Psychosocial distress among unpaid Community Health Workers in rural Ethiopia: Comparing leaders in Ethiopia’s Women’s Development Army to their peers*

Kenneth Maes1, Svea Closser2, Yihenew Tesfaye1, Roza Abesha3

1. Department of Anthropology, Oregon State University, Corvallis, OR, USA, Kenneth.maes@oregonstate.edu
2. Department of Anthropology, Middlebury College, Middlebury, VT, USA
3. Independent Researcher, Bahir Dar, Ethiopia

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Abstract

There is a growing critical social science literature on volunteering in health programs in non-western, low-income countries, yet few have mixed quantitative and qualitative methods to examine the psychological and social wellbeing of unpaid community health workers in such contexts. We address this issue with data from unpaid community health workers (CHWs) and other women who comprise Ethiopia’s state-organized “Women’s Development Army”. We draw on qualitative and cross-sectional survey data collected between 2013 and 2016 to test links between various aspects of psychosocial and economic wellbeing and volunteer status in a rural context. We surveyed 422 adult women in Amhara state, 73 of whom were unpaid CHWs in the “Army”. We also conducted interviews and focus group discussions with health officials, salaried Health Extension Workers, volunteer CHWs, and other adult women. Analyses of our qualitative and quantitative datasets show that volunteer CHWs are actually worse off than their peers in various psychosocial and economic respects, and that CHW recruitment processes are the most likely explanation for this difference. Additionally, the unpaid CHW position adds work to already burdened shoulders, and makes women—especially unmarried women—vulnerable to negative gossip and high levels of psychological distress. To a limited extent, the volunteer CHW position also bolsters married women’s subjective socioeconomic status and confidence in achieving future gains in status. By showing that unpaid CHWs do not necessarily enjoy psychosocial benefits, and may experience harm as a result of their work, these findings reinforce the recommendation that CHWs in contexts of poverty be paid and better supported.

Key Words: community health workers, volunteerism, wellbeing, Ethiopia
Many global health initiatives rely on unpaid, impoverished community health workers (CHWs).

Unpaid CHWs in Ethiopia’s Women’s Development Army are worse off than their peers.

The unpaid CHW position puts more work on already burdened shoulders.

Unmarried, unpaid CHWs experience negative gossip and high levels of psychological distress.

These findings underline the need for payment and other support for these workers.
Introduction

Shortages of health workers in poor countries are recognized as one of the greatest current threats to global health (WHO 2006). To make up for these shortages, many of the world’s largest public health initiatives rely on unpaid community health workforces comprised of local, low-income people (WHO 2008, 2018). The World Health Organization, however, recommends that community health workers (CHWs) receive fair wages and recognition for their labor to ensure their capabilities and commitments and provide them with secure livelihoods (WHO 2008; WHO 2018). The WHO recommendation implies that paying community health workers fair compensation—rather than relying on so-called “volunteers” (a misleading term for people who may be desperate for gainful employment)—is a matter of social justice. Yet massive lack of funding in low-income countries means there is plenty of pressure to continue relying on unpaid and underpaid workers (Dahn et al 2015). Meanwhile, projects that rely on unpaid labor are often understood to be humanitarian endeavors, and local “volunteers” are often said to derive psychosocial benefits through serving the health interests of marginalized people.

Discourses that volunteering is “good for you” have circulated around the world in the neoliberal era, in some cases promoting programs that recruit impoverished people for unpaid community health service roles (Prince and Brown 2016; Colvin 2016; Maes 2017).

Social epidemiological literature suggests that volunteering in western, middle- or high-income contexts generates greater wellbeing, particularly psychological wellbeing. Longitudinal survey studies show that volunteers and altruists enjoy better physical health and quality of life in old age, are at lower risk of dying, and are happier (Danner et al. 2001; Post 2005; Borgonovi 2008). Researchers have hypothesized that these outcomes are mediated by psychosocial benefits
involving the increased social integration of volunteers, the feeling that one can enhance the well-being of others, and the reduction of “destructive levels of self-absorption” and concern for status (Oman et al. 1999: 303; Thoits and Hewitt 2001; Wilson 2000; Borgonovi 2008).

There is an important critical social science literature on volunteering in health and other programs in low-income countries (Colvin 2016; Prince and Brown 2016; Swidler and Watkins 2009). Yet the hypothesis that volunteering generates greater wellbeing has gone largely untested with mixed methods in non-western, low-income settings (an exception is Maes et al 2010; Maes 2017). We aim to address this issue with data from Ethiopia’s state-organized volunteer community health workers, the Women’s Development Army (WDA).

In the mid-2000s, the Ethiopian government rhetorically tied the sustainability of the country’s primary health care services to the act of creating paid – not volunteer – CHW jobs. Dr. Tedros Adhanom, then Minister of Health and now Director General of the World Health Organization, claimed at the time that the success and sustainability of the country’s Health Extension Program hinged upon “engaging health extension workers as full-time salaried civil servants” and thereby “moving away from volunteerism” (WHO 2009). Ethiopia’s cadre of Health Extension Workers thus received a salary since the beginning of the program. Funding for the Health Extension program came from both the Ethiopian government and international donors.

Ultimately, however, the level of sustained funding is not enough to meet the needs of Ethiopia’s massive rural population. Thus, despite Ethiopian leaders’ stated interest in moving away from volunteerism, in 2011 the Ethiopian government began rolling out an ambitious new unpaid CHW program: the “Women’s Development Army” (Amharic: yesetoch lemat serawit), sometimes referred to (in English) as the Health Development Army. Aimed at addressing the
high workload of paid Health Extension Workers, the Army is supposed to incorporate the vast majority of the adult women living in rural Ethiopia (FMOH 2011). One woman out of every six households is to become a “1-to-5” (Amharic: ande le’ammist) Women’s Development Army leader. A group of approximately six 1-to-5 leaders (hereafter, 1-5 leaders) is in turn led by a “1-to-30 leader” (hereafter 1-30 leader). 1-30 leaders serve under the direct supervision of a Health Extension Worker, and are considered by government officials to be volunteer community health workers. They are supposed to help educate and organize the 1-5 leaders and members for various activities, including immunization campaigns, antenatal and birth care seeking, and the promotion of hygiene and sanitation-related behaviors. Thus unpaid 1-30 leaders are supposed to take the burden of household outreach off the shoulders of HEWs (Teklehaimanot and Teklehaimanot 2013; FMOH 2011; CNHDE 2011). They receive no pay, and government policy is that they receive no incentives at all from donors or NGOs (Maes et al. 2015a).

Ethiopian health officials say that volunteering as a 1-30 leader in the WDA is beneficial for women (Maes et al. 2015a). Our previously reported findings, however, showed that 1-30 leaders in the WDA experience more psychosocial distress and food insecurity than other women (Maes et al. 2018). Our aim in this paper is to explain this finding by drawing on qualitative and quantitative data to test links between psychosocial and economic wellbeing and volunteer status.

Our initial comparison of 1-30 leaders and other women revealed a disparity in marital status: only 62% of 1-30 leaders were married, compared to 81% of women in the rest of the sample (p<0.001). Conversely, 22% of leaders were divorced or separated, compared to only 8% of women in the rest of the sample (p<0.001). Another 15% of 1-30 leaders were widowed, compared to 10% of women in the rest of the sample, though this difference was not statistically
significant (Maes et al. 2018). Here, we test the hypothesis that a tendency for divorced/separated and widowed women to become 1-30 leaders puts more psychosocially vulnerable women into the unpaid position. We also assess the competing hypotheses that the 1-30 role puts more work burden and psychosocial stress on women; and that the 1-30 role is psychosocially beneficial for women in some ways. Our mix of qualitative and quantitative methods addressing multiple aspects of psychosocial wellbeing allow us to test these hypotheses about the impacts of volunteering and the recruitment processes that shape the composition of this workforce.

Methods

We conducted a cross-sectional survey and ethnographic methods. The survey allowed us to examine various aspects of wellbeing among a relatively large number of women, to compare women across marital status and 1-30 leader status, and to examine a multivariate model of psychological distress. Since cross-sectional survey data cannot tell us about direction of effects or causality between associated variables, we relied on ethnographic methods to evaluate our hypotheses, suggest plausible mechanisms, and develop a clear narrative of how and why women become 1-30 leaders and what this role does for their psychosocial wellbeing.

Our formative ethnographic work also guided our design of the survey questions, for instance our checklist of stressful life events, and our survey sampling strategy. Finally, our ethnographic work was crucial in understanding the goals of various people at multiple socioecological levels, from high-level government and international officials to district level
health officials, Health Extension Workers, women in the Women’s Development Army, and their husbands (Maes et al. 2015a,b).

Survey sample

For the survey, we selected four kebeles (local government administrative areas comprising a few villages) in rural West Gojjam, Amhara State. The four kebeles were diverse in terms of distance to a paved road, accessibility, and level of activity of the Women’s Development Army. To achieve a random sample, we first asked Health Extension Workers in each kebele to prepare their own lists of current 1-30 leaders within the WDA. The number of 1-30 leaders on their lists ranged from 28 to 56. We then used a random number generator to select fifteen to twenty-five 1-30 leaders from each list. With the help of HEWs and other local guides, one of the authors (RA) approached the randomly selected 1-30 leaders to complete surveys. At the end of each survey, she asked the 1-30 leader to name the 1-5 leaders under her supervision. Using a six-sided game die, she randomly selected one to two of the 1-5 leaders from the list. She then approached them and completed surveys. She then asked each surveyed 1-5 leader to name the women who are under her leadership, and followed the same procedure for randomly selecting two to three of these 1-5 members for surveys. This procedure was followed until we reached a sample of n=422, including 73 1-30 leaders, 142 1-5 leaders, and 207 1-5 members.
Survey measures

Psychological distress symptoms

We assessed the distribution of psychological distress symptoms (i.e. depression, anxiety, and somatoform) with a 29-item version of the WHO Self-Reporting Questionnaire that was adapted for Amharic-speaking populations, known as the SRQF (WHO 1994). The SRQF incorporates eight items derived from Amharic idioms of distress, has been tested for content, construct and criterion validity (Zilber et al 2004), and has been used in previous population research in Ethiopia (Hanlon et al 2008; Maes et al 2010). Participants were presented with ‘yes’ or ‘no’ response categories for each SRQF item/symptom. Affirmative responses were coded as 1 and negative responses as 0. The number of affirmative responses was summed to create a distress symptom score for each individual. Cronbach’s alpha for this measure was 0.84. In addition, for our multivariate analysis we created a binomial variable designating high psychological distress symptom loads, using a cutoff of 8 or more symptoms. Though the SRQF is not a diagnostic tool, a cutoff of 7/8 was determined by Zilber et al. (2004) to be optimal for screening cases of mental disorder among urban Ethiopian populations.

Stressful life events

Stressful life events, including loss of property and displacement, may lead to greater psychological distress (Hadley et al. 2008; Patel et al. 1999; Hanlon 2010a). We assessed the distribution of stressful life events by asking women whether or not they had experienced 16 different events in the last year, including violence and severe forms of deprivation or loss (see Maes et al. 2018 or the supplemental online file for lists of events and SRQF items). We
developed the list of events based on the results of focus group discussions we conducted with women, in which participants were asked what kinds of difficult or challenging events are commonly experienced by women in their communities. We created a stressful life events score by summing an individual’s responses (1=yes, 0=no).

Subjective socioeconomic status
Studies in various high-income country contexts have shown that people with lower subjective socioeconomic status (SES), as measured with the MacArthur ladder (Goodman et al. 2003), have worse health, including psychological wellbeing (Euteneur 2014). The assumption is that feelings of lower status lead to frustration and shame, and then to poor health outcomes, including psychological suffering (Marmot and Wilkinson 2001). This scale has been used previously in research in rural Ethiopia, also demonstrating an association between ladder position and psychological distress (Hadley et al. 2008). Participants provided a subjective measure of SES by responding to the ladder, which presents a picture of a 10-rung ladder, anchored at the top and bottom through a descriptive text. Individuals at the top were described as “those who have the jobs that bring the most respect, the most assets, and the highest amount of schooling.” Participants were asked to show where on the ladder their own household stands (Goodman et al. 2003). The number of the rung (1-10) indicated by the participant was used as a measure of her subjective SES.

Concern with socioeconomic status
As mentioned above, researchers have hypothesized that volunteers have better health than non-volunteers because they are less concerned about their socioeconomic status, and because a high
level of concern about socioeconomic status generates distress that erodes wellbeing. Classic ethnographic work in rural northern Ethiopia suggests that women in general are strongly concerned with advancing ties to patrons in local government and, more generally, with achieving greater socioeconomic status, both personally and at the household level (Hoben 1973; Iliffe 1987). Recent ethnographic work in eastern and southern Africa also suggests that volunteers in health and development programs have serious concerns about their present and future social status (Prince and Brown 2016; Swidler & Watkins 2009). We asked participants how much they are concerned with improving their current household’s position on the ladder (i.e. socioeconomic status). Possible responses included “not at all concerned,” “concerned” and “very concerned”. In our analyses, we dichotomized responses, coding both “not at all” and “somewhat concerned” as 0, and “very concerned” as 1.

Confidence in future gains in SES
We then asked participants, “How confident are you that your household will move up the ladder in the future”? Possible responses included “not at all confident,” “confident” and “very confident”. We dichotomized these responses, coding both “not at all” and “somewhat confident” as 0, and “very confident” as 1. Greater confidence in future gains in SES is another salient aspect of psychosocial wellbeing among Ethiopians, as evidenced by ethnographic work in the southern part of the country (Mains, 2012).

Social Support
There is ample evidence that social support is a key aspect of psychosocial wellbeing and a determinant of psychological distress levels (Uchino 2006). Following Hadley and colleagues’
epidemiological work in southern Ethiopia (2009), we summed responses to seven questions that asked participants if it would be “very difficult” (=0), “difficult” (=1), “easy” (=2), or “very easy” (=3) to: get someone to watch their children; borrow a small amount of salt or coffee; get help with a big task such as building, farming or repairing; borrow 25 kg of flour; borrow money to buy medicine for their children; borrow or get 10 birr (~0.5 USD); and borrow or get 50 birr (~2 USD). Scores could range from 0 to 21, with higher scores indicating higher perceived social support. Cronbach’s alpha for this measure was 0.86.

Food and Water Insecurity
Household food insecurity refers to a situation in which households experience physically, socially, and/or economically restricted access to food of sufficient quantity and quality (including cultural preference) for a healthy life. Similarly, household water insecurity occurs when households experience restricted access to sufficient and safe water for their economic, cultural, psychological, social, and spiritual needs (Stevenson et al 2012; Hadley and Wutich 2009; Wutich and Ragsdale 2008). Research in Ethiopia and other low-income countries has demonstrated that food and water insecurity are correlates and, in some cases, important determinants of psychological distress and suffering (Wutich and Brewis 2014; Hadley et al 2012; Stevenson et al 2012, 2016; Wutich and Ragsdale 2008; Lund et al 2010).

We measured household food insecurity with the 9-item Household Food Insecurity Access Scale (HFIAS) (Swindale and Bilinsky 2006; Coates et al 2007). The HFIAS has previously been validated and used by several researchers in Ethiopia (Maes et al 2010; Dynes et al 2014; Gebreyesus et al 2015; Stevenson et al 2012). The nine items in the HFIAS ask about experiences of household food insecurity in the previous 30 days. ‘No’ responses are coded as 0.
‘Yes’ responses are followed up with a question about frequency of experience, with three possible responses: rarely (Amharic: alfo alfo, coded as 1), sometimes (ande ande gize, coded as 2), and often (bizu gize, coded as 3). Responses are summed to create a food insecurity score for each individual. Cronbach’s alpha for the food insecurity scale was 0.85.

We measured respondents’ household water insecurity with a 22-item scale, guided by methods developed in Ethiopia (Stevenson et al 2012; Hadley and Freeman 2016; for list of items, see Maes et al. 2018). ‘Yes’ responses were coded as 1 and ‘no’ responses as 0. Responses are summed to create a food insecurity score for each individual. Cronbach’s alpha for the water insecurity scale was 0.94.

Work burden
We quantified women’s work burdens by asking participants to rate their perceived work burden in 5 domains (farm, house, childcare, non-farm income generation, and health/development work for the government). Women ranked their burden for each item from 0 (no work) to 4 (heaviest burden), aided by a sketch of a woman physically burdened by a heavy pack (see Maes et al. 2018). Higher scores indicate higher self-reported workloads. We summed answers to the 5 questions to create an overall workload score that could range from 0 to 20.

Ethnographic Methods
Our qualitative work (participant observation, interviews, and document review) focused on the recruitment of WDA leaders as well as impacts of participation in the WDA. Throughout the study, we reviewed numerous documents produced by the Ethiopian government and their
international donors. We conducted qualitative data collection in the same four kebeles as the survey and in two additional neighboring kebeles to ensure a greater variety of contexts and voices. We conducted participant observation in health posts, in the homes of Health Extension Workers, and in the homes of leaders and members in the Women’s Development Army. We observed family structures, economic and social status, and workload, taking detailed fieldnotes. We also conducted two focus group discussions (one with WDA leaders and one with WDA members) in each of two kebeles, for a total of four FGDs (n=9 WDA leaders and n=12 WDA members total). These were important in understanding participants’ various concerns and hopes regarding socioeconomic status.

We conducted in-depth, semi-structured interviews with NGO, academic, and government officials in Addis Ababa (n=8, 5 men, 3 women) and Bahir Dar (n=8, 7 men, 1 woman), and with an array of other actors: district health officials (n=16, all men), Health Extension Workers (n=18), Army leaders (n=26), and Army members (n=24). We interviewed several of these women multiple times during our 4-year study, for a total of 101 in-depth interviews with HEWs, Army leaders, and Army members. For Army leaders and members who participated in in-depth interviews, we relied on convenience sampling, with the help of Health Extension Workers. We asked Health Extension Workers to help us find WDA leaders and other women from a variety of socioeconomic backgrounds. We made it clear that we did not want to talk only with women who were highly active leaders, but also with women who were less enthusiastic about the army work. More details on our sampling approach are included in the online supplemental file.¹

¹ At the district level, we interviewed the head of the district health office and one other health official who was responsible for overseeing the Health Extension Program and/or maternal and child health programs. We interviewed all of the HEWs in each of the kebeles (up to 3 / kebele). With focus groups, we asked HEWs to help us assemble available women, emphasizing our interest in hearing the voices of women from a variety of backgrounds.
2013. From June to August 2014, 2015, and 2016, we conducted follow-up and new interviews with Health Extension Workers and Army leaders, which allowed us to take advantage of the rapport that had already been established. All interviews and focus group discussions with Amharic speaking participants were conducted by co-authors YAT or RA, whose first language is Amharic. Co-authors KM and SC conducted the interviews with English-speaking officials in Addis Ababa and Bahir Dar, and sometimes participated in the interviews conducted by YAT and RA.

Analytical approach

We addressed our hypotheses by drawing on a mix of qualitative and quantitative data analyses. We entered survey data from paper forms into Microsoft Excel, then imported these data into SPSS v.23 for cleaning, variable recoding, and analyses. We transcribed digitally recorded interviews and translated Amharic-language documents and interviews into English. After creating a systematic codebook based on a priori and emergent concepts and questions, we coded interview transcripts, fieldnotes, and documents using MAXQDA. All four authors discussed the qualitative and quantitative findings extensively and at multiple stages over the four-year project period and subsequent analysis, and came to consensus on interpretations.

In some cases, women who participated in our group discussions also participated in in-depth interviews. In Addis Ababa, we interviewed officials in government, NGOs, and foundations that worked closely with the government health extension program. For example, we interviewed an Ethiopian social scientist who had recently studied the motivations of unpaid CHWs in rural Ethiopia, the Director of the Health Extension Program in the Federal Ministry of Health, the Director of Health Promotion & Disease Prevention at the Amhara Regional Health Bureau, the former Amhara regional director for an international NGO that had collaborated with Ethiopia’s HEP and WDA in our study zone, the head of the Ethiopian Public Health Institute, as well as heads or other high-level officials in John Snow International and the Gates Foundation, which are major sources of external support and technical assistance for Ethiopia’s Health Extension Program.
We first assessed the hypothesis that unmarried women in our sample are generally worse off by examining bivariate associations between marital status and an array of survey variables, including psychological distress, as well as demographic, psychosocial, and economic variables.

Next, we assessed the hypothesis that unmarried women tend to be over-selected for the 1-30 leader role, through examining the results of our interviews with WDA leaders, members, and primary recruiters (Health Extension Workers). Using both survey and qualitative findings, we then tested the competing hypotheses that the 1-30 leader role puts additional work burden and psychosocial stress on women; and that the 1-30 leader role is psychosocially beneficial for women in some ways. Since psychosocial wellbeing is a complex construct with multiple aspects, and since becoming a 1-30 leader could have different impacts on these various aspects, these hypotheses are not mutually exclusive. Finally, we fit a multivariate regression model of high psychological distress (SRQF score of 8 or more). The model included the following independent variables: 1-30 leader status, marital status, demographic and psychosocial variables, and measures of deprivation and stressful life events. We examined beta coefficients and p-values for each variable to identify which independent variables were significantly associated with the outcome.

To account for potential non-independence of data collected from members of the same 1-30 group (given our sampling strategy described above), and thus generate robust error and parameter estimates, in all of our statistical analyses we used the Generalized Estimating Equation (GEE) procedure in SPSS. We specified the subject variable as the ID number of the 1-30 leader linked to each individual respondent and the within-subject variable as the individual ID number, and set the working correlation matrix as exchangeable.

We received approval to carry out this research from the ethical review boards of Addis...
Ababa University, Middlebury College, and Oregon State University. We also received approval to carry out our research from Ethiopia’s Federal Ministry of Health and the Amhara Regional Health Bureau in Bahir Dar.

Results

The participants in this study—both WDA leaders and their peers—were deeply impoverished. Few participants in our survey had access to electricity or mobile phones. The large majority had never been to school. The majority possessed some farmland, but as in most of highland Amhara, the size of most farm plots was very small. A majority of participants said they owned their house, as is common in rural Amhara. Most houses consisted of wooden poles, mud, and thatch or corrugated iron. A majority of women participated in some non-farm income-generating activity, such as selling home-distilled alcohol to wholesalers and homegrown vegetables at market.

In focus groups, WDA leaders and other women said that poverty was a problem with clear social consequences. “If I have no money to buy soap to wash my scarf,” a WDA leader lamented, “people will say, why is she not washing her clothes? But if I wash my clothes without soap they will become more dirty, not clean and white… what can I do?”

On the other hand, women asserted, it was easy for the relatively well off to do everything needed to be socially respected. They presented examples of women whose social status transformed when they moved from severe poverty to having a little money. “If a woman
has money, then everyone will like her,” one woman said; “whatever good conduct we have, it
has no value unless we have money.”

Unmarried women in our sample (n=92) were in general worse off on a range of
economic and psychosocial variables, in comparison to married women (n=330, Table 1). In
particular, women who were not married (i.e. divorced, separated, or widowed) had lower
subjective socioeconomic status and less social support (both p<0.001), higher food insecurity
scores (p=0.004), and more psychological distress symptoms (p=0.002).

Table 1. Differences between married and unmarried women (p-values are derived from
generalized estimating equations accounting for non-independence of data).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Not married (n = 92)</th>
<th>Married (n = 330)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years, mean</td>
<td>41.8</td>
<td>32.9</td>
<td>0.000***</td>
</tr>
<tr>
<td>Any formal schooling, %</td>
<td>10.9</td>
<td>17.9</td>
<td>0.096</td>
</tr>
<tr>
<td>Schooling in years, mean</td>
<td>0.9</td>
<td>0.8</td>
<td>0.670</td>
</tr>
<tr>
<td>Psychological distress symptoms, mean</td>
<td>6.6</td>
<td>4.8</td>
<td>0.002**</td>
</tr>
<tr>
<td>8+ psychological distress symptoms, %</td>
<td>35.9</td>
<td>23</td>
<td>0.022*</td>
</tr>
<tr>
<td>Subjective social status, mean</td>
<td>3.3</td>
<td>4.8</td>
<td>0.000***</td>
</tr>
<tr>
<td>“Very concerned” about SES, %</td>
<td>64.1</td>
<td>69.1</td>
<td>0.262</td>
</tr>
<tr>
<td>“Very confident” in future SES↑, %</td>
<td>28.6</td>
<td>31.2</td>
<td>0.604</td>
</tr>
<tr>
<td>Social support score, mean</td>
<td>11.6</td>
<td>14</td>
<td>0.000***</td>
</tr>
<tr>
<td>Food insecurity score, mean</td>
<td>3.9</td>
<td>2.1</td>
<td>0.004**</td>
</tr>
<tr>
<td>Water insecurity score, mean</td>
<td>4.9</td>
<td>4.3</td>
<td>0.873</td>
</tr>
<tr>
<td># of stressful life events, mean</td>
<td>2.6</td>
<td>2.2</td>
<td>0.118</td>
</tr>
</tbody>
</table>

*indicates p < 0.1; *indicates p < 0.05; **indicates p < 0.01; ***indicates p < 0.001
1-30 leaders were more likely to be divorced, separated, or widowed, as noted above. Since unmarried women are in general psychosocially and economically worse off compared to married women, we would expect 1-30 leaders to be worse off than other women because they are more likely to be unmarried (i.e., everyday recruitment criteria and processes likely explain the association between volunteer status and wellbeing). But why are 1-30 leaders more likely to be unmarried? To answer this question, we drew on our ethnographic work.

Government documents state that 1-30 leaders are supposed to come from “model households,” which means they have adopted a bundle of health and development-related beliefs, behaviors, and technologies promoted by the government via Health Extension Workers (FMOH 2011). District health officials we interviewed also said leaders were chosen if they were “more active,” “better performing” of the Army’s intended work, and “naturally gifted” to lead other women. Multiple officials explained that leaders were the women who were able to speak freely in front of other rural women and “who accept what we teach them and implement what we tell them.” A Health Extension Worker said that the first criterion for selecting leaders is reliability “when we call them for meetings.” Several leaders themselves clarified that they had been chosen because they were seen as cooperative with government initiatives (Maes et al. 2015a,b).

HEWs and women in the WDA also explained that active cooperation with government initiatives could be an issue for married women, making them less likely to become 1-30 leaders. An HEW told us that some of the women who were preliminarily selected as 1-30 leaders were not able to take on the role because they were “under the control of their husbands,” who would not “allow them to go out of the house and do the work.” Such husbands, she explained, “don’t want their wives to be in leadership positions and stand in front of others.” The HEWs thus attempted to nominate women who were “relatively free to go out and work.” A woman who
was part of the WDA but not selected as a leader made similar comments: her community
selected a 1-30 leader not because she was “better than us in her work,” but because “she is not
married and is free to work. She can leave her home and come back when she wants, as there is
no one who will influence her.”

When married women were able to carry out WDA work, it was often because their
husbands were involved with government work. HEWs explained that some men with good ties
to government officials—maintained largely through supporting (with their own labor)
government initiatives aimed at improving agricultural productivity, installing basic
infrastructure, and conserving natural resources—wanted their wives to volunteer as WDA
leaders to further demonstrate their family’s commitment to government initiatives.

Thus, 1-30 leaders were a mix of very vulnerable women and ones with relatively strong
ties to government officials. We now turn to the competing hypotheses that the 1-30 leader
position leads to more stress and a decrease in wellbeing for some women, and conversely,
provides some psychosocial benefits for women.

*Does the volunteer role add stress to women’s lives?*

To test the hypothesis that the volunteer role puts additional work burden and
psychosocial stress on women, we first examined our qualitative data. In our interviews with 1-
30 leaders, many complained about the unpaid work they were expected to do, in some cases
emphasizing the large amount of data collection and paperwork they did (Maes et al 2015b). Our
survey data also show that 1-30 leaders have greater work burdens. We have previously reported
that 1-30 leaders who participated in our survey had significantly greater overall work burdens
compared to other women, and that this is due to an increased amount of “health/development-related work for the government” (p<0.001; Maes et al. 2018). It is clear that the higher workloads among 1-30 leaders is not a result of recruitment practices, but rather an impact of becoming a 1-30 leader.

We report here for the first time that, interestingly, marital status again emerged as important in bringing added psychosocial stress upon 1-30 leaders. The primary problem had to do with gossip among women. One HEW told us that, in their communities, women with husbands tend to gossip about women without husbands, saying they are relatively immoral, unethical, or lazy. Another HEW told us that 1-30 leaders also become targets of gossip:

There are some [1-30 leaders] who tell us that people are saying rumors behind them, saying that [women who become 1-30 leaders] are lazy and that is why they are going to government offices frequently and going here and there [i.e. looking for government support/patrons instead of doing other work like everyone else]. [1-30 leaders] have told us this when we ask why they are absent [from meetings]. They told us they are afraid of the rumors and verbal abuse of their neighbors.

If unmarried women are the targets of gossip about being immoral and lazy, and 1-30 leaders become targets of similar gossip, the 1-30 role would seem to be particularly treacherous for unmarried women, leading to feelings or ascriptions of inferiority and immorality vis-à-vis other women. The story of Eleni (pseudonym), a 1-30 leader whom we followed closely over the years of our research, illustrates this. In 9th grade, Eleni was raped by an older man. She became pregnant and gave birth to a daughter, who was 7 years old when we met her. Under
economic and social pressure from her parents and community, she ended up marrying her rapist. Burdened by motherhood and her husband, she did poorly in high school and was not able to continue past the 10th grade. Her husband later started drinking heavily. After a few years, as soon as divorce became a viable option for Eleni, she divorced him.

By the time we met Eleni, she was also raising her 3-year-old son, living in one room on her family’s property, with her parents’ meager support. She told us she wanted to start her own small business so she could be her own boss and support herself and children. She was energetic, smart, ambitious, and hopeful about the future, but at the same time she was very troubled by the social and economic difficulties she faced. She said she was somewhat fulfilled by playing the 1-30 leader role. Eleni was warm, enthusiastic, hospitable, and generally very easy to like. Still, at times she struggled with gaining respect from her peers.

At the 1-30 meetings led by Eleni that we attended, several times a relatively wealthy, married, well-respected woman had to intervene to maintain order on Eleni’s behalf. When we talked to this woman later, she explained that “many women begrudge” Eleni for making demands on them through the 1-30 program, and “just oppose her.” A few other 1-30 leaders also said that their 1-30 leader positions sometimes led to friction with their neighbors. “The community members think and act as if we are being paid for our work,” one explained.

Our survey data back up the suggestion that the 1-30 leader role can make women—particularly unmarried ones—the subject of gossip. Being the subject of local gossip was one of the stressful life events that we assessed in our survey. Not only were 1-30 leaders more likely than other women to report being the subject of local gossip (29% versus 17%, p=0.019) (Maes et al. 2018); additionally, our current analyses show that unmarried 1-30 leaders were more likely to report being the subject of gossip than married 1-30 leaders (35.7% vs. 24.4%), though
this difference was not statistically significant. Unmarried women who were not 1-30 leaders were only slightly more likely to report being the subject of gossip in comparison to married women who were not 1-30 leaders (18.8% vs. 16.5%, also n.s.).

It is possible that unmarried 1-30 leaders experience a slight drop in social support after taking on the role; however, we did not observe any clear evidence of this. Since there was a more pronounced and statistically significant difference in social support comparing married to unmarried women (14 vs. 11.6, p<0.001), we interpret the lower social support among 1-30 leaders as likely a result of recruitment practices that targeted or attracted unmarried women. Likewise, with food insecurity: 1-30 leaders were more likely than other women to report some aspects of food insecurity, namely skipping meals and eating smaller amounts of food (Maes et al. 2018). Yet there was a more pronounced and statistically significant difference in food insecurity comparing married to unmarried women (p=0.004). Since 1-30 leaders reported higher workloads than other women, it is possible that 1-30 leaders skipped meals and ate less, due to a lack of time rather than a lack of food (cf. Steege et al 2018). However, since nobody talked about the 1-30 role leading to difficulties with accessing food, we interpret the more common experiences of food insecurity among 1-30 leaders as likely a result of recruitment practices.

Finally, we found evidence in our survey that 1-30 leaders have particularly elevated psychological distress symptom loads, and are much more likely to report 8 or more symptoms (Maes et al. 2018). Very similar differences were observed in the present analysis when comparing unmarried women to married women: average symptom loads were higher among unmarried women (6.6 vs. 4.8, p=0.002), and they were more likely to report 8 or more symptoms of psychological distress (36% vs 23%, p=0.022). Given our findings that unmarried
1-30 leaders were more likely to report being the subject of gossip, we examined distress symptom loads across both marital status and 1-30 leader status. As shown in Table 2, unmarried 1-30 leaders reported the highest average symptom loads (6.8) and rate of 8 or more symptoms (46.4%). Using married women who are not 1-30 leaders as the reference group in a generalized estimating equation of the continuous outcome (SRQF score), we observe that unmarried 1-30 leaders report significantly higher symptom loads (beta=2.05, p=0.017). Married 1-30 leaders also report higher symptom loads, yet the contrast is smaller (beta=1.43, p=0.048; Table 3).

Thus, especially for unmarried women, becoming a 1-30 leader may lead to a significant rise in psychological distress.

Table 2. Psychological distress symptoms (raw SRQF scores and % of participants reporting 8 or more symptoms) by 1-30 leader and marital status. Betas and p-values are derived from a generalized estimating equation of the continuous outcome (SRQF score), accounting for non-independence of data.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Symptoms (mean)</th>
<th>8+ symptoms</th>
<th>Beta</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unmarried 1-30 leaders</td>
<td>28</td>
<td>6.8</td>
<td>46.4%</td>
<td>2.05</td>
<td>0.017*</td>
</tr>
<tr>
<td>Unmarried other women</td>
<td>64</td>
<td>6.5</td>
<td>31.3%</td>
<td>2.04</td>
<td>0.007**</td>
</tr>
<tr>
<td>Married 1-30 leaders</td>
<td>45</td>
<td>6.0</td>
<td>31.1%</td>
<td>1.43</td>
<td>0.048*</td>
</tr>
<tr>
<td>Married other women</td>
<td>285</td>
<td>4.6</td>
<td>21.8%</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td>Intercept</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.28</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

*indicates p < 0.1; *indicates p < 0.05; **indicates p < 0.01; ***indicates p < 0.001
Is the volunteer role psychosocially beneficial?

To test the hypothesis that the volunteer role is psychosocially beneficial in some ways, we also drew on a mix of qualitative and quantitative data. First, we found that some 1-30 leaders said it made them feel happy to serve their community (cf. Jigssa et al 2018). Our survey also showed that 1-30 leaders were more likely than other women to feel “very confident” in achieving future gains in social status (41% vs. 28%, p=0.034). Marital status again was an important factor in the distribution of such confidence. Nearly 50% of married 1-30 leaders were “highly confident” in achieving future gains in SES; for all other groups, the percentage was around 28%. In a generalized estimating equation of the dichotomous outcome (“highly confident”), married 1-30 leaders were significantly more likely to be highly confident than all other groups except unmarried 1-30 leaders (Table 3).

We found no significant difference in current subjective SES (ladder position) between 1-30 leaders and other women (mean = 4.3 vs. 4.5; p=0.571). However, married 1-30 leaders did report higher subjective SES in comparison to other women. The highest average subjective SES was reported by married 1-30 leaders (5.2 out of 10) (Table 4). In a generalized estimating equation of the continuous outcome (subjective SES) with married women who are not 1-30 leaders as the reference group, we observe significantly lower status among unmarried other women (beta = -1.3, p<0.001), even lower status among unmarried 1-30 leaders (beta = -1.7, p<0.001), and higher status among married 1-30s (beta=0.5, p=0.121) (Table 4).

Our qualitative data suggest that married 1-30 leaders’ pre-existing government connections were responsible for their higher subjective SES and greater confidence in experiencing positive change in their lives. These differences may also be due in part to feelings
that, by becoming 1-30 leaders, they were *pleasing* government patrons, which may in turn lead to feelings of higher SES and confidence in encountering socioeconomic opportunities in the future. However, there was not strong evidence to support this. Many 1-30 leaders told us they had joined the WDA hoping to make connections with government officials and obtain money and property that could help them, for instance, start a small business in cooperation with other 1-30 leaders. Unfortunately, many were disillusioned when it became clear that 1-30 work was not quickly leading to new opportunities that could generate improvements in their material lives. “I mean, I can say there has been a change in my knowledge,” said one leader, when asked what she gained from the program. “But there has not been any change at all in my living conditions.”

**Table 3.** Confidence in achieving future gains by 1-30 leader and marital status (Betas and p-values are derived from a generalized estimating equation accounting for non-independence of data).

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>“Highly Confident” (%)</th>
<th>Beta</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unmarried other women</td>
<td>64</td>
<td>28.6</td>
<td>-0.90</td>
<td>0.033*</td>
</tr>
<tr>
<td>Unmarried 1-30 leaders</td>
<td>28</td>
<td>28.6</td>
<td>-0.90</td>
<td>0.077*</td>
</tr>
<tr>
<td>Married other women</td>
<td>285</td>
<td>28.4</td>
<td>-0.88</td>
<td>0.010*</td>
</tr>
<tr>
<td>Married 1-30 leaders</td>
<td>45</td>
<td>48.9</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td>Intercept</td>
<td>-</td>
<td>-</td>
<td>0.03</td>
<td>0.926</td>
</tr>
</tbody>
</table>

*indicates p < 0.1; *indicates p < 0.05; **indicates p < 0.01; ***indicates p < 0.001
Table 4. Subjective socioeconomic status (ladder position) by 1-30 leader and marital status (Betas and p-values are derived from a generalized estimating equation accounting for non-independence of data).

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Subjective SES (mean)</th>
<th>Beta</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unmarried other women</td>
<td>64</td>
<td>3.4</td>
<td>-1.34</td>
<td>&lt;0.001***</td>
</tr>
<tr>
<td>Unmarried 1-30 leaders</td>
<td>28</td>
<td>3.0</td>
<td>-1.73</td>
<td>&lt;0.001***</td>
</tr>
<tr>
<td>Married 1-30 leaders</td>
<td>45</td>
<td>5.2</td>
<td>0.45</td>
<td>0.121</td>
</tr>
<tr>
<td>Married other women</td>
<td>285</td>
<td>4.7</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td>Intercept</td>
<td>-</td>
<td>-</td>
<td>4.47</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

*indicates p < 0.1; *indicates p < 0.05; **indicates p < 0.01; ***indicates p < 0.001

Finally, we examined whether or not 1-30 leaders have less concern for their household’s SES, which could play a role in reducing their levels of distress (Borgonovi 2008; Gibbons 1999; Kawachi and Kennedy 1999). 1-30 leaders who participated in the survey were, however, just as likely as other women to be “very concerned” about their household’s SES (p=0.481). Approximately two thirds of women in both categories were “very concerned”. In addition, marital status was not correlated with this variable (p=0.262). This is consistent with the qualitative data presented above: women including 1-30 leaders were deeply and chronically concerned about improving their socioeconomic status.
Multivariate model of psychological distress

We have shown so far that (1) recruitment practices likely explain why 1-30 leaders tend to be worse off than other women; (2) the 1-30 position comes with more work burden and vulnerability to gossip (especially for unmarried women); and (3) the 1-30 position appears also partially beneficial, though only to a limited extent and only for married women’s subjective SES and confidence in achieving future gains in SES. In the final stage of our analysis, we examined a multivariate model of the dichotomous outcome of 8 or more psychological distress symptoms. In the model (Table 5), we included the dummy variables for marital status, 1-30 leader status, and their interaction (the latter allows us to examine if the association between 1-30 leader status and the outcome is different for married versus unmarried 1-30 leaders). None of these variables were significantly associated with the outcome. Instead, elevated symptom loads were associated with more stressful life events (beta=0.48, p<0.001) and higher scores on both the food (beta=0.19, p=0.001) and water insecurity scales (beta=0.06, p=0.037). Participants who were “very confident” in achieving future gains in SES tended to have less than 8 psychological distress symptoms (beta= -0.60, p=0.086), as did participants with more social support (beta=-0.05, p=0.033). Subjective SES, being “very concerned” with one’s SES, and workload were not associated with the outcome.
Table 5. Multivariate GEE predicting outcome of dichotomous SRQF scores (8 or more psychological distress symptoms).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Beta</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>0.01</td>
<td>-1.19, 1.21</td>
<td>0.991</td>
</tr>
<tr>
<td>1-30 leader</td>
<td>-0.57</td>
<td>-1.38, 0.25</td>
<td>0.173</td>
</tr>
<tr>
<td>Marital x 1-30 leader status (interaction)</td>
<td>0.24</td>
<td>-1.12, 1.60</td>
<td>0.731</td>
</tr>
<tr>
<td>Subjective SES (ladder score)</td>
<td>0.03</td>
<td>-0.15, 0.21</td>
<td>0.732</td>
</tr>
<tr>
<td>“Very concerned” about SES</td>
<td>0.10</td>
<td>-0.51, 0.71</td>
<td>0.743</td>
</tr>
<tr>
<td>“Very confident” in future SES†</td>
<td>-0.60</td>
<td>-1.29, 0.09</td>
<td>0.086*</td>
</tr>
<tr>
<td>Social support</td>
<td>-0.05</td>
<td>-0.10, -0.004</td>
<td>0.033*</td>
</tr>
<tr>
<td>Workload</td>
<td>-0.04</td>
<td>-0.12, 0.04</td>
<td>0.317</td>
</tr>
<tr>
<td>Water insecurity</td>
<td>0.06</td>
<td>0.004, 0.12</td>
<td>0.037*</td>
</tr>
<tr>
<td>Food insecurity</td>
<td>0.19</td>
<td>0.08, 0.29</td>
<td>0.001**</td>
</tr>
<tr>
<td>Stressful life events‡</td>
<td>0.48</td>
<td>0.26, 0.70</td>
<td>0.000***</td>
</tr>
<tr>
<td>Intercept</td>
<td>-2.12</td>
<td>-3.93, -0.31</td>
<td>0.021</td>
</tr>
</tbody>
</table>

‡indicates p < 0.1; *indicates p < 0.05; **indicates p < 0.01; ***indicates p < 0.001

*To avoid over-adjusting the multivariate model, we excluded the item regarding “being the subject of gossip” from the stressful life events score used in this analysis.

Discussion

How does volunteering impact wellbeing in non-western, low-income settings? We addressed this overlooked but important question by focusing on the experiences of women participating in a national community health worker program in rural Amhara, Ethiopia. We have shown that unpaid CHWs who participated in our survey were just as likely as other women to be very concerned about their household’s SES. This counters the hypothesis that comes from studies in high-income settings, that volunteers are less concerned about their SES (Borgonovi 2008). Thus in contexts of deep poverty and uncertainty, we should not necessarily expect that people who volunteer to work without pay have less concern for improving SES. Women’s decisions to become WDA leaders are better understood as forms of “judicious opportunism,” driven by deeper concerns about securing their future socioeconomic status in a context of
widespread political-economic uncertainty (Johnson-Hanks 2005; Cliggett et al. 2007; Ellison 2009). Poverty is a deep social problem for rural women, who hoped to benefit from WDA work.

We have also shown that these unpaid CHWs are actually worse off than their peers in various psychosocial and emotional respects (Maes et al. 2018), which is in stark contrast to volunteers in western high-income settings, who tend to have better wellbeing than their peers. While the disparity we observed is likely due largely to practices of CHW recruitment, our mixed dataset suggests that the unpaid role is also stressful in some important ways for many women. Thus while the WDA program aims to improve health and take a large portion of the burden of health promotion work off the shoulders of paid Health Extension Workers, it also creates new forms of social suffering involving unpaid, government-mandated work for already burdened women, as well as new inequalities between women. These unintended consequences are shaped by local gendered hierarchies and politics, including: rural households cooperating and competing to eke out small gains in socioeconomic status through farming and entrepreneurship; married women marginalizing unmarried women; men dominating most household decision-making and women’s labor; and men seeking to connect with government patrons, who at the time of our research were generally members of a long-ruling party that had become increasingly authoritarian in its attempt to get Ethiopians to cooperate in multiple state-led efforts to achieve rapid economic “development and transformation” (Østebø et al. 2018).

These kinds of unintended consequences are commonly documented by feminist ethnographers studying structural interventions that, like Ethiopia’s WDA, intend to ameliorate gendered disparities in wellbeing by pragmatically “capitalizing” on women’s unpaid labor while giving little attention to local socioeconomic hierarchies and root causes of poverty and social
injustices (Parikh 2012; Chant 2010). Ethnographic research using mixed methods is uniquely capable of illuminating the unintended consequences that unfold beneath superficial government plans and discourses about, in this case, empowering model women to play active roles in health care and promotion.

Our multivariate analysis allowed us to examine which variables are most strongly associated with elevated psychological distress among women in our sample, and thus to contribute to research demonstrating that poverty-related stressors like food insecurity and stressful life events (e.g., loss of property, displacement) are important determinants of psychological distress in low-income countries (on Ethiopia, see e.g., Hadley et al. 2008; Hanlon et al. 2009). In our multivariate model of elevated psychological distress, 1-30 leader status is overshadowed by stressful life events, as well as the experience of food and water insecurity. It is important to keep in focus these basic aspects of quality of life: regardless of 1-30 leader status, large numbers of women in rural Ethiopia experience food and water insecurity, stressful life events, and psychological distress, and these social and emotional experiences are deeply connected. They also have very heavy workloads and, at times, a deficit of social support.

We have shown that the WDA program tends to recruit women who are divorced, separated, or widowed to take on the unpaid 1-30 leader role. This could be positive, if these positions offered a significant rise in wellbeing. Unfortunately, our study suggests they did not. Instead, unmarried Ethiopian women, who are already more vulnerable and distressed (CSA and ICF 2016; Kumar and Quisumbing 2015), come into an unpaid position that burdens them with more work, places them at the bottom of a hierarchy of paid government health workers and officials who expect them to follow orders, and makes them the target of negative gossip among
other women (who, according to government expectations, are supposed to emulate these “model” women).

Our qualitative and survey data consistently demonstrated the importance of marital status in structuring disparities in multiple aspects of wellbeing among women, with negative implications for unmarried women. More than 46% of unmarried 1-30 leaders reported 8 or more psychological distress symptoms. This is a high rate relative to their married peers and to other populations in Ethiopia (e.g., Hanlon et al 2010b; Maes et al 2010) and other low-income countries (Patel et al 1999; Patel and Kleinman 2003). For married women, in contrast, becoming a 1-30 leader appears to be slightly beneficial in some ways, leading to slight increases in subjective SES and confidence in achieving gains in SES in the future. However, married women have higher social status to begin with in comparison to unmarried women. Thus married women who become 1-30 leaders avoid the potential added gossip that befalls unmarried women in the leader position, and see their leader role as an opportunity to perhaps solidify ties to more powerful local patrons in the government, consistent with studies of volunteerism in the health/development sector in other countries in Africa (Kaler and Watkins 2001; Swidler and Watkins 2009).

The critical social science literature on volunteering in health and other programs in Africa indicates that such volunteering has become a central neoliberal practice, in which state and non-state actors call on individuals to fulfill social obligations that many consider the responsibility of the state (Swidler and Watkins 2009; Prince and Brown 2016; Wig 2016). Colvin (2016) illustrates these points through study of volunteer CHWs in post-apartheid South Africa, arguing that such work has become a way for the state to efficiently meet the health needs of its population. Colvin finds that such volunteers “are optimistic that their newly
acquired knowledge will translate into new work opportunities,” but that more sustainable, paid work opportunities rarely materialize in an “increasingly professionalized civil society” (34).

A growing ethnographic literature further shows that unpaid work for health programs in low-income contexts is taken up by people who greatly need paid work but cannot obtain it, and who hope that volunteering will eventually lead to a paid position. This dynamic persists across a striking variety of contexts, from polio eradication campaigns in urban Pakistan (Closser 2018), to HIV care in Malawi, Mozambique, and Ethiopia (Rosenthal 2017, Maes and Kalofonos 2013, Swidler and Watkins 2009).

Our findings lead us to raise a number of policy options and recommendations. First, in contexts of deep poverty, policy makers and health officials should not assume that community health volunteers simply enjoy psychosocial benefits. “Volunteer” is furthermore an inappropriate label for the kinds of roles and activities assigned to unpaid workers in such contexts. Though the Ethiopian government and international donors use the term “volunteers” for these unpaid workers, many of these women are actually being cajoled into the role (Maes et al 2015b), and their financial and social situations are incomparable to those of Western volunteers.

Our findings support the policy that 1-30 leaders be paid, consistent with recommendations from the WHO made in 2008 and more recently. Payment and other forms of support for low-level workers should be viewed as essential supports for the most vulnerable health staff. Of course, the Ethiopian government would need a great deal of funding to convert the 1-30 leader position into a paid one. This is a challenge facing multiple low- and middle-income countries around the world (Dahn et al 2015). If the 1-30 leader position were paid, our study suggests this would make the position more attractive to married women (and their
husbands). Unmarried women who take on the role would at least be making money, which women generally say they want (Maes et al. 2015b). To mitigate the potential for unmarried women to be excluded from a paid 1-30 leader role, or for resentment to develop between 1-30 leaders and other women, government practice could shift from recruiting so-called “model women” for the role, to recruiting both married and unmarried women who are trusted by marginalized women in their community and willing and able to complete formal training to become effective CHWs. This would also be in line with guidelines for CHW recruitment and training globally (Perry and Crigler 2014; WHO 2018; Ballard et al. 2017). Government officials, including HEWs, could also aim to protect and enhance the status of unmarried women who take on the 1-30 leader role by publicly recognizing their dignity and their dedication to improving the wellbeing of their neighbors, and by using forms of training that aim to build trust among 1-30 leaders in a given community (e.g., Wiggins et al. 2014). Finally, our research underscores the importance of adopting rights-based approaches to achieving gender equity and more successful CHW programs, which emphasize the importance of amplifying the political voices of CHWs themselves through supporting their collective organization and participation in policy-making (Maes 2017; Meagher 2010).

Our survey’s cross-sectional design, a lack of statistical power due to sample size limitations, and the limited duration of our ethnographic work prevent us from making stronger conclusions about the direction of effects and longer-term causal relationships between psychosocial and economic wellbeing, volunteer status, marital status, and other factors. Future research should continue to evaluate claims about the wellbeing of unpaid health workers in settings of poverty. Ethnographic research in Ethiopia in particular is needed to show what
women get out of the WDA leader role and to document how political and economic changes at national and transnational levels impact the lives of rural women.

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