The experiences and challenges of community health volunteers as agents for behaviour change programming in Africa: a scoping review

Mary Ndu a,b, Ellena Andoniou a,b, Sorcha McNally a,b, Francisco Olea Popelka a, Marisa Tippett c,d and Elysée Nouveret a,b

Faculty of Health Sciences, University of Western Ontario, London, ON, Canada; bFaculty of Health Science, Western University, London, ON, Canada; cDepartment of Pathology and Laboratory Medicine, Department of Epidemiology and Biostatistics, Schulich School of Medicine & Dentistry, Western University, London, ON, Canada; dResearch & Scholarly Communications Librarian, Western Libraries, Western University, London, ON, Canada

ABSTRACT
Community health volunteers are considered a vital part of the community health structure in Africa. Despite this vital role in African health systems, very little is known about the community health volunteers’ day-to-day lived experiences providing services in communities and supporting other health workers. This scoping review aims to advance understanding of the day-to-day experiences of community health volunteers in Africa. In doing so, this review draws attention to these under-considered actors in African health systems and identifies critical factors and conditions that represent challenges to community health volunteers’ work in this context. Ultimately, our goal is to provide a synthesis of key challenges and considerations that can inform efforts to reduce attrition and improve the sustainability of community health volunteers in Africa. This scoping review was conducted using the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for scoping reviews checklist to achieve the objectives. A comprehensive search of six databases returned 2140 sources. After screening, 31 peer-reviewed studies were selected for final review. Analytical themes were generated based on the reviewers’ extraction of article data into descriptive themes using an inductive approach. In reviewing community health volunteers’ accounts of providing health services, five key challenges become apparent. These are: (1) challenges balancing work responsibilities with family obligations; (2) resource limitations; (3) exposure to stigma and harassment; (4) gendered benefits and risks; and (5) health-system level challenges. This scoping review highlights the extent of challenges community health volunteers must navigate to provide services in communities. Sustained commitment at the national and international level to understand the lived experiences of community health volunteers and mitigate common stressors these health actors face could improve their performance and inform future programs.

Introduction
The global shortage of human resources for health (HRH), especially in low-middle-income countries with limited health resources, represents a fundamental challenge to health equity. This shortage directly limits the achievement of Sustainable Development Goal (SDG) 3, which aims to ensure healthy lives and promote well-being for all, at all ages, and hinders progress on Target 3.8: achieving universal health coverage [1–4]. Strategies that countries continue to adopt and implement to address the shortage of HRH include task shifting and the introduction of various cadres of community health workers, including community health volunteers (CHVs) [5–7]

The World Health Organization (WHO) formally describes CHVs as lay health workers who are not professionally trained as healthcare professionals but have been trained to promote health within the community in which they reside [8,9]. To this definition, one can add that CHVs are community members that may or may not be elected by the populations they serve, who willingly collaborate and partner with governments, non-governmental organizations (NGOs), and others to serve members of their community without any form of compensation [10] CHVs may receive support from their government or NGOs working within the community. However, where provided, this rarely extends beyond stipends for transportation and miscellaneous expenses as an incentive for volunteering [11–13] While different health systems identify these unpaid health volunteers by different nomenclature (e.g. community health workers, community health extension workers, community health influencers and promoters, village health workers), for this scoping review, we use CHVs in reference to all community health volunteers who do not receive any wages or salary from the
government, and are distinct, if not complementary, to formal community health workers who are government employees within a country’s health system.

CHVs have become vital to achieving universal health coverage on the African continent [1,4,9,14]. Currently, and while varying from context to context, CHVs may be responsible for basic community drug distribution, providing health information, diagnostics, prevention and treatment information, tracking and encouraging treatment and vaccination compliance, and recording and reporting births and incidences of morbidity and mortality [5,15,16]. As the first contact for many community members with national healthcare systems, programmes, and services, CHVs play vital roles in gaining community trust in, understanding of, and utilising available programmes and services aiming to improve health outcomes across the globe [17]. CHVs are widely recognised as enabling the extension of national and sub-national capacities for diagnosis, treatment, monitoring, and health promotion programmes [1,4,9,14].

Despite their crucial role in supporting African community well-being and health systems, little is known about the day-to-day work and challenges of African CHVs. Advancing an understanding of CHV experiences and challenges in their roles can provide governments and programmes relying on CHVs with important insights on how best to support CHV’s in general and concerning specific performance expectations within community-based healthcare delivery or health behaviour change and promotion programmes. Hence, this scoping review aims to better understand the day-to-day experiences of a CHV in Africa. More specifically, this scoping review aims to identify critical factors or conditions that represent challenges to CHV work in Africa, analysing first-hand accounts of CHVs.

The following guiding questions informed this review. What are CHV’s experiences of this work? Do CHVs feel (de)valued, and if so, by whom, under what conditions, and on what bases? Do CHVs feel they have the supports or capacity to do the work they are tasked to do? What do CHVs define as factors or environments (Administrative? Social? Technology-related? Training-related? Other?) that enable or hinder their ability to fulfill their CHV responsibilities? Do CHVs identify unmet needs or supports for fulfilling their responsibilities? How long do CHVs stay in these roles, typically, and what factors contribute to their departure from these positions when and if they do? Are the above experiences of CHVs gendered or otherwise distinct depending on the social identity or context of the CHV’s practice?

Methods

The protocol for this scoping review was registered on Open Science Framework (OSF). The registration number is 10.17605/OSF.IO/2JZ7E, and the protocol preprint is also available on OSF Preprint at https://osf.io/hmy5t/. The team followed Tricco et al. Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR) checklist statement [18].

Literature search strategy

An academic research librarian, in consultation with the researchers, prepared a comprehensive search strategy and then conducted the literature searches in the following six databases: MEDLINE (Ovid), EMBASE (Ovid), PsycINFO (Ovid), CINAHL (EBSCOHost), Scopus, and Sociological Abstracts (Proquest). The searches were initially conducted between July 20 and 21, 2021, followed by a re-run of the searches on 5 November 2021, to ensure the most current articles were included in this review. Appropriate subject headings and numerous synonyms for the following main concepts were strategically combined and searched in this scoping review: Concept 1: All of Africa, Concept 2: Community health worker, Concept 3: Experiences/ challenges. No filters or limits were used. Results were de-duplicated using Covidence, a systematic review platform. The complete search strategy can be found in Appendix A.

Inclusion/exclusion criteria

The team developed and agreed on the inclusion criteria in dialogue with the research librarian on the team before commencing this review. Eligibility criteria included that studies be peer reviewed, published in English, and that these be focused on the experiences, challenges, motivations, and/or opinions of CHVs in Africa about their work, their role, and responsibilities in local or national healthcare systems, or in relation to specific programmes. No publication date limits were applied when searching the databases. Articles dedicated to description of salaried (as opposed to truly volunteer) CHVs were excluded. Conference abstracts, commentaries, non-English sources, and articles that did not include CHVs accounts of their experience were excluded.

Selection of sources

The articles selection process involved three phases of screening using Covidence. The first stage involved title/abstract screening. The first and senior authors of this scoping review screened the same fifty articles independently in this first phase and compared sources they viewed as eligible for full review. Discrepancies on three out of 50 articles were discussed, and consensus reached on their inclusion/exclusion. During the title/abstract screening phase, articles which were not clear
were retained for full-text review. The first author completed the full text review, consulting with the senior author when unsure about inclusion/exclusion. References of selected articles were also manually searched for relevance.

**Data charting**

In extracting and analysing data from the sources, the team used Thomas and Harden’s proposed three stages of thematic synthesis: coding the data line-by-line according to its meaning, developing descriptive themes from the data, and generating analytical themes based on the reviewers’ interpretative construct of the descriptive themes. As an inductive approach, thematic synthesis provides a critical lens to generate high-level themes that capture the key messages from multiple qualitative data [19,20].

First, a data extraction template was developed to collate relevant data from the studies (see Appendix B for table of characteristics). This was done using a partial double extraction process to reduce errors during the process [20,21]. Two members of the team with moderate and substantial literature review experience independently developed data extraction templates based on a review of the same ten articles. This involved coding the data line-by-line according to its meaning and developing descriptive themes that could capture patterns each reviewer perceived within the data and that corresponded to the review objective of understanding the lived experiences and challenges of a CHV. The moderate and substantial compared extraction tables and reached a consensus on critical themes and definitions to guide subsequent data extraction. The minimally and moderately experienced reviewers respectively, divided up the remaining articles and completed the data extraction using the agreed-upon criteria and extraction table. The first author reviewed minimally experienced reviewer’s extraction for completeness and coherence, having read the articles. Additionally, the experienced reviewer reviewed the completed data extraction tables to ensure consistency in categorising extracts.

The final step involved meeting to discuss and agree on key analytical themes and messages for analysis. Analytical themes were generated beyond the descriptive themes outlined in the studies. To do this, each reviewer independently considered the themes and messages contained in the studies and generated themes based on their understanding. The results are presented in a thematic format with direct quotes from extracted interviews with CHVs in the studies reviewed.

**Data item**

The team extracted data on the studies’ characteristics including country of origin, study type, year of publication, intervention area, study participants, contextual factors i.e. gender, participant role, education, years of experiences and study location.

**Results**

**Selection of sources of evidence**

A total of 2140 articles were retrieved from database and other methods of searches. After removing duplicates, we identified 1240 articles for screening. During the title and abstract screening, an additional 1175 articles were excluded, with 65 retained for full text screening and retrieval. Of these, two articles could not be retrieved. Of the 63 assessed for full text screening, 33 were excluded for the following reasons: Exclude assessments of CHV practice that do not ask CHVs about their experiences of that practice (n = 5); Exclude description of interventions that use CHVs, but do not speak to them to learn of their experience using intervention (n = 8); Exclude feasibility studies prior to implementation of a programme (n = 2); Studies that involved interviewing CHVs only to better understand a health outcome or behaviour (n = 10); Wrong geographic focus (n = 3); Does not meet the eligibility criteria (n = 5). A total of 31 studies were selected for final analysis. Details of the sources are presented in the below PRISMA diagram Figure 1.

**Characteristics of sources of evidence**

Sources retained contained a mix of studies (20 qualitative; 3 quantitative; 8 mixed quantitative/qualitative). Ten studies (32%) were health systems strengthening (HSS) interventions; 8 studies (26%) HIV/AIDS and TB; 5 studies (16%) maternal, newborn, and child health (MNCH); 2 studies (6.5%) palliative care and 2 studies (6.5%) malaria; while the remaining percentage was split between 1 study on family planning, 1 study on social and behaviour change communication (SBCC) and 1 study on eHealth at 3.1% each. One study did not mention an intervention. The studies were conducted in urban, semi-urban, and rural areas in African countries: Ethiopia, Kenya, Malawi, Nigeria, Rwanda, Sierra Leone, Liberia, Democratic Republic of Congo, South Africa, Tanzania, Uganda, Zambia, Mozambique. Participants in the studies reviewed included a mix of male and female volunteers. Most of the CHVs reported being married with children with volunteering experience ranging between five months to 20 years. Some of the studies reported on the educational level of the CHVs, with most of the CHVs having either completed primary or secondary level education. Two studies included some CHV participants with post-secondary education [22,23].
For more details on the study characteristics see Appendix B.

In terms of the focus of the studies, eight were conducted to examine volunteer health worker participation and performance in community interventions [22–28] while 17 examined the motivational factors that could improve the retention and performance of volunteers at the community level [29–50].

**Synthesis of results**

Presented below are key themes that emerged from the studies that addressed the first-hand accounts of CHVs’ experiences and challenges in Africa.

**Challenge of balancing responsibilities with family obligations**

One common challenge that emerged across several studies, especially for female CHVs, was the challenge of balancing or managing CHV responsibilities alongside family obligations. Six of the thirty-one studies reported that family and spousal support play a crucial role in CHVs’ work-life [24,29–31,37,40,41]. Family obligations were noted as coming under pressure due to being a CHV, including income-generating activities to support the family, household chores, and spending quality time with children. Many CHVs underlined the particularly demanding nature of their volunteer role. They report that often, fulfilling CHV responsibilities could and did require responding to community members at all hours, including in the middle of the night and during meal preparation times. Findings show that volunteering can and often does result in neglecting income-generating activities. Thus, in two studies, CHVs who already have casual jobs, businesses, and farming as sources of income felt forced to make a choice between volunteering and earning income to support their families:

Even the time I spend going around households can be converted into loss income because I can use that time farming or selling produce … but I cannot think like that because I’m passionate about improving my community [41, p.5]

My potato frying business [is] in the evening or making porridge in the morning. … If I am needed somewhere, my business has to close. … those potatoes usually get spoilt; they won’t find another person to sell them [FGD 6–KALOLENI] [31, p. 6]

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**Figure 1. PRISMA diagram.**

| Identification of studies via databases and registers | Identification of studies via other methods |
|------------------------------------------------------|------------------------------------------|
| Records identified from Databases (n = 2140)          | Records identified from Websites (n=0)  |
| Registers (n = 0)                                     | Organisations (n=0)                      |
|                                                      | Citation searching (n=3)                 |
|                                                      | Other reviews (n=0)                     |
| Records screened (n = 1240)                           | Records sought for retrieval (n=3)      |
| Records excluded (n = 1175)                           | Records not retrieved (n = 0)            |
| Records sought for retrieval (n = 65)                 | Records assessed for eligibility (n = 3) |
| Records not retrieved (n = 2)                         | Records excluded: Community based study (n=2) |
| Records assessed for eligibility (n = 63)             | Records excluded: 33                    |
|                                                    | - Exclude assessments of CHV practice    |
|                                                    |   that do not ask CHVs about their      |
|                                                    |   experiences of that practice (n=5)    |
|                                                    | - Exclude description of interventions  |
|                                                    |   that use CHVs, but don’t speak to    |
|                                                    |   them to learn of their experience     |
|                                                    |   using intervention (n=8)              |
|                                                    | - Exclude feasibility studies prior to  |
|                                                    |   implementation of a programme (n=2)   |
|                                                    | - Studies that involved interviewing    |
|                                                    |   CHVs only to better understand a      |
|                                                    |   health outcome or behavior (n=10)     |
|                                                    | - Wrong geographic focus (n=3)          |
|                                                    |   Does not meet the eligibility criteria |
|                                                    |   (n=5)                                  |
| Studies included in review (n = 31)                   |                                         |
My child needs school fees but I say wait for a while. If you see patient, I use my money. I don’t know where God is. We don’t have job. Now, we have a problem because cost of life is high and there is no job.’ [Female, CHW3, Group 2] [33, p. 842]

Some CHVs reported feeling discontent and disapproval from families for spending so much time on volunteer work when they could engage in more profitable jobs [24,29]. Findings indicate that CHVs, especially women, are expected to maintain their roles in the family while volunteering. The following quote, taken from a study with CHVs called Mentor Mothers in the study’s country context, provides a window into the sorts of tension on the home front CHVs may need to navigate alongside their community health work:

Another Mentor Mother [MM] shared tensions that had arisen in her household, where she as a young wife (makot) was expected to plan meals and clean. After accompanying a client to an emergency clinic visit, she recalled, “I arrived at home past eight, and when I got home, I saw the mood had changed, but I told myself that what matters is I helped the baby” (MM6) [25, p. 1255]

Several CHVs reported struggling with creating a work-life balance, and feeling they are neglecting their families’ needs to fulfill their CHV responsibilities. Findings reveal female CHVs are particularly torn between their commitments to their CHV role, and their socially normative role as homemakers. Female CHVs’ narratives indicate that many face a triple burden of care because of their CHV positions, integrating CHV work alongside income-earning activities, while still being the person in their household with primary responsibilities for domestic work. A quote from one CHV in Kenya saying:

For now, I have a grandchild whom I am taking care of. My challenge is, I have to look for someone [to] leave my grandchild with before I can go to the community. Sometimes I leave her [childcare] and tell her, ‘I will give you anything that I get [payment]. Or sometimes when I am called for a seminar and I leave the same person [childcare] with my grandchild, she also hopes to get something [to be paid]. [FGD 4–RABAI] [31, p. 5]

Some CHVs reported family members playing a role in supporting individuals’ fulfillment of CHV responsibilities by providing moral support, and by taking on an extra farm or domestic work, including responsibilities for cooking, washing clothes and rearing children in the case of women. CHVs reported how the need to improve their family’s economic status and support the family financially often competed with their volunteering. The reported unremunerated nature of the job made it hard for these CHVs to provide necessities for their children, as exemplified by the following quote from a study in Kenya:

At the end of the month, the [CHVs] were not paid enough, and they had been working. They, therefore, could not supply their families with some of their basic needs, so they decided to leave the job. (2013, Female FGD 2, Eldoret West). My children can’t get the basic needs like soap and you can’t tell the community about being clean when the CHV is not clean. (2015, Female, FGD 3, Eldoret West) [30, p. 97]

Where CHVs reported an inability to provide what they regarded as sufficient financial support to their family due to their CHV time commitments, this was reported as stressful. The experience of primary responsibilities being frequently neglected because of CHV duties also emerges in the literature as resulting, at least for some CHVs, in feelings of hopelessness and mental stress:

Now at least three times in a week, I wake up [in the middle of the night]. I think about my family, about supporting them with a good job. I will not sleep until the next day. There is no happiness with me. When I can’t sleep, I will feel depressed all day. [38, p. 56]

One MM described ‘leaving the pots on’ after she had started making dinner to put on her uniform and go help a client who had called with an emergency. You don’t ever think that you supposed to tell the manager that today, I left work at five, the only thing you think is that I have to help this person, [it] doesn’t matter what time I knock off, I’m not supposed to say I’m rushing for 14:00, rather this person die because you want to knock off at 14:00 (MM6). [25, p.1253]

Some CHVs noted that pressures on income-earning activities from CHV work were offset somewhat by the provision of support in the form of stipends for transportation and materials [29,30,41]. Other CHVs especially men reported and appreciated receiving payments and in-kind support from community members, for example in the form of food and help with farm work, in exchange for services they provided [31].

Limited resources
Financial and logistical challenges such as non-remuneration, stipends for transportation, stock out of medicines, lack of uniform and badges facilitating their identification as health workers, and lack of training to provide additional services needed in their communities, were among the critical challenges CHVs reported encountering in their roles [23,24,26–31,34,36–38,40,42,45]. Many volunteers especially reported motivation to volunteer and improve their knowledge as linked to a commitment to helping their families and community. Although, male CHVs reported aspiration to move to higher positions in government offices, NGOs, or political offices.
at the local level as the motivation to work as CHVs. However, and related to CHV responsibilities and family conflicts noted above, many CHVs also reported the absence of stipends or payments that might offset the time they commit to CHV work as constituting a significant challenge. In one study in Zambia CHVs reported:

Our stipend is too little, and we sometimes spend three months without receiving it." [47-year-old Setswana-speaking female from JS Moroka sub-district)] [43, p. 417]

In another study in Ethiopia, CHVs reported:

We have to take our children to school, but we are not after money more than we want to help the community. But we need money for crèche [daycare] [49, p.146]

Studies reported that the stress produced by a lack of resources available to CHVs to fulfill their responsibilities extended beyond the issue of stipends [41,48], and that some CHVs have incurred additional financial burdens resulting from wanting to provide care to community members without resources being allocated to them to do so. CHVs reported, for example, providing food items to patients and spending personal funds to buy materials such as lamps, kerosene, candles, and torches/flashlights. In South Africa, one CHV notes:

You have to share that little amount you are earning, to give a client to buy some bread and at some point, we used to give some soups to the patients from our own families to help them, just because we have a conscience, they do not have food and we cannot report it to our seniors as they will tell you that there is no food to give to the clients. . . . Sometimes we do not have . . . [Olga, Female, 30] [42, p. 5]

Studies also showed that stock out of medicines and inconsistent supply of resources affected the CHVs’ performance and effectiveness in providing services to their communities. In some communities, CHVs were placed in unpleasant and frustrating positions because they were perceived as withholding medicines and materials from needy communities. So much so, that there were times when the community would not trust the CHV:

People always ask me why we don’t receive medicine, yet we got this box. It affects me because we are the immediate health workers who have to give first aid to the people, so it frustrates me and them when there is nothing to give! (Male CHW, 67 years old) [39, p. 393]

In some settings, CHVs reported having limited access to opportunities to develop their skills. According to studies, CHVs might be expected to limit their efforts to basic health promotion and disseminating non-prescription medications, such as family planning methods. However, they often had to assume additional health service responsibilities in practice since they are often the only healthcare providers in remote areas. CHVs reported wanting further training, for example, to provide more comprehensive information and services inclusive of non-communicable diseases like cancer and diabetes and detecting gender-based violence. CHVs in one study in Uganda state:

We appreciate the trainings we have had on child health, but we don’t get enough in other diseases like diabetes, eye disease, cancer . . . and there is a weakness in supervision. [Male CHW, 45 years old] [39, p. 391]

After initial CHV training, it appears that there is a lack of refresher courses. This lack suggests there is no appreciation, or little appreciation towards the CHVs contributions and in turn, discourages some CHVs from continuing with the programme [51]. As Kweku et al. [51] note:

Such CHMC members were frustrated that their skills have not been upgraded over the years and thus were not seen as important stakeholders in the CHPS initiative [p. 9]

In another study in Kenya, digital literacy was a challenge for CHVs in a mHealth intervention. However, the CHVs reported additional structural challenges like weak internet coverage, poor power supply, and slow replacement of tools:

. . . it has a negative because at the moment, okay there is a time I lost my phone. It was stolen and it had that line of (organisation name) and it took a lot of time 3 months for them to return for me the line, so there is no data I have been checking. Because you cannot check without bundles, that’s one thing because if I check for that one that desktop in the office, that one the bundles you find that it’s not even there. Another thing since they returned for me that line, it was last month I have not been able to access any data because the password I am using and anything it doesn’t open it keeps telling me your password is wrong or your password is wrong every time every time. [KII CHA] [23, p. 7]

**Stigma and harassment**

CHVs reported personal experience with stigma and harassment from both facility health workers and community members [28,33,45]. This was also a challenge of the work, in some settings. Where such stigma and harassment emerged, the professional collaboration between CHVs and other health workers indicated a fragmented relationship, with CHVs feeling they were receiving little to no respect for their work. Some CHVs in Nigeria note:

On ANC days, we work together, do everything together. But if there is anything [of benefit], they will say, leave, are you one of the staff? . . . when it is time to share they will say it’s for the staff . . . when
they see a positive mother it is then that they remem-
ber us.—[Intervention MM FGD3] [29, p. 5]

CHVs described feeling stigmatised by fellow health care
workers who treated them differently because they
were not formal health workers within the health
facilities. Some CHVs identified training, educational
qualifications, and recruitment status as factors influ-
encing other health workers’ rejections and discrimina-
tion:

We don’t have ID cards, no uniforms… [HCWs]
said we don’t work with a certificate and are not
members of staff. Even if we are staff, we are not
learned.—[Intervention MM FGD3] [29, p. 8]

Some of the CHVs described similar experiences
of being ignored and disrespected by other health other
workers within health facilities. One study in Nigeria
reported;

In some instances, even the lowest-cadre clinic staff
wielded illegitimate authority over MMs, further dis-
tracting them from their primary duties: … The
attendants are ordering us about, telling us we have
not done this or that.—[Control Group FGD 3]
[29, p. 8]

Some CHVs reported toxic relationships between
volunteers and supervisors. Some CHVs reported
supervisors and health workers yelling and using
abusive words if they did not perform tasks in the
facility. This greatly affected the mental health of
the CHV:

The last matron we had in Facility A, she gave me
a ‘heart attack’. As soon as I get to the gate of the
clinic my heart always skips because I know it will
be trouble all through … But with this new one,
I do not have any problems.—[Intervention MM
FGD3] [29, p. 5]

Some CHVs reported supervisors are devaluing
and excluding them from activities that could provide
some funds. A CHV in Kenya explains:

You will find that [the supervisor] will only invite the
few secretly [to receive some compensation] and not
all the CHWs. (…) This is something that makes us
demotivated and even think of withdrawing because
he is not transparent. (Voluntary CHW, FGD-
Kenya) [46, p. 7]

Some HIV-positive CHVs reported being discrimi-
nated against by the community and health facility
health workers. Similarly, female CHVs in one study
were subjected to name-calling and insults from com-

munity members when the job involved working on
reproductive health interventions:

The former in-charge didn’t even allow us to come
close to his office; he sent us away as soon as we got
close because we are HIV-positive. But the new one
we have now doesn’t discriminate.—[Intervention
MM FGD1]. Some of the nurses at my site stigmatize
in the way they treat us. They treat us as if it is
because of being wayward that we have HIV.—
[Intervention MM FGD1] [29, p. 8]

In another study, female CHVs reported being har-
assed by community members because of the inter-
vention focus area they work. The author explains:
‘the CBMs reported that some community members
ridiculed them by claiming they were prostitutes,
which seemed related to their task of promoting con-
traception, including condoms.’ [34, p. 4]

**Potential gendered benefits and gendered risks**

Studies reported that creating community health
worker volunteers can address existing gender
inequality by empowering women through health
[29,36,46,48]. As Closser et al. [36] note for the con-
text of Ethiopia, the CHV programme was ‘…
designed to encourage women to leave the house and
gain decision-making power vis-a-vis their husbands –
and to use this power to achieve specific, state-
mandated, domestically centred goals.’ (p. 298)

However, at least one study suggests that recruit-
ment preferences may favour unmarried or divorced
women because of the high turnover of a younger
demography who craved more financial freedom
[29]. Studies reported gendered differences in the
motivation to volunteer, often closely associated
with the desire to improve their families’ financial
situation [23–25,28,29,31,33,35,37,39,44–48,52].

Although women also expressed the desire for career
advancement in connection to work experience
acquired as CHVs [27,31,36,46,48], the kinds of
future careers they hoped to get with minimal educa-
tion is not reported in the literature. More male
CHVs interviewed were explicit and detailed in con-
necting their motivation to volunteer as being linked
to providing financially for their families and to spe-
cific career advancement aspirations, such as finding
paid employment with the Ministry of Health or
NGOs, with some harbouring political ambitions at
the grassroots level [26,35,38,45,46].

Male and female CHVs in at least six studies
described their frustration and disappointment with
the inability to achieve their desired financial objec-
tives [23,25,31,33,39,45,46,48]. Some female CHVs
reported frustration and disappointment in the
CHV scheme. They did not feel they could achieve
their career or financial objectives through the volun-
tee programme. As one study notes in Ethiopia,
‘Empowerment, defined as significant changes in social
power and economic status, did not accrue to WDA
leaders [Women’s Development Army] through the
programme. Neither … was able to advance them-
selves economically through WDA work.’ [37, p. 304]

In contrast, at least some male CHVs regarded
volunteering as a pathway to higher positions, with
many reporting being able to access paid employment opportunities because of their volunteer experience. In a study in Tanzania, one CHV states:

What drew me to this work was my love for the Ministry of Health. I thought I would be lucky to join the ministry, and by good luck, I am in the ministry [through my CHW position]. I am grateful for this opportunity (CHW1, age 35, male) [32, p. 7]

Some female CHVs described feeling unsafe while volunteering [23,24,31,35,43]. Without provisions for transportation, they describe safety concerns with risky commutes to work and assigned households. Female CHVs also described being attacked and fear walking alone on the streets while providing services in the context of South Africa:

… they walked long distances to households (76.3%) and did not feel safe to walk on the streets or to interview patients with mental health problems [43]

**Health system challenges**

CHVs considered the absence or lack of standardised remuneration for their work as a significant challenge but also as a failure of the health systems they served. Many CHVs reported, sometimes with clear disappointment or frustration, government promises to provide payment for volunteering and not fulfilling it [26,28–30,33,34,36–40,45,46,50,53]. Where CHVs reported not receiving money or less than what the government promised as an incentive, this can lead to feelings of distrust towards the government:

This subsidy is just not enough for anything, but they promised us and should at least give us the little at the end of the month, and they give just nothing. (...) I have to support my family.' (Voluntary APE – Agente polivalente elemental (elementary multipurpose agent), SSI-Mozambique). 'This job is very hard to do (...). This payment we are supposed to get, the government is the one that is not trustworthy. They should give some money for us to be paid every month.' (Voluntary CHW, FGD-Kenya) [46, p. 7]

Some studies reported partial financial incentives that stopped once the NGOs were no longer within the community [29,31,33,36–38,40,46,50]. Non-government funding of programmes delivered by CHVs does facilitate Ministries negating responsibility for remunerating CHV work in some settings:

Like this centre gets 1,200 kwacha for general maintenance at the health post every month. We just asked them to give us part of the money since we have delays in our salaries. We needed the money to repair our bikes. But they said no, this is programme is not under the Ministry of Health, you are sponsored by Clinton Health Access Initiative (CHAI), so go and ask CHAI for the money.' (CHA 6) [47, p. 8]

Some CHVs reported increased and unclear scope of work, and performing clinical tasks within their supervising primary health centre (PHCs) [28,40,50]. CHVs reported unclear division of labour as they are often required to perform certain tasks usually ascribed to health facility workers (HCWs), such as administering drugs and filling out facility registers which are outside their scope of work. These unclear descriptions of roles and responsibilities made it difficult for CHVs to collaborate with their colleagues in the facilities effectively:

I don’t know exactly what registers we are supposed to handle and those we should not be responsible for, because we get conflicting information … This clarification will make me focus on those registers that are my responsibility and reject any unrelated tasks.—Intervention MM FGD1. Sometimes, they [HCWs] make us do jobs that are not part of our responsibilities as peer counselors… They give us additional jobs apart from the peer counseling job.

—Control MM FGD3 [29, p.6]

Moreover, CHVs in several contexts noted the inequity of their non-remuneration in light of their counterparts and supposed colleagues in health facilities being provided with a monthly maintenance allowance [28,29,36–38,40,45,50].

**Discussion**

Building up population health relies on governments, communities, private sectors and other stakeholders understanding how one of their most valuable and important human resources for health (HRH), CHVs, experience their lived realities day-to-day. This review adds to existing knowledge of CHVs, using personal accounts of their daily experiences to highlight the challenges they face while providing services within their communities. The findings outline tensions and challenges that CHVs face in their daily roles. Two critical findings were revealed in this review. First, there are potential gendered differences in the experiences of male and female CHVs. From the studies reviewed more women than men are often recruited as CHVs which could be an indication of a recruitment bias. Some studies have arrived at the same conclusion that women are often the preferred gender for the role of CHVs [54–56]. Secondly, the commitment of CHVs to continue building their communities’ health despite their need for work-life balance, resources, monetary compensation, training, and better supervision.

The consistency with which CHVs report struggling with balancing their work and personal life responsibilities is reason for concern and merits addressing. There is an indication that communities and institutions that promote CHV’s value and rely on their labour appreciate their work. However, there was no indication that their physical, psychological, and economic well-being were adequately considered
during implementation. Similar studies have found that CHVs, while providing service to community members, also provide mental support, often to the detriment of their well-being [54–57].

Additionally, CHVs may face critique at home from family members who may not understand or are unwilling to support this work without material or financial gain [58], alongside these worries, and alongside facing critique from interprofessional collaborators (i.e. supervisors, healthcare professionals), and in some instances suffering castigation. This review’s findings align with similar studies on community health volunteers. For example, a similar multi-country review found that community health volunteers, especially women, were often criticised for their role as volunteers by their spouses, family, and co-workers [59]. From our findings, male CHVs often had different motivations and aspirations for becoming CHVs, with many moving on to higher positions within the community. Male CHVs, we also found, experienced limited household burdens or mental health distress due to the needs of the community members they serve. These findings are not unique to the sub-Saharan context. A comparative study of CHWs in Brazil reached similar findings – that women were more likely than men to experience mental health distress and household burden due to work-related reasons [60]. If national and global commitments to expanding healthcare services at the community level continue to grow, in line with commitments to the Sustainability Development Goals, these commitments will likely only further increase pressures on CHVs, including potentially gendered pressures. Ensuring recognition for the workloads CHVs assume and developing supports to mitigate the diverse challenges CHVs may face in their work is crucial to sustaining the well-being of these key healthcare actors.

As we reflect on CHVs roles and interactions, it is vital to remember that CHVs are not a homogenous group. CHVs in sub-Saharan Africa as elsewhere are diverse in their status and gender identities, particularly over time, space, and place [14]. This does have implications for ensuring CHVs are adequately supported in their work in specific settings. For instance, evidence supports that approximately 70% of CHVs are women in sub-Saharan Africa [61]. With this current demographic reality, it is critically important to acknowledge the triple burden faced by women because of their triple role in society (reproductive work, productive work, and community management work), which is, of course, in addition to caring for their personal well-being and health (e.g. illness episodes with malaria, TB or HIV/AIDS). It is clear from CHV narratives that the majority of CHV work is being conducted in settings where women traditionally hold primary responsibilities for childcare, food preparation, and general maintenance of the household. This results in gendered implications for CHV experiences of balancing CHV roles with household responsibilities. Any initiatives introduced to support CHVs in their work will benefit from considering how such support may need to be different for men and women in these roles, in particular settings.

While challenges balancing family and gendered responsibilities were prominent in the literature reviewed, it is equally important to highlight the ways in which challenges of being a CHV in sub-Saharan Africa arise in relation to the healthcare system more generally. Our review makes evident that CHVs are rarely well integrated into primary care teams, and their potential impact is limited where there is an inability to follow up on patients and health needs due to limited resources. Many studies highlight the crucial role CHVs play in primary healthcare to address complicated barriers to care [1–12,23,62,63]. Their contributions are especially important towards fulfilling the United Nations Sustainable Development Goals (SDGs) [44,54,55]. It is clear from the experiences and accounts reviewed that CHVs in Africa are exposed to a myriad of psychosocial and physical stresses because of their stark encounters with mortality, morbidity, disability while often unable to comprehensively help those who are suffering due to the limited availability of resources (i.e. materials, services, medicines, training, etc.). Even as they describe such realities, CHVs come across in the literature as deeply devoted to their work and communities.

Some CHVs in the reviewed studies went so far as to share their income and resources – e.g. food and money – with community members as they perform their care duties to ‘do what is right.’ This deep sense of responsibility to help their communities and fulfill their duties of care is juxtaposed against concerns: for the well-being of those they serve, for the strain on their time to care for their own families and household responsibilities which put some of them at a constant crossroads. Optimising the impact and contribution of CHVs to the SDGs and sustaining the well-being and energy of CHVs in sub-Saharan Africa, requires finding ways to increase their reliable access to resources needed to carry out the health activities they are expected and motivated to undertake.

This review highlights the tensions that can emanate from a poor understanding of the CHVs role, responsibilities, and scope of work, between the CHVs and other cadres of health workers. There seems to be an undervaluing of their work at the system level among healthcare professionals. Within health systems, CHVs frequently lack a voice and
agency to control their circumstances and carry out their work as they would like to do. This lack of control can potentially undermine beneficial relationships between the CHV, the health system and the communities they serve. It may also contribute to decreased motivation, job satisfaction and eventually ineffectiveness.

As more countries prepare to shift their acute focus from challenges with infectious diseases to non-communicable diseases and confront various forms of violence, mental health, and injuries, the CHV portfolio will inevitably expand to include health promotion, prevention, and services in these areas. Threatening to further overload CHVs and progressively blurring the lines of their roles, responsibilities, and scope of work in increasingly complex ways. Under the banner of global health, achieving health for all is accomplished at the expense of underpaid or non-remunerated volunteers.

Based on the findings of this scoping review, we recommend that governments take steps, if these are not already under way, to review CHV supports and programmes in their jurisdiction. Ideally, CHVs would have the opportunity to regularly share their experiences and suggestions. In dialogue with CHV representatives (including male and female CHVs), Ministries of Health may then identify ways to ensure the important work CHVs do, can be more effective and less draining to CHVs in specific national and sub-national contexts. This does mean investment in human resources for health planning and earmarking some funds to work with CHVs. Including identifying recommendations in collaboration with CHVs that can support the长期 effectiveness, success and sustainability of programmes, as well as CHV retention. Ministries of Health may explore regularising CHVs as a cadre and consider standardising their training and scope of responsibilities. Some governments may be ready to consider provision of salaries or stipends to CHVs. Additional considerations should also include ongoing supports essential to their supervision and provision of resources needed to deliver services, as well as basic mental health support for CHVs.

CHVs are a critical group of healthcare workers connecting communities and health systems. They are citizens and often members of communities with complex responsibilities beyond their CHV commitments, yet their invisibility in global and national conversations about how the SDGs will be achieved casts them as nothing more than delivery mechanisms of health programmes. Themes emanating from this review point to the need for future research to focus on gaining an improved understanding of their experiences as they relate to applying advanced behaviour change interventions to their practice as part of their responsibilities at the individual, household, and community levels. A step further in the research would allow practitioners, decision, and policy makers to concentrate on approaches that give agency, encouragement, and support to CHVs to participate in the design and implementation of these programmes. Allowing them to share their knowledge about activities and approaches that work in and with the communities they serve. Understanding CHVs’ insights, experiences, and programmatic implications on their daily realities is key to achieving the greatest impact and sustainability.

Strengths and limitations

Strengths of this review include its attention to lived experiences of community health volunteers, and its incorporation of quotes from CHVs to illustrate themes. Inclusion of CHVs accounts of their day-to-day work and challenges supports a nuanced and detailed attention to CHV experiences that has not previously been available in reviews of CHV work in sub-Saharan Africa. This is the first synthesis of the experiences of CHVs posing challenges in their day-to-day life as health volunteers in Sub-Saharan Africa. It provides essential insight into the mental state of volunteers and the struggle to balance their needs with those of the community members they serve. The findings demonstrate how efforts to achieve the SDGs could be undermined by neglecting the CHVs, given their relationship and proximity to the community. It is also a review attention to gendered differences in experiences and challenges of CHVs: understanding these differences can inform effective supports to CHVs.

This review had some limitations. First, we included only studies in English due to the language fluency limitations of our team. The authors are confident that the findings reported in this review provide an accurate picture of CHVs’ experiences in Sub-Saharan Africa, but inclusion of Arabic and French sources might have enabled this review to include North Africa as well. Secondly, this review did not include grey literature. While publication bias is often avoided by accessing grey literature such as theses, dissertations, conference papers, and programme reports [64], the focus of this review was to analyse the personal accounts of CHVs and not the opinions and perspectives of other cadres of health workers or those who make decisions. Therefore, the authors decided to include only peer-reviewed studies with qualitative data reported directly from CHVs, although, grey literature informed the framework and discussions.

Lastly, the eligibility criteria of this scoping review are inclusive of publications capturing the
lived experiences of CHVs across the gender identity spectrum. Nonetheless, gender roles, expectations and norms both socio-culturally and across multiple levels of the health system, more women than men work as CHVs, ultimately capturing the voices of more participants identifying as women.

**Conclusion**

CHVs play a vital role in dynamic and complex communities. Understanding the experiences and challenges CHVs face can inform governments and programmes on how best to support community health volunteers both generally and specifically with respect to performance expectations within community-based healthcare delivery or health behaviour change and promotion programmes. This scoping review points to the need to understand the inequities CHVs face, the power imbalances they encounter in their labour relations and interactions with other healthcare providers, supervisors, care recipients and family members, which collectively shape their lived experiences. Of note are the gendered nature and risks faced by women taking on these positions to serve their communities. We need to recognise the unique challenges of female volunteers especially given the focus on gendered experiences of female health workers globally. Future research on CHVs may focus on understanding the potential mental health implications of the volunteering experiences on CHVs motivation, performance and the types of mental health supports that could be offered to CHVs. Finally, studies on the gender equity implications of focusing on women as CHVs need to be explored further. Ultimately, contributing to the sustainability of this under-considered cadre of healthcare workers is crucial to healthcare delivery in many countries.

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**Ethics and consent**

None.

**Paper context**

Community health volunteer workers have significantly contributed to improving health in low- and middle-income countries. Past studies have focused on the importance and performance of community health volunteer workers. However, there is limited focus on their daily personal experiences and challenges. This review clarifies perceptions, challenges, and overall experiences of community health volunteer workers explicitly noted as influenced by social identities or context of practice in the literature. Findings indicate community health workers face various daily challenges, including work-life balance and financial constraints.

**Abbreviations**

| Abbreviation | Description |
|--------------|-------------|
| CHA          | Community Health Assistant |
| CHV          | Community Health Volunteers |
| CHW          | Community Health Workers |
| HCW          | Health Care worker |
| HIV/AIDS     | Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome |
| HSS          | Health systems strengthening |
| HRH          | Human Resources for Health |
| MNCH         | Maternal, newborn, and child health |
| MM           | Mentor Mothers |
| NGOs         | Non-governmental organizations |
| OSF          | Open Science Framework |
| PHCs         | Primary Health Care Centers |
| PRISMA ScF   | Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for scoping reviews |
| SBCC         | social and behaviour change communication |
| SDG          | Sustainable Development Goals |
| TB           | Tuberculosis |
| WHO          | World Health Organization |

**ORCID**

- Mary Ndu [http://orcid.org/0000-0002-5221-3898]
- Ellena Andoniu [http://orcid.org/0000-0001-5789-4736]
- Sorcha McNally [http://orcid.org/0000-0002-5506-3928]
- Marisa Tippett [http://orcid.org/0000-0002-7887-5603]
- Elysée Nouvet [http://orcid.org/0000-0002-1607-3453]

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Appendix A: Search strategy

Ovid MEDLINE Search History
(R) ALL <1946 to November 04, 2021>

(1) sub-saharan africa.mp. or exp "Africa South of the Sahara"/
(2) exp Africa, Western/or exp Africa, Central/or exp Africa, Eastern/or exp Africa, Southern/
(3) "sub saharan africa".mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
(4) "africa south of the sahara".mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
(5) (Angola or Benin or Botswana or "Burkina Faso" or Burundi or Cameroon or "Cape Verde" or "Central African Republic" or Chad or Comoros or Congo or "Cote d'Ivoire" or Djibouti or "Equatorial Guinea" or Eritrea or Ethiopia or Gabon or Gambia or Ghana or Guinea or Guinea-Bissau or Kenya or Lesotho or Liberia or Madagascar or Malawi or Mali or Mauritania or Mauritious or Mozambique or Namibia or Niger or Nigeria or Reunion or Rwanda or "Sao Tome and Principe" or Senegal or Seychelles or "Sierra Leone" or Somalia or "South Africa" or Sudan or Swaziland or Tanzania or Togo or Uganda or "Western Sahara" or Zambia or Zimbabwe).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
(6) exp Angola/
(7) exp Benin/
(8) exp Botswana/
(9) exp Burkina Faso/
(10) exp Burundi/
(11) exp Cameroon/
(12) exp Cape Verde/
(13) exp Central African Republic/
(14) exp Chad/
(15) exp Comoros/
(16) exp Congo/
(17) exp "Democratic Republic of the Congo"/
(18) exp Cote d'Ivoire/
(19) exp Djibouti/
(20) exp Equatorial Guinea/
(21) exp Eritrea/
(22) exp Ethiopia/
(23) exp Gabon/
(24) exp Gambia/
(25) exp Ghana/
(26) exp Guinea/
(27) exp Guinea-Bissau/
(28) exp Kenya/
(29) exp Lesotho/
(30) exp Liberia/
(31) exp Madagascar/
(32) exp Malawi/
(33) exp Mali/
(34) exp Mauritania/
(35) exp Mauritius/
(36) exp Mozambique/
(37) exp Namibia/
(38) exp Niger/
(39) exp Nigeria/
(40) exp Reunion/
(41) exp Rwanda/
(42) "Sao Tome and Principe"/
(43) exp Senegal/
(44) exp Seychelles/
(45) exp Sierra Leone/
(46) exp Somalia/
(47) exp South Africa/
(48) exp Sudan/
(49) exp Swaziland/
(50) exp Tanzania/
(51) exp Togo/
(52) exp Uganda/
(53) exp Zambia/
(54) exp Zimbabwe/
(55) Africa.mp. or exp Africa/or exp Africa, Northern/
(56) ("Northern Africa" or "Southern Africa" or "Western Africa" or "Eastern Africa" or "Central Africa").mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
(57) (Algeria or Egypt or Libya or Morocco or Tunisia).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
(58) exp Algeria/
(59) exp Egypt/
(60) exp Libya/
(61) exp Morocco/
(62) exp Tunisia/
(63) 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58 or 59 or 60 or 61 or 62
(64) ("community health worker" or "community health workers" or "community health volunteer" or "community health volunteers" or "community health representative" or "community health representatives" or "community health mobilizer" or "community health mobilizers" or "community health mobilisers" or "community health extension worker" or "community health extension workers" or "community health aide" or "community health aides" or "community-based health worker" or "community-based health workers" or "community-based health volunteer" or "community-based health volunteers" or "community-based health representative" or "community-based health representatives" or "community-based health extension worker" or "community-based health extension workers" or "community-based health educator" or "community-based health educators" or "lay village representatives" or "lay health representatives" or "lay health extension worker" or "lay health extension workers" or "lay health worker" or "lay health workers" or "lay health volunteer" or "lay health volunteers" or "lay health representative" or "lay health representatives" or "lay health extension worker" or "lay health extension workers" or "lay health aide" or "lay health aides" or "barefoot doctors" or "village health worker" or "village health workers" or "village health volunteer" or "village health volunteers" or "village health representative" or "village health representatives" or "village health extension worker" or "village health extension workers" or "village health aide" or "village health aides" or "lay health advisor" or "lay health advisors" or "lay health educator" or "lay health educators" or "lay health visitor" or "lay health home visitors" or "lay health leader" or "lay health leaders" or "lay health promoter" or "lay health..."
promoters” or “lay health volunteer” or “lay health volunteers” or “lay health worker” or “lay health workers” or promote or promotore or promotores) adj5 (view or views or reflection or reflections or reflect or reflects or value or values or valued or motivation or motivations or motivate or motivates or motivated or emotion or emotions or memory or memories or expectations or expectation or expects or expect or expected or satisfaction or satisfied or dissatisfaction or dissatisfied or disappointed or disappoint or disappointment or challenge or challenges or barriers or barrier or perspective or perspectives or experience or experiences or experienced or opinions or opinion or belief or beliefs or believes or believe or believed or attitude or attitudes or perceptions or perception or perceive or perceives or perceived or prospect or prospects or feeling or feelings or understanding)).mp.

[mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

(65) ((community or village or lay) adj3 (“change agent” or “change agents” or “health promoter” or “health promoters”)).mp.

[mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

(66) 64 or 65

(67) 63 and 66
## Appendix B: Study characteristics

| Author(s)/Year | Study Title                                                                 | Country                      | Area             | Participants                                                                 | Study Objective                                                                 | Study Design               | Intervention Area |
|----------------|------------------------------------------------------------------------------|------------------------------|------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------|---------------------------|-------------------|
| 1 Haile et al., 2014 | Assessment of non-financial incentives for volunteer community health workers – the case of Wukro district, Tigray, Ethiopia | Ethiopia                     | Rural            | VCHWs n = 400, female                                                       | Investigate the non-financial incentives for VCHWs and factors affecting their motivation. | Cross-sectional quantitative | Neonatal mortality |
| 2 Maesa and Kalofonosb, 2013 | Becoming and remaining community health workers: Perspectives from Ethiopia and Mozambique | Ethiopia and Mozambique     | Rural            | Case study of 2 CHWs, a single mother in Chimoio and single man who volunteers as a CHW | Why people become and remain CHWs, comparison between Addis Ababa and Chimoio. | Qualitative HIV/AIDS |                    |
| 3 Kelly et al., 2018 | Can the financial burden of being a community health volunteer in western Kenya exacerbate poverty? | Western Kenya               | Rural            | 2013 n = 35 CHVs 48.6% female and 51.4% male; 2015 n = 29 CHVs 58.6% female and 41.4% male | Determine how the implementation of a pooled incentive model had an impact on the lives of CHVs in two counties in western Kenya. | Qualitative HIV/AIDS |                    |
| 4 Bakibinga et al., 2020 | Challenges and prospects for implementation of community health volunteers’ digital health solutions in Kenya: a qualitative study | Kenya                        | Urban            | CHVs n = 25 3 male and 22 female; Health providers and sCHMTs n = 10 4 male and 6 female | Explores the experiences of CHVs, health workers and members of Sub-County Health Management Teams following implementation of the decision support mobile health app | Qualitative eHealth |                    |
| 5 Banek et al., 2014 | Community case management of malaria: exploring support, capacity and motivation of community medicine distributors in Uganda | Uganda                      | n/a              | CMDs n = 100 56% female 44% male                                           | To understand the level of support available, and the capacity and motivation of community health workers to deliver these expanded services | Mixed Malaria              |                    |
| 6 Lusambili et al., 2021 | Community health volunteers' challenges and preferred income generating activities for sustainability: a qualitative case study of rural Kilifi, Kenya | Kenya                        | Rural            | CHVs n = 81 64 female and 17 male                                          | Determine challenges of volunteerism in community health and the preferred LGAs in rural Kilifi county, Kenya. | Qualitative MCH          |                    |
| 7 Laurenzi et al., 2020 | Balancing roles and blurring boundaries: Community health workers’ experiences of navigating the crossroads between personal and professional life in rural South Africa | South Africa                 | Rural            | CHVs (referred to as MMs) n = 10                                             | Implications of the difficulties and burdens of being an MM on an immediate level (equipping CHWs with self-care and boundary-setting skills), and an intermediate level (introducing opportunities for structured debriefings and emphasizing supportive supervision). | Qualitative MCH          |                    |
| 8 Closer et al., 2019 | Does volunteer community health work empower women? Evidence from Ethiopia’s Women’s Development Army | Ethiopia                     | Rural            | CHVs (referred to as HEWs or WDAs) n = 69, women                           | Determine whether volunteer community health work empowers or burdens women | Qualitative MCH          |                    |

(Continued)
| Author(s)/year | Study title | Country | Area | Participants | Study objective | Study design | Intervention area |
|---------------|-------------|---------|------|--------------|----------------|-------------|------------------|
| Miotshwa et al., 2015 | Exploring the perceptions and experiences of community health workers using role identity theory | South Africa | Rural | CHWs n = 18 89% female 11% male | The role identity theory framework was used to understand the work of CHWs within their communities, addressing themes such as entry into, and nature of, caring roles, organizational support, state resourceing, and community acceptability | Qualitative | SBCC |
| Jigssa et al., 2018 | Factors contributing to motivation of volunteer community health workers in Ethiopia: the case of four woredas (districts) in Oromia and Tigray regions | Ethiopia | Rural | vCHWs (1to5NL) n = 786 100% female | Examine factors contributing to the motivation of volunteer CHWs (vCHWs) in Ethiopia currently known as one-to-five network leaders (1to5NLs) and explore variations between attributes of social and work-related determinants. | Quantitative | MCH |
| Loth et al., 2020 | "From good hearted community members we get volunteers"—an exploratory study of palliative care volunteers across Africa | 21 countries in Africa: Botswana, Egypt, Ghana, Kenya, Malawi, Mozambique, Namibia, Rwanda, Sudan, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe, Benin, Burkina Faso, Burundi, Côte d’Ivoire, DRC, Rwanda, Senegal | n/a (wide variety of locations) | n = 25 National Champions 36% female 48% male 6% no response | Determine types of volunteers, their motivations and roles in service delivery in palliative care | Mixed | Palliative Care |
| Kok et al., 2019 | Getting more than "claps": Incentive preferences of voluntary community-based mobilizers in Tanzania | Tanzania | Urban | CBMs n = 17 CMB supervisors n = 11 Phase 2: CMBs n = 61 | Explore the drivers of CBM motivation and inform the design of an incentive scheme. | Mixed | SBCC |
| Kok et al., 2016 | Health surveillance assistants as intermediates between the community and health sector in Malawi: exploring how relationships influence performance | Malawi | Rural | FGD (HSAs, women with under 5 children, volunteers) n = 137 Semi-structured interviews n = 44 (HSAs, senior HSAs, mothers, traditional birth attendants, district level managers and health staff, health centre in charges, NGO representatives, traditional leaders, volunteers) | Aimed to obtain in-depth insight into the facilitators of and barriers to interpersonal relationships between health surveillance assistants (HSAs) and actors in the community and health sector in hard-to-reach settings in two districts in Malawi, in order to inform policy and practice on optimizing HSA performance. | Qualitative | HRH |
| Zulu et al., 2014 | Hope and despair: community health assistants’ experiences of working in a rural district in Zambia | Zambia | Rural | CHAs n = 12 42% women 58% male | Document motivation to become a CHA, their experiences of working in a rural district, and how these experiences affected their motivation to work | Qualitative | HRH |
| Chowdhury et al., 2021 | How workers respond to social rewards: evidence from community health workers in Uganda | Uganda | Not specified | CHWs n = 4050 female | This paper investigates the effect of a non-financial incentive – a competitive annual award – on community health workers’ (CHWs) performance, an issue in the public health literature that has not been explored to its potential. | Mixed | HRH |
| Author(s)/year | Study title                                                                 | Country          | Area                        | Participants | Study objective                                                                 | Study design | Intervention area |
|---------------|------------------------------------------------------------------------------|------------------|-----------------------------|--------------|---------------------------------------------------------------------------------|-------------|-------------------|
| 16 Tuyisenge et al., 2020 | "I cannot say no when a pregnant woman needs my support to get to the health centre": involvement of community health workers in Rwanda’s maternal health | Rwanda           | Not specified               | M-CHWs n = 16 female | Explore M-CHWs’ perceptions and experiences on access and provision of maternal health services. | Qualitative | MCH               |
| 17 Swartz & Colvin, 2015 | 'It's in our veins': caring natures and material motivations of community health workers in contexts of economic marginalisation | South Africa     | Rural and urban             | Non-specific case study of CHWs in Khayelitsha | Explore here how CHWs narrate and understand their roles and motivations as careers and members of a resource-constrained community. | Qualitative | HRH               |
| 18 Ritchie et al., 2016 | Lay Health Workers experience of a tailored knowledge translation intervention to improve job skills and knowledge: a qualitative study in Zomba district Malawi | Malawi           | Rural                       | LWHs n = 35 nurse n = 1 56% male 44% female | Explore LHWs responses to a tailored knowledge translation intervention they received, designed to address a previously identified training and knowledge gap. | Qualitative | TB                |
| 19 Mpembeni et al., 2015 | Motivation and satisfaction among community health workers in Morogoro Region, Tanzania: nuanced needs and varied ambitions | Tanzania         | Rural                       | CHWs n = 228 55% male 45% female | Study assessed motivation and satisfaction among these CHWs. | Mixed       | MCH               |
| 20 Topp et al., 2015 | Motivations for entering and remaining in volunteer service: findings from a mixed-method survey among HIV caregivers in Zambia | Zambia           | Rural, urban and peri-urban | Caregivers n = 758 40% male 60% female | This study aimed to advance understanding of why indi-viduals in Zambia enter into and remain in volunteer service by identifying (a) motivations for volunteering(b) the extent to which these motivations are fulfilled in service and (c) factors related to discontinuation or prolongation of service. | Mixed       | HIV/AIDS          |
| 21 Nyalunga et al., 2019 | Perceptions of community health workers on their training, teamwork and practice: a cross-sectional study in Tshwane district, Gauteng, South Africa | South Africa     | Rural and urban             | CHWs n = 431 88.2% female 11.8% male | Assess perceptions of community health workers on their training, teamwork and practice. | Cross-sectional | HIV/AIDS          |
| 22 Aseyo et al., 2018 | Realities and experiences of community health volunteers as agents for behaviour change: evidence from an informal urban settlement in Kisumu, Kenya | Kenya            | Peri-urban                  | CHWs n = 16 69% female 31% male | Examine the behaviour change-related activities of community health volunteers (CHVs)—community health workers affiliated with the Kenyan Ministry of Health— in a peri-urban settlement in Kenya, in order to assess their capabilities, opportunities to work effectively, and sources of motivation | Mixed       | HRH               |
| 23 Ormel et al., 2019 | Salaried and voluntary community health workers: exploring how incentives and expectation gaps influence motivation | Ethiopia, Kenya, Malawi and Mozambique | Rural                       | n not specified, 250 interviews and 65 FGDs conducted | Critically analyse the use of incentives and their link with improving CHW motivation. | Qualitative | HRH               |

(Continued)
| Author(s)/year | Study title                                                                 | Country          | Area                  | Participants            | Study objective                                                                 | Study design | Intervention area |
|----------------|------------------------------------------------------------------------------|------------------|-----------------------|-------------------------|---------------------------------------------------------------------------------|--------------|-------------------|
| 24 Peltzer et al., 2014 | Secondary trauma and job burnout and associated factors among HIV lay counsellors in Nkangala district, South Africa | South Africa     | Not specified         | HIV lay counsellors n = 117, 91.6% female, 8.4% male | Evaluate secondary trauma and job burnout and associated factors in a sample of 71 HIV lay counsellors in South Africa. | Mixed        | HIV/AIDS          |
| 25 Greenspan et al., 2013 | Sources of community health worker motivation: a qualitative study in Morogoro Region, Tanzania | Tanzania          | Rural                 | CHWs n = 20, 50% male, 50% female | Explore sources of CHW motivation to inform programs in Tanzania and similar contexts. | Qualitative   | HRH               |
| 26 Jack et al., 2011 | The personal value of being a palliative care Community Volunteer Worker in Uganda: A qualitative study | Uganda            | Rural                 | Hospice Clinical Teams n = 11, CWs n = 32, 41% male, 53% female, 6% not reported | The aim of this study was to evaluate the motivation for becoming a volunteer and the personal impact of being a palliative care Community Volunteer Worker in Uganda. | Qualitative   | Palliative Care   |
| 27 Sam-Agudu et al., 2018 | "They do not see us as one of them": a qualitative exploration of mentor mothers ‘working relationships with healthcare workers in rural North-Central Nigeria | Nigeria           | Rural                 | MMIs n = 36 female      | Explore the experiences and opinions of MMIs with respect to their work conditions and relationships with healthcare workers. | Qualitative   | HIV/AIDS          |
| 28 Maesa 2014 | "Volunteers Are Not Paid Because They Are Priceless": Community Health Worker Capacities and Values in an AIDS Treatment Intervention in Urban Ethiopia | Ethiopia          | Urban                | CHW n = 110, 90% female, 10% male | Analyze community health workers’ (CHW) capacities for empathic service within an AIDS treatment program in Addis Ababa. | Qualitative   | HIV/AIDS          |
| 29 O’Donovan et al. (2020) | 'We are the people whose opinions don’t matter'. A photovoice study exploring challenges faced by community health workers in Uganda | Uganda            | Rural                 | CHWs n = 8, 50% male, 50% female | Understand the experiences of community health workers (CHWs) through the use of participatory visual methods (PVMs). | Qualitative   | HRH               |
| 30 Takasugi and Lee (2012) | Why do community health workers volunteer? A qualitative study in Kenya | Kenya             | Rural                 | CHWs n = 23, 65% female, 35% male | Determine factors that motivate volunteers | Qualitative   | HRH               |
| 31 Kwaku et al., 2020 | Volunteer responsibilities, motivations and challenges in implementation of the community-based health planning and services (CHPS) initiative in Ghana: qualitative evidence from two systems learning districts of the CHPS+ project. | Ghana             | Rural                 | CHVs +37 | Qualitative | HRH |
## Appendix C: Mapping studies to themes

| Coding                                                   | Sub-themes                        | Themes                                                                 |
|----------------------------------------------------------|-----------------------------------|------------------------------------------------------------------------|
| Taking on an extra farm or domestic work                 | Family obligations                | Challenge of Balancing Responsibilities with Family Obligations        |
| Inability to provide                                     | Reason for volunteering           | Limited Resources                                                      |
| Pressures on income-earning activities                   | Motivation                        | Stigma and Harassment                                                  |
| Commitment to helping their families and community       | Moral/social distress             | Potential gendered benefits and gendered risks                         |
| Additional financial burdens                             | No job aids/resources             | Health system challenges                                               |
| Stock out of medicines and inconsistent supply of resources | Identification and trust           |                                                                        |
| The desire for career advancement                        | Relationship with community       |                                                                        |
| Differences in male and female motivation to volunteer   | Feeling marginalized             |                                                                        |
| Male career advancement aspirations with some harbouring political ambitions | Gendered differences             |                                                                        |
| Frustration and disappointment with the inability to achieve their desired financial objectives | Safety                            |                                                                        |
| Male CHVs regarded volunteering as a pathway to higher positions | Supervision and management        |                                                                        |
| Feeling unsafe while volunteering                        | Skills and knowledge (capacity)   |                                                                        |
| Absence or lack of standardized remuneration             | Motivation                        |                                                                        |
| Partial financial incentives                             | Government remuneration/financial compensation |                                                                        |
| Increased and unclear scope of work; unclear division of labour | Inequity of their non-remuneration |                                                                        |