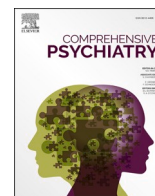




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An intervention package for supporting the mental well-being of community health workers in low, and middle-income countries during the COVID-19 pandemic

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ABSTRACT

Background: As the COVID-19 pandemic continues, there is an increasing reliance on community health workers (CHWs) to achieve its control especially in low, and middle-income countries (LMICs). An increase in the demand for their services and the challenges they already face make them prone to mental health illness. Therefore, there is a need to further support the mental health and well-being of CHWs during the COVID-19 pandemic.

Methods: We organised a workshop on Zoom to deliberate on relevant components of an intervention package for supporting the mental health of CHWs in LMICs during the COVID-19 pandemic. We used a thematic analysis approach to summarise deliberations from this workshop.

Outcomes: Participants identified the need for a hub for coordinating CHW activities, a care coordination team to manage their health, training programs aimed at improving their work performance and taking control of their health, a communication system that keeps them in touch with colleagues, family, and the communities they serve. They cautioned against confidentiality breaches while handling personal health information and favoured tailoring interventions to the unique needs of CHWs. Participants also advised on the need to ensure job security for CHWs and draw on available resources in the community. To measure the impact of such an intervention package, participants encouraged the use of mixed methods and a co-designed approach.

Interpretation: As CHWs contribute to the pandemic response in LMICs, their mental health and well-being need to be protected. Such protection can be provided by using an intervention package that harnesses inputs from members of the broader health system, their families, and communities.

Research in context

Evidence before this study

We sought to identify components of an intervention package relevant for supporting the mental health and well-being of community health workers (CHWs) in low, and middle-income countries (LMICs) during the COVID-19 pandemic. Using the keywords “*intervention*

package”, “*mental well-being*”, OR “*psychological well-being*”, “*Community Health Workers*”, AND “*COVID-19 pandemic*”, we conducted a search in the Embase Classic + Embase (Ovid), PubMed Databases and Google Scholar. We considered a date range from 1 January 1947 to 27 August 2020.

We did not find any study that specifically addressed this topic in the Embase and PubMed databases. For Google Scholar, our search yielded 46,000 results. We considered the first three pages and only studied

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articles that mentioned community health workers (CHWs) as the sole focus for the study or as part of a larger population of health workers.

The added value of this study

While previous studies have offered recommendations for supporting the mental health of CHWs during the COVID-19 pandemic, few have grounded such from a CHW-perspective and from those who work closely with them. Our study provides guidance based on a bottom-up approach to global CHW involvement.

Implications of available evidence

To support the mental health and well-being of CHWs during the COVID-19 pandemic, there is a need for an intervention package that harnesses inputs from the broader health system, CHWs, members of their families, and the community they serve.

1. Introduction

The COVID-19 pandemic has placed much stress on health systems worldwide and impacted the mental health of health care professionals. This is especially true for low, and middle-income countries (LMICs) facing critical shortage of health professionals [1]. As the number of those affected by COVID-19 increases worldwide, governments in several countries involve community health workers (CHWs) in efforts aimed at controlling the pandemic. [2,3] CHWs are in turn confronted with stigmatisation from local communities in which they live and work, who fear that the health workers could spread the infection. They are also confronted with an enormous caseload, a mounting patient death toll, shortages in personal protective equipment (PPE), and uncertainty about best treatment options [4]. Particularly in LMICs, CHWs are disproportionately female, and many must confront these challenges while managing family responsibilities and paid work. These factors put them at increased risk of developing psychological distress and mental health symptoms. [2,4]

Previous studies have described efforts to support the mental health and well-being of health workers (including CHWs) during the COVID-19 pandemic. These efforts include ensuring safe working conditions, providing psychological support, training, and adequate remuneration [5–9]. In view of the fact that many LMICs struggle with health worker shortages and rely on CHWs to provide health service, our team conducted a survey (between 25 May and 8 June 2020) to explore a) the mental health burden of CHWs in LMICs during the pandemic; b) what services, if any, had been designed by the organisations that employ CHWs to support their mental health [5]. We received 74 complete responses from 61 unique organisations/institutions (including government and non-government organisations and research institutions working with CHWs) in India, Kenya, Peru, Bangladesh, Ethiopia, Nepal, the Philippines, and South Africa. Survey respondents included primary care doctors, heads of institutions (e.g., NGOs), program managers, project implementors. Of these, 57.4% of the participants stated that their organisations had noticed mental health symptoms among CHWs working with them. These included core mental health symptoms such as anxiety and depression (76.5%), undifferentiated symptoms such as fatigue and somatisation (70.5%), and complaints of high workload and burnout (14.8%). Fortunately, about half of all the institutions/organisations (55%) had developed training modules and made provisions to support CHWs' mental health through the provision of psychosocial support on WhatsApp, peer groups (61.3%) and pharmacotherapy (9.7%) [5]. However, a lack of robust evaluation data, and a relative lack of implementation evidence outside of India (where 44% of the identified interventions were offered), highlights the need for more research to create scalable mental health solutions for CHWs.

Given that workshops can serve as avenues for design innovation, learning, and as a qualitative research method for generating reliable

data [10], we planned one workshop comprised of stakeholders involved in promoting CHW mental health. Due to international travel restrictions put in place globally to prevent the spread of COVID-19, the workshop was held virtually. This paper summarises stakeholders' views from this virtual workshop. It provides insights on the core components of an intervention package for supporting the mental health of CHWs in LMICs during the COVID-19 pandemic, how the uptake of such a package might be supported, and how its effectiveness might be assessed.

2. Materials and methods

2.1. Workshop setting and data collection

The workshop took place on 3 November 2020. It was organised through the collaborative efforts of the Global Health Workforce Unit at The George Institute for Global Health and the Community Health Workers Thematic Working Group of Health Systems Global. Each organising committee member reached out to a wide range of stakeholders within their personal and organisational networks. We invited workshop participants if they were CHWs in an LMIC or had practical, research or policy competence in promoting the mental health and well-being of CHWs in LMICs.

The workshop was conducted on the Zoom platform and lasted for two hours. RJ chaired the workshop and presented expectations for the session and ground rules for participation. Subsequently, there was a presentation on the implications of the COVID-19 pandemic on the well-being of CHWs by two CHWs from India and Uganda, a summary of the survey [11], and small group discussions.

Informed by the need for more evidence to support interventions relevant for upholding the mental health of CHWs in LMICs during the COVID-19 pandemic, the small group discussions addressed the following questions: (i) What are the necessary components of an intervention package for supporting the mental well-being of CHWs during the COVID-19 pandemic? (ii) What resources are needed to support the creation of such a package? (iii) What challenges and pitfalls must be avoided when designing such a package? (iv) How can the uptake of such an intervention package be encouraged and prioritised, despite the social stigma that surrounds mental illness and CHWs' overwhelming pandemic workload? (v) How can we evaluate the success of such an intervention package?

The small group discussions lasted for 45 min and were held using the breakout function in Zoom. The discussions consisted of four groups with five to seven participants per group. RJ, PM, DM, and KC facilitated the group discussions and ensured that all participants could freely share their ideas, even if they extended beyond the specific questions asked. The facilitators of the discussions also received support with notetaking during the workshop. After the small group discussions, one participant from each group presented a discussion summary to the larger group. There was consensus among the workshop participants around the main points presented.

2.2. Workshop participants

There were 27 participants from Australia, Bangladesh, India (Asia-Pacific), Nigeria, Ethiopia, Malawi, Uganda (Africa), Switzerland, the United Kingdom (Europe), and the United States of America. Participants included program implementers and support staff from organisations that work with CHWs [11], CHWs [3], and academics/researchers with expertise in health workforce and health systems [12].

2.3. Data analysis

The audio recording of the workshop and its breakout sessions were transcribed and coded using NVivo 12 Pro©. A thematic analysis approach was used to summarise the findings from the workshop. [13]

KY familiarised himself with transcripts from the workshop and inductively coded portions relevant to the four groups of questions (i.e., relevant components of an intervention package, challenges and pitfalls in its design, ways to encourage its uptake, and evaluation methods). He then shared preliminary ideas for theme development with RJ and PM, and together they reviewed and defined relevant themes. Using these themes, KY wrote a summary of the discussions from the workshop, which all the co-authors further refined.

2.4. Ethics

The Human Research Ethics Committee (HREC) at the University of New South Wales UNSW gave ethical approval for the workshop. All participants gave their written informed consent for their responses to be captured and subsequently included in an article to be published.

3. Results

Referring to their experiences in Sierra Leone, Liberia, the Democratic Republic of Congo, India, and Bangladesh, participants described what they believed should be included in an intervention package to support the mental health and well-being of CHWs. They thought interventions should be designed around a cohort of CHWs and include physical activities and peer mentorship sessions where problem-solving skills are discussed. Participants mentioned that a peer support mechanism would operate through the shared identity and social cohesion within a cohort of CHWs and social support from the health and social systems to which they belong. The following points provided below were raised and discussed without objection from any participant (Table 1).

Table 1
Components of the intervention package and facilitators for their uptake.

| Context for the intervention | Components of intervention | Factors necessary for successful implementation |
|-------------------------------|--|---|
| Small group-based activities | Physical activities, Mental health peer-support activities | A shared sense of identity among CHWs, gender sensitivity, involvement of influencers and existing social support in the community. |
| A hub (digital and in-person) | To coordinate their work Ensure connection with other health workers, and other components of the support package. | For digital interventions, access to technology needs to be considered |
| A care coordination team | Respond to mental health crisis Proactively help CHWs address modifiable risk factors for physical and mental illness. | Personalization, trust, and confidentiality of CHWs' health information. |
| Communication system | Providing airtime so CHWs can communicate with colleagues at work, their families, and members of their community. | A budget reserved exclusively for this purpose. |
| Training programs | Focus on improving their ability to negotiate job roles, communication skills, technology literacy, positive psychological framing skills, and improving their capacity to carry out their work tasks. | Access to technology and internet for CHWs in remote regions, availability and skill of resource persons who will provide the training program. |
| Work condition | Safe work environment including PPE, Adequate recognition, remuneration and relevant work supervision. | Job security, access to PPE |

3.1. Components of a mental well-being support package for CHWs during COVID-19 and resources needed for their creation

The participants described five components of a support package for CHWs: a hub, a care coordination team, a communication system, training programs, and improvements linked to increased job security and respect for the position. Participants noted that each of these components must be gender-sensitive or responsive to the different needs and preferences of male and female CHWs. These components are further described as follows:

3.1.1. A hub

Participants thought it was necessary to have a hub where debriefing, job supervision/coordination, mentorship, psychosocial and logistic support is provided. They did not identify this only as a community health worker hub, but as a place where engagement can occur with other members of the wider health team. This hub could be a physical place or a digital platform, e.g., closed social media platforms like WhatsApp, Zoom, and Facebook.

3.1.2. Care coordination team

Realising that modifiable risk factors for physical and mental health conditions often coexist, participants identified the need to protect both the physical and mental health of CHWs during the COVID-19 pandemic. They opined that this would require the services of a multi-disciplinary medical team responsible for routine (physical and mental) health checks for CHWs. They also advocated for the role of non-medical personnel (e.g., community leaders, hospital chaplains) and non-governmental organisations (NGOs) who would provide psychosocial support to CHWs during the pandemic. In addition, peer navigators were proposed to help CHWs navigate these resources. The participants discouraged setting up care systems outside existing hospital and community systems and advocated for continuity of care coordination teams beyond the COVID-19 pandemic.

3.1.3. A communication system

Participants also mentioned the need for a communication system paid for by the hospital/health facility where CHWs work. This communication could include text messaging services, phone calls, or video conferencing to send messages of encouragement to CHWs during the pandemic, maintain regular communication with other members of the health team and their families, and provide up-to-date health information.

3.1.4. Training programs

The participants advocated for training programs where CHWs can learn mindfulness, sleep hygiene, and recognise early signs of mental ill-health during and after the COVID-19 pandemic. Having identified a lack of awareness about CHW mental health needs within the community and the health system, participants advised that training programs should address this.

3.1.5. Job security and work designs

To ensure their well-being during and after the COVID-19 pandemic, participants thought it was essential to have formal work agreements that identify CHWs as members of the mainstream health workforce with certain rights and privileges. They also advocated for a team-based care approach to their work designs (e.g., where CHWs together with family doctors, pharmacists, and nurses embark on home visits).

3.2. Challenges to the uptake of the intervention package and options for ensuring its success

3.2.1. The stigma associated with mental health

Participants thought it was important to consider the fear of disclosure and potential stigma if a mental health intervention is provided by

an employer. However, in trying to ensure confidentiality for each CHW, participants also advised against providing generic interventions that do not meet their unique mental health needs. The participants thought this barrier might be overcome if CHWs perceived that a third party provided the intervention. In addition, participants recommended involving influential stakeholders such as religious/faith and community leaders that CHWs respect and listen to help overcome the stigma of accessing mental health treatment.

3.2.2. Access to technology

The participants were concerned that the acceptability and accessibility of digital interventions might be limited by poor internet connectivity in rural areas, low digital literacy, a preference for in-person events, and the costs of acquiring a smartphone or a laptop.

3.3. Evaluating the success of such packages

3.3.1. Evaluation methods and indicators

Academic participants thought a combination of quantitative and qualitative methods was necessary to represent the proposed intervention package's impact accurately. For quantitative methods, they recommended using before-and-after surveys to evaluate uptake of the interventions and use of self-reported tools (e.g., a resilience scale, anxiety, and depression screening tools). Self-reported tools could be used to assess the prevalence of mental health conditions and track their severity during and after the intervention. These participants also advised on the need to use longitudinal and randomised trials to infer causality and identify evidence-based interventions. For qualitative methods, they recommended individual interviews, reflection sessions and participatory action research methods. Rather than a top-down approach, participants favoured researchers developing the evaluation strategy with CHWs (i.e., a co-design approach). They thought this would elicit feedback that can be used within the life cycle of the intervention.

3.3.2. Attributable cause

Concerning making conclusions on cause and effect, participants advised on the need to keep in mind that most episodes of depression resolve on their own. Hence, if the prevalence of depression decreased among CHWs after an intervention, this was not conclusive evidence on its effectiveness. Even though participants identified CHWs as the direct beneficiaries of an intervention package, they also commented on the trickle-down effect of CHW mental health and well-being on the community. Hence, they advised on the need to define the impact of a mental health and well-being package from the CHW's perspective and the communities they serve.

3.3.3. Unintended consequences of evaluations

While debrief sessions may offer benefits for exploring triggers and identifying how best to address mental health symptoms, participants warned that this could be detrimental for some CHWs. They cautioned that discussing mental health triggers might sustain an ongoing trauma from past events, thus perpetuating, rather than resolving their mental health symptoms.

4. Discussion

For an intervention package that supports the mental health and well-being of CHWs, participants mentioned the need to identify a cohort of CHWs willing to undertake mental health support activities together. They also mentioned a hub that could be online or physical, where debriefing occurs, and activities are coordinated. Other components of the intervention package mentioned include a care coordination team that looks after the mental and physical health of CHWs; and a communication system for CHWs to keep in touch with colleagues, members of their family and community. Lastly, participants mentioned

training programs to equip CHW with skills to protect their mental health while carrying out their job tasks and an appropriate work design that ensures their safety and job security.

For pitfalls that should be avoided during the design and implementation of this package, participants mentioned confidentiality breaches regarding CHWs' personal health information, the use of generic interventions that are not suited to the unique mental health needs of CHWs, and limited access to technology in remote regions.

To encourage uptake of such an intervention package, participants advised that these interventions should not compromise the job security of CHWs; they should be sensitive to their unique needs and involve members and available resources in the community. To measure the impact of this package, participants encouraged the use of mixed methods and a co-designed approach. These findings suggest that an intervention package specific for CHWs can be designed to harness the inputs of CHWs, their colleagues, families, members of their communities, and the broader health system.

We did not find any studies that explored the creation, implementation, or evaluation of an intervention package specific to CHWs. However, some of the recommended components of the intervention package participants described in this study have been identified as key considerations for mobilising CHWs and supporting frontline health workers during a pandemic. [12,14,15] They include virtual psychological therapy, support from peers, family and community members, improved training, PPEs, and long-term job security. Similar components have been used to improve the psychological resiliency of medical staff in both LMICs and high income countries. They include having a dedicated physician to attend to the mental health needs of each medical staff, ensuring clear communication from the leadership on the need to protect the mental health of medical staff, effective risk communication, involving mental health specialists and other medical specialists in providing integrated care, and involving medical staff in developing strategies for protecting their mental health. [16–24]

Recipients of these interventions generally found them to be helpful. However, these interventions are typically offered as complex intervention packages whose components vary from study to study. There is a lack of well-designed evaluation studies that describe the essential components of psychosocial resilience packages specifically for CHWs.

We also found similarities between challenges to the uptake of the mental health intervention packages mentioned by our participants and those mentioned in studies for medical staff. These include the need to involve superiors/leaders who influence health workers' attitudes or their ability to seek mental health support. [16] However, other components of the package that our participants did not explicitly mention may be relevant to CHWs. These include the need to mitigate the psychological effect of the quarantine (if they get infected) and ensure adequate provision of PPE during the COVID-19 pandemic. [17]

Our participants thought the underlying mechanism for the effectiveness of the intervention package is a sense of shared identity within a cohort of CHWs. This shared identity underpins an existing social cohesion/bond which, when leveraged upon by implementers of the package, can ensure a sense of social support. Personalisation is a mechanism proposed by another study involving clinicians. [16] It refers to when health workers and their superiors become familiar with their group's mental health support provider. This familiarity enables an improved understanding of the aim of the intervention for supporting their mental health, alignment of goals between the support provider and the health workers, and a reduction in stigma associated with seeking help for mental health challenges. [16]

Our participants were familiar with CHWs in LMICs or were themselves CHWs from such countries. In these settings, the majority of CHWs are women, and thus their recommendations, while not explicitly gendered, may be more appropriate for female CHWs. Men and women CHWs mental health needs are different, reflecting different gendered social pressures and roles [25]. Research shows that their willingness, and the strategies needed, to promote uptake of mental health services,

also differs [26], and the design of mental health interventions themselves might need to be adapted in response to these differences. Thus, future studies will need to assess CHWs' baseline mental health status and the presence of gender-based differences (and other contextual issues) that may influence the uptake of a mental health intervention packages.

To progress with integrating the recommendations from this research into real-world tools for CHWs, we recommend a step-wedged RCT that ensures that all research participants eventually access the intervention [27]. In addition, using a theory-driven evaluation of the intervention will accommodate recommendations from participants that this evaluation include both qualitative and quantitative approaches. A theory-driven evaluation will provide information about what components of the intervention package work, and why they work (or do not work) [28]. Such information can help adapt and scale mental health packages for CHWs in LMICs and globally.

4.1. Study limitations and strengths

We acknowledge that limited internet access may have hindered the participation of relevant stakeholders from various LMICs. However, there was a rich diversity of participants who attended, and the lived experience of workshop participants informed the recommendations made in this article. It would still require further studies to confirm what might be relevant for specific CHWs across LMICs, and whether the recommendations would be generalisable to CHWs in HICs.

5. Conclusion

The COVID-19 pandemic has created additional pressure on the work of CHWs globally. These include stigmatisation from local communities, an enormous caseload, a mounting patient death toll, shortages in PPE, and uncertainty about best treatment options. To ensure they perform optimally in response to COVID-19 and continue to provide essential health services, health systems need to plan long-term mechanisms for supporting and sustaining the mental health of CHWs during and beyond the pandemic. An intervention package to achieve this may include a hub (virtual or physical) where debriefing occurs, and activities are coordinated. It may also require a care coordination team (for looking after the mental and physical health of CHWs) and a communication system for sharing relevant health information and staying in touch with colleagues, members of their family and community. Lastly, it may require a training program (which empowers them to protect their mental health and equips them to perform their job tasks effectively), job security, and a healthy work design.

Ethics approval and consent to participate

The Human Research Ethics Committee (HREC) at the University of New South Wales UNSW gave ethical approval for the workshop. Each participant gave written consent to participate in the workshop.

Consent for publication

We obtained written and verbal consent from the participants of this workshop to publish their views.

Availability of data and materials

The datasets used or analysed during the current study are available from the corresponding author on reasonable request.

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Authors' contributions

KY was involved in the organisation of the workshop, led the qualitative analysis of the data used for this manuscript, wrote the first draft of the manuscript, and led the revisions that followed. RJ and PKM conceived the idea for the workshop, led its organisation, contributed to the intellectual content of the manuscript as co-senior authors, and reviewed each draft for its accuracy and clarity. DM, KC, and ACV were all involved in the conception of the idea for the workshop, were involved in its organisation, contributed to the manuscript's intellectual content as co-authors, and reviewed each draft for its accuracy and clarity.

Declaration of Competing Interest

We have no conflict of interest to declare. The views expressed in this article do not represent the position of our affiliated organisations.

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