Perceptions of Community Health Workers (CHW) On Barriers And Enablers To Care For People With Psychosis In Rural Mozambique: Findings of a Focus Group Discussion Study Using The Capability, Opportunity, Motivation and Behavior Framework (COM-B Framework).

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Abstract

Background: Psychotic disorders contribute significantly to the global disease burden by causing disability, impaired quality of life, and higher mortality in affected people compared with the general population. In rural settings, where there is limited or no access to healthcare, individuals living with psychotic disorders often seek support from Community Health Workers (CHWs). However, little is known about what CHWs know about psychosis and how they manage such cases. This study aimed to explore the CHWs perception of psychosis and their experiences and beliefs about the factors that might enable or hinder care taking for patients with psychosis in rural settings in Mozambique.

Methods: A qualitative study was conducted in rural districts of Maputo Province, a southern region of Mozambique, using six focus group discussions with participation of 79 CHWs. Thematic analysis was used informed by the Capabilities, Opportunities, Motivation and Behavior framework (COM-B).

Results: Nine primary themes were identified. Overall, CHWs perceived psychosis as treatable medical conditions and held a positive attitude about being part of the care taking process of patients with psychosis in rural settings. Partnerships with key-stakeholders such as traditional healers, health care workers and families, were perceived by CHWs as enablers to improve access to care in rural areas. However, stigma, myths, and lack of competencies to treat people with psychosis were perceived by CHWs as barriers for appropriate care.

Conclusion: CHWs, with adequate support, can play an important role in the care of patients with psychosis in rural settings, including identification of patients requiring care and referring them to appropriate healthcare professionals, and follow-up of medicated patients with psychosis within the rural remote setting. Training of CHWs should consider inclusion of basic mental health care competencies.

Introduction

Psychotic disorders contribute significantly to the global disease burden by causing disability, impaired quality of life, and higher mortality in affected people compared with the general population (1)(2). Schizophrenia is the main cause of psychosis and has been identified as a priority disorder by the Global Mental Health Initiative (3). Nevertheless, the median treatment gap for schizophrenia in low and middle-income countries is approximately 70% (4) and a scarcity of human resources for the treatment of psychosis has been identified as a contributor to this existing gap globally (5).

Mozambique is a low-income country where about two-thirds of its total population (32 million people in 2020) live in rural areas. In Mozambique, the prevalence of psychosis is regarded as being higher in rural compared to urban areas (6). Schizophrenia is the leading cause of inpatient admission to psychiatric hospitals and the second most common reason for psychiatric outpatient consultation (7). Family support, community-based rehabilitation, self-help and support groups are some of the key priority interventions to address the burden of mental, neurological and substance use disorders in people living with psychosis (8). Interventions delivered by Community Health Workers (CHW) can effectively reduce

disability and increase adherence to treatment in people living with schizophrenia (9). The effectiveness and feasibility of community-based interventions for people living with psychosis have been demonstrated in Latin America (10), Asia (11) and Africa (12).

The CHW program (*Programa dos Agentes Polivalentes Elementares-APEs*) in Mozambique was created in 1978, informed by the primary health care approach, with the aim of expanding access to health care in remote and rural regions (13). After a challenging period followed by a civil war in the country (1977-1992), the program was relaunched in 2010 with a defined training package, supervision strategies and logistical support (14). However, the mental health and neurological component is still inadequately addressed, with only a brief reference to epilepsy (15). Many people with psychosis will start treatment elsewhere and then return to their communities requiring continued attention and follow up. In rural areas, this attention is scarce or non-existent. We focused on CHWs because they are important health care providers in rural areas of Mozambique (16). Having CHWs as providers of mental health interventions for people living with psychosis in rural areas could potentially contribute to narrowing the gap in mental health care in Mozambique. However, studies about the knowledge and perceptions of CHWs on the barriers and enablers of mental health care for people living with psychosis in Mozambique are scarce.

Aim

The study aimed to explore the CHWs perception of psychosis and their experiences and beliefs about the factors that might enable or hinder care taking for patients with psychosis in rural settings in Mozambique.

Theoretical framework

The model of behaviour change “Capability, Opportunity, Motivation and Behavior” (COM-B) (17) was used to inform our focus group guide and data analysis. Our goal was to better understand the interactions between capability, opportunity and motivation on behaviour that could enable access to health care. COM-B can be used to facilitate the design of interventions (17) aimed at improving access to healthcare by people living with psychosis in rural settings of Mozambique. In this framework, capability includes the necessary knowledge and skills that enable a person’s psychological and physical capacity to engage in an activity. Motivation includes the brain processes that enable direct behaviour, including habitual processes, emotional responses and analytical decision making. Opportunity encompasses all the external factors which make the behaviour possible.

Methods

Study design

A qualitative study was carried out and data collected through focus group discussions with CHWs. The focus groups were regarded as appropriate as they allowed for the probing of specific issues in group interaction and clarification of individual and shared perspectives of health issues (18). This sharing of

experiences enhances additional thoughts and insights between group discussion participants (CHWs), providing opportunities to make connections and learn from shared experiences during the group dynamics.

Sample and recruitment

Using a purposive sampling strategy (19), we identified and subsequently invited all CHWs from the three districts to participate voluntarily. Those that agreed were additionally informed about the time and place where the focus group discussions would occur. Recruitment was led by DM and took place during monthly district meetings at district health clinics between September and December 2019. Travel expenses were reimbursed, but no other incentives were offered. The objectives of the study were explained to the CHWs who agreed to participate, and informed consent was obtained. Discussions were facilitated in the Portuguese language by DM, a male researcher trained in qualitative methods with no previous contact with the participants. Each session was audio-recorded and transcribed verbatim by DM. In addition to these recordings, written notes were also taken, to allow for future review during data analysis and other research processes and to ensure that participants views were clearly documented.

Procedure

The study was approved by the National Review Board (92/CNBS/2017) and all participants signed the informed consent prior to the focus group discussion. The interview guide was designed by the research team and informed by the COM-B framework. Before the study commenced, the focus group guide was piloted in other districts which were not part of the study, so that it could be refined and revised. Because CHWs are not trained in mental health themes, we adapted the mhGAP case vignette of psychosis (20) to provide a unified description of the common experiences of psychosis. Participants were asked to identify if they have had previous experiences with similar cases and identify the causes (Supplementary material).

Study setting

Three rural districts of Maputo province in southern region of the country were included: Manhica, Moamba and Boane.

Manhica district is located in the north area of Maputo Province, 80 km from Maputo City. It has about 214,751 inhabitants. It has 15 primary care units. *Moamba* district is located to the north area of Maputo Province, 52 km from Maputo City. It has about 56,559 inhabitants. It has 11 primary care units. *Boane* district is located in the southeastern region of Maputo Province, 30 km from Maputo City. It has about 134,006 inhabitants. It has 10 primary health care units.

Data analysis

Transcripts were analysed manually using a word template based on guidelines for the thematic analysis(21). The following steps were taken to analyse the data: 1) familiarization: the first author (DM)

revisited the focus group discussion audio and verbatim transcript several times to familiarize himself with the data; 2) code generation: the coding was derived from the data using the structural coding approach (22); 3) theme search: after initial coding, a set of overarching themes were developed; 4) theme revision: revision of the coding process was performed, during which themes were refined and new themes could be added; 5) theme definition and naming: consultation with a second researcher (DO) was undertaken to refine the way each theme was developed; and 6) thematic final map: this map was used to inform the reporting of the analysis. Data saturation was assessed following Monike Hennik’s guidelines on saturation (23) which states that a study where focus group are not stratified by any characteristic will require a small sample size to reach saturation (3-6 groups). Reporting followed the Consolidated Criteria for Reporting Qualitative Research (18).

Results

Seventy-nine representative CHWs took part in six focus groups (group size n=5-13), and each focus group lasted between 65 to 100 minutes. The socio-demographic characteristics of the sample are described on Table 1.

Table 1. Socio demographic characteristics of participants

Variable	Focus group (n=79) Mean (SD)
Age (years)	38.81 (11.92)
Time as CHW (years)	7.71 (6.91)
Gender n (%)	
Male	28 (35.4)
Female	51 (64.6)
District	
Boane	13 (16.5)
Manhiça	34 (43)
Moamba	32 (40.5)
Qualification	
Primary	36 (45.6)
Basic	26 (32.9)
Midlevel	7 (8.9)
No information	10 (12.7)
Marital status n (%)	
Single	53 (67)
Married	24 (30.5)
Divorced	2 (2.5)

Abbreviations: CHW- Community Health Workers; SD-Standard deviation; n-number;

%- percentage.

Nine primary themes were identified: knowledge about psychosis and mental health; the manifestations of the disease; attitudes and practices towards patients with psychotic disorders; key-stakeholders in the care of patients with psychotic disorders; perceived needs for training; perceived readiness to provide care for patients with psychosis; community perceptions; and beliefs and attitudes related to psychosis. Table 2 shows details of COM-B model related themes.

Table 2: COM-B model and related themes

COM-B components (Michie et al., 2011)	COM-B components applied to CHW views of enablers and barriers	Themes from this study	Illustrative quotes
<p>Capability: “the individual's capacity to engage in the activity concerned”</p> <p>Psychological capability: ‘the capacity to engage in the necessary thought processes i.e. comprehension, reasoning.’</p>	<p>CHW knowledge towards psychosis</p> <p>The nature of the illness</p>	<p>Knowledge about the cause of psychosis:</p> <p>Alcohol and Substance Abuse as a cause of psychosis</p> <p>Post Malaria Infection in Childhood</p> <p>Familiar heritage and young age; Familiar problems</p> <p>Trauma (sexual trauma, stress, anger)</p> <p>Bad spirits, punishment</p> <p>Isolation, discrimination, orphaned in childhood</p> <p>The nature of the disease: the lack of insight that characterize many people with psychosis. It includes agitation, delusions, hallucination and bizarre behavior.</p>	<p><i>“To my mind, such illness strikes young people [the most], since most young people use suruma /cannabis sativa a lot, so many are there due to their using cannabis sativa.” FGD1, 01</i></p> <p><i>“To my mind, these problems are rooted in the families, perhaps. Suppose, perhaps, there are families who have had cases of that illness, and maybe they think that such persons would pass it on to others.” FG 2 07</i></p> <p><i>“In most-people’s minds, this is witchcraft, in other words, someone has been bewitched...the community thinks that this illness is rooted in tradition.” FG 2 03</i></p> <p><i>“I can’t tell, and scientifically speaking, it is difficult to tell. Still, it seems that a person, in particular kids, for instance, who had cerebral malaria earlier, right, can develop this illness, scientifically speaking... I cannot tell whether or not myths become a reality, but what people have said is that these illnesses have to do with evil spirits.” FGD 5, 03.</i></p> <p><i>“Consider the example of someone who is discriminated where they live, they may eventually suffer from</i></p>

				<p><i>this illness. If he/she feels lonely without being hugged by their relatives, he/she may develop this illness.” FGD 2 06</i></p> <p><i>“Someone with mental disorders can, for instance, serve food on a plate, then dump it onto the floor, collect the food from the floor and eat it. All that is normal is seen by them as something abnormal, as I explained earlier.” FGD 05 6</i></p>
	<p>Physical capability: physical</p> <p>skills to enact the behavior</p>	<p>Healthcare professionals’ skills to support people with psychosis and their family’s inability to access the clinic due to lack of income</p>	<p>Training need: need to train the APEs to diagnose and manage psychosis. Include training in screening, brief intervention and referral of the patients with psychosis as well as follow up.</p>	<p><i>“We are not yet well prepared on the topic, right? Given that we are not knowledgeable about the topic, we shall be prepared, well prepared after undergoing a small training.” FGD 06 8</i></p>
<p>Opportunity: ‘the factors that lie outside of the individual that make behavior possible or prompt it’.</p>	<p>Social opportunity: ‘afforded by the cultural milieu’ which ‘dictates the way we think about things</p>	<p>Social barriers/enablers to CHW care for people with psychosis</p>	<p>Attitude and practice of CHWs: the attitude of APEs towards psychosis. Views of CHWs towards people with psychosis. Positive attitude of the CHWs towards people with psychosis.</p> <p>Partnership: CHWs, traditional healers, family and community working together.</p> <p>Engage families in care pathway (enabler)</p>	<p><i>“But we as CHWs have been entrusted by the community with working for them. We already have several types of packages with which we are working. We’re going to give the case a try until we succeed, because that person belongs to the community, that is a person of ours.” FGD 1 04</i></p> <p><i>“Because when this sort of illness appears, they think that this illness can’t be cured at the hospital, but that the illness can only be cured by traditional healer(s). We are not refusing this. We are saying yes, you can go</i></p>

and see traditional healers, don't stop seeing them, but first go to the hospital."
FGD 01 6

"It's not easy for the community to understand that this illness can be treated at the hospital, but whenever a visit is paid by us we should give advice, give support so that they take him/her to the hospital, to see whether they can eventually understand it. He/she will end up accepting the pieces of advice and whenever he/she is taken to hospital he/she will see that things will change." FGD 05 2

"As for my community, I, as a CHW, have to help those people who do not understand that the illness can be treated at the hospital, advise the ladies or the families to take the person with that disability to hospital, in order to get better..."
FGD 02 8

"We have to make more auxiliary visits to help our communities. The communities don't know where else that illness comes from... As CHWs we have to help the community by raising their awareness so that community members can also know that a person can get ill and not be in a spell, but that at the hospital he/she can be cured." FG2 02

"Yes, because the difficulties are the fact that communities already share the

conviction that this kind of illness is not treated at a hospital. That is the most common difficulty, all the more so because they tell us that if they go there, they are going to be sent to Magude, and from Magude, they will be sent to Maputo. Thus, they don't have money to go there."

Motivation:
'all those brain processes that energize and direct behavior'.

Reflective motivation: 'analytical decision making', 'reflective processes (involving evaluation and plans)'.

How CHW analyze their motivation to support people with psychosis

Lack of confidence (barrier)

Readiness of CHW to provide mental health care (enabler): Positive attitude of CHW towards psychosis

Readiness to provide care for people with psychosis

"As we do not know enough about the illness, if we approach a family to offer explanations, family members in the first place would want to know what is happening. These are questions which, at that moment, we would not be able to answer. And our credibility as CHWs there is virtually nil." FGD 06 12".

"Again, we CHWs are not known there in the community as persons dealing with these stuff, except for dealing with malaria, cholera, diarrhoea. Meanwhile, nowadays, if we approach them with this topic, they will ask us where we got this information from, and that we are lying."

"But we as CHWs have been entrusted by the community with working for them. We guarantee that we will do what we have been doing with those other packages, because so far we have already been achieving the goals. We're not going to set someone aside in that it's difficult. We're going to give the case a try until we succeed, because that

person belongs to the community, that is a person of ours.” FGD 1 04

Automatic motivation: ‘involving emotions and impulses that arise from associative learning and/or innate dispositions.

How professionals are motivated to support health behaviors in relation to their own (perhaps unconscious) emotions or understandings about those behaviors

Stigma issues (barriers)

“I felt very sorry when two months ago a boy who is still old enough to go to school or do what is for his own good, received an unsatisfactory response from his father towards his illness, as the father tied him up and beat him up a lot and put him on his minibus.” FGD 1 04

“As far as recovery is concerned, the difficulty lies with the family itself, because when the family sees the kid in the state he/she is messing up everything, they think he/she only does that because he/she wants to [do so], but no, that is an illness.” FGD 1 04

“The communities don’t know where else that illness comes from. People say that thing that somebody got bewitched. The thing is that there are people who say that cure can’t be found there, you can only go to a traditional healer and be given I don’t know what.” FG2 02

“Another thing involves the community: It is the fact that we were born there, grew up there, are known by people, people know what we do in our homes, people are aware that we are poor. So, when we approach the community, they don’t take us seriously—they think that we are lying;

They despise us.” FGD 02 10

“Another thing involves the community: It is the fact that we were born there, grew up there, are known by people, people know what we do in our homes, people are aware that we are poor. So, when we approach the community, they don’t take us seriously—they think that we are lying; I’m not sure, as they know us (...). They despise us.” FGD 02 10

Capability

Capability can be explained as the CHW’s capacity to engage in the management of mental health issues for people with psychosis in rural settings. Two barriers and one facilitator emerged in relation to this construct. Three themes were identified within the category of capability: knowledge about the cause of psychosis, the nature of the disease, and lack of mental health skills.

Knowledge about cause of psychosis

To determine levels of knowledge about psychosis, participants were asked to define the causes of psychosis. Generally, CHWs demonstrated limited knowledge and understanding of psychosis. Most CHWs indicated that alcohol use and substance abuse can be important causes of psychosis or worsening of symptoms. The theme related to knowledge about the causes of psychosis encompassed 5 sub-themes: alcohol and substance abuse; malaria infection in childhood; family inheritance; young age; and family problems, such as trauma (sexual trauma, stress, anger), bad spirits, punishment, and isolation (discrimination, orphaned in childhood).

The main substance implicated in the development of symptoms was cannabis sativa “*suruma*”:

“To my mind, such illness strikes young people [the most], since most young people use suruma /cannabis sativa a lot, so many are there due to their using cannabis sativa.” FGD1, 01

CHWs also observed that psychosis is caused by heritability from fathers to children, besides the use of drugs.

“To my mind, these problems are rooted in the families, perhaps. Suppose, perhaps, there are families who have had cases of that illness, and maybe they think that such persons would pass it on to others.” FG 2 07

Few CHWs believed that psychosis is caused by witchcraft and possession by bad spirits:

"In most-people's minds, this is witchcraft, in other words, someone has been bewitched...the community thinks that this illness is rooted in tradition." FG 2 03

One CHW observed that psychosis could be the result of malaria infection during the childhood, however, did not discard the possibility of psychosis being the result of "evil spirits":

"I can't tell, and scientifically speaking, it is difficult to tell. Still, it seems that a person, in particular kids, for instance, who had cerebral malaria earlier, right, can develop this illness, scientifically speaking... I cannot tell whether or not myths become a reality, but what people have said is that these illnesses have to do with evil spirits." FGD 5, 03.

Discrimination and lack of empathy was stated as a cause of psychosis by one CHW:

"Consider the example of someone who is discriminated where they live, they may eventually suffer from this illness. If he/she feels lonely without being hugged by their relatives, he/she may develop this illness." FGD 2 06

Training needs

CHWs felt that they lacked the skills needed to care for people with psychosis and suggested practical and theoretical training to overcome this gap:

"We are not yet well prepared on the topic, right? Given that we are not knowledgeable about the topic, we shall be prepared, well prepared after undergoing a small training." FGD 06 8

The nature of the disease

Participants considered that the ability to provide care for people with psychosis could be influenced by the nature of the disease. One CHW recognized that it is difficult to deal with people with psychosis because of their symptoms and behaviour:

"Someone with mental disorders can, for instance, serve food on a plate, then dump it onto the floor, collect the food from the floor and eat it. All that is normal is seen by them as something abnormal, as I explained earlier." FGD 05 6

Opportunity:

Three enablers emerged as influencing CHWs' opportunities within this construct: attitudes and practices of CHWs towards psychosis; partnerships; and engaging families in the care pathway.

Attitude and practices of CHW

CHWs felt that are empowered and motivated to care for people living with psychosis:

"But we as CHWs have been entrusted by the community with working for them. We already have several types of packages with which we are working. We're going to give the case a try until we succeed, because that person belongs to the community, that is a person of ours." FGD 1 04

Partnerships

Partnering with families, traditional healers and health care workers was a way that CHWs reported to improve access and care for people living with psychosis in their communities:

"Because when this sort of illness appears, they think that this illness can't be cured at the hospital, but that the illness can only be cured by traditional healer(s). We are not refusing this. We are saying yes, you can go and see traditional healers, don't stop seeing them, but first go to the hospital." FGD 01 6

Engage families in care pathway

Almost all CHW recognize that they have a challenge in convincing families to engage in the care of their kids with psychosis. They also recognize that families need support from the community and all stakeholders to fulfil the needs of people living with psychosis:

"It's not easy for the community to understand that this illness can be treated at the hospital, but whenever a visit is paid by us we should give advice, give support so that they take him/her to the hospital, to see whether they can eventually understand it. He/she will end up accepting the pieces of advice and whenever he/she is taken to hospital he/she will see that things will change." FGD 05 2

Education and providing support for people with psychosis and their caregivers were seen by CHWs as enablers for recovery:

"As for my community, I, as a CHW, have to help those people who do not understand that the illness can be treated at the hospital, advise the ladies or the families to take the person with that disability to hospital, in order to get better..." FGD 02 8

CHWs are able to support the communities to better understand the causes of psychosis and increase awareness about mental health issues:

"We have to make more auxiliary visits to help our communities. The communities don't know where else that illness comes from... As CHWs we have to help the community by raising their awareness so that community members can also know that a person can get ill and not be in a spell, but that at the hospital he/she can be cured." FG2 02

CHWs stated that families who care for people with psychosis are reluctant to go to clinic because they are not comfortable with continuing through the complex referral and treatment pathway:

"Yes, because the difficulties are the fact that communities already share the conviction that this kind of illness is not treated at a hospital. That is the most common difficulty, all the more so because they tell us

that if they go there, they are going to be sent to Magude, and from Magude, they will be sent to Maputo. Thus, they don't have money to go there." FGD 02 8.

Motivation.

Two barriers and one facilitator were categorized as influencing participants' motivation to manage people with psychosis.

The motivations that were expressed by CHWs to improve care for people living with psychosis were positive and enabling regarding the readiness of CHWs to provide mental health care for people with psychosis.

Lack of confidence

CHWs perceived a lack of confidence and skills/ability to care for people with psychosis and their families as barriers. This reduces the self-efficacy of CHWs to care for people with psychosis. Building that capacity and professional competence were seen as important factors for CHW motivation:

"As we do not know enough about the illness, if we approach a family to offer explanations, family members in the first place would want to know what is happening. These are questions which, at that moment, we would not be able to answer. And our credibility as CHWs there is virtually nil." FGD 06 12".

Because CHWs so far have not address mental illness in the community, CHWs felt that households where a family member is a person living with psychosis would not trust them as a source of knowledge:

"Again, we CHWs are not known there in the community as persons dealing with these stuff, except for dealing with malaria, cholera, diarrhoea. Meanwhile, nowadays, if we approach them with this topic, they will ask us where we got this information from, and that we are lying."

Readiness of CHW to provide mental health care

CHWs perceived that they would be able to raise awareness within the community and among families of people with psychosis in a way that increases knowledge about psychosis. Additionally, they felt that they were able to care for patients with psychosis and help their communities:

"But we as CHWs have been entrusted by the community with working for them. We guarantee that we will do what we have been doing with those other packages, because so far we have already been achieving the goals. We're not going to set someone aside in that it's difficult. We're going to give the case a try until we succeed, because that person belongs to the community, that is a person of ours." FGD 1 04

Stigma issues

Stigma issues were recognized by CHWs as barriers for access, diagnosis, recovery and continuity of care by people living with psychosis. CHWs felt that some families of people living with psychosis treat them

with dehumanization and blame:

"I felt very sorry when two months ago a boy who is still old enough to go to school or do what is for his own good, received an unsatisfactory response from his father towards his illness, as the father tied him up and beat him up a lot and put him on his minibus." FGD 1 04

Families in the rural communities may express their stigma about psychosis by sanctioning violent acts against people manifesting psychotic symptoms. One CHW stated that people don't believe that mental disorders exist. They think that it's a personal choice to have a mental illness:

"As far as recovery is concerned, the difficulty lies with the family itself, because when the family sees the kid in the state he/she is messing up everything, they think he/she only does that because he/she wants to [do so], but no, that is an illness." FGD 1 04

The CHWs also recognized that misinterpretation about the origin/ causes of the psychosis may negatively impact recovery and create barriers to accessing mental health services and care:

"The communities don't know where else that illness comes from. People say that thing that somebody got bewitched. The thing is that there are people who say that cure can't be found there, you can only go to a traditional healer and be given I don't know what." FG2 02

CHWs felt discriminated against by some community members because they are members of the same community and mental health themes are not part of their current intervention package:

"Another thing involves the community: It is the fact that we were born there, grew up there, are known by people, people know what we do in our homes, people are aware that we are poor. So, when we approach the community, they don't take us seriously—they think that we are lying; They despise us." FGD 02 10

Discussion

This qualitative study aimed to explore the CHWs perception of psychosis and their experiences and beliefs about the factors that might enable or hinder care taking for patients with psychosis in rural settings in Mozambique. It sheds light on how CHWs understand psychotic illnesses, their desires for further education and skills to improve their understanding and how they approach psychotic illnesses, and how a lack of knowledge and misunderstandings about the causes of psychosis in these rural communities hampers appropriate approaches to deal with stigma and prevent abuse of people with psychosis.

Our findings suggest that CHWs have a good attitude and perceive themselves as being ready to provide mental health care for people with psychosis and that they are available to be trained to perform this additional task. Furthermore, CHWs also consider that having a good collaboration between CHWs, families, traditional healers and health care professionals is an important enabler to engage/maintain people with psychosis with appropriate care while residing in remote rural setting.

The study shows that CHWs with appropriate knowledge about psychosis had better attitudes and practices towards psychosis. Many CHWs were aware of factors that may contribute to the onset of psychotic illnesses, such as the abuse of alcohol and illicit substances, especially marijuana, the role of cerebral malaria in contributing to mental illness, and the presence of other contributing factors, such as trauma. CHWs were able to discuss community beliefs about witchcraft and spirit possession as factors that needed to be addressed appropriately to promote better acceptance of psychiatric treatment in rural communities. These findings are in line with other studies (24).

A systematic review suggests that family and community support for people with psychosis results in good outcomes and recovery (25). In this study, family support has been stated as an important enabler to recovery of people with psychosis. This was also suggested in previous studies (27)·(28). CHWs in this study faced issues of lack of knowledge and skills to care for people with psychosis and suggested training in mental health themes. Our study is in line with other studies that were carried out in Kenya about the helpfulness of interventions that improve knowledge among CHWs through training on the diagnosis of psychosis (26).

A randomized controlled trial in Nigeria and Ghana suggested that collaborative care between traditional healers and primary health-care workers was more effective and cost-effective for care for people with psychosis in low resource settings (12).

The goal of our study was to explore the views of CHWs concerning the barriers and enablers of access to mental health services and recovery services for people with psychosis in their communities. Our findings shed important light on the negative impact of the stigma on access to mental health care and recovery in rural areas of Mozambique. They suggest the need for improved collaboration/partnerships between families, traditional healers, CHWs and health care workers. Discrimination related to psychosis was an important barrier that contributed to low levels of knowledge towards psychosis among CHWs (26).

Additionally, CHWs found it challenging to provide care for people with psychosis, but they also felt many barriers could be lowered by training CHWs on mental health themes and on techniques for engaging/convincing families to be involved in the care pathway for people with psychosis. One previous study found that training for CHWs, along with providing family support and community mobilization, had a positive impact on the quality of life of people with schizophrenia (29). Some CHWs felt discriminated against by their communities when providing mental health care, highlighting the impact of stigma on those who are caring for people with psychosis.

Limitations

The sample was composed by CHWs of the southern region of Mozambique and there are considerable ethno-cultural differences within different parts of the country which limits the applicability of findings to the whole of the country. These CHWs' suggestions and opinions may not reflect those of CHWs in other

contexts elsewhere in Africa or globally. However, this study is the first to explore the barriers and enablers of mental health care for people with psychosis living in rural settings in Mozambique from the perspective of CHWs. This study can serve as a background for further research focusing on the feasibility of implementing evidence-based interventions for people with psychosis in rural areas of Mozambique. The participation of CHWs in care of patients with psychosis is of paramount importance as they are the ones who deliver basic health care and first point of contact with the health system in the rural areas of Mozambique.

Conclusion

In conclusion, this study presents exploratory evidence of the role that CHWs could play in participating in care of patients with psychosis. CHWs, with adequate support, can play an important role in the care of patients with psychosis in rural settings, including identification of patients requiring care and referring them to appropriate healthcare professionals, and follow-up of medicated patients with psychosis within the rural remote setting. Training of CHWs should consider inclusion of basic mental health care competencies.

Abbreviations

CHW: Community Health Workers

COM-B: Capability, Opportunity, Motivation and Behavior

APE- Agente Polivalente Elementar

CNBS- Comitê Nacional de Bioética em Saúde

FGD- Focus Group Discussions

Declarations

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Ethics approval and consent to participate

All data collection protocols were approved by the National Review Board (92/CNBS/2017). The participants provided written informed consent for participation and recording prior to all data collection.

Consent for publication: Not Applicable

Competing interests: The authors report no conflicts of interest.

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