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CYCLES OF POVERTY, FOOD INSECURITY, AND PSYCHOSOCIAL STRESS AMONG AIDS CARE VOLUNTEERS IN URBAN ETHIOPIA

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Abstract

With the rollout of AIDS therapies, volunteer AIDS care has been promoted across Africa under the assumption that volunteerism is economically imperative in settings of health professional and resource scarcity. As low-income volunteers have become a major part of HIV/AIDS prevention and treatment workforces, it is imperative to question how poverty impacts their well-being. This chapter presents epidemiologic data collected during the 2008 food crisis from a sample of 110 AIDS care volunteers in Addis Ababa, Ethiopia, as well as narratives offered by HIV-positive volunteers, highlighting a widely overlooked way in which food insecurity and mental distress impact efforts to treat AIDS in sub-Saharan Africa. Food insecurity and elevated common mental disorder (CMD) symptom loads were common and tightly linked among the volunteers in the sample. Volunteers who were HIV-positive (17 percent) fared slightly worse in terms of food insecurity and psychosocial well-being. However, positive HIV serostatus was not associated with CMD in multivariate analyses accounting for food insecurity. Narratives illustrate how being HIV-positive shaped experiences of psychosocial stress, which involved unemployment and lack of prospects for marital relationships or strife within them. Our focus demonstrates the potential for mixing ethnographic and epidemiological methods to inform policy questions regarding poverty-reduction through compensation for volunteers' valuable labor, as well as AIDS care program sustainability. [volunteerism, AIDS care, food insecurity, livelihoods, HIV, psychosocial health]

Interactions among HIV/AIDS, economic production, food security, and nutrition in sub-Saharan Africa are the focus of influential policy research (Gillespie 2006; WFP/WHO/UNAIDS 2008). Yet little of this research has focused on the experiences of AIDS care volunteers. This is despite the fact that, with the rollout of AIDS therapies, low-income volunteers have become a major part of public and NGO-based health workforces throughout sub-Saharan Africa (Akintola 2008; Rödlach 2009), including in Ethiopia, which faces a late-maturing HIV/AIDS epidemic (Iliffe 2006; National Intelligence Council 2002).

Our work in Addis Ababa, the capital city of Ethiopia, focuses on the potential psychosocial impacts borne by AIDS care volunteers in settings of high unemployment and food insecurity (cf. Akintola 2008; Ogden et al. 2006; Schneider et al. 2008). This paper specifically addresses the impact of positive HIV serostatus in this group, given that a substantial proportion of AIDS care volunteers may also be living with this potentially stigmatized and debilitating illness. Our intention is to further develop an understanding of the livelihoods and experiences of AIDS care volunteers as a novel and policy-relevant

dimension of what Ivers and colleagues (2009) refer to as cycles of poverty, undernutrition, and AIDS in sub-Saharan Africa (SSA). According to these authors, such cycles must be addressed by integrating AIDS treatment with alleviation of food insecurity through poverty-reduction. We have shown that food insecurity is a very common experience in volunteers' households in Addis Ababa, and is associated with low income, decreased dietary diversity (Maes et al. 2009), and common mental health disorders, which include depression, anxiety, and somatoform disorders (Hanlon et al. 2008; Lund et al. 2010; Maes et al. 2010a). We have also reported qualitative data suggesting that food insecurity plays a role in generating strife between volunteer caregivers and their care recipients (Kalofonos 2010; cf., Maes et al. 2011).

Relationships among food insecurity, HIV/AIDS, psychosocial stress, and household economic functioning are complex and potentially iterative (Hadley and Patil 2006; Himmelgreen et al. 2009; Ivers et al. 2009). Households that have lost members to AIDS-related illness, or that struggle to care for weakened or bedridden members, are obviously deeply affected by AIDS in terms of economic functioning. Another way in which HIV/AIDS may take a toll on individuals and households is by inducing common mental disorders, mediated by stressful experiences of stigmatization and restricted social participation in various domains of activity, such as learning and applying knowledge, communication, mobility, self-care, relationships, and domestic and civic life (van Brakel et al. 2006). Food insecurity, as an experiential dimension of poverty, may also take a toll on individuals and households by inducing common mental disorders, driven in part by the uncertainty that is introduced into people's lives as they struggle to meet their food needs (Weaver and Hadley 2009). This is consistent with a recent systematic review by Lund and colleagues (2010), which concludes that common mental disorders (CMD) are an integral aspect of poverty and aims to shift debate "from questions about whether poverty is associated with CMD ... to questions about which particular dimensions of poverty carry the strongest (or weakest) association [with CMD]" (2010:517).¹

In seeking to understand the causes and consequences of psychosocial stress among AIDS care volunteers, who are crucial for the success of many AIDS treatment and care programs in sub-Saharan Africa, we attempt to integrate important policy-relevant research domains examining (1) cycles of poverty, HIV/AIDS, and food insecurity (Himmelgreen et al. 2009; Ivers et al. 2009), and (2) common mental disorders as an integral dimension of the experience of poverty (Lund et al. 2010). We focus on urban AIDS care volunteers in Ethiopia. These volunteers influence both the strength of health systems and the greater well-being of communities facing syndemics (i.e., biosocially interactive epidemics) involving food insecurity and HIV/AIDS (Himmelgreen et al. 2009; Singer this volume).

As AIDS care volunteers, the city dwellers sampled in our study are unique in several ways that bear on our research. First, volunteer caregivers for people living with HIV/AIDS may be exposed to secondary or "courtesy" stigmatization (Goffman 1963). Second, the majority of volunteers in this setting were women, who may be particularly vulnerable to HIV-related stigmatization (Nyblade et al. 2003) and in general face strong gender inequity in formal economic participation (UNDP 2009). And yet, given their positions as active promoters of community welfare, there are reasons to expect that volunteers in our study were less vulnerable to stigmatization and related restriction in social participation, in comparison to many of the HIV-positive people for whom they provided care (cf. Schneider et al. 2008). They were trained in the promotion of "positive living" with HIV/AIDS, which involves

¹Resilience is also often observed at the individual, household, and community levels, in which people living amid multiple stressors and economic uncertainty do not report common mental disorders. This is currently and should remain a focus of empirical biocultural research (Worthman and Kohrt 2005).

understanding and striving to mitigate stigmatization. They had a reasonably well-defined role that offered opportunities to be efficacious in various community settings. And those volunteers who were living with HIV/AIDS were relatively healthy thanks to their access to antiretroviral therapies.

Thus this paper aims to account for the ways in which positive HIV serostatus shapes experiences of poverty and psychosocial stress among AIDS care volunteers in Addis Ababa. Based on survey measures, we show that net of food insecurity, volunteers who reported positive HIV serostatus tended to also report greater social participation restriction but not elevated CMD symptom loads. Quantitative analyses also suggest that gender was not associated with CMD symptom loads in this sample, but this may be because of sample size limitations (men represented only a small proportion of the sample). Lack of statistical association, however, does not rule out the possibility that the experience of psychosocial distress was qualitatively different between HIV-positive and HIV-negative volunteers and between male and female volunteers. Therefore, we go beyond quantitative data analyses to examine HIV-positive volunteers' subjective experiences of poverty and psychosocial stress, drawing on the narratives of the two in-depth interview respondents in our study who disclosed to us their positive HIV serostatus early in the research. The narratives of these two respondents—an unmarried man and a young wife and mother—also help illuminate how gender relations shape the experience of poverty and psychosocial distress for volunteers who are HIV-positive.

METHODS

Local Setting

This study was conducted over 20 months during 2007 and 2008 in various low-income neighborhoods adjacent to the Ministry of Health's ALERT Hospital on the southwest outskirts of Addis Ababa. The launch of highly active antiretroviral therapy (HAART) programs at ALERT Hospital and throughout the country in 2004 coincided with the beginning of an upward trend in food prices in Ethiopia. At that time, home-based HIV/AIDS care relying on kin and volunteer labor was promoted at the national level (Ministry of Health 2005). In mid-2008, global food prices escalated rapidly, driven by a mix of structural and environmental factors (Headey and Fan 2008; Robles et al. 2009). While food price inflation occurred throughout Ethiopia, from 2006 to 2008 rates were particularly high in Addis Ababa (Ulimwengu et al. 2009).

In this setting, local public health facilities relied heavily on the training of volunteers, who provided home-based palliative care and counseling, supported drug adherence, and mediated patients' access to clinical treatment and NGO assistance. Volunteers were trained and organized by local NGOs (with international funding), which in turn cooperated with government health workers and institutions. On average, the volunteers in this study were 28 years old (*SD* 6.2; range from 18 to 45) and had 10 years (*SD* 2.6) of schooling. They cared for on average 13 (*SD* 6.6) patients. They spent 15 (*SD* 8.3) hours per week in various volunteer tasks and responsibilities, and typically served for a period of 18–24 months, after which patients would be reassigned to a new group of volunteer recruits, and “graduating” volunteers exited the service. Some volunteers held concurrent part-time jobs (e.g., as parking attendants and cleaners), but income from such positions was small, and most volunteers had very low incomes. The median household per capita income in the sample described below was only 0.29 USD/day. Volunteers received about 5–10 USD/month to reimburse their transportation and telecommunications expenses; many volunteers used this money to buy basic foods. Some volunteers received food aid (usually wheat and cooking oil) as a stipend from their NGO. However, this practice was suspended in early-to-mid 2008.

Epidemiologic Methods

Structured surveys were developed and piloted after conducting 12 months of ethnographic fieldwork in the study setting, to assess socioeconomic status and psychosocial well-being with locally relevant measures. Extensive effort was made to assess the content and construct validity of these measures. Surveys were administered to community AIDS care volunteers from two local NGOs that provided home-based care for people accessing HAART at ALERT Hospital. The Hiwot NGO ran an Addis Ababa-wide AIDS care program, with upward of 600 volunteers. Medhen is a smaller organization under the auspices of the Ethiopian Catholic Church, which focused on neighborhoods adjacent to ALERT hospital. Data were collected from the same participants at three rounds (February, July, and November 2008) to observe changes over the course of volunteers' service period. At each round, four Ethiopian data collectors were deployed. Data collectors underwent extensive training, were closely supervised, and worked in pairs, to maximize data quality.

The survey sample included 110 volunteer caregivers (99 women and 11 men) of adult patients receiving HAART at ALERT Hospital. This gender ratio reflects the overwhelming proportion of women in the volunteer population. A random sample of 90 participants was drawn from the Hiwot NGO's volunteer rosters. We also included all 20 volunteer caregivers from the Medhen NGO. The present analyses examine the entire sample ($n = 110$) as a whole. At Round 2, 106 of the original 110 participants were surveyed, and at Round 3, 107 of the original 110 were again surveyed.

Measures

We assessed food insecurity with a standard scale for international use, the nine-item Household Food Insecurity Access Scale (HFIAS; Swindale and Bilinsky 2006). We translated the HFIAS into Amharic, the language of commerce in urban Ethiopia, then back-translated and revised. Participants were presented with "yes" (1) or "no" (0) response categories and a 30-day recall frame for each HFIAS item. Based on their responses, participants' households were classified into four levels of food insecurity (FI): (1) food-secure; (2) mild FI; (3) moderate FI; and (4) severe FI (Coates et al. 2007). Using this scheme, the HFIAS performed well according to established validation criteria (Maes et al. 2009). Given that only about 20 percent of volunteers in our sample were food-secure, in this paper we compare those who reported food security and mild FI to those who reported moderate to severe FI.

To assess the distribution of common mental disorder(CMD)symptoms, we used a 29-item version of the WHO Self-Reporting Questionnaire (the SRQF), which incorporates eight items derived from Amharic idioms of distress (e.g., feeling that someone has cursed you; feeling that your heart is beating too fast; Zilber et al. 2004). The SRQF has been tested for content, construct and criterion validity in urban Ethiopia and used in previous population research in Ethiopia (Hanlon et al. 2008). Participants were presented with "yes" (1) or "no" (0) response categories and a 30-day recall frame for each SRQF item/symptom. The number of affirmative responses was summed to create SRQF scores (out of 29) denoting CMD symptom loads for each individual. Although the SRQF is not a diagnostic tool, we used a cutoff of 7/8, which was determined by Zilber and colleagues (2004) to be optimal for screening CMD cases in urban Ethiopian populations.

We operationalized restricted social participation with the Participation scale (van Brakel et al. 2006), which was developed for use among people with stigmatized conditions such as Hansen disease or HIV/AIDS. The published Participation scale consists of 18 items that ask a respondent whether he or she engages in various social activities as much as local age-mates or "peers" do. Ethnographic work revealed the importance of showing hospitality to

guests in the home, and suggested that the local validity of the Participation scale would be improved by adding two items, “Do you receive guests as much as your peers do?” and “Do you have the capacity to treat guests (show hospitality) as much as your peers do?” These items were found to correlate strongly with overall Participation scale scores. We also dropped seven items from the published Participation scale that had consistently low correlations (<0.15 at two or more data collection rounds) with overall scores in our sample. The resulting 13 items are listed in Table 1. For each item, a “yes” response is scored as 0, while a “no” or “sometimes” response is followed up with the question, How big a problem is it to you? “No problem” is scored as 1, “small” problem as 2, “medium” problem as 3, and “big” problem as 5. The items are summed to produce a Participation scale score ranging from 0 (no restriction) to 65 (severe restriction). For the purposes of our present analyses, we categorized those who scored more than 15 on the Participation scale as having elevated social participation restriction. Chronbach’s alpha (raw) for the Participation scale, SRQF and HFIAS averaged over all data collection rounds was 0.80, 0.90, and 0.84, respectively.

At data collection round 1, participants reported age, gender, and years of formal schooling. At round 3, participants reported HIV serostatus (positive, negative, or unknown). Participants also reported estimated monthly household incomes at all three rounds. Estimated household incomes were divided by the total number of adults and children regularly sleeping and eating in the house to yield monthly household per capita incomes in Ethiopian Birr/mo (converted to USD/mo using a rounded exchange rate of 10 Birr to 1 USD).

Ethnographic Methods

Participant-observation focused on the HIV/AIDS Department clinic at ALERT Hospital, volunteers’ and care recipients’ homes, and the facilities of the *Hiwot* and *Medhen* NGOs. Drawn from these NGOs, a purposive sample of 13 in-depth interview respondents (10 female and 3 male) aimed to account for the preponderance of women in the volunteer population, as well as variation in length of service, age, education, and socioeconomic status. Each respondent completed a series of five to six semi-structured interviews assessing motivations, costs and benefits of volunteering, food insecurity, care relationships, and well-being. Texts were translated, transcribed, and analyzed by the authors using MAXQDA software. Here, we examine narratives of the two in-depth interview participants in our study who openly disclosed their positive HIV serostatus at the beginning of the research, to illuminate the ways that positive HIV serostatus and gender shaped experiences of food insecurity and common mental disorders. Notably, these two individuals volunteered for separate organizations, had divergent lengths of experience as volunteers, and represented different genders and marital statuses. Further, it was clear from our ethnographic work that the experiences described by these individuals echoed common themes in the lives and livelihoods of AIDS care volunteers in our sample. The research design was approved by the IRBs of Addis Ababa University’s Faculty of Medicine, ALERT Hospital, and Emory University.

Analytic Strategy

Our strategy was to lay out our epidemiological findings and subsequently examine how our informants’ narratives explain and qualify the epidemiological findings. Analyzing change over time in the survey data was beyond the scope of this paper; thus observations from all three rounds of survey data collection were pooled to calculate summary statistics of food insecurity, social participation restriction, and common mental disorder (CMD) symptom loads. We then examined how these variables compared between HIV-positive and HIV-negative volunteers in the sample. Subsequently we assessed whether positive HIV

serostatus and social participation restriction predicted elevated CMD symptom loads in our sample, net of food insecurity and other covariates. It is necessary to account statistically for the nonindependence of data contributed by the same volunteer caregivers at multiple survey rounds. Thus we used multilevel linear models (MLM) and generalized estimating equations (GEE) to observe associations of covariates with continuous and dichotomous outcomes, using the MIXED and GENMOD procedures in SAS (v9.2), respectively.

RESULTS

We began our analyses by calculating summary statistics for social participation restriction, food insecurity, and common mental disorder (CMD) symptoms in our sample of AIDS care volunteers (see Table 2). Twenty percent scored above 15 (out of a possible 65) on the Participation scale, suggesting that most participants in the sample experienced no restriction or only mild restriction in social participation. Eighty percent of volunteers reported at least mild food insecurity (FI), and more than half the sample (53 percent) reported moderate to severe FI. These are very high rates, but not surprising given the extremely low incomes reported by participants (Maes et al. 2009). Another 31.6 percent of volunteers reported SRQF scores (denoting CMD symptom loads) of at least 8. Thus, substantial proportions of volunteers suffered from both food insecurity and high levels of mental distress.

Seventeen percent of AIDS care volunteers reported positive HIV serostatus, while 72.6 percent reported negative HIV serostatus and 10.4 percent said that their status was unknown. Compared to HIV-negative volunteers, HIV-positive volunteers fared worse in terms of food insecurity, per capita household income, CMD symptom loads, and social participation restriction. However, the only difference that reached statistical significance (at the .05 level) is in participation restriction (see Table 2).

While positive HIV serostatus did not predict elevated CMD symptom loads in bivariate GEE models, moderate to severe food insecurity, in contrast, strongly predicted elevated CMD symptom loads ($P < 0.0001$). Elevated participation restriction scores (i.e., a score of at least 15) also predicted this outcome ($P = 0.03$). When all three of these predictor variables were included in a multivariate model of SRQF score adjusted for age, gender, years of education, and per capita income, the effect of food insecurity remained strong ($P < 0.0001$), the effect of elevated participation restriction scores was no longer significant ($P = 0.38$), and the effect of positive HIV serostatus remained insignificant (see Table 3).

Because elevated participation restriction was not a significant predictor of elevated CMD symptom loads after the inclusion of food insecurity in the multivariate model, we questioned whether the measure of social participation restriction used here indexed HIV-related stigmatization as opposed to another dimension of socioeconomic hardship. Thus we asked what better predicts participation restriction: food insecurity or HIV serostatus? In a linear model of Participation scale score accounting for repeated measures (excluding those with unknown serostatus), the main effect of positive HIV serostatus was not associated with higher participation restriction scores ($P = 0.88$), while the main effect of moderate to severe FI ($P = 0.0001$) and the interaction term ($P = 0.02$) were both significantly associated with higher participation restriction. Table 4 illustrates this pattern, in which moderately to severely food-insecure participants with either positive or negative HIV serostatus report elevated participation restriction, while those with positive HIV serostatus report the highest scores. This suggests that the measure of social participation restriction used here is primarily tapping a dimension of socioeconomic hardship; only when holding food insecurity at the moderate to severe level is positive HIV serostatus (and presumably HIV-related stigma) associated with greater social participation restriction. This is supported by

the fact that the two items on the Participation scale deemed most “problematic” on average by the volunteers in our sample—having the capacity to treat guests (show hospitality) as much as one’s peers and having equal opportunity as one’s peers to find work—both seem to index economic hardship.

Table 4 also illustrates the lack of a strong effect of HIV serostatus on CMD symptom loads. When HIV-positive volunteers report moderate to severe food insecurity, their CMD symptom loads are elevated, but are not different from those of HIV-negative volunteers who report moderate to severe food insecurity. When HIV-positive volunteers report food security or mild food insecurity, their CMD symptom loads are greater than those of volunteers who are HIV-negative ($P = 0.054$); however, this effect should be interpreted with caution because of the small number of observations ($n = 18$).

In sum, moderate to severe food insecurity and elevated CMD symptom loads were highly prevalent in our sample and were tightly linked. Social participation restriction was generally mild, although elevated among volunteers who reported food insecurity, and further elevated among volunteers who were both food-insecure and HIV-positive. HIV-positive volunteers fared slightly worse on measures of economic and psychosocial well-being. And yet positive HIV serostatus was not a statistically significant predictor of elevated CMD symptom loads. Neither was social participation restriction, when accounting for food insecurity.

It is clear why food insecurity was so prevalent and severe among the AIDS care volunteers in our sample: their incomes were extremely low, making it difficult to afford sufficient food. Further, it is not surprising that food insecurity was tightly linked to high CMD symptom loads. Excessively worrying about household food supplies, having to make substantial cutbacks in food quality and quantity, and regularly depending on handouts from others are clearly stressful experiences. This is illustrated by the narratives presented below.

But why do positive HIV serostatus and social participation restriction appear to have little impact on CMD symptom loads in our sample? The narratives below also help to answer this question. Part of the answer may simply be that chronic and severe food insecurity is such a salient stressor that it overshadows the experience of being HIV-positive. This explanation finds support in our multivariate analyses. Another part of the answer may be that, in general, volunteers are socially active in their communities because of the fact that their responsibilities require and encourage social engagement. In particular, HIV-positive volunteers, who potentially face greater restriction in social participation, may consciously address this problem by staying active as volunteers. Thus, even if positive HIV serostatus is not associated with CMD symptom loads, this statistical pattern does not rule out that being HIV-positive alters the experience of poverty-related psychosocial distress. The same holds for gender: although CMD symptom loads did not differ statistically between men and women in the sample (keeping in mind that the number of men in the sample is very small), gender relations may still shape the experience of poverty-related psychosocial distress among AIDS care volunteers who are HIV-positive. The narratives presented in the following section are therefore essential to a fuller understanding of how poverty, HIV/AIDS, and psychosocial stress interact among AIDS care volunteers in our study.

Eskinder

Eskinder was a middle-aged man who began volunteering with the *Medhen* NGO in April 2007.² In 2003, he found out that he was HIV-positive when he became critically sick. He

²Personal names in this paper are pseudonyms.

recovered after beginning HAART at ALERT Hospital, but continued to suffer from peripheral neuropathy. Eskinder's mother, with whom he still lived, was infected with leprosy at a young age. His experiences with HIV/AIDS and leprosy deeply affected both his access to secure employment and his motivation to be an AIDS care volunteer.

Now I am going around as a volunteer caregiver while carrying my anti-retroviral medication in my pocket. Patients will call for you [because] they fear that their neighbors, friends, and family will avoid them. The reason I see these matters deeply is that I have HIV inside me.

Recovering from, living with, and being trained as a caregiver for people with HIV/AIDS thus encouraged and prepared Eskinder to understand the emotions and needs of his patients.

Eskinder told us that, before he got sick, he was able to work, furnish his house, and lead a decent life in mutual support with his mother and siblings. Living alone with his disabled mother at the time of our research, he had no substantial source of income, and depended on the *Medhen* NGO, extended family, and neighbors for food and other basic necessities.

This chair is not edible. The television and these cupboards are not edible ... I got all these things previously when I was healthy—when I was working ... I am stressed because I am not working, not because the virus is inside me. I also worry about how long I will rely on the support of others. ... Nowadays, it is only that life is expensive and there is no employment. ... What shall I do working at something that has no prospects for improvement. ... How can a woman accept me as a husband?

In sum, unemployment, dependence on others, and perceived lack of marriage prospects created stress for Eskinder. He said he was not stressed because HIV was “inside” him, and yet his HIV status was a concern in relation to how his health condition affected his prospects for paid employment, and thus marriage and secure access to food.

Asayech

Asayech was a 30-year-old woman who began volunteering with the *Hiwot* NGO in early 2008. She was also living with HIV/AIDS and receiving HAART. Asayech used to work in a factory—before she became sick with TB: “After that, I was not able to do any job ... because I fear that I will get sick [on the job].”

Most of the time, I forget that I even have it [i.e. HIV], and I feel peaceful on the inside. Why? Because I am working [i.e. volunteering] and moving. ... If you have your own work, you never think that you have a disease. [But] if you are getting aid [from an organization], you always think of your pain ... [and] if you are just sitting in the house, waiting for what the [aid] organization is doing for you, it is very difficult. ... This [volunteer caregiving] gets me to go out, rather than sit idle at home. It gives me hope—it gives me a chance.

Thus, like Eskinder, volunteering as an AIDS care volunteer allowed Asayech to be active in a space of confidence that AIDS-related illness would not pose a problem.

During the study period Asayech was raising a young child, whom her friends and neighbors would look after when Asayech went out of the house. Her husband also supported the family by working at an industrial firm located just outside Addis Ababa. His position was low-level but highly desirable considering the scarcity of jobs in the area. When we asked Asayech if she ever felt a longer sadness, a depression, she replied that she and her husband sometimes disagreed about having sex, which caused substantial emotional distress. According to her, these situations arose when Asayech would “think about” her illness.

Sometimes there is [a longer sadness]. But my sadness comes when I have a fight with [my husband] at home. ... When I am thinking about my sickness, I am not comfortable to have sexual contact. I will be happy if he doesn't even touch my clothes. Sometimes he plans to have sexual contact, and I may not be ready, and we simply fight because of that. We even say bad things to each other. That disturbs me for some time. If I had my own [job], and if I could live alone [i.e., apart from my husband], I would have freedom. Even if my child is [dependent on me], if I had a good income, I could live [alone].

Sometimes my husband says, "I can give you what I have, but you should also work." At first, he was willing. But now, he says, "Volunteering has no benefit, and it is tiresome. ... Why don't you find another job?" ... I am ready to do any job that God gives me. ... If I get a chance to be employed in an organization [i.e., an NGO, government office, or private company], I can do that. I want to live, working.

In both Eskinder's and Asayech's narratives there was an emphasis on wage work as an essential means to food security, economic autonomy, and the reduction of stress. Asayech voiced her desire to avoid depending on her husband and on an aid organization. Whether or not Asayech actually desired to leave her husband, she thought that having her own income would resolve some of her marital strife and allow her to support her child and avoid idleness. Asayech would sometimes "think about" or stress about her HIV status; this would become problematic when she was sitting idle, which left her thinking too much about her HIV status, and led to disagreement over sex with her husband. From her point of view, these problems could be resolved by becoming gainfully employed. Eskinder also worried about excessively depending on others. For Eskinder, having income from a steady job would allow him to attract a wife and meet his own basic dietary needs. In both cases, HIV/AIDS appeared to play an *interactive* role in creating stress linked to unemployment. Additionally, both Eskinder and Asayech saw volunteer AIDS care as a meaningful, but not economically viable, activity. They enjoyed serving fellow community members living with AIDS, but could not make a living out of it because it was unpaid work.

DISCUSSION

Our epidemiological analyses and the narratives of Eskinder and Asayech can be integrated to better understand how psychosocial stress, HIV/AIDS, and food insecurity interacted among AIDS care volunteers living in Addis Ababa during the height of the 2008 food crisis. We questioned whether HIV-positive volunteers experienced greater food insecurity, common mental disorder symptom loads, and restricted social participation, in comparison to their fellow volunteers who were HIV-negative. We found that HIV-positive volunteers fared slightly worse on all these measures; however, food insecurity and elevated CMD symptom loads were highly prevalent among both HIV-positive and HIV-negative volunteers. HIV-positive volunteers did not report higher CMD symptom loads after accounting for food insecurity. Our data suggest two reasons for this. First, chronic food insecurity as an integral aspect of urban poverty may overshadow the experience of being HIV-positive. Additionally, volunteering may be in a sense psychosocially therapeutic for HIV-positive volunteers, because it allows them to be socially active and efficacious in a space of confidence that their positive HIV serostatus will not pose a problem. Thus, AIDS care volunteers in this study were in general primarily concerned with food and economic security.

The lack of a statistical association between HIV serostatus and CMD symptom loads, after accounting for food insecurity, cannot rule out that being HIV-positive alters the experience of poverty-related psychosocial distress. Eskinder and Asayech both became AIDS care volunteers after recovering from serious illness through ongoing HAART regimens.

Eskinder asserted that his mental distress was not simply because of HIV being “inside” him, but to experiences of livelihood and food insecurity that resulted from his lack of gainful employment. However, it was clear that living with HIV/AIDS (and related peripheral neuropathy) played an interactive role in his experience of distress: it contributed to his lack of employment, and thus to his experience of food insecurity and perceived lack of marriage prospects. Asayech revealed that being HIV-positive played an interactive role in her own experience of psychosocial distress by contributing to her lack of employment and therefore dependence on her working husband, with whom she came into conflict over having sex.

The comments offered by Eskinder and Asayech illustrate ways in which gender relations intersect with the stress associated with both HIV/AIDS and unemployment. In particular, lack of prospects for marital relationships or strife within them shapes how poverty-related stress is experienced by HIV-positive volunteers. Eskinder wanted a wife but felt that, given his current employment status, he could not attract one. Asayech wanted more autonomy from her husband and felt that a job would help fulfill that desire.³ Akintola (2008) and others have pointed out that AIDS caregiving tends to be “women’s work” in sub-Saharan Africa. Women made up 90 percent of our sample, but we also observed that the proportion of men recruited by the *Hiwot* NGO in early 2008 grew substantially over 2007 (data not shown). Hanlon and colleagues (2009) suggest that, across Ethiopia, economic insecurity coupled with gender disadvantage may be the most important challenge to women’s mental health.⁴ To our knowledge no studies have examined the specific ways in which gender and HIV/AIDS intersect with food insecurity and unemployment-related psychosocial distress among AIDS care volunteers. The important gendered differences between the experiences of Asayech and Eskinder call for further ethnographic and survey research addressing these intersections.

Food insecurity, HIV/AIDS, and common mental health disorders are theorized to feed back on each other, creating cycles of poverty, HIV/AIDS, and psychosocial stress. Analyses that directly test directions of causality among these constructs were not conducted here. In addition, we did not examine the impact of these constructs on caregiver work performance. Keeping in mind the technical difficulty and micropolitical implications of measuring work performance, testing these impacts would allow us to better understand cycles of psychosocial stress, poverty, and AIDS, incorporating both poor people living with AIDS and their unpaid volunteer caregivers. Even if our quantitative analyses are limited to showing association and not causality, with our qualitative data we can confidently say that unemployment, which contributes to both food insecurity and problems in forging and sustaining marital relationships, is a major contributor to psychosocial distress among AIDS care volunteers, a subpopulation that has been crucial to economies of AIDS care over the past decade. Thus ethnographic work can contribute important insights when dealing with multidimensional aspects of poverty and livelihood security.

Our findings suggest the need for programmatic interventions that address needs for secure and gainful employment among the volunteers in our study, to reduce poverty and food insecurity and improve mental health for both HIV-positive and HIV-negative volunteers, while taking into account the different experiences of men and women. While much attention within policy circles is paid to non-monetary techniques to incentivize low-income people to take up and commit to volunteer community health work (e.g., Glenton et al.

³Difficulties in forging and sustaining marital relationships may also be common among economically insecure and unemployed men and women who are not living with HIV/AIDS (see Gurmu and Mace 2008; Sibanda et al. 2003).

⁴Ethiopia’s Gender-related Development Index (GDI), which attempts to quantify labor burden differences between men and women, is 0.403, on the low end globally (cf., Nepal [0.520] and the United States [0.937]; UNDP 2009).

2010), our focus emphasizes the potential of anthropological inquiries to inform goals of poverty-reduction and increased well-being at household and community scales through health sector job creation (Maes 2010; Maes et al. 2010b; Maes et al. 2011). Our results suggest that job creation, and in particular creation of paid community health worker positions for people on the low end of the socioeconomic scale, will improve food access, reduce economic uncertainty, and bolster the autonomy of male and female volunteers in our sample, thereby substantially reducing the stress they experience as they attempt to meet their own needs and the needs of their care recipients. Although volunteering to serve fellow community members living with HIV/AIDS may be therapeutic for HIV-positive individuals like Eskinder and Asayech, their narratives suggest that gainful employment would also be therapeutic. Receiving modest but predictable remuneration for the work they are currently doing might thus constitute a “double-dose” of therapy.

A desire for gainful employment as a means to food security and increased well-being is not unique to HIV-positive volunteers, suggested by the fact that 50 percent of the HIV-negative volunteers in our sample reported moderate to severe food insecurity. During our first round of data collection in early 2008, when we asked all 110 participants in our study, “What kind of work would you like to do after your current period of volunteer service?,” 38 percent of the sample responded that they wished to continue giving the service or that they would continue *if* they could not find a better job that paid more money. Fifteen percent said they would like to do any job other than volunteer caregiving or any job that could generate income; 17 percent wanted to pursue a variety of specific low- to medium-income occupations⁵; 12 percent wanted to start a small-scale business; and 12 percent wanted to continue their education. Thus there is considerable diversity in the desires of these volunteers in regard to future work. What they shared were very low incomes and an urban environment in which food insecurity and unemployment were rampant (Serneels 2007). Even with occasional non-monetary incentives, what is lacking for these volunteers is the certainty of remuneration that comes with regular wages. In testimony before the U.S. Senate Committee on Foreign Relations, Paul Farmer (2010) noted that a group of Rwandan community health workers, who served a program jointly organized by the international NGO Partners in Health, the Clinton Foundation, and the Rwandan government, contributed \$7,000 in donations for victims of the January 2010 earthquakes in Haiti. Although these health workers earned less than 200 USD/month, they were securely employed in meaningful work and were able to give donations rather than be donor-dependent. This resonates with the comments of Eskinder and Asayech about the stress involved in depending on donations in the absence of gainful work.

Widespread reliance on volunteerism for providing health care to marginalized people, including undocumented migrants and people living with HIV/AIDS, reflect societies habituated to inequality (cf. Biehl 2007; Castañeda 2010). Given that food insecurity is likely to remain problematic in many countries in SSA, low-income volunteers will continue to face severe constraints that may impact on their psychosocial health, and, thus, their capacity and willingness to be effective community health workers. Although low-income volunteers may derive satisfaction and social status from their activities and see their roles as socially congruent, they face enormous challenges in other areas of their lives. Donors, NGOs, and governments have the opportunity to reduce food insecurity and psychosocial stress for many low-income volunteers, and enable them to better meet the needs of their patients, many of whom are likely to face similarly multidimensional challenges combining poverty, HIV/AIDS, and psychosocial stress. As policy makers worry over the impact of

⁵Each of the following responses was given by one to three participants, together comprising 17 percent of the sample: go to an Arab country to work; work for an NGO; teach kindergarten; be a nurse, photographer, cleaner–janitor, tailor, hairdresser, cook, or shoemaker.

wages on volunteers' "intrinsic" motivations (Glenton et al. 2010), as well as over the financial sustainability and political-economic challenges of creating paid community health worker jobs (Ferguson 2010; Ooms et al. 2007; Schneider et al. 2008; Swidler and Watkins 2009), anthropologists can help to clarify what is at stake for the multiple parties involved in volunteer-based community health programs in sub-Saharan Africa. Such research may lead to policies and practices that simultaneously promote effective and equitable health care as well as livelihood security for more economically vulnerable volunteers.

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TABLE 1

Participation Scale Items Used in the Present Analyses (after van Brakel et al. 2006)

Scale item
Do you have equal opportunity as your peers to find work?
Do you make visits outside your neighborhood as much as your peers do?
Do you help other people (e.g., neighbors, friends or relatives) as much as your peers do?
Do you take part in casual social activities (e.g., sports, chatting, meetings) as much as your peers do?
Are you as socially active (e.g., in church/community affairs) as your peers are?
Do you visit other people in the community as often as your peers do?
Do you have the same respect in the community as your peers?
Do you visit public places (e.g., schools, shops, offices, cafes) in your neighborhood as much as your peers do?
Do you have the opportunity to take care of yourself (e.g., appearance, nutrition, health) as well as your peers do?
Do you take part in major festivals and rituals (weddings, funerals, religious festivals) as much as your peers do?
Do you feel as confident as your peers to try to learn new things?
Do you receive guests as much as your peers do?
Do you have the capacity to treat guests (show hospitality) as much as your peers do?

TABLE 2

Selected Summary Statistics, by HIV Serostatus (excluding unknown serostatus)

Variable	All N = 323	HIV serostatus: Positive N = 54	HIV serostatus: Negative N = 230	<i>p</i>
Moderate/Severe food insecurity	53.3%	66.7%	50%	0.0949
SRQF score 8	31.6%	35.2%	28.7%	0.5020
Elevated participation restriction	20.1%	35.2%	16.1%	0.0159
SRQF score (raw)	6.0(<i>SD</i> 5.8)	7.6(<i>SD</i> 6.4)	5.6(<i>SD</i> 5.6)	0.1155
Participation scale score (raw)*	7.2(<i>SD</i> 8.0)	10.8(<i>SD</i> 10.4)	6.5(<i>SD</i> 7.1)	0.0016
Per capita household income USD/Mo	12.7(<i>SD</i> 11.6)	8.9(<i>SD</i> 5.2)	12.9(<i>SD</i> 10.8)	0.1472

* Excluding two individuals who were extreme outliers at data collection rounds 2 and 3.

TABLE 3

Generalized Estimating Equation Estimates of the Probability of SRQF Score 8

Variable	Beta	SE	p
Intercept	−0.851	1.101	.4395
Moderate to severe food insecurity	1.259	0.328	.0001
Elevated participation restriction	−0.302	0.345	.3816
Positive HIV serostatus	−0.028	0.542	.9592
Age (years)	−0.006	0.030	.8338
Schooling (years)	−0.013	0.062	.8319
Gender (Male = 0)	0.320	0.589	.5865
Per capita household income	−0.002	0.002	.2797

TABLE 4

Averages and Standard Deviations of Participation Restriction and SRQF Scores as a Function of Food Insecurity and HIV Serostatus (all data collection rounds combined, n = 310)

	Participation Restriction *		SRQF	
	Food Secure/Mild FI	Mild to Moderate FI	Food Secure/Mild FI	Mild to Moderate FI
HIV serostatus: –	4.2 (<i>SD</i> 5.4)	8.9(<i>SD</i> 7.7)	3.3(<i>SD</i> 4.0)	7.9 (<i>SD</i> 5.9)
HIV serostatus: +	3.4 (<i>SD</i> 5.8)	14.5(<i>SD</i> 10.3)	6.7(<i>SD</i> 5.9)	8.0 (<i>SD</i> 6.6)
HIV serostatus: unknown	2.9 (<i>SD</i> 4.6)	5.8(<i>SD</i> 6.2)	2.4(<i>SD</i> 3.0)	8.3 (<i>SD</i> 6.5)

* Excluding two individuals who were extreme outliers at data collection rounds 2 and 3.