



Impact of COVID-19 Restrictions on the Implementation of the Ward-based Outreach Team Program in Gauteng Province

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Abstract:

Background: The epidemic Coronavirus 2019 (COVID-19) has led to changes in healthcare delivery systems globally, affecting the Ward-based Outreach Team (WBOT) program.

Objective: This study aimed to explore the impact of COVID-19 restrictions on the implementation of the ward-based outreach team program by Community Health Workers (CHWs).

Methods: A qualitative design was adopted to conduct In-depth Interviews (IDIs) with CHWs implementing the WBOT program in the northern subdistrict of Ekurhuleni. A purpose-oriented sampling technique was used to select participants for IDIs.

Results: The study included nine health facilities linked to 47 wards. The findings of the study revealed four main themes: fear and denied access during COVID-19, the impact of COVID-19 on CHW's role, psychological impact, and perceived socioeconomic impact as a result of COVID-19. The results of this study showed the perception of CHWs of the displaced community during the COVID-19 outbreak and the impact of the lockdown on their role.

Conclusion: The results of this qualitative study showed the impact of the outbreak on the role of CHWs, the fear of COVID-19 in the communities, stress and fear of the disease, and the perception of CHWs of the displaced community by the disease. Despite the challenges posed by the outbreak, the ward-based outreach program has continued to play a vital role in delivering essential healthcare services to communities. These findings can be used as an input for decision-making when developing strategies to optimize CHWs implementation.

Keywords: COVID-19, Community health workers, Ward-based outreach team program, Households, Families, Outreach programs, Community.

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1. INTRODUCTION

The epidemic of Coronavirus 2019 (COVID-19) emerged as a global emergency due to its rapid spread causing serious disease and high mortality rates [1]. Since December 19, 2019, the number of cases has increased considerably in Wuhan, China, reaching nearly 8 million cases in one year [2], and worldwide, more than 630 million people have been infected and over 6,59 million

people have died since then [3]. The consequences of the COVID-19 epidemic were profound throughout the world due to the burden of the disease or the enormous interruption in people's daily lives. Although the pandemic affected the whole world, the risks, burdens, experiences, and health outcomes were different for everyone around the globe [4].

The COVID-19 epidemic exerted different effects on

communities around the world. It led to the displacement of underprivileged populations and had an impact on community support systems playing an important role in the prevention and livelihood support [5]. Recent global data show the importance of Community Health Workers (CHWs) and community participation during the COVID-19 pandemic. CHWs are essential to understanding and successfully implementing various community programs and they have a significant impact on the implementation of the Ward-based Outreach Team (WBOT) Program.

The outbreak of COVID-19 has led to changes in healthcare delivery systems globally, affecting programs, like the Ward-based Outreach Team (WBOT) strategy [6]. The establishment of WBOTs was part of a reform strategy to enhance primary healthcare services and bridge the gap between health facilities and communities [7]. WBOTs connect community life and formal services to speed up access and participation in local clinics and other services [8]. WBOT programs deliver multiple interventions tailored to specific needs. If implemented correctly, WBOT programs can address the previous limitations of community-based health services, improve access to health care, provide referral pathways, and improve health outcomes [9]. In response to the pandemic, WBOTs have been utilized for community outreach activities, such as home visits, to ensure treatment continuity and support for patients [10, 11]. However, the pandemic has introduced new challenges, requiring healthcare teams to prioritize fundamental care amid competing demands, especially in the context of living with COVID-19 [12].

The National Department of Health in South Africa provided additional resources for ward-based primary healthcare Outreach Teams (OT) in 2018, with support from the U.S. President's Emergency Plan for AIDS Relief (EPR) [13, 14]. Community Health Workers (CHWs) are greatly responsible in resource-limited and middle-income countries to provide primary health services and bridge the gap between health facilities and communities in the case of healthcare shortage [15]. The United Nations called on all governments in 2019 to invest in community initiatives, including CHW programs, so that the primary health system is strengthened to ensure Universal Health Coverage (UHC) to achieve the Sustainable Development Goals (SDGs) [16]. Hence, CHWs are considered important contributors to the achievement of Sustainable Development Goal 3, which targets to achieve a healthy life and promote the well-being of people of all ages.

The rich history of the CHW program in South Africa dates back to 1930s, when the malaria assistant was trained and the Pholela Health Center was founded in 1940, leading to CHW training in infectious disease control and community health education [14]. CHW's role includes a wide range of local activities, including health promotion, health education, community health assessments, and links to maternal and child health services, tuberculosis, HIV, and other chronic diseases [17]. Then, over time, Non-governmental Organisations (NGOs) and faith-based organisations have implemented a growing number of small-scale CHW programs [14].

The governance principles and tasks outlined for Community Health Worker (CHW) programs draw from the early implementation of the WBOT strategy in South Africa [13]. The roles of WBOTs in providing community-based primary healthcare services have become even more crucial during the pandemic [18]. The pandemic has also highlighted barriers to the implementation of the WBOT program, such as workload issues and challenges in practical functioning [7]. The sudden disruption caused by COVID-19 has prompted the need for rapid response coordination and adjustments in healthcare delivery systems, impacting the functioning of outreach programs, like WBOTs [19, 20]. The pandemic has also underscored the importance of adapting safety protocols and strategies for outreach programs to continue functioning effectively amid global health challenges [21].

The impact of COVID-19 on the implementation of the ward-based outreach team program has been significant. Since the onset of the pandemic, various strategies have been employed to adapt outreach programs to the challenges posed by COVID-19 [22]. The Critical Care Outreach Team (CCOT) continued to provide critical care support to acutely ill patients during the COVID-19 outbreak [6]. In response to the pandemic, there was a rapid coordination of response efforts, scale-up of health communications, and redeployment of community surveillance programs [19]. Additionally, community-based strategies have been utilized to address barriers to COVID-19 vaccination, with vaccinated individuals serving as ambassadors to promote vaccination within their communities [23].

The Ward-based Outreach Team (WBOT) strategy in South Africa has been a key component of primary healthcare, especially in resource-constrained rural settings [24]. These teams have been crucial in providing community-based primary healthcare services, including activities in households and referral networks [18]. However, challenges have been identified in the implementation of the ward-based outreach team program, including workload issues and barriers to full program acceptance [7]. The need to prioritize fundamental care amid competing demands, especially in the context of COVID-19, has been emphasized [12]. The COVID-19 pandemic has had a profound impact on healthcare services globally, including outreach programs aimed at addressing various health issues, such as HIV [25].

In South Africa, ward-based primary healthcare outreach teams have been instrumental in conducting Tuberculosis (TB) household contact tracing, highlighting the adaptability of these teams to respond to different health challenges [26]. Moreover, the pandemic has necessitated the development and implementation of safety protocols for outreach programs to ensure the protection of both healthcare workers and the communities they serve [21]. In conclusion, the COVID-19 pandemic has posed challenges to the implementation of outreach programs, like the ward-based outreach team program. However, these programs have demonstrated

resilience and adaptability in responding to the evolving healthcare needs during the pandemic. By leveraging community-based strategies, addressing workload issues, and implementing safety protocols, outreach teams have continued to play a vital role in delivering essential healthcare services to communities, despite the challenges posed by COVID-19.

Although the WBOT program was introduced in South Africa, the effectiveness of the implementation was hampered by the COVID-19 epidemic. The CHWs themselves were fighting for their employment rights, recognised contribution, and challenged relationships with the health system. Despite various models for the implementation of the WBOT program in South Africa, there is limited documentation of the implementation of the WBOT program throughout the country during COVID-19 and how the obstacles faced by the CHWs can be addressed [27]. This is important because it can inform the National Department of Health (NDoH) of what works and what does not work in the policy, and it can help inform future revisions and implementation of the WBOT program if another epidemic affects the country. Hence, this study explored the impact of COVID-19 restrictions on the implementation of the WBOT program by community health workers,

2. METHODS

2.1. Study Design

A qualitative design was adopted to conduct interviews with CHWs implementing the WBOT program. This qualitative study was intended to investigate in detail the impact of the limitations of COVID-19 on the implementation of ward-based outreach team program. The design enabled researchers to gain a complete understanding of the phenomenon.

2.2. Study Setting

The study was conducted in Ekurhuleni's north sub-district. This sub-district is one of the three health districts located in Ekurhuleni Metropolitan Municipality in Gauteng province. The total population in Ekurhuleni Metropolitan in Gauteng Province is around 3.3 million. The sub-district is primarily urban and has a population of an estimated 6.8 hundred thousand people, a total of 47 wards, and 28 clinics. Each CHW is accountable for providing service to 270 household families. The study setting included nine health facilities linked to 47 WBOTs in the sub-district. The researcher selected nine wards using systematic random sampling with a fixed interval of one out of 17 wards with CHWs.

2.3. Study Sampling

A purpose-oriented sampling technique was used to select participants for in-depth interviews. The purpose of the sampling allowed the researcher to select the participants in the study, thereby systematically understanding the research problem and the central phenomena of the study. CHWs were recruited to participate if they met the eligibility criteria for delivering

outreach services for more than 12 months. The lead researcher recruited 30 CHWs according to the thumb rule for exploratory studies. Based on methodological considerations and past experiences, some researchers have recommended thumb sampling size rules for certain qualitative research designs, but John Creswell (1988) indicated a thumb recommendation of 5 to 35 for grounded theory and phenomenological research [28]. However, in this study, data collection was guided by data saturation. In 20 interviews, data saturation was declared, because nothing new was reported from the interviews. However, the researcher continued to interview five participants until the interview confirmed that there was no new information.

2.4. Data Collection

The development of the interview guide was based on the project objective and literature review. The interview guide had open-ended questions that were used during the interview and probing questions for follow-up as needed during the interview. The guide was translated from English into local languages, IsiZulu and Sesotho, by a professional language translator. The interview guide asked questions on the types of activities they perform as CHWs, what helps them to function, their satisfaction with the way the WBOT activities are being implemented by outreach teams, and the factors that facilitate and hinder the implementation of the WBOT program. Interviews were conducted by the lead researcher using the language of CHWs' choice, either in English, IsiZulu, or Sesotho, in a private room at the facilities. All interviews were audio recorded after obtaining permission from the CHWs. The participants signed an informed consent before the interview. Each interview took about 30 to 45 minutes. The interviews were conducted in the afternoon or on Fridays when the CHWs were at the clinics for weekly reporting. All interviews were conducted after the CHWs were done with their duties to avoid interfering with their day-to-day duties. The CHWs were provided with refreshments at the end of the interview. Data was collected over a period of four months.

2.5. Data Analysis

The researcher applied thematic analysis through an inductive approach to analyse collected data whereby the transcripts were read several times to understand data accordingly and identify initial codes. The researcher organized the data by reading all transcripts, establishing initial codes, searching themes by identifying the trends and patterns in the data, and defining and naming the themes. Then, the researcher reviewed all themes and finally wrote a report of all themes. Digital audio files were transcribed verbatim in the local languages of IsiZulu or Sesotho and the language translator translated them into English. After transcription, data quality was ensured by checking the audio recorder against the transcripts for verification by the researcher. The initial codes and themes were identified after repeated reading of the transcripts. This process enabled the researcher to search repeated concepts across the data to identify patterns, and

what stands out from the patterns. This allowed the researcher to create a codebook, which was reviewed for new codes and emerging themes. The data analysis process by NVivo uses a cycle process that begins with the importing of data, such as interview transcripts [29]. The transcripts were uploaded to NVIVO software version 12.0 for the application of coding to all the transcripts in order to finalize themes and sub-themes reflecting the experiences of CHWs as they rendered outreach services in relation to the research question. The data were then studied to identify keywords from participants' transcripts. Subsequently, keywords were searched by query. All the keywords of the data were displayed. During these processes, the researcher took notes of any additional comments or important ideas. The researcher consulted the supervisor throughout the data analysis process.

2.6. Measures to Ensure Trustworthiness

Credibility, transferability, dependability, and conformability were used to ensure trustworthiness. Credibility is the belief in the accuracy and interpretation of data [30]. To ensure credibility, the main researchers remained at the research sites for four months due to difficult access to CHWs during COVID-19, and the interview sessions were extended to 30–45 minutes. The main researchers interacted with participants until data saturation was achieved. The ability to transfer the results of studies to different settings and people is called transferability [31]. To ensure transferability, the samples, contexts, and data collection were detailed. The quotations used to illustrate results and the limitations were highlighted. Dependability is a concept used to establish a standard for evaluating integrity in qualitative research, and if evidence is repeated in the same context and the results are the same [31]. For ensuring dependability and confirmability, audit trail was kept by recording the research process [31], including the purpose of the study, the design of the study, and how the data were collected. Moreover, data triangulation was performed by confirming the research findings shared with the participants to confirm the accuracy of the data. Moreover, the criteria for confirmability were based on the level of confidence that

the findings of the research are factual narratives and words of the participants, rather than the potential biases of the researcher. Confirmability was assured by going through data voice recordings and field notes.

2.7. Ethical Considerations

Ethical clearance was requested from the Sefako Makgatho Health Sciences University research ethics committee (SMUREC/H/140/2021:PG). Further approval was sought from the Ekurhuleni research ethics committee (NHRD no.: GP_202109_065 and research project number: 13/10/2021-05). Permission was requested from Ekurhuleni health district and relevant authorities and Ekurhuleni north district to conduct the study at the clinics affiliated with WBOTs in the sub-district. Lastly, the researchers obtained permission to access the clinics from the selected facility managers. After providing a written information leaflet and explaining the nature and details of the study verbally in the language of participants' choice, informed consent was sought. Confidentiality was ensured by not linking data to specific participants.

3. RESULTS

3.1. Description of the Study Sample

The assessment of the Ward-based Outreach Team (WBOT) program included 25 community health workers. The characteristics of the data sources included in the study are shown in the table below. Most health workers were in the age group 31–40 and 24 were females and one male. Most CHWs had passed grade 12 (Table 1).

3.2. Themes

Interpretation of results yielded four themes with respect to the impact of COVID-19 on the implementation of the Ward-based Outreach Team (WBOT) program. These included (1) fear and denied access during the COVID-19 pandemic, (2) the impact of COVID-19 on CHWs' role, (3) the psychological impact of COVID-19 on CHWs, and (4) the perceived socioeconomic impact as a result of COVID-19 pandemic.

Table 1. The demographics of community health workers (CHWs).

CHWs' Demographics	Characteristics	N
Gender	Female	24
	Male	1
Age range in years	20-30	2
	31-40	13
	41-50	9
	>51	1
Highest level of education	Unknown	1
	Grade 10	1
	Grade 11	6
	ABET level 4	1
	Grade 12	16
Current occupation	Community health workers	25

3.2.1. Fear and Denied Access during the COVID-19 Pandemic

CHWs reported on the challenges they faced in the household during lockdown. Most of them reported that community members refused them to visit their families. This was because the community members were not satisfied and comfortable with the home visits of the CHWs during the lockdown period of COVID-19. This hindered CHWs' performance.

"They refused to open for us. We were no longer allowed to enter the households." (IDI-22, female, 35 years old)

"There was a time that community members refuse us entry to their household. They will just say no, you cannot enter, you cannot come in." (IDI-16, female, 32 years old)

"Our patients were so vocal that they don't want us to come see them in their homes." (IDI-12, female, 31 years old)

CHWs perceived that community members were afraid due to assumptions of them being COVID-19 carriers, and that CHWs would infect them with COVID-19 in their household. With regard to this, CHWs perceived that community members regarded the facility areas as COVID-19 superspreaders. Hence, the work activities of CHWs were affected negatively, especially their daily statistics drastically dropped down. Thus, CHWs limited their involvement.

"They (community members) thought we were carrying this COVID-19, and we going to infect them. Most of them thought like that because they did not want to be associated with us, and even the children at the street, they run away when they see us (CHWs). This is clear that this is what they (children) were told by their families." (IDI-14, female, 39 years old)

"When we knock, they (community members) will close their door and say that they are afraid of COVID-19, and others do not open for us and obviously it might be due to the fact that they were afraid of contracting the virus." (IDI-17, female, 33 years old)

"They (community members) said we are the ones who are bringing COVID-19 in their households, so they were refusing to let us in." (IDI-11, female, 47 years old)

3.2.2. Impact of COVID-19 on CHWs' Role

The CHWs have expressed several concerns about their role to have been influenced by COVID-19. In this respect, thirteen CHWs reported that during the COVID-19 lockdown, their household work activities were negatively affected. This is due to that CHWs were unable to visit the home as usual.

"It has had a lot of impact on us because we were afraid of going to work...we were afraid of going to households." (IDI-9, female, 31 years old)

"But many of the (patients)... it's a pain because they're no longer interested in what we're doing, so we had to push them to cooperate with us and explain to them why the visits were compromised." (IDI-6, female, 34 years old)

"It has affected our work big time." (IDI-13, female, 30 years old)

Four CHWs reported that their work schedules changed due to COVID-19 restrictions, and it has resulted in poor daily performance because they were unable to reach their monthly targets.

"Now we were no longer productive, we use to have campaigns a lot. So, our performance started to decrease because of COVID-19 restrictions." (IDI-25, female, 48 years old)

"It was difficult for us, especially when it came to tracking people and household registration." (IDI-9, female, 31 years old)

Adding to the impact of COVID-19 restrictions and regulations, three CHWs reiterated that they were unable to visit households.

"We were not able to go for home visit as we were no longer allowed to go to households at that time." (IDI-11, female, 47 years old)

"We could not reach patients at home; our scope was limited to the assistance of patients we found only in healthcare facilities. But now things are improving, and we are going to see them at least. It's difficult, because some people have lost confidence in us." (IDI-12, female, 31 years old)

"For a period of time, we didn't manage to go and visit our patients outside the facility." (IDI-23, female, 49 years old)

While three other CHWs (IDI-13, 30-year old female; IDI-3, 39-year old female, and IDI-2, 34-year old female) reported that due to the lack of supervision and observation, some members of the community defaulted their treatment, and they could not reach them due to lockdown restrictions. Furthermore, CHWs reported that patients did not want to find themselves in an environment that they perceived to contribute to the spread of COVID-19. They thought that the environment was the super-spreader of COVID-19 infection and were afraid of going there.

On the contrary, three CHWs (IDI-19, 47-year old female; IDI-18, 35-year old female; IDI-10, 36-year old male) reported an increase in their daily working time due to their excessive workload for registering new households, conducting follow-up work, conducting COVID-19 screening, and referring them to medical help. In addition, they stressed that they should cover at least seven homes, more than what is in their enrolment registers.

3.2.3. Psychological Impact of COVID-19 on CHW

Participants expressed concern and frustration about the working conditions during the COVID-19 era. Though participants reported mixed feelings about COVID-19's psychological effects, anxiety and depression were stated strongly as the factors that surfaced while adhering to their job description. These prevented CHWs from performing their duties effectively as expected.

"I was also a victim, I got COVID-19, I was always scared, it really affected me, and my life was no longer normal. I was anxious and depressed. Many households were starving because of the salary reduction....." (ID-20, female, 44 years old)

"We were anxious to go to the household thinking of what if someone had COVID....." (IDI-10, female, 36 years old)

"Thinking about this situation is traumatizing... Because other colleagues contracted COVID-19 while we were working on the ground. I was also anxious. Others (colleagues) lost their life due to COVID-19. Others have lost their family, parents, relatives and home breadwinners." (IDI-1, female, 50 years old)

Furthermore, CHWs expressed fear and stress of getting the disease. Consequently, twelve CHWs reported that they had developed a fear of contracting COVID-19 infection because of fear of losing their lives. Fear and stress were a result of hearing about the high incidence of people dying by COVID-19, including front-line health professionals.

"I was scared because I knew that COVID-19 is dangerous and I wanted to avoid contracting it by all means." (IDI-25, female, 48 years old)

"We were afraid of losing our lives and we thought we goner die, things like that." (IDI-12, female, 31 years old)

"I had that fear because of hearing the alarming statistics of people dying daily. One of our colleagues tested positive. We felt the pitch, fortunately, we did not lose that person, we prayed day and night for her recovery." (IDI-5, female, 29 years old)

However, nine participants reported contracting COVID-19. These factors had a negative impact on their productivity due to quarantine, self-isolation, and time away from work, as well as the fumigation process at the facilities. As a result, the facilities were closed for a few days, resulting in an increased stress level of delay in work and many catch-ups.

3.2.4. Perceived Socioeconomic Impact as a Result of the COVID-19 Pandemic

CHWs reported challenges that affected their household income and social life during COVID-19. Consequently, eight CHWs lost their jobs due to COVID-19. This situation did not affect the CHWs only, even the community members were also affected socially and economically, as reported by some of the CHWs.

"It affected our work too much because people were no longer working and lost their jobs." (IDI-6, female, 34 years old)

"In the community, other people also lost their work because of COVID-19." (IDI-17, female, 33 years old)

"A lot of people have lost their jobs because of these COVID-19 restrictions, more especially, the sessional and contract workers." (IDI-7, female, 38 years old)

In view of this situation, three CHWs reported that many households had no food and that they were starving.

They indicated that some family members needed food packages to supplement the situation. Four CHWs added that many members of the community lost family members and primary caregivers who were responsible for bringing food to the table due to COVID-19. This obliged some children to lead their families and take care of other siblings.

"Children became orphans because of multiple deaths in the families." (IDI-18, female, 35 years old)

"They lost their family members, parents, relatives, and those who were breadwinners at home. It (COVID-19) has killed many people, and it left many children to head the family, taking care of their young brothers and sisters." (IDI-17, female, 33 years old)

4. DISCUSSION

The results of this qualitative study showed the perception of CHWs during COVID-19 regulations and their contribution to the implementation of health needs at the community level in the northern subdistrict of Ekurhuleni during the COVID-19 pandemic. The study revealed that community members refused the CHWs to visit families during the COVID-19 epidemic. Community members were afraid that the CHWs would bring infections into their homes. During the COVID-19 epidemic, not only community members were afraid of the spread of COVID-19, but also the CHWs expressed fear of being affected by COVID-19. In the literature, it is also reported that during the first epidemic, many CHWs expressed concern about the spread of COVID-19, as it was widely reported to have a high mortality rate for people infected with the virus [32-36]. The results of this study showed that both CHWs and community members were struck with disbelief by the widespread impact of COVID-19, as they witnessed people close to them to get sick and die of the virus.

Empowering behaviour is fundamentally necessary to change people's views, encourage community behaviour, and minimize and overcome the stigma of COVID-19 in communities [33]. As we have observed in our findings, CHW should spread COVID-19 management wings and help in providing COVID-19-related support, as they already have good knowledge and extensive opportunities for providing COVID-19-related education in the community. Although community awareness is generally included in programs to work with stigmatised groups, there is no significant evidence that awareness-raising strategies alone can reduce stigma in the community [37]. Changes in attitudes and behaviours are recognised as a complex process and interventions must aim at enhancing knowledge through education. However, education alone is unlikely to be effective in transforming behaviours. Social contact intervention is one of the most effective ways to promote behaviour change, for example, to reduce discriminatory behaviour by community members [37].

During the COVID-19 regulations and lockdowns, our study found that CHW activities were affected because they could not visit households as usual. As a result, their work-related activities decreased, which led to poor daily

performance. On the other hand, however, CHWs were overwhelmed by the huge workload. Our results showed that CHWs' activity increased during the COVID-19 pandemic because it was expected that they would expand their job description and add other new roles. This finding is consistent with the results of Lotta [34] and Niyigena [35], who reported that the scope of work of CHWs during COVID-19 increased. In several studies, it has been reported that regulations and restrictions during COVID-19 have adversely affected CHWs' work activities [34-36].

CHW is a first-line public health worker and a trusted member with unusually close knowledge of the community served [38]. CHWs serve as a link between health and social services and the community, facilitating access to services and enhancement of individual and community capabilities by increasing knowledge and self-sufficiency in health care [39]. However, CHWs' work is based on cultural competence and community orientation and cannot be excluded from daily services. In this sense, the COVID-19 epidemic represents one of the most important health challenges in the past few years that has directly affected the dynamics and relationships between elements providing reorientation and healthcare services to the territory [40, 41]. Especially in Primary Healthcare (PHC), in situations like this pandemic, teams' work and care flows must be readjusted quickly without compromising the actions that had already been developed to intervene on the determinants of the health-disease process and the risks faced by registered families and individuals [40].

CHWs can exhibit the necessary flexible and transferable skills throughout the COVID-19 disease spectrum, from preventing the spread of the SARS-CoV-2 virus to reducing the burden of those diagnosed with COVID-19 and living with the infection, and social and economic impacts, and they can also reach the communities most at risk of COVID-19 [39]. Therefore, the CHWs' work transcended all the previous health needs during the COVID-19 pandemic, including knowledge acquisition, practice improvement, as well as emergency needs [42, 43].

The study also showed that CHWs faced several mental health challenges during the pandemic and how these challenges influenced their roles. CHWs were constantly working through these difficult times and have been affected by fear, stress, self-isolation, and depression. The literature indicates that when stress overwhelms resilience, health workers may start to deteriorate as well as lose their ability to aid their patients [32]. The health system in many countries was overwhelmed by the outbreak of coronavirus (COVID-19) and the demand for control and response to the virus increased, resulting in an increase in pressure on first-line health workers [44]. These high-stress conditions, coupled with the risk of infection and anxiety among the health care workers, resulted in serious psychosocial consequences for CHWs who play a vital role in delivering a bulk of primary care services. Our results also showed substantial increases in an already intense workload, anxiety, and psychological

working environment during the COVID-19 pandemic.

This study also revealed that CHWs and community members who tested positive for COVID-19 remained absent from work due to the quarantine and self-isolation process, and some even ended up losing their jobs. As a result, many members of the community lost their sources of income, and many families lived without food and starved. Financial uncertainty, decreased income, concern regarding losing the job, and food insecurity were some major challenges that community health workers faced due to the outbreak of coronavirus [45]. These results have been found to be in line with those of Olateju [43], who found community members' lives to be disrupted, including their socio-economic situation.

In some instances where the parents succumbed to COVID-19, children were left to head their families. In that era, due to COVID-19 deaths, high numbers of children lost their parents and caregivers. After the loss of their parents, orphaned children cared for by grandparents may have experienced secondary trauma after losing a caregiver [46]. The loss of caregivers may have had a long-term impact on the health and well-being of children. Data regarding the scale of deaths due to COVID-19 among caregivers are required to guide global response. Children who lost caregivers due to COVID-19 may be in need of safe, stable, and economic support [47, 48].

5. STRENGTH AND LIMITATION OF THE STUDY

The main strength of this study is that it has presented the experiences of CHWs with respect to COVID-19 management in the Gauteng province. Despite challenges faced during the time of COVID-19, CHWs have shown a commitment to even work beyond their job description in order to optimize COVID-19 management at the community level. The CHWs have played a vital role in the prevention and control of COVID-19 by providing screening and knowledge sharing regarding the management of COVID-19 to their families and the community. Therefore, this present study can be used to strengthen policymaking and planning for any outbreaks in the future. The findings of this study can be used as a lesson learned regarding the experience of CHWs interventions in dealing with the situations during the COVID-19 pandemic.

The results of this qualitative study may not represent a general picture of all community health services. Thus, the findings could be limited to Gauteng province and may not be generalizable for the global population. Using a purpose-oriented sample may result in sampling biases in the way that the sample size may not accurately represent the population being studied. Sampling biases threaten the external validity and limit the generalizability of the findings. The participants' bias was avoided by asking open questions instead of closed questions. Open questions promote the exploration of a context, and participants can choose what they want to share in detail regarding their experiences, thereby benefiting the study findings.

CONCLUSION

This study has provided perspectives of CHWs after the COVID-19 pandemic and the lockdown. To better understand the activities of CHWs, it is necessary to explore the experiences of CHWs during the COVID-19 epidemic and lockdown. CHWs have reported some challenges, but indicated it as crucial to improve the lives of communities. Despite the outbreak and the closure of the COVID-19 pandemic, CHWs have played an imperative role in the first line of response to COVID-19. They have acted as a bridge between communities and healthcare facilities by providing health services to families, though it has been challenging. The findings of this study can be used as input for decision-making when developing strategies to optimize CHWs' roles and responsibilities amid COVID-19 and possible future global pandemic challenges. Further research is needed to integrate CHWs as an integral part of COVID-19 management as well as the prevention of other health problems in the community.

In conclusion, although the COVID-19 epidemic has posed great challenges in the implementation of outreach programs, CHWs have continued to play an essential role in providing community health services by adapting to the requirements of strategies, safety protocols, and service provision, thereby ensuring the continuity and effectiveness of services provided to the communities.

AUTHORS' CONTRIBUTION

It is hereby acknowledged that all authors have accepted responsibility for the manuscript's content and consented to its submission. They have meticulously reviewed all results and unanimously approved the final version of the manuscript.

LIST OF ABBREVIATIONS

CCOT	=	Critical care outreach team
UHC	=	Universal health coverage
CHWs	=	Community health workers
IDIs	=	In-depth interviews
WBOT	=	Ward-based outreach team
COVID-19	=	Coronavirus 2019

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Ethical approval was obtained from Sefako Makgatho University's research and ethics committee (SMUREC/H/140/2021:PG) and Ekurhuleni research ethics committee (NHRD no.: GP_202109_065 and research project number: 13/10/2021-05) South Africa.

HUMAN AND ANIMAL RIGHTS

All human research procedures followed were in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national), and with the Helsinki Declaration of 1975, as revised in 2013.

CONSENT FOR PUBLICATION

All participants voluntarily participated and provided their informed consent.

STANDARDS OF REPORTING

COREQ guidelines were followed.

AVAILABILITY OF DATA AND MATERIALS

The data and supportive information are available within the article.

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None.

CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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