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Care delivery in the context of district mental healthcare plans in Ghana: a qualitative study exploring experiences of primary healthcare workers and service users

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ABSTRACT

Objective To explore the perceptions and experiences of mental health service users and healthcare workers regarding the implementation of district mental healthcare plans (DMHPs) in three district demonstration sites in Ghana.

Design The study employed a qualitative design using reflexive thematic analysis. Interview data were analysed by combining inductive and deductive approaches.

Setting The study was conducted in three DMHP districts in Ghana: Anloga (Volta), Asunafo North (Ahafo) and Bongo (Upper East). The districts were selected via national stakeholder consultations, using a DMHP framework. Data were collected between January 2023 and June 2023.

Participants In-depth interviews were conducted with 28 primary healthcare workers who played key roles in the delivery of care in the demonstration districts. Thirty-two service users who are 18 years and above and have been receiving healthcare for the past year in the demonstration districts were also interviewed. Participants were purposively sampled.

Findings Three main themes were identified: (1) factors supporting DMHP implementation, including capacity building, collaboration, awareness creation and acceptability; (2) challenges affecting DMHP implementation, such as inadequate resources and medication shortages and (3) perceived outcomes of the DMHPs, including improved well-being and daily functioning as well as changing attitudes towards mental health. Some district-level variations were noted in the intensity of challenges and outcomes.

Conclusion The DMHPs have shown promise in improving mental healthcare in primary care settings in Ghana. However, addressing resource constraints and medication shortages and sustaining capacity building and awareness creation efforts will be crucial for successful scale-up. The perspectives of service users and healthcare providers offer valuable insights for policymakers and practitioners aiming to enhance integrated mental healthcare.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ The inclusion of both healthcare workers and service users across three districts provided diverse perspectives on district mental healthcare plan (DMHP) implementation.
⇒ The qualitative approach using in-depth interviews, allowed for a nuanced understanding of participants' experiences and perceptions regarding the implementation of DMHPs.
⇒ The study provides a snapshot of experiences at a particular point in time, making it difficult to observe how the DMHP's implementation and impact may have changed over time.

INTRODUCTION

Mental health conditions are a major public health burden globally and account for 16% of disability-adjusted life years worldwide.[1] Untreated mental illness significantly impairs quality of life across various domains, including physical health, psychological health and social functioning.[2 3] Severe mental illness can have profound effects not only on the individuals experiencing them but also on their caregivers and the resources provided by governments particularly, in terms of healthcare costs, social services and overall public health management.[4 5] The situation has been exacerbated by the COVID-19 pandemic with an increase in mental, neurological and substance (MNS) use disorders such as depression and anxiety.[6] Despite an estimated 80% of people with mental health conditions living in low- and middle-income countries (LMIC), access to mental health services is limited due to socioeconomic disparities, inadequate human and financial resources, cultural stigmatisation, lack of policy priority and insufficient mental health infrastructure.[7] In Ghana, the trend is similar. A vast majority of people with mental health conditions are unable to access mental healthcare with a gap of between 94% and

98%.[8 9] Inability of people with mental health conditions to access mental health services may exacerbate their conditions and impair their daily functioning.[10]

The integration of mental health services in primary healthcare services has proven to be one of the most effective ways of improving access to mental healthcare services and reducing stigma.[11–13] The benefits of integrating mental health services into primary healthcare include reducing the care gap and the impact of mental health conditions on individuals.[14 15]

Ghana Somubi Dwumadie (Ghana Participation Programme) was a 4-year disability programme in Ghana, with a specific focus on mental health. The programme sought to provide support and generate evidence to inform the effectiveness of mental health programmes and interventions in Ghana (https://www.ghanasomubi.com/).

As part of the strategy to improve mental healthcare access in Ghana, Ghana Somubi Dwumadie worked with local stakeholders to develop and implement the DMHP in three demonstration districts in Ghana. Using the Programme for Improving Mental HealthcarE (PRIME) approach,[11] the DMHPs were designed to raise mental health awareness, improve detection, treatment and recovery, as well as improve the overall functioning of service users. One of the components of the DMHPs was implementing interventions that would enhance the integration of mental health services at the primary care level. This included the training of healthcare workers and community health volunteers using the WHO Mental Health Gap Action Programme (WHO mhGAP) Intervention Guide to detect and manage MNS conditions as well as provide psychosocial support to service users.[16] Another way of doing this was ensuring the availability of psychotropic medication, which has been a major challenge in this context. Improving the availability of psychotropic medication was proposed by stakeholders as a major priority during the development of the DMHP through the Theory of Change workshops. The district mental health operations team then developed strategies to ensure that this goal was achieved. The implementation steps as well as the evaluation have been explained in an earlier publication.[17]

Despite the emerging evidence on the process of developing and implementing DMHPs, there is a gap in our knowledge regarding the perceptions and experiences of mental health service users and primary healthcare workers involved in this process. Understanding the perspectives and experiences of primary healthcare providers and service users in the implementation of mental healthcare plan is important for identifying acceptability, feasibility, areas of success, challenges and opportunities for improvement in mental healthcare delivery. The perspectives of service users and healthcare workers are vital for integrating mental healthcare into primary care in Ghana.[18]

The aim of this study is to explore the perceptions and experiences of mental health service users and healthcare workers regarding the implementation of DMHPs in three district demonstration sites in Ghana. Specifically, we sought to understand the factors that stakeholders perceive as supporting or challenging the DMHP implementation and explore stakeholders' perceived outcomes of the DMHP in the three districts.

METHODS

Study design

The study employed a reflective thematic analysis, a qualitative research approach designed to identify, analyse and interpret patterns of meaning (themes) within qualitative data. It emphasises the researcher's subjectivity, reflexivity and active role in the construction of themes.[19] The approach was used to explore the subjective experiences and perceptions of mental health service users and healthcare workers regarding the implementation of DMHPs. The reflexive thematic analysis allowed for both inductive and deductive theme development.[19 20] The study design, data collection, analysis and reporting were conducted in accordance with the consolidated criteria for reporting qualitative research.[21]

Setting

The study was conducted in three demonstration districts where the DMHPs were implemented as part of efforts to improve access to mental healthcare services in the country. These districts are Anloga in the Volta Region, Asunafo North in the Ahafo Region and Bongo in the Upper East Region. The districts were selected through an extensive consultation process with local and national stakeholders in which a framework for DMHPs was outlined. The rationale and criteria for the selection of these three districts as demonstration sites have been described in other publications.[17] After selecting the districts, five health facilities per district (a total of 15) were included, representing diverse primary healthcare settings. The 15 health facilities included 10 health centres, 2 hospitals, 2 Community Health Planning and Services and 1 clinic; in this context, a clinic is a primary healthcare facility that provides outpatient services.[8]

Patient and public involvement

Members of the public or patients were not directly involved in setting the research questions. However, members of the public and service users' representatives were involved in the selection of districts and implementation of the project, including the mental health research agenda led by Ghana Somubi Dwumadie.[22]

Participants

In-depth interviews were conducted with 32 service users and 28 primary healthcare providers. The primary healthcare workers played key roles in the delivery of care in the demonstration districts. The composition of the healthcare workers included midwives, general nurses, physician assistants, enrolled nurses and mental health specialists.

Inclusion criteria for service users included those who are 18 years and above and have been receiving healthcare for the past year at the 15 health facilities (5 in each district) that were selected during the implementation of mental healthcare plans in the three demonstration districts. Participants have no prior relationship with the researchers but because LS and KA-N had been working in those districts it is possible that participants had met. The facility selection process and methodology have been extensively covered in another paper.[17]

Sampling and recruitment procedure

Purposive sampling was used to recruit study participants. Purposive sampling was employed to ensure the inclusion of participants who could provide relevant and diverse insights into the implementation of district mental healthcare plans (DMHPs). This approach allowed for a targeted selection of healthcare workers and service users across the three districts who could provide meaningful perspectives on the implementation of the DMHPs. Recruitment and interviews were facilitated by LS (male, Research Coordinator, MA) and KA-N (male, Technical Advisor, PhD), with support from district mental health coordinators. Both researchers have extensive qualitative research experience. Before recruitment, district directors were briefed on the study's purpose. Mental health coordinators identified healthcare workers involved in DMHP implementation and contacted them to confirm their availability and willingness to participate. Researchers followed up via telephone to schedule interviews.

For service users, district mental health coordinators worked with department heads of selected healthcare facilities to review patient records and identify individuals who had received treatment in the past year. Coordinators informed potential participants or their caregivers about the study, and the research team arranged interviews. Research assistants and the two researchers conducted interviews with assistance from the coordinators, who played no role in interviewing participants. All participants provided written informed consent. Recruitment continued until thematic saturation was achieved. Thematic saturation is achieved when no new information can be found, and further interviews become repetitive.[23]

Data collection

In-depth interviews were the primary data collection method, chosen to gain a deeper understanding of participants' experiences with care delivery in the context of DMHPs. Data were collected in two phases between January and June 2023. In Phase 1, three trained research assistants conducted interviews with 17 service users and 18 healthcare workers using an interview guide developed by the researchers. Phase 2 involved face-to-face interviews conducted by LS and KA-N across the three districts. This phase was necessary to explore themes identified in Phase 1 further, as thematic saturation had not been reached.

Research assistants were selected for their ability to conduct interviews in local languages (Ewe, Frafra and Twi) and had tertiary education. Interviews were conducted in English and local languages in locations such as health facilities and participants' homes. At health facilities, interviews were held in meeting rooms to ensure privacy.

The interview guide, informed by the study's research questions, included probes to clarify responses (see online supplemental file 1). For service users, key topics included the acceptability of healthcare, experiences of stigma and discrimination, and barriers to accessing and adhering to treatment. For healthcare workers, topics included lessons learnt, acceptability, resource availability, social protection, economic empowerment, and training and supervision.

All sessions were audio-recorded and lasted for 15–20 min on average. Despite their brevity, interviews were focused and yielded in-depth responses. Both inductive and deductive approaches guided the exploration of themes, ensuring a comprehensive analysis of participants' experiences.

Data analysis

The audio data from the in-depth interviews were extracted from the recorder and organised into two main folders with each representing healthcare workers and service users. To ensure the confidentiality of participants, the file names of both the healthcare workers and service users' interviews were replaced with different identifiers. All the interviews were transcribed verbatim into English by skilled transcribers with expertise in the three languages (Twi, Frafra and Ewe) in which the interviews were conducted. The Twi and Frafra transcripts were double-checked by two researchers (LS and KA-N). The anonymised Ewe transcripts were double-checked by the district mental health coordinator.

A reflexive thematic analysis[19 24] using inductive and deductive approaches was used to gain a better understanding of healthcare providers' and service users' perspectives on critical factors influencing care delivery in the districts. The deductive approach was used to create the main themes and subthemes from the research questions in the semistructured interview guide. The inductive approach ensured that all the themes that emerged from the transcripts that did not exist in the deductive codes were captured. Analysis was done by LS and proceeded through six stages: (1) reading the transcripts closely to gain familiarity with the text, (2) generating initial codes to capture the range of views on the experiences of healthcare workers and service users, (3) collating the codes into themes and gathering all the text related to the themes and subthemes, (4) reviewing the themes and subthemes and refining them, (5) defining and naming the themes that have been identified and (6) selection of vivid examples that capture the essence of the themes and subthemes to write the analysis report.[24] The NVivo V.12 software package was employed to organise, code and identify all data.

Reflexivity statement

As researchers involved in the implementation of the DMHPs being studied, it is important that we reflect on our roles and potential biases. Our close involvement in designing and implementing the DMHPs may have influenced our perceptions and interpretations of participants' experiences. To mitigate this, we employed strategies such as having Phase 1 of the interviews conducted by research assistants who were not involved in DMHP implementation. We also made efforts to probe for both positive and negative experiences during the interviews.

However, participants' responses may still have been affected by social desirability bias, as they might have wanted to provide positive feedback to researchers seen as connected to the DMHP implementation. Our backgrounds as mental health researchers and practitioners also inevitably shape our perspectives. We may hold assumptions about the importance and appropriateness of integrating mental healthcare into primary care based on our disciplinary training and previous research.

Triangulating the interview data with health facilities and DMHP records could have provided further validation but was not feasible within the scope of this study. Triangulation involves the use of diverse data sources to obtain a range of perspectives on a complex phenomenon. Including more independent researchers in the data analysis could have helped counterbalance potential biases among those of us involved in DMHP implementation.

Despite these limitations, we believe this study provides important insights into the experiences of service users and healthcare workers during the early implementation of the DMHPs.

FINDINGS

Characteristics of the study participants

A total of 60 participants (32 service users and 28 healthcare workers) were recruited and interviewed about their perspectives and experiences in the implementation of the DMHPs in the three demonstration districts. Table 1 provides further details about the characteristics of participants.

Table 1 Demographic characteristics of participants

Characteristics	Bongo	Asunafo North	Anloga	Total
Service users	11	10	11	32
Male	7	7	5	19
Female	4	3	6	13
Healthcare workers	8	10	10	28
Male	4	4	4	12
Female	4	6	6	16
Subtotal	19	20	21	60
Designation				
Community Mental Health Officer	3	2	2	7
Midwife	2	2	3	7
Registered Mental Health Nurse	2	–	–	2
Physician Assistant	1	–	–	1
Registered Community Nurse	–	3	2	5
Registered General Nurse	–	1	–	1
Enrolled Nurse	–	2	2	4
Senior Nurse Officer	–	–	1	1
Total	19	20	21	60

Summary of key themes

The study sought to explore the perception and experiences of healthcare workers and service users in the implementation of mental healthcare plans in the three demonstration districts. Three main themes emerged from the analysis of the data. These themes were factors supporting district mental healthcare implementation, challenges affecting the successful implementation of DMHPs and the perceived outcomes of the plans. Table 2 describes each of the themes and the subthemes.

Theme 1: factors supporting district mental healthcare plan implementation

Factors that were identified as supporting the implementation of the DMHPs in the districts were capacity building, strengthened collaboration and partnership, expanded mental health awareness and community engagement, and acceptability of the DMHP. The theme of acceptability was categorised into two subthemes: community participation and health facilities' acceptance.

Subtheme 1.1: capacity building

One significant factor that was reported to positively impact district mental healthcare delivery was the capacity building of healthcare workers within the districts, as part of the implementation of the DMHPs. Respondents discussed the importance of targeted training and the role it had played in empowering healthcare workers and community volunteers in providing effective mental healthcare delivery to service users. The capacity building not only improved the skills and knowledge in mental health detection of healthcare workers but also increased their awareness and prioritisation of mental healthcare. Respondents specifically mentioned that the training has equipped them with skills to identify and manage mental health cases.

> The training you provided on mental health to us at the sub-district have really equipped and helped us on cases involving mental health and even […] how to identify and treat through this programme (Registered General Nurse, ID 015)

> Even though before your coming, it was part of the service we render, your presence has also empowered

Table 2 Healthcare workers' and service users' experiences of district mental healthcare plan implementation

Theme 1	Factors supporting mental healthcare plan implementation
Subtheme 1.1	Capacity building
Subtheme 1.2	Strengthened collaboration and partnership
Subtheme 1.3	Expanded mental health awareness and community engagement
Subtheme 1.4	Acceptability of district mental healthcare plans
Subtheme 1.4.1	Community participation
Subtheme 1.4.2	Health facilities' acceptance
Theme 2	**Challenges affecting the successful implementation of mental healthcare plans**
Subtheme 2.1	Financial resources
Subtheme 2.2	Human resources
Subtheme 2.3	Inadequate supply of psychotropic medication
Theme 3	**Perceived outcomes of district mental healthcare plans**
Subtheme 3.1	Improved integration and access to mental health services
Subtheme 3.2	Early identification and referral of mental health cases
Subtheme 3.3	Improved well-being and daily functioning
Subtheme 3.4	Changing attitudes towards mental health

> us in a way to pay special attention to mental health in the sense that you started the team drawing the plan for the district, proceeded by training staff on the mhGAP and then you came back to train our volunteers who will support work at the community level (Senior Nursing Officer, ID 010)

Respondents discussed the importance of training and empowering community health volunteers as part of the capacity-building efforts in implementing the DMHPs. They explained that community health volunteers had played an important role in providing education to community members after receiving training in mental health detection and referral.

> One of the major community goals is that we work with the community health volunteer. Majority of them too were brought on board and we trained them on case identification and then referral. So, once they went back home, they continued the education process and have started referring cases within the community to us (Community Mental Health Officer, ID 009)

Subtheme 1.2: strengthened collaboration and partnership

Collaboration between healthcare workers, local government and community-based organisations played a crucial role in the successful implementation of the DMHPs. Stakeholders worked together to deliver mental health services and support. For example, the district health management team collaborated with the assembly and the social welfare department to distribute monetary support to individuals in need. This financial assistance was seen to play a role in supporting the well-being and recovery of individuals with mental health conditions, particularly those facing socioeconomic challenges with one healthcare worker explaining,

> At first, when you go to other members on the operational team, they usually say it's a health-related case, but now they understand the challenges and are willing to come to our aid (Registered Mental Health Nurse, ID 020)

Subtheme 1.3: expanded mental health awareness and community engagement

The DMHPs played a crucial role in expanding mental health awareness and fostering community engagement. Healthcare workers and community health volunteers actively promoted mental health education through outreach programmes, community durbars (engagement meetings) and health education at outpatient departments. The Bongo district demonstrated more intensive outreach and awareness efforts compared with the rest of the districts. Respondents emphasised the effectiveness of outreach services, such as joining the Reproductive and Child Health (RCH) activities, conducting health education at Outpatient Departments (OPD) and organising community durbars (engagement meetings). These activities provided them with the opportunities to directly engage with community members, educate them about mental health and promote the availability of services at health facilities. The healthcare workers also observed how increased awareness during the implementation of mental healthcare plans had led to improved utilisation of mental health services. The awareness creation was achieved through collaborations with community leaders and opinion leaders, through media and public education. One healthcare worker noted:

> What actually works for us, mostly it's on our outreach services. We go with this…our RCH when they are going for weighing. We get the mothers, we talk to them, and then I think that has been very good way of helping us improve mental healthcare delivery. And then we normally do health educations at the OPD every morning and it's also working for us. It is at least contributing to people understanding mental health as a whole so that they can just accept it and then embrace it (Enrolled Nurse, ID 005)

Subtheme 1.4: acceptability of district mental healthcare plans

As key stakeholders and implementers of the DMHPs, healthcare workers provided their perceptions of the extent to which the mental healthcare plans were considered satisfactory or suitable. The subthemes generated were categorised under community participation and health facilities acceptance.

Subtheme 1.4.1: community participation

Healthcare workers interviewed by the study explained that community involvement and engagement had been

key components in the implementation of mental healthcare plans in the districts. They specifically highlighted the role played by the Assembly person, who are local government representatives, in taking the lead in organising people to attend durbars organised as part of the implementation of the DMHPs. Evidence of communities' acceptance of the mental healthcare plan is the fact that healthcare workers are given free airtime to discuss mental health issues on local radio and raise awareness, a critical aspect of the plan's objective of reducing mental health stigma and discrimination.

> Yes, yes, yes, they have accepted it. I will congratulate the Assembly men. They are doing marvellously well. Sometimes you try to organise a durbar and they will take it up, organise people to come and listen to the talk and the advice you are giving them. So, the community as a whole has also supported us (Community Mental Health Officer, ID 007)

Subtheme 1.4.2: health facilities' acceptance

Interviews with some of the healthcare workers showed that many of them actively participated in the planning and implementation of the DMHPs. Some who are also members of the operation team took ownership of their roles and responsibilities within the plans. Healthcare workers acknowledged that the introduction of mental healthcare plan has been a valuable tool that has helped improve mental health services in the districts.

> Yes, the plan has been accepted that is why we are making significant progress when it comes to mental health. When you review a few selected folders in some facilities, you will realise that some of the questions we ask clients when they come, which we document in the folder, also give us that signal that we are actually screening for probable cases (Midwife, ID 003)

> yes, for the healthcare providers, we have always been looking for means to deliver the best of services to the clients, so with the district mental healthcare plans, you could clearly see that it is a work plan, like a road map for us to ride on in order to be able to achieve whatever we aim at, not just for Somubi, but for Ghana Health Service too (Community Mental Health Officer, ID 012)

Theme 2: challenges affecting successful implementation of mental healthcare plans

Under this theme, three subthemes were identified from the data. The challenges were thematised into financial resources, human resources and inadequate supply of psychotropic medication.

Subtheme 2.1: financial resources

The most significant factor influencing mental healthcare delivery according to all the healthcare workers in this study is inadequate financial resources and inadequate financial support at the national level, which hampered the overall mental healthcare delivery. More respondents in the Anloga district reported inadequate financial resources as constraints compared with respondents from the Bongo and Asunafo districts.

> No, that is a big challenge. Considering the financial position of the nation as a whole, releasing funds now is a huge problem. This has in turn crippled the [district mental healthcare] plan to some extent (Senior Nursing Officer, ID 010)

Outreach programmes were crucial for creating awareness, identifying cases and providing mental health services to communities, especially those in remote areas. However, the success of these programmes relied heavily on the availability of transportation and the necessary financial resources to support them. The lack of funds to purchase fuel hindered the healthcare workers' ability to effectively carry out their plans. This situation posed a challenge to the implementation of the DMHPs. One healthcare provider commented:

> Even getting money these days to buy fuel into the available vehicle is also a problem, which poses a challenge to the outreach programmes (Registered Community Nurse, ID 028)

Subtheme 2.2: human resources

One of the critical challenges in mental healthcare delivery was the shortage of healthcare workers in the districts. The shortage of mental health professionals was one of the challenges faced by all districts in implementing DMHPs. This shortage was seen to put pressure on the existing mental health staff and limit the district's capacity to provide adequate mental health services to the population.

> Yes, the district has adequate number of health personnel, but for the mental health professionals, they are very limited. Only four of them that are in the district, taking care of a population close to 99,000. I think we need to do something about that one. For the health professionals, they are adequate, but for the mental health professionals, they are woefully inadequate (Registered Mental Health Nurse, ID 022)

Subtheme 2.3: inadequate supply of psychotropic medication

All respondents mentioned an inadequate supply of psychotropic medication as one of the main challenges impacting the implementation of the DMHPs in the districts. The lack of essential medicines was reported to impact the ability of healthcare workers to provide optimal care for individuals with mental health conditions. Health facilities from the Anloga and Asunafo North districts experienced a more acute shortage of psychotropic medicines compared with Bongo. Most service users interviewed expressed their frustrations at the lack of medication during their visits to their respective health facilities. They reported often being directed by service

providers to seek their medications from private pharmacies or other healthcare facilities. This situation not only delayed their access to necessary treatment but also posed a financial burden due to the cost of purchasing the medications from private pharmacies or drug stores.

> For the resources I think that if a staff or clinician identifies a case and the case needs to be managed with medication and then the medications are not there, that clinician is limited as to the quality of care he or she can provide for the client (Community Mental Health Officer, ID 007)

> I would say that some of the barriers are lack of injections and drugs they are the barriers sometimes when I get there the nurse always complained about non-availability of injections and drugs so they direct me to different health facility to check whether I would get it or not but now I think is getting better a little bit (Service User, ID 019)

Theme 3: perceived outcomes of district mental healthcare plans

The DMHPs led to a range of positive outcomes as perceived by both healthcare workers and service users. These included improved integration and access to mental health services, early identification and referral of mental health cases, improved well-being and daily functioning, and changing attitudes towards mental health.

Subtheme 3.1: improved integration and access to mental health services

The implementation of the DMHPs was seen to improve the integration of mental health services into primary healthcare systems, resulting in improved access for individuals with mental health conditions. Healthcare workers across all three districts noted that before the DMHPs, mental health services were not fully incorporated into routine primary healthcare activities. The introduction of the DMHPs facilitated the integration of mental health into general healthcare services, making mental healthcare a more prominent part of daily operations at primary care facilities. As one participant explained,

> Gone were the days when things were being done in terms of building to incorporate mental health into our different units of which their involvement into primary healthcare activities was not seen. So, looking at it in that way, it has helped us to integrate these services into our normal services (Senior Nursing Officer, ID 010)

This integration led to an improvement in access to mental health services, with many service users now able to receive care closer to their homes. The DMHPs expanded the reach of mental health services through outreach programmes and improved service availability at local facilities. By bringing mental health services into routine primary healthcare, the DMHPs reduced barriers to accessing care, ensuring that more individuals could receive timely and appropriate support. A service user highlighted this improvement:

> The facility is closer to us, and it is always accessible to us. We always call on them at any time they are also trying to come to us and give help (Service User, ID 005)

Subtheme 3.2: early identification and referral of mental health cases

The healthcare workers indicated that instead of waiting for individuals to seek help themselves, they are now able to recognise potential mental health issues even when patients present with physical symptoms at the general health facilities. One participant provided an explanation for the change as follows:

> Now I will say that we are able to pick up cases without waiting for them to come because, you know there are many people with mental health conditions who even go to the general side and present some physical symptoms but once these different categories of health personnel were trained [mhGAP training] they were able to pick up this cases right from there so I will say early identification of cases is one of the positive side of it (Community Mental Health Officer, ID 001)

The healthcare workers further indicated that there had been an increase in referral cases due to the training provided to non-mental health staff and community health volunteers.

> I think there has been many referral cases from the sub districts because of the training e.g., the non-mental health staffs, now they are able to identify cases even the community health volunteers are referring cases. So, you could see that clients coming to the facility has increased as compared to earlier on (Community Mental Health Officer, ID 025)

Subtheme 3.3: improved well-being and daily functioning

The implementation of the DMHPs was perceived to have a positive effect on the well-being and daily functioning of service users. Many participants reported a reduction in relapse rates, which they attributed to the consistent and effective mental healthcare they received. Service users described noticeable improvements in their mental health conditions, with some highlighting how these improvements allowed them to regain control over their lives. As one participant noted:

> I feel my health condition has improved because the way I behaved previously I do not behave as such, so for now I would say it has improved (Service User, ID 007)

In addition to perceived reduced relapse, many service users experienced enhanced independence in their daily tasks. Before receiving treatment, their mental

health conditions often interfered with their ability to function independently, but after the implementation of the DMHPs, they found themselves more capable of managing day-to-day activities. One service user shared:

> At first it was very difficult to even have a chat with me but now I am able to do my own things like cooking [and] wash my own clothes unlike at first where I was unable to do anything by myself (Service User, ID 008)

Improved sleep patterns were another common benefit reported by service users, which they attributed to the medication and care they received. Proper sleep was highlighted as a critical marker of their improved mental health condition. One participant explained:

> …at first even to sleep they would have to tie me down for me to be calm before I could sleep, but now I can sleep by myself without any force from anyone. I sleep normal now when I feel to do so (Service User, ID 011)

Subtheme 3.4: changing attitudes towards mental health

Participants perceived that the DMHPs contributed to a noticeable change in communities' attitudes toward mental health, which they believed led to decreased stigma and discrimination. A service user explained:

> I would say that now the public perception about me has reduced because I don't behave like how I use to do before so I can now say my health condition has improve so the public perception about me has reduced totally (Service User 007)

DISCUSSION

The study sought to explore the perspectives and experiences of primary healthcare providers and service users during the implementation of DMHPs in demonstration sites in the Anloga, Asunafo North and Bongo districts in Ghana. Both healthcare workers and service users reported a range of factors that they believed supported district mental healthcare implementation, as well as challenges that, from their perspectives, affected the success of the DMHPs. They also shared their views on the perceived outcomes of the DMHPs.

Healthcare workers frequently mentioned the inadequate supply of psychotropic medicines as a major challenge. Interviews with healthcare workers across the three districts indicated that health facilities from the Anloga and Asunafo North districts experienced a more acute shortage of psychotropic medicines compared with Bongo. While Bongo also experienced a shortage in psychotropic medicine, their ability to leverage external support may have contributed to this difference compared with the Anloga and Asunafo North districts that relied on existing budgets as reported in our earlier publication.[17] Participants also highlighted varied levels of logistical and financial resource constraints across the districts. Healthcare workers in the Anloga district more often reported financial and logistical resource limitations compared with those in the Bongo and Asunafo North districts. Our other studies have shown that over 2 years of DMHP implementation, there was a 159% average monthly increase in mental health service utilisation rates in general healthcare facilities in the Anloga district compared with a 106% increase in the Bongo district and 63% increase in the Asunafo North district as reported in our other study.[17]

Service users described perceived improvements in their mental health conditions citing improved well-being and daily functioning. Some improvements they cited included perceived reduced relapse, better sleep patterns and changing attitudes towards people with mental illness. Healthcare workers reiterated these perceptions, noting what they saw as improved integration, access to mental health services, early identification and referral of mental health cases. These results indicate that the DMHPs have successfully influenced several crucial aspects of mental health service provision in the districts.

The valuable effect of capacity building of healthcare workers on facilitating integration of mental healthcare into primary care has been highlighted as one critical factor in the implementation of mental healthcare plans in India,[25] corroborating the findings from this study. Our study reveals that the DMHPs' successful implementation can be attributed in part to the synergy and partnerships forged between various government agencies. This finding is consistent with studies that used integrated mental health approaches to improve access to mental health services in Kenya.[26] Positive support from health facilities enhanced the integration of mental health into the primary healthcare system and this was achieved through the active involvement of healthcare workers as evidenced in other mental health integration programmes in Lebanon.[27] This is a crucial factor in ensuring improved access to mental healthcare.

One of the emerging challenges highlighted in this study was the consistent inadequate financial and human resources support by the central government, the main stakeholder in healthcare in Ghana. This continues to be a barrier to effective care delivery of mental health services in Ghana. Mental healthcare in LMICs has consistently been hampered by these critical issues.[27–29] Additionally, an inadequate supply of psychotropic medications was identified as a major barrier to people with mental health conditions receiving effective mental healthcare delivery. Factors include centralisation of the procurement process, nonprioritisation of psychotropic medications and inadequate financing of psychotropic medicines.[30–33] Evidence within the study suggests psychotropic medication challenges across all the districts. This challenge continues to affect mental health service delivery as service users are sometimes sent to buy medications from nearby pharmacies which puts financial constraints on them. Currently, the Government of Ghana is working to make outpatient

treatment for some MH conditions available on National Health Insurance Scheme (NHIS).[33]

Service users' reports of overall improved conditions mirror other PRIME DMPHs, in which cohort studies showed higher response rates, early remission and recovery among patients with depression who received care during the implementation of district plans in Ethiopia, India, Nepal, South Africa and Uganda.[7 34] One of the objectives of the implementation of the DMHPs was to facilitate the integration of mental healthcare into the primary healthcare system in the three districts. Healthcare workers confirmed a noticeable integration of some aspects of mental health services into routine primary healthcare, hence improving access to these services. An emerging body of literature has reported on how the participatory development and implementation of mental healthcare plans can effectively lead to increased integration of mental health services into primary care in low-resource settings, therefore improving access and patient outcomes.[35–37] Highlighting the improved mental health outcomes of service users after implementing the DMHPs, a previous study corroborated this by reporting that patients with depression experience a faster decrease in suicidal thoughts when treated by primary care workers who were part of the PRIME DMHP in Nepal.[38]

Implications for future research, policy and clinical practice

The findings from the study have several implications for future mental health research in Ghana. First, while the current study highlights the positive outcomes of the DMHPs in the implementation districts, it is important to conduct further research to ascertain the long-term impact and sustainability of the plans. Longitudinal studies should be conducted to evaluate the factors that contribute to the success or failure of these plans in the long term. This can provide valuable learnings and recommendations to policymakers and healthcare workers.

One of the main challenges the study highlighted was financial constraints affecting the implementation of the DMHPs. Future research should include substantial new financial investments and assess the cost-effectiveness of the DMHPs and their various components, such as capacity-building initiatives and community-based interventions, to inform resource allocation decisions. Given the limited financial resources available for mental healthcare delivery in Ghana, it is important to make informed decisions about resource allocation. Evaluating the cost-effectiveness of the different components of the DMHPs provides policymakers and implementers with important data regarding the financial feasibility of the plans for future scale-up.[39]

One of the major barriers to accessing mental healthcare in Ghana is the inadequate supply of psychotropic medicines. Revising the NHIS to include coverage for mental health services, making it free at the point of use as stipulated in the Mental Health Act 846 of 2012, would significantly improve access to care for individuals with mental health conditions. Ghana Somubi Dwumadie as part of its efforts to improve access to mental health in Ghana has been advocating for the inclusion of essential psychotropic medicines into the NHIS. It is the hope of the programme that the government's plan to include these essential medicines on the NHIS is fully operationalised as soon as possible to improve care delivery in Ghana.

Finally, findings of the study have shown the positive outcome of capacity building on mental healthcare delivery with healthcare workers reporting improved skills and knowledge in mental health detection and management. Sustaining and scaling up capacity-building initiatives, such as targeted training for healthcare workers and community volunteers using the WHO mhGAP, would improve the quality of mental healthcare delivery in Ghana. By investing in ongoing training, supervision and support for healthcare workers, policymakers and healthcare facilities can ensure the long-term success and impact of DMHPs, ultimately leading to improved mental health outcomes and reducing the treatment gap in the country.

Limitations and strengths

The participants in this study were recruited from specific health facilities within the three demonstration districts using purposive sampling. This sampling approach, while useful for targeting relevant participants, may have introduced selection bias. The experiences and perceptions of the selected participants may not fully represent those of service users and healthcare workers in other health facilities or districts not included in the study.

A further limitation of this study is the predominance of healthcare service providers' voices in the formation of themes. This focus emerged due to the study's dual aim of exploring both the implementation process and the experiences of those directly involved in delivering the DMHPs. Given healthcare workers' key roles in service delivery, their perspectives were essential for understanding the operational and systemic factors influencing the DMHPs. While we aimed to balance these perspectives, healthcare providers' voices may be more prominent in the analysis, potentially influencing the depth of service users' perspectives presented in the themes. Service users' experiences, especially regarding perceived outcomes such as improved access, reduced stigma and enhanced well-being, are nonetheless reflected in the results. Future research could further balance the voices of healthcare workers and service users to ensure an even more comprehensive representation of both stakeholder groups' experiences.

The researchers involved in this study were also part of the team that implemented the DMHPs in the three demonstration districts. This dual role of the researchers as both implementers and evaluators of the programme could have introduced potential biases in the data collection and interpretation processes. The researchers' close involvement in the implementation may have influenced their perceptions and interpretations of the participants'

experiences and perspectives. Nevertheless, to mitigate this bias, the study employed reflexivity where researchers examined their biases and assumptions, as stated in the Methods section, and research assistants who were not involved in the DMHP design or implementation were employed for initial data collection.

Despite these limitations, the study also has some strengths. First, to the best of our knowledge, this is the first study in Ghana to explore the in-depth experiences of healthcare workers and service users in the implementation of DMHPs. Using a qualitative design enabled the study team to provide a more nuanced understanding of factors supporting the implementation of the DMHPs, which would have been more difficult using quantitative methods alone. Findings from this study have the potential to provide insights to policymakers and implementers in the scaling up of DMHPs to other districts in Ghana.

CONCLUSION

The study sought the perceptions and experiences of healthcare workers and service users regarding the implementation of the DMHPs in three demonstration districts in Ghana. The findings revealed positive outcomes, such as improved mental healthcare delivery through capacity building, effective collaboration and increased awareness. Integration of mental health into primary healthcare, early identification and referral of mental health cases, and improved access to mental health services were identified as key outcomes. Service users reported reduced relapse rates, improved independence, better sleep patterns and decreased stigma and discrimination.

However, significant challenges were also identified, including financial constraints, inadequate human resources and shortages of psychotropic medications. Future research should assess the long-term impact, sustainability and cost-effectiveness of the DMHPs. Policymakers should prioritise the inclusion and operationalisation of mental health services in the NHIS and allocate sufficient resources to support the scale-up of DMHPs across the country. By addressing the identified challenges and leveraging the positive outcomes, Ghana can scale up mental healthcare plan nationally to improve access to quality mental healthcare and reduce the treatment gap for individuals with mental health conditions.

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