to the items, listed above, Baier (1997) also indicated that the following effects were observed in HIV/AIDS infected communities in Eastern Africa: (1) delay in farming operations such as tillage, planting, and weeding, (2) reduction in the availability to control pests, (3) loss of soil fertility, (4) shift from labor-intensive crops (e.g. bananas) to
less labor intensive crops (such as cassava and sweet potatoes), and (5) shift from cash-oriented production to subsistence production.

When asked about their particular country, the participants all had similar responses regarding the shift from labor-intensive crops to less labor-intensive crops. The participants indicated that they had not personally observed a shift in crops and believed that it would be difficult to switch crops given the arid conditions of their countries. The participants in this study did not provide any information concerning specific effects of HIV/AIDS on agricultural production in their home countries. They did not confirm or deny the effects listed by the researchers above. Their primary concern was to express and document the impact that HIV/AIDS has had on their countries, female farmers, and the incredible loss of labor.

**HIV/AIDS and its Implication for the Agricultural Extension System**

“When you talked of AIDS in a settlement, people think of the Ministry of Health. They think of social workers or nurses before they think of the agricultural demonstrator or the extension worker. Even the agricultural demonstrator may not immediately click in too this; that there is a problem that affects the farmer’s field. I feel that extension can campaign against the disease and create awareness among the farmers. The farmers can also be assisted in monetary ways. Sometimes you see crops dying in the field, because the owner of the field cannot attend to them, because of the disease.”

What is the impact of HIV/AIDS on the agricultural extension service and what are the implications for this organization whose clients are primarily rural people facing a myriad of social, political, and economic problems? Agricultural extension education has been defined as “consisting of all activities that help rural families improve agricultural production, find solutions to daily problems of homemaking and deals with other aspects of rural living by the application of science and technology to daily needs” (Okigo, 1989, p. 60). Traditionally, agricultural extension has focused exclusively on agricultural production and technology transfer; however, “in view, of the devastating impact of HIV/AIDS on rural economies and farm families, extension interventions can not focus any longer on the technical aspects of agricultural production and livestock development” (Baier, 1997, p.4). The extension service must incorporate human resource development activities into their agenda and implement programs and policies that take into consideration the local cultural practices and the changing nature of agriculture and labor supply as a result of HIV/AIDS. As the participant stated above, HIV/AIDS does have an impact on the agricultural extension service and this organization have a responsibility to its rural clients to provide educational services related to HIV/AIDS. Several authors including Baier (1997); Rugalema (1999); Haslwimmer (n.d.); and Barnett and Haslwimmer (1995) have expressed similar views regarding the role of agricultural extension and HIV/AIDS. According to these researchers, the impact of HIV/AIDS can be observed in two distinct areas: (1) impact on the extension worker and (2) impact on the implementation of agricultural extension’s programs and policies.

In many HIV/AIDS infected regions, the agricultural extension worker or family members may be infected with the virus. When this occurs, there is a decrease in manpower and a reduction in the number of hours worked due to sickness or even death. Haslwimmer
(n.d.) documented the impact of HIV/AIDS on the agricultural extension worker in sub-Saharan Africa. She stated, “several staff members from all levels have contracted the disease and some have died. The problem is compounded by the fact that it is difficult to find trained people to replace farmer staff, both because the area is remote and because it has the reputation of being a highly HIV/AIDS affected area” (p. 5). Participants in this study were also asked to describe the impact of HIV/AIDS on the extension worker. Their responses were closely aligned with Haslwimmer (1996).

The loss of valuable work hours in the extension service has also been blamed on HIV/AIDS. Haslwimmer (1996) cited a case in Uganda in which a local extension officer noted between 20 and 25 percent of working time was lost as a result of the disease. “Staff members were frequently absent from work to attend funerals and caring for sick relatives; in some cases, extension messages have had to be revised to take into account the impact of the disease on agricultural system, i.e., the shortage of labor, changes in farmer’s needs and priorities in crop and livestock production systems” (Halswimmer, 1996, p. 4).

The respondents in this study were asked to describe the role of the agricultural extension service when working in HIV/AIDS infected regions. Their responses varied depending on their educational background and experience level. Several of the respondents indicated that providing educational services related to HIV/AIDS was a key aspect in decreasing the number of new infections in rural communities. Baier’s (1997) ideas were similar to the participants of this study regarding extension and their responsibility in educating rural residents. He stated, “Frequently, the extension service is the only government agency represented in rural areas and the extension worker are the only rural resource persons who can assist rural families in alleviating the socio-economic consequences of the disease” (Baier, 1997, p. 4). The participants also suggested that policies and programs could not be changed at the field level or by the extension worker. Programs and policies have to be changed at a higher level and that there must be a national call for the change. Agricultural extension is responsible for providing educational services to rural areas.

Each of the respondents were asked to describe how they would solve the problem. Their responses varied; however, they were concerned with the implementation of programs that were culturally sensitive, require less implementation time, incorporate the needs of rural women, and focus on preventive measures. Examples of potential strategies proposed by the participants are shown below.

“I believe in involving the community people in coming up with their own programs. I am saying that we can go there as experts, but don’t take programs. Let’s go and ask and involve them in creating program that they can own. When they see something brought to them, they are not going to embrace it because it is something foreign. I have seen programs failed, because the program specialists have designed and defined the problem themselves through their own language.

**Conclusion and Recommendations**

The overall purpose of this study is to examine the perceptions of international students from sub-Saharan Africa regarding HIV/AIDS and its impact of the agricultural sector in their home countries. The perceptions of the students varied; however, it was evident that the students shared a strong desire and commitment to the economic and
social advancement of their individual countries. When faced with national problems, such as HIV/AIDS, each of the students had strong opinions on how their individual countries should respond. In regards to HIV/AIDS, the students indicated that the role of the government was crucial in addressing the impacts of this disease. The responsibility of the government extends far beyond their traditional borders. Government officials have a responsibility to ensure that HIV/AIDS education is accessible to all individuals, including the hard to reach rural populations. These are the individuals that are primarily engaged in agricultural activities. In many sub-Saharan countries women are responsible for a large portion of food production. They also account for a large percentage of HIV infections. This population is especially vulnerable because of their position in society. Programs and policies have to be designed to target and empower rural women. As one participant stated:

“You find that most of the time, women do most of the agricultural activities. They are the farmers, they are the managers of their homes, and the producers of crops. The conditions of women are very unbearable and society doesn’t acknowledge what women do. Women generally seem to be disadvantaged, because they don’t have the resources. We have to help them understand what it is to be able to take care of themselves in terms of AIDS. We are losing many of them. We should not be losing women simply because they are uneducated. Government and policy makers need to focus on women. There is a lot of potential in women in terms of their input and in improving the lives of their families.”

In concluding, when addressing the impact of HIV/AIDS on the agricultural sector in sub-Saharan Africa, special emphasis has to be placed on understanding cultural beliefs and the role of women in sub-Saharan Africa society.

References (Complete list available upon request.)


