

Perceptions around occupational mental well-being of community health workers and an intervention package for its promotion: A mixed-methods study in rural Chiapas, Mexico

Jack Sullivan^a, Zeus Aranda^{a,*}, Manvit Adusumilli^b, Anna Martens^a, Ariwame Jiménez^a

^a Partners in Health Mexico (Compañeros En Salud), Calle Primera Pte. Sur 25, Colonia Centro, 30370, Ángel Albino Corzo, Chiapas, Mexico

^b Kellogg Institute for International Studies, University of Notre Dame, 1130 Jenkins Hall, 46556, Notre Dame, Indiana, United States

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ABSTRACT

Background: The challenging working conditions experienced by community health workers (CHWs) have an impact on their mental health, as detected by the NGO Compañeros En Salud (CES) in rural Mexico. In response to this situation, CES designed through a participatory process a package of interventions to promote the mental well-being of CHWs, beginning implementation in 2021. The objective of the present study was to learn how CES CHWs' work affects their mental well-being and to evaluate the intervention package to promote CHWs' mental well-being implemented by CES.

Methods: In June–August 2023, 52 CHWs from the CES-supported communities participated in the study, responding to a survey and participating in 10 focus group discussions. Quantitative data were analyzed using statistical descriptive analysis and qualitative data using thematic analysis.

Findings: Participants highlighted the impact on their communities as one of the main aspects of their job that contribute positively to their mental well-being, as well as the challenging work-life balance as one of the main aspects that contribute negatively. As for the interventions, most participants considered them significant and positive for their mental well-being, highlighting positive aspects such as the possibility of creating community with their peers or a feeling of self-efficacy. However, the access to interventions was uneven among participants and most interventions presented areas for improvement, such as the periodicity of psychological distress screening and the response time to material needs.

Conclusions: Efforts to support CHW well-being in the areas they signal as needs can impact their experiences around work and their perceived well-being. Access to work materials, preparedness on clinical topics, and relationships with their teams are key areas that may have a bearing on CHWs' emotional and mental well-being. Interventions aimed at these areas can positively impact CHWs' self-efficacy, their community with each other, and their interactions with patients.

1. Introduction

Community health workers (CHWs) play a critical role in global healthcare delivery, often working under challenging conditions such as lack of supplies, training, supervision, and community involvement, excessive working hours, and insufficient compensation, especially in low- and middle-income countries (LMICs) (Astale et al., 2023; Musoke et al., 2022; Ballard et al., 2023). These challenging working conditions have negative repercussions on the physical (Dos Santos Ferreira et al., 2021) and mental health (Closser et al., 2020) of CHWs, effects that were

exacerbated during the COVID-19 pandemic. As part of the pandemic response, many CHWs had tasks added to their already busy schedules, often without additional compensation, worked with inadequate personal protective equipment, and were stigmatized for their work all without having received coping strategies (The George Institute for Global Health; Aranda et al., 2024; Lotta et al., 2022; Bhatia et al.). In terms of healthcare worker mental well-being, the health emergency worsened pre-existing mental health conditions and created new psychosocial needs linked to the work of CHWs (The George Institute for Global Health, 2020; Fernandes et al., 2023; Di Ciaccio et al., 2023;

* Corresponding author.

E-mail addresses: sullivan.jack0812@gmail.com (J. Sullivan), zaranda@pih.org (Z. Aranda), madusumi@nd.edu (M. Adusumilli), amartens@pih.org (A. Martens), ajimenez@pih.org (A. Jiménez).

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Hoang et al., 2022).

Despite knowledge of the impact of CHW's work on their mental health (Closser et al., 2020; The George Institute for Global Health, 2020; Fernandes et al., 2023; Di Ciaccio et al., 2023; Hoang et al., 2022; Shanthosh et al., 2021) and identification of interventions with the potential to promote the well-being of CHWs (Lotta et al., 2022; The George Institute for Global Health, 2020; Yakubu et al., 2022), worldwide there is still scarce evidence about this type of interventions and their evaluation (Recto et al., 2023). In the specific case of Mexico, the country where the present study takes place and where various CHW-led health initiatives have been implemented (Aranda et al., 2024; Balcázar et al., 2015; Anders et al., 2006; Denman et al., 2014; Secretaría de Salud del Estado de México, 2017; Balcázar et al., 2016; Gobierno de México, 2024), there is no evidence about the impact of CHWs' work on their mental well-being, nor studies describing and evaluating interventions to address their mental health needs. The current body of research focuses on the evaluation of the implementability and effectiveness of CHW-led interventions (Aranda et al., 2024; Balcázar et al., 2015; Denman et al., 2014; Worster et al., 2020; Newman et al., 2018), some targeted at population mental health (Ortega et al., 2021; Rodríguez-Cuevas et al., 2021; González-Robledo et al., 2023), without contemplating mental well-being interventions where CHWs act as beneficiaries, rather than providers. These studies, although important for developing strategies with potential to improve health outcomes in the target population, risk further exploitation of CHWs by focusing on them as solely a tool to deliver healthcare to vulnerable populations.

There is a great need to engage with CHWs to understand how their work impacts their mental well-being and how programs with this personnel can do a better job of supporting them, in Mexico and worldwide. The objective of the present study was to learn how the work of the CHWs with the non-governmental organization (NGO) *Compañeros En Salud* (CES), as *Partners In Health* (PIH) is known in Mexico, affects their mental well-being, as well as to evaluate a package of interventions aimed at promoting the mental well-being of CHWs implemented by this NGO.

2. Materials and methods

2.1. *Compañeros En Salud's* CHW-led intervention

Since 2011, CES has been operating in rural areas of the Sierra Madre region in the state of Chiapas, collaborating with the local Ministry of Health to strengthen its healthcare delivery (Palazuelos et al., 2023). Chiapas is the poorest state in the country, with 75.5% of its population living in poverty (Consejo Nacional de Evaluación de la Política de Desarrollo Social, 2020), and more than 50% of its population living in rural areas, often marginalized (Instituto Nacional de Estadística, 2020). In addition, the state suffers from a profound shortage of qualified health professionals (Consejo Nacional de Evaluación de la Política de Desarrollo Social, 2018). These factors translate into a high burden of unattended disease in the region (Secretaría de Salud de México, 2021). In response to this situation, CES introduced a comprehensive community-based primary healthcare strategy to meet the population's health needs. In addition to providing care in outpatient clinics, CES deployed a female CHW workforce in 2013, known locally as *Acompañantes*, to primarily provide treatment support to patients with non-communicable diseases, maternal and newborn health needs, and child development and nutrition. Since 2019, the scope of the program has expanded, and some of the supported communities have migrated from the original model, consisting of visits to patients with specific health conditions, to a household model with routine visits to address the different health needs of all community members (Palazuelos et al., 2021). Additionally, during the early stages of the COVID-19 pandemic in 2020, CES CHWs supported the contact tracing and case follow-up efforts of the organization in the supported communities (Aranda et al., 2024).

Both accompaniment models' supervision had been enhanced along the implementation timeframe, from a volunteer role held by foreigners to the full-time hiring of three former CHWs. The on-site follow-up is carried out one week per month in each community in a ratio of one supervisor per three communities, in which they deliver monthly training, discuss emerging situations and supplies needs, as well as provide one on one mentorship.

2.2. Initial diagnostic of the mental well-being of CHWs

The detection of psychological distress in CHWs by the program's supervision and coordination team, through direct observation or after being reported by the CHWs themselves, raised concerns about the mental well-being of CHWs in CES. In response, the CES team decided to conduct a situational diagnostic on the mental well-being of CHWs working in the organization throughout the first half of 2021 (Fig. 1). The diagnostic consisted of focus group discussions with active CHWs (eight with five participants per group on average), semi-structured interviews with active CHWs (54 out of 69 eligible) and ex-CHWs (3 out of 41 eligible), and screening for psychological distress for active CHWs interviewed (53 of 54). The focus groups were intended to co-create a local definition for mental health topics (such as mental health, stress, emotional well-being, or depression) to frame the interview guide to address specific aspects of mental well-being addressed by CHWs in focus groups and to explore their point of contact preferences for mental healthcare. The interviews explored their perceptions about the impact of their role on their mental well-being, work-life balance, the impact of the COVID-19 pandemic on their work, coping mechanisms, and suggestions to improve CHW's mental well-being.

As part of the psychological distress screening, burnout screening tools were initially considered, but because depression and anxiety, not burnout, were considered priorities by CHWs in the focus groups, burnout screening was not included in the psychological distress screening. Additionally, when considering use of a screening tool for the mental well-being of CHWs, it was important that the screening tool meet the following criteria: be a validated screening tool, have the ability to open up conversation about mental health and well-being, and have available and actionable treatment to avoid screening for the sake of screening. Accordingly, the Patient Health Questionnaire-9 (PHQ-9) in Spanish and the General Anxiety Disorder-7 (GAD-7) in Spanish were selected, as they had been validated with CES-supported populations (Arrieta et al., 2017) and with other Spanish-speaking populations (García-Campayo et al., 2010), respectively. On the other hand, identified cases of depression and anxiety could be addressed by the primary care doctors within the community-based clinics where CHWs lived, who provided consultation and pharmacotherapy for both conditions, in addition to the community mental health worker-led Problem Management Plus intervention (Rodríguez-Cuevas et al., 2021). The screening identified eight people (15% of those screened) with symptoms of psychological distress (score above 10 on the PHQ-9 scale for depression or the GAD-7 scale for anxiety), who were referred to and treated by mental health specialists.

Among the proposals suggested by the participants to improve their mental well-being were the incorporation of occupational mental health services (including periodic evaluations and access to mental health specialists), the strengthening of training for CHW recruits and ongoing training (especially in clinical topics, mental health and self-care), the implementation of peer-to-peer activities (such as relaxation sessions, craft workshops, spaces for sharing work experiences, or sports activities), the improvement of communication among fellow CHWs and with supervision, the provision of well-functioning tools and consumables to carry out their work, and the sensitization of CES to the mental health needs of CHWs.

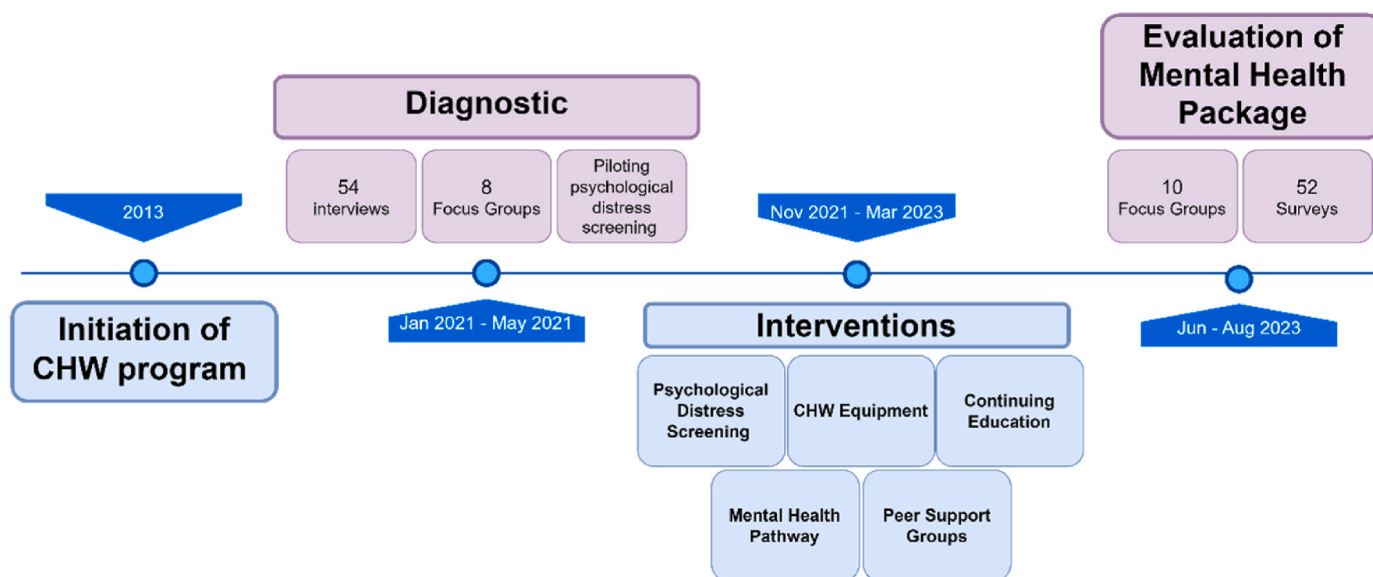


Fig. 1. Timing of the initial diagnosis of mental well-being of community health workers, implementation of interventions and evaluation of the intervention package.

2.3. Design of a package of interventions for the mental well-being of CHWs

The findings of the initial diagnostic were used to design a package of interventions to promote the mental well-being of CHWs through the prevention of mental health conditions, their early detection, and adequate treatment, as well as programmatic strengthening. From the ideas contributed by the participants of the interviews and focus groups, some intervention proposals emerged, selecting the most feasible ones, according to the resources available in CES or the capacity to attract new resources to address the needs expressed by the CHWs.

After a collaborative review process between the program’s supervision and coordination team, the CHWs themselves, the CES mental health team, and the organization’s finance and human resources departments, it was decided to opt for a package of interventions comprising: 1) periodic screening for psychological distress, 2) a specific mental healthcare pathway for the CHWs, 3) support groups for CHWs, 4) strengthened CHW continuing training, and 5) the provision of sufficient materials for the proper performance of their work (Table 1).

2.3.1. Periodic screening for psychological distress

Since November 2021, screening for psychological distress, consisting of the PHQ-2 scale for depression and the GAD-2 scale for anxiety, was incorporated into the monthly supervision of CHWs. The periodicity of the screenings was reduced from monthly to quarterly starting in February 2022 due to time constraints of the supervision team. Although it was a 2-question screener, it often served as a conversation-starter related to mental health, taking up to an hour. This made it difficult to complete the screening with all CHWs in the community during the supervisor’s one-week visit once a month.

2.3.2. Mental healthcare pathway

Along with the implementation of screening for psychological distress in November 2021, a mental healthcare pathway was introduced specifically for CHWs. Initially, it was envisaged that CHWs with positive results in any of the four screening questions would be referred to the CES mental health team, consisting of two psychologists, a general practitioner, and four community mental health workers. However, after initial experiences, it was decided to have external support to CES to ensure the privacy of CHWs and to avoid overburdening the clinical

Table 1

Suggestions to improve CHWs’ mental well-being mentioned by CHWs during the diagnostic phase, interventions implemented by the Compañeros En Salud team, and their implementation timing, taking place from November 2021 to March 2023. CHW: Community Health Worker; PDS: Psychological Distress Screening; CES: Compañeros En Salud.

Suggestions to improve CHWs’ mental well-being mentioned by CHWs during the diagnostic phase		Implemented interventions	Description of implementation timing
Sensitization of CES to the mental health needs of CHWs	Improvement of communication with supervision	Periodic mental health evaluations	Routine PDS becomes monthly (Nov 2021)
		Access to mental health specialists	PDS transitioned to quarterly (Feb 2022)
		Implementation of peer-to-peer activities	Care pathway provided by CES mental health staff (Nov 2021)
		Improvement of communication among fellow CHWs	Modification of care pathway to external mental health specialist (Feb 2022)
		Strengthening of training for CHWs recruits	Piloting women’s circles (Feb 2022)
	Strengthening of ongoing training	Peer Support Groups	Implementation of well-being circles, which were adapted from women’s circles (Mar 2023)
	Provision of well-functioning tools and consumables to carry out their work	Continuing Education	Implementation of reinforced continuous training curriculum (Nov 2022 with ongoing additions)
		CHW Equipment	Review of CHW inventory and equipping those with insufficient materials (Nov 2021)

team serving CES-supported communities. As of February 2022, CHWs with symptoms of psychological distress were referred to a psychiatrist with professional experience in the region for teleconsultation. If medication was required, CES provided it at no cost to CHWs.

2.3.3. Peer support groups

In February 2022, the "women's circles" intervention was piloted with CHWs. The intervention is based on psychoeducational groups of mutual support with a gender perspective. It was the result of co-creation with the beneficiary populations, ensuring the sociocultural relevance of the intervention. Initially, the circles were piloted in four communities with approximately 40 CHWs, co-facilitated by a psychologist and four community mental health workers belonging to the CES mental health program. The original intervention consisted of eight sessions held every two weeks.

In November of 2022, facilitation of circles with CHWs shifted to CHW supervisors and a volunteer from the CHW program, and several adaptations were made to the original intervention to improve its implementability, such as shortening the length or changing themes to directly address challenges the teams were facing. The groups were renamed "well-being circles" and were conducted monthly in each community (Table 2 with the list of sessions led after November 2022). All sessions used in the well-being circles were originally developed by psychologists on CES' mental health team, and they included some sessions from the women's circles and some sessions from another collaboratively created manual of "triangle courses." The triangle courses, similar to the women's circles, consist of one-to-2-h interactive psychoeducation and well-being support sessions. Sessions from this manual were facilitated with groups that had already piloted the women's circles, such that all CHWs receiving new material, though specific sessions were chosen to ensure similar thematic content in each community.

2.3.4. Strengthened continuing training

To strengthen the CHWs' capacities and promote their self-efficacy, the CHW program's existing continuing training curriculum was reinforced. The reinforced curriculum implementation starting in November 2022, was developed in a participatory manner between the CHW themselves, the CHW supervision team, two program volunteers—one with pedagogical expertise—and the program coordinator. The main topics covered in the curriculum include clinical aspects for some of the most recurrent health conditions and demands in the work of the CHWs (hypertension, diabetes, wound care, anxiety, depression, pregnancy, puerperium, neonatal health, and use of basic medications), tools for health promotion, self-care and time management skills (Table 3 with the complete curriculum). Time management skills were addressed as CHWs participating in the interviews identified lack of time and uncertainties in schedules as a major source of stress.

Table 2
Well-being circles for community health workers facilitated by the community health worker program. CHW: Community Health Worker.

Session	Facilitated by	Date facilitated with CHWs
Relaxation techniques/Self love ^a	Program volunteer and CHW supervisors	2nd half 2022
Intrusive thoughts/Self care ^a		
Gender and violence/Violence towards women ^a		1st half 2023
The tree of life		
Gender and violence: part 2	CHW supervisors	1st half 2024
Emotions		
Suicide		

^a Depending on the community, one of two sessions—with similar activities and conversation questions—was facilitated. The communities that had already participated in the "women's circles" pilot engaged with "triangle course" sessions.

Table 3
Strengthened curriculum for continuing education of community health workers. CHW: Community Health Worker.

Topic	Facilitated by	Date facilitated with CHWs
Insulin and medications for diabetes: mechanisms of action	Program volunteer and CHW supervisors	2nd half 2022
Introduction to wound care		
Maternal lactation and short between-pregnancy interval		1st half 2023
Medications for hypertension: mechanisms of action		
Type 1 diabetes	CHW supervisors	1st half 2024
Medications for digestive problems: mechanisms of action		
General medications: mechanisms of action		
Medications for immune problems: mechanisms of action		
The reproductive system and fertility cycle		
Time management workshop		
Neonatal evaluation		
Pregnancy ultrasounds		

2.3.5. Increased availability of functional tools and consumables

The CHWs identified the negative impact on their mental health of feeling ill-equipped with insufficient quantity and quality of supplies to perform their work. To address this identified issue, the CHW team turned this direct request into an objective within a funding renewal to obtain a proper budget to cover these expenses in November 2021. Thus, as supplies became available, it was possible to equip all CHWs with their own glucometer and automatic blood pressure monitor, rechargeable batteries and its charger, as well as regular 2032 lithium batteries, test strips and lancets for capillary glucose measurements, pregnancy tests, antibacterial gel, and masks. This has been an ongoing process, in which the continuous availability of consumables has been guaranteed and devices with malfunctions have been repaired or replaced.

2.4. Evaluation design and participants

This is an observational cross-sectional mixed methods study following a convergent design. Data collection was carried out between mid-June and mid-August 2023 in the 10 communities where CES CHWs work, belonging to the municipalities of Ángel Albino Corzo, Capitán Luis A. Vidal, La Concordia, Honduras de la Sierra, and Montecristo in the Fraylesca and Sierra Mariscal areas of Chiapas, Mexico. A total of 52 active CHWs participated in the study, all women, on average 5 from each of the 10 participating communities. All participants were born in the Fraylesca and Sierra Mariscal areas of Chiapas, except for one who was born in the coastal area of Chiapas, one in Tabasco, and one in Veracruz. None self-identified with a particular ethnicity. No further sociodemographic data were collected from the participants to ensure their privacy from other members of the CES team. Participation in the evaluation was proposed to all CHWs working in CES in June 2023, all were 18 years of age or older and their participation was fully voluntary. All persons interested in participating signed the letter of informed consent before their involvement. Ethical approval was obtained from the Institutional Review Board (IRB) of the University of Notre Dame, United States (protocol number 23-03-7776 and IRB number FWA 00002462 exp 4/1/2020). The study had the full approval of the management team of CES. The research was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki.

2.5. Data collection

Data collection was carried out according to a convergent mixed

methods design, collecting quantitative (through 52 surveys) and qualitative data (through 10 focus groups) in parallel from the same participants and analyzing them independently to finally perform a joint interpretation of both data sources (Harvard Catalyst, 2024). The different topics of interest were addressed through surveys and focus group discussions. The topics selected for the focus groups were chosen because of the need to develop the topics in greater depth, the fact that they were less sensitive for the participants, and the potential of benefiting from a group discussion.

A 27-item survey was used to collect quantitative data on three areas of the interventions: access to work equipment, mental health screenings, and access to care by mental health specialists. Questions were all multiple choice, being either yes/no or three-point scale (for instance “never, one time, several times” or “not much, somewhat, a lot”). Three questions also had optional write-in spaces to clarify (such as which work materials they require, if they indicated they were lacking any). These formats were chosen to keep the survey simple and accessible to CHWs with limited literacy. The survey design involved the research team, the CHW supervision team, the program coordinator, and the CHWs. The survey was completed anonymously by the participants on paper, and the focus group facilitator was present to introduce the survey, obtain consent, and read questions aloud or clarify parts of the survey when needed, especially for CHWs with lower-level literacy.

Once the survey was completed, the CHWs went on to participate in focus group discussions. A guide designed by the same team involved in the design of the survey was used to conduct the focus groups. This contained questions about the impact of being a CHW on their mental well-being, which were taken from the initial diagnostic focus groups conducted in 2021, so as to provide a direct comparison. The guide also included sections on their experiences and perceptions of the reinforced continuing training curriculum and of the well-being circles. The focus groups were conducted by a University of Notre Dame student external to the CES team and proficient in Spanish. Prior to conducting the focus groups, the researcher underwent a four-week training and familiarization process with the context of the study. The focus groups consisted of an average of 5 participants per group, lasted 41 min on average, and were recorded. Subsequently, all audio documents were transcribed with the support of transcription software.

2.6. Data analysis

Quantitative data were imported into SPSS v. 29.0 software, where descriptive analysis was performed. The frequencies of the different response values were calculated for all the questions in the questionnaire. The frequencies given in the text were calculated without including the missing data, while the frequencies in Table A1 of Appendix A were calculated taking into account the missing data.

Transcripts were analyzed with the aid of Dedoose v. 9.0.62 software using the thematic analysis methodology as defined by Braun and Clarke (2013). After initial familiarization with the data, MA and ZA independently coded a subset of interviews. Discussion between the two researchers led to a consensus codebook, which was applied to the entire dataset. After MA coded the entire dataset, themes were identified following an inductive approach. The themes obtained were reviewed and refined through an iterative process until all co-authors were satisfied with the outcome. Participants did not provide feedback on the results. The authors adhered to the Standards for Reporting Implementation Studies (StaRI) checklist, which can be found in Appendix B.

3. Results

Through the thematic analysis of the focus groups, seven themes were identified around the impact of being a CHW on mental well-being and the experiences and perceptions around the well-being circles and continuing training (Table 4). The descriptive analysis of the surveys provided information about the experiences and perceptions

Table 4

Categories and themes resulting from the thematic analysis of the qualitative data. CHW: Community Health Worker.

Category	Theme
The impact of being a CHW on mental well-being	Positive impacts of CHW’s work on mental well-being Negative impacts of CHW’s work on mental well-being
Experiences and perceptions around well-being circles	Well-being circles as spaces for exchange and self-reflection Limited exposure to well-being circles
Experiences and perceptions around continuing training	Training impacts on self-efficacy and stress reduction Identification of their own psychological distress through mental health trainings Preferences on the format of the training and topics that need to be reinforced

surrounding screening for psychological distress, the mental healthcare pathway, and access to materials (Table A1 in Appendix A).

3.1. The impact of being a CHW on mental well-being

3.1.1. Positive impacts of CHW’s work on mental well-being

Many participants felt that working as a CHW allowed them to make a significant impact on their community through the provision of health counseling, medicines, emergency support, conflict resolution, and more, which positively impacted their well-being. One of the participants shared:

“It helps me a lot. [...] On one occasion I arrived [to a patient’s home] and the lady started telling me very sad things. And you realize that [being a CHW] teaches you to be strong, you are not going to cry with the person, with the patient. And it’s like ... it teaches you many things; it teaches you to know how to solve other people’s problems that you didn’t know and that you never thought that at some point you could help them. [...] You go back home already in a different mood. It does help a lot.”

Also, most participants mentioned the possibility of growing personally and professionally as one of the positive aspects of being a CHW, thanks to the opportunities this work provides to advance their education, develop organizational skills, and learn conflict resolution strategies. Some CHWs acknowledged the importance of CES support for their professional development. One participant relayed:

“So far, we are supported. Compañeros en Salud has always supported us. Regarding what they give us, for example the courses, in everything we have advanced with this.”

The participants also reflected on the empowering role of being a CHW, with a different role in the community than the one they have as mothers, housewives, or caretakers at home. One of the CHWs exemplified this idea with the health education visits—in which they “give topics” to households—that are part of their work:

“You go to the houses, for example, if you’re going to give a topic or something. Well, for me; you are prepared with your topics. You feel a little bit important when you’re there, more so when it’s a couple or an entire family. At that moment you don’t think you’re a mother, a housewife. You feel like someone ... so they start asking you their questions, or ... for example, ‘What’s up with this?’ And you are solving this and everything else. You feel different than being a mother, than being at home. Because at home it’s different.”

Also, several participants mentioned that their work as CHWs helped them to disconnect from their personal problems, distract themselves, and reduce their stress, returning home in a better state of mind.

“Sometimes I think that ... that work helps us a lot, because as I said, sometimes in personal life there are problems, or as I say, a loss. And when

you leave for work you go to visit the person and you forget about it, sometimes for a while, because sometimes the person starts to talk, start to tell their life or tell other things.”

3.1.2. Negative impacts of CHW's work on mental well-being

Participants discussed some challenges of the job, such as difficulties in balancing their professional life and home life, which for many includes cooking, cleaning, and taking care of children and extended family. One participant recounted how she was affected by the sum of workload at home and as a CHW:

“How does it feel? I'd say like ... tiredness. Or I'd say like ... stress.”

Another participant shared having difficulty getting her husband to understand her increased job responsibilities or accept her role outside the home:

“Also the family, the family is the one that ... sometimes there comes a time when I think I'm going to quit. Because it already happened to me when they gave me three more [CES assigned her three more households] and my husband gave me permission and everything. But then he said that I was going out too much.”

Also, some participants mentioned frustration stemming from interacting with non-collaborative patients. One participant relayed:

“It stresses me out a lot when I encounter patients—ah, what could I call them ... —rebellious. They don't give a damn about their health. And you're there insisting and insisting, and they're like, ‘Yeah, ah well. Well well.’ But then they don't do it; the results are not there. Not their appointment, not anything. So it stresses you out, it makes you angry, it makes you ... Because you'd like [the patient] to be okay, [their disease] to be controlled.”

3.2. Experiences and perceptions around well-being circles

3.2.1. Well-being circles as spaces for exchange and self-reflection

Overall, the well-being sessions had a positive impact on CHWs. Participants in the focus groups highlighted the opportunity to get to know each other on a personal level through participation in activities such as crafts as one of the most satisfying elements of the well-being circles. The CHWs cited specific activities that allowed them to get closer to their colleagues on a personal level and that they enjoyed completing, such as a tree of life, which also served as a way to reflect on their progression through the stages of life.

“We learn to get to know ourselves a little, and also our colleagues. And it's very nice to learn that—even though we are very different—to learn things that we didn't know about ourselves and our colleagues. Because that day with the tree, well, some of them did one thing and we did another and so on. And there we began to know and learn more about ourselves and others.”

CHWs repeatedly emphasized how sharing with their peers in a more intimate way had not only helped them to get to know each other better, but also to reflect on their own growth and had given them a sense of self-realization. One participant relayed:

“You don't even realize what you experienced, what has been changing, and what you are experiencing right now. In other words, even you yourself say ‘I did that’ or ‘I lived that and now I am here’ or ‘What changes my life has had.’ And then when you listen to others, you say ‘She had a childhood like that’ or ‘She already lived it, she had to go through this process and what we lack is the same.’ But yes, it is very nice. And more than anything, you yourself are unaware of what you may have done. In other words, they transport you to the past. It's good that you already achieved it, certain things that perhaps you never thought you would have achieved. But it is something very beautiful.”

3.2.2. Limited exposure to well-being circles

Overall, it appeared that the well-being circles were remembered fondly and the CHWs expressed an interest in returning to them. However, some participants reported that sessions took place less frequently than desired due to factors such as lack of facilitators and safety concerns within the region. Therefore, some CHWs were unable to participate in the sessions or participated in so few activities that they remembered few details about them. One participant was unaware of the intervention when asked:

“Well-being circles? No, I don't know.”

3.3. Experiences and perceptions around continuing training

3.3.1. Training impacts on self-efficacy and stress reduction

Many participants in the focus groups emphasized the positive impact the continuing training has had on their ability to provide care. Increased confidence and reduced stress were highly cited as positive effects of the training. CHWs shared that the learnings from the continuing training enabled them to interact successfully with patients, such as answering patients' questions regarding medications or explaining the physiological mechanism of their illness. This produced a sense of self-efficacy in their ability to navigate problems or situations that arose. One participant relayed:

“With the training that we've received, we have been gaining confidence, self-assurance that we are able to go with the patients and visit them.”

The training also reduced the stress induced by a lack of knowledge on various topics related to healthcare and health promotion, as well as a lack of general job skills, such as time management.

“Because it stressed me out ... what I'm going to do all week: I need to do this; I have to do something else ... And it kind of piled up in my mind, but I didn't know when to do it. And now it's like—I don't remember who told us how to schedule the visits ... —one day I am going to rest; another day I'm going to do the housework and go out to visit.”

3.3.2. Identification of their own psychological distress through mental health trainings

Some participants highlighted how receiving mental health training, in addition to helping them identify and manage psychiatric distress among the population served, had helped them to identify it in themselves. One participant reflected this, saying:

“And if we don't have these talks, we don't realize that the person is sick. Because as ... as I said before, when I came into this program, I realized that I myself was sick. I was depressed, very depressed. And when I listened to the talks, the instructions, how it was and everything, I said, ‘I'm really sick’.”

3.3.3. Preferences on the format of the training and topics that need to be reinforced

In terms of teaching style, focus group participants collectively agreed that the use of images and videos during the learning process increased engagement and recall of the topics. They also valued and expressed interest in being able to review the images and videos at home to refresh their understanding and explain the topics to their patients.

“I would also like that, just as she [the supervisor who conducts the training] shows us images, she could also send them, for example, to our cell phones or give them to us in print ... so that we, who see the topic in the households, can also show them [the community members who visit] the images, and make the topic more interesting.”

Many focus group participants shared that, even after participating in continuing training sessions, they still felt they lacked expertise in wound care. This was compounded by their belief that they did not have

the materials necessary to treat injuries as reported in the surveys. Similarly, CHWs shared many different topics that they enjoy and would like to learn more about, such as women's health, mental health, and hypertension and diabetes management, as these are the areas in which they feel there is the greatest need. One participant reported:

"I really like to talk about, for example, women, such as infections, or about chronic patients, the medications in case of emergency for chronic patients such as diabetics."

3.4. Experiences and perceptions around psychological distress screening

Some of the survey participants reported feeling uncomfortable seeking help for emotional difficulties (10.4%), although most were comfortable or very comfortable (89.6%) with doing so. Most participants had been screened by their supervisor for depression or anxiety in the four months prior to the survey (64.7%). The majority of participants thought that the system implemented for early detection of psychological distress was good (91.7%), and they also felt very comfortable talking to their supervisor during the screening (83%). However, the majority of participants would like this screening to be done more frequently (88.2%).

Of the participants who reported having psychological distress (high scores on the GAD-2 or PHQ-2 questionnaires; 11 of 44), all had been referred to a mental health specialist by their supervisor (to a psychiatrist in nine cases and to a community mental health worker in the remaining two). Of the referred CHWs, seven made an appointment with the mental health specialist.

3.5. Experiences and perceptions about the mental healthcare pathway

According to the surveys, most CHWs knew that they had access to sessions with a mental health specialist (68.8%), as well as how to contact her if needed (65.3%). The majority considered it very helpful to be able to count on the support of this specialist (83%). Of the eight participants who had a consultation with the mental health specialist, half had had only one session, and half had had more than one at the time of the survey. Of these CHWs, most felt that their mental health had improved somewhat or a lot after the session (five of eight). In the focus groups, a number of CHWs expressed that they would prefer face-to-face psychotherapy over videoconferencing or phone calls.

The majority of participants felt that CES values the emotional well-being of CHWs highly (81.3%) and did not believe that the emotional well-being of patients was valued more highly than that of CHWs (71.4%).

3.6. Experiences and perceptions around access to material

The majority of CHWs who participated in the surveys considered access to work materials satisfactory (82.4%), with 5.9% of the respondents considering the lack of materials as a source of stress. The majority of participants felt that access to materials had either increased (47.1%) or remained the same (19.6%) from the previous year. However, the majority of CHWs surveyed felt that there was still room for improvement in the availability of certain supplies, mainly lancets and glucose test strips (64.7%). The lack of supplies to care for patients with wounds was also reported in some of the focus groups. Although the majority of participants claimed to have a functional automatic blood pressure monitor (86.3%) and glucometer (88.2%) at the time of the survey, 46.9% of the respondents reported not being able to measure the glucose or blood pressure of at least one patient in the last three months because of malfunctioning devices.

4. Discussion

This study reflects how CHWs working in CES perceive the impact of

their work on their mental well-being, as well as their experiences and perceptions around the implementation of a package of interventions to support their mental well-being. The intervention package, the result of a participatory design process with CHWs, consisted of the implementation of a psychological distress screening system, the creation of a care pathway with mental health specialists, the creation of peer support groups called well-being circles, the strengthening of the continuing education curriculum, and the provision of sufficient materials for CHWs to perform their work. Most participants considered the interventions significant and positive for their mental well-being, although access to interventions was uneven among participants and most interventions had areas for improvement.

Participants highlighted aspects of being a CHW with the greatest positive impact on their mental well-being, including having a positive impact on their communities, personal growth, a sense of empowerment, and an opportunity to disconnect from their personal problems. These findings align with those of other studies on the motivation and satisfaction of CHWs in different LMICs, where seeing the impact of their work in the community, the possibility of further developing their skills and gaining the respect of their communities were identified as determining factors (Greenspan et al., 2013; Razee et al., 2012; Olaniran et al., 2022; Hämmerli et al., 2022; George et al., 2017), including a study conducted by the PIH affiliate in Malawi (Ndambo et al., 2022). The fact that CHWs work in the communities to which they belong, serving family, friends and neighbors, intensifies the impact on their emotional well-being of the improved well-being of the community through their work, as well as the recognition of their work by the community (Kok et al., 2017). These factors can also contribute to a virtuous circle in which CHWs are motivated and seek to improve their performance (Dehingia et al., 2020). In a community where traditional gender roles are maintained, the sense of empowerment and impact can be particularly heightened for women. As one focus group member reflected, she enjoyed taking on a distinct role outside the home and being seen as a professional.

Among the aspects of being a CHW with a negative impact on mental well-being, the CHWs in the study signaled to difficulties in balancing their personal lives with their work as CHWs and the lack of cooperation of some of the patients. Community members' collaboration and commitment to the work of CHWs—which largely determines the impact of their work—have also been identified as important factors for CHW motivation, satisfaction, and work-related stress in previous studies, similarly to comments observed in the CES focus groups (Razee et al., 2012; Johnson et al., 2022; Haq et al., 2008; Takasugi and Lee, 2012). Difficulties in balancing personal and professional lives have also been reported in other studies in LMICs as determinants of CHWs' motivation (Razee et al., 2012; Laurenzi et al., 2021). This challenge can especially affect women, as in contexts like rural Chiapas, where women may be expected to complete all household work regardless of whether they are working outside the home. Because they work in their own communities, some program beneficiaries expect CHWs to be available at any time, making it difficult for them to have a defined work schedule or to engage in other activities—a pressure specifically mentioned by some CES CHWs (Laurenzi et al., 2021). At times, the personal connection with the beneficiary population can present an additional emotional burden for CHWs (Laurenzi et al., 2021). Furthermore, in some contexts, women's work as CHWs can cause family tensions from the questioning of locally normalized gender roles (Razee et al., 2012; Laurenzi et al., 2021). As mentioned by CES CHWs, their husbands may expect to approve or deny their wives' activities outside the home; both CHWs' husbands and male community members have taken time to adapt to the women's new roles and in the meantime have restricted or criticized their work.

The majority of participants showed positive perceptions about the different well-being-oriented interventions implemented by CES for CHWs. In the case of the well-being circles, participants reported that they had been able to get to know their peers better and reflect on their

personal development. These findings resonate with what has been expressed in other evaluations of peer support group-based interventions for health workers, where improved group cohesion and a sense of self-realization are mentioned as key effects of the interventions (Carbone et al., 2022). Some participants especially expressed gratitude for being able to speak openly about infrequently discussed topics or address them in new ways among groups of women—for instance, learning about definitions of violence and then being able to apply that language to their own experiences. The community aspect of the circles and other group activities can be particularly poignant for women as well, given that outside of their work as CHWs they may have limited venues to connect with other women, and some experience vigilance by their male family members. In the case of the strengthened continuing education curriculum, the study participants reported reductions in their stress and gaining a sense of self-efficacy as a result of the skill strengthening. Thus, training CHWs may not only positively impact their performance, as demonstrated in the literature (Ursua et al., 2014; Abdel-All et al., 2017), but also have a positive effect on CHWs' mental well-being and self-perception (Bouchonville et al., 2018; Damian et al., 2020; Vareilles et al., 2017). Other studies with CHWs in LMICs have identified training as an important motivational and satisfaction force for these workers (Greenspan et al., 2013; Hämmerli et al., 2022; George et al., 2017). Both group activities and training are among the proposals for a package of interventions aimed at the mental well-being of CHWs during the COVID-19 pandemic in LMICs designed by a number of stakeholders with expertise in the field in November 2020 (Yakubu et al., 2022). In the cited study, group activities are designed to foster collective identity among CHWs, while trainings are intended to enhance CHWs' job skills, as well as to enable CHWs to know how to prevent and identify psychological distress in themselves—as was reported by some participants in our study.

Our results also align with findings from a pilot evaluation of a program to support CHWs during the COVID-19 pandemic implemented in Texas, United States (Recto et al., 2023). The intervention, which consisted of virtual didactic presentations (including topics such as self-care and mental health) and peer-to-peer case-based learning, was found to reduce CHWs' perceived stress levels and depressive symptomatology. Participants mentioned the feeling of belonging, being able to get to know their peers better, sharing their own experiences, and acquiring new skills as the most relevant aspects of the intervention (Recto et al., 2023). Both the interventions included in the cited documents and those evaluated by our study were proposed and implemented in a health emergency context. However, despite the fact that the public health emergency for COVID-19 was ceased by the World Health Organization in May 2023 (Burki, 2023), the proposals remain of utmost importance to prevent and mitigate the challenges that CHWs face on a daily basis and that affect their mental well-being.

Despite the mostly positive experiences and perceptions around the interventions in our study, one limitation was that a number of the CHWs could not benefit from the interventions of psychological distress screening, mental health specialist care, well-being circles and provision of additional material as intended by the design of the interventions. In the case of the well-being circles, external factors such as insecurity in the region, which has been increasing since the beginning of 2023 (Leyte, 2023), prevented the sessions from taking place. Other times the circles could not be carried out due to the lack of personnel to conduct them. In other cases, the circles were planned but CHWs could not attend due to scheduling difficulties or travel times to arrive at the meeting location.

Psychological distress screenings had to be changed from monthly to quarterly due to the lack of time of the CHW supervisors, who spend only one week per month in each community and supervise between 5 and 13 CHWs in each community. In addition, the results revealed cases in which CHWs who screened positive for psychological distress were referred to a mental health specialist but did not make an appointment with her. These CHWs were approached by their supervisor to determine

ways to facilitate contact with the mental health specialist by offering them work devices available at certain times and/or Internet connection at the health facility, support in scheduling the appointment, or change of assigned mental health specialist. However, there were still four CHWs who had been referred to a mental health specialist and never made an appointment at the time of the study. Further research is needed to clarify the causes that prevent CHWs from approaching mental health specialists.

Some of the participants reported not knowing about the possibility of receiving care from the mental health specialist, as well as being unaware of well-being circles. This may be due to the continuous addition of new CHWs to the team, who may not have had the opportunity to receive information about these interventions from the supervisory team. Finally, the limited access to supplies and functional tools is likely linked to the restructuring of the system for delivering inputs to the CHW in the community more efficiently and effectively, with new collaborators—which presented some turnover—and processes added to the existing workflows.

Taking into account the positive perception and the positive effect of the interventions on the well-being of the beneficiaries, as well as the limitations in implementation mentioned above, it is of utmost importance to take a series of actions to improve access to the package of interventions: attract human and material resources to the program to be able to offer the interventions according to the demands of the beneficiaries; improve the dissemination of the tools for prevention, detection and treatment of mental health conditions so that CHWs are aware of the possibility of benefiting from them; reinforce follow up with the referred CHWs to detect barriers that may be hindering them from having their appointments with the mental health specialist; and consolidate the system for diagnosing the material needs of CHWs and reduce the response time. In addition to improving accessibility to these interventions, it will be important to reinforce the topics suggested by the participants in the continuing education curriculum, in order to continue to enhance their sense of self-efficacy, as well as to distribute the visual didactic material of these topics among the workers, to facilitate patient engagement.

Our study is not free of limitations. It is possible that selection bias was introduced at the stage of recruiting participants for the study, since participation was voluntary for all CHWs in the organization and individuals with particular characteristics may have been more likely to participate in the study (those with more available time, more positive experiences in the program, etc.). Also, the communities where the CHWs live and the community of CES itself are very tight-knit. This closeness allows mutual support and strong benefits to be gained from activities like the well-being circles. However, it also means the community members can be reticent to share criticism or sensitive personal information. For instance, the CHWs likely saw the researchers as part of the CES CHW team, and therefore with potential to influence aspects of their team, including their employment. This fact may have had an impact by introducing response bias to the results, leading participants to avoid negative comments about the interventions implemented by CES.

The increasing insecurity in the region throughout 2023 made it difficult to implement some of the interventions and conduct the study, limiting the number of CHWs benefiting from and participating in the research. In the last year, the escalation of violence in the Fraylesca and Sierra Mariscal regions, coupled with the inaction of the authorities, has led the CHWs and their communities to witness armed confrontations, disappearances, executions, torture and political-electoral violence while the perpetrators act with impunity (Centro de Derechos Humanos Fray Bartolomé de las Casas, 2023; Hernández, 2024). This situation has led to the forced displacement of part of the population, including some CES CHWs, for their safety and that of their families (Red por los Derechos de la Infancia en México, 2024). Although difficult to quantify precisely, CES staff and other Chiapas health institutions have observed how the mental well-being of the population in the region has been

severely affected by the current situation of insecurity (García, 2024). Efforts to ensure access to mental healthcare for communities affected by this wave of violence, including CHWs themselves, is especially crucial at this time.

Many of the participants did not answer part of the questions in the questionnaires, which led to a considerable volume of missing data. Although the cause of response evasion is not known for certain, the question with the most missing data is the question about the identification of psychological distress in the screening, possibly due to the stigma surrounding mental health still prevalent in the context of the study (Miguel-Esponda et al., 2020).

This study also leaves the door open for future research. The present study did not evaluate the impact of improvements in CHW well-being on their work, communities, or other people on their team. Future studies could monitor colleagues' well-being, patients' perspectives, or performance as measured by supervisors, to see if any of these variables change with well-being support for CHWs. Also, while the present focus was on CHWs' perceptions of the well-being initiatives, their well-being was not measured longitudinally. CHW supervisors have record of CHW depression and anxiety check-ins, so future research could analyze whether these quantitative measurements change over the course of strengthening institutional initiatives, allowing the evaluation of the effectiveness of the package of interventions aimed at the mental well-being of CHWs, individually and in combination. Furthermore, the CES CHW team is entirely female, but a gender frame could be applied to this research, analyzing the differences in challenges and benefits of community health work for female versus male CHWs.

5. Conclusions

The present study brings to the forefront the supports CHWs identify as necessary in order to continue their work sustainably. It has been widely recognized in global health literature that CHWs are an impactful component of community healthcare and that they work under unique constraints and pressures as frontline providers—and in most rural cases, as the sole point of care in remote communities. Internationally, it is also acknowledged that health workers confront unique mental health challenges, especially during and in the wake of the COVID-19 pandemic. Still, the literature has yet to bridge these concepts, as few evidence-backed templates can be found for specific initiatives to bolster CHW wellness and resilience. The evaluations and interventions realized at CES contribute to an integrated perspective of CHWs as both care providers and beneficiaries. They highlight the responsibility of the organization and the potential benefits—to the CHWs themselves, to CES, and to its target population—of focusing on CHW mental well-being.

This research also demonstrates the benefits of the participatory design process: CHWs guided the initial needs assessment, suggestions for addressing needs, and evaluations of the interventions. Receiving their feedback and incorporating changes has been a continuous and ongoing process. Moving forward, the CES CHW team will incorporate the learnings presented here into improved well-being supports, such as more streamlined communication around psychotherapy referrals, work equipment requests, and provision of materials from training sessions. At a broader level, CES has also completed an organization-wide survey to identify factors that most negatively affect health worker mental health and has piloted creative approaches like phone applications to address these.

One hope for this research has been to offer examples to other NGOs looking to support their CHWs in their work and mental health. One of the most impactful overarching themes from the present study that can be applied in future interventions is the multi-layered effect of the well-being interventions: CHWs gained skills in the trainings and well-being circles (and possibly in sessions with the mental health specialist) and readily proposed to bring that knowledge and those strategies to their patients. These relationships among CHWs, with their supervisors, and

with their communities have potential to improve CHWs' knowledge of support from their organization, satisfaction with their work, and confidence in themselves.

CRedit authorship contribution statement

Jack Sullivan: Writing – review & editing, Writing – original draft, Formal analysis, Conceptualization. **Zeus Aranda:** Writing – review & editing, Writing – original draft, Formal analysis, Conceptualization. **Manvit Adusumilli:** Writing – review & editing, Writing – original draft, Formal analysis, Conceptualization. **Anna Martens:** Writing – review & editing, Writing – original draft, Conceptualization. **Ariwame Jiménez:** Writing – review & editing, Writing – original draft, Conceptualization.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

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