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# Exploring the experiences of mental health nurses in the management of schizophrenia in the Upper East Region of Ghana: a qualitative study

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## ABSTRACT

**Objective** Schizophrenia is a chronic condition, of which the diagnosis and management require comprehensive care. The role mental health nurses play in this management cannot be overemphasised. In an effort to give their best, several challenges confront them which need to be sought and addressed. This study aimed to explore the factors that influence the management of schizophrenia by mental health nurses in the Upper East Region.

**Design and participants** A descriptive phenomenology design was used in this study. Individual in-depth interviews were conducted among 18 purposively sampled mental health nurses using a semistructured interview guide. Audio-recorded interviews were transcribed verbatim and analysed thematically using Colaizzi's approach.

**Setting** The study was conducted in five primary and secondary-level health facilities in the Upper East Region of Ghana.

**Findings** Five themes were deduced from the theoretical framework, which were as follows: individual factors, interpersonal factors, organisational factors, community-level factors, and policy-level factors. At the individual level, factors such as the condition of the patient at presentation, medication side effects, inadequate knowledge, and poor adherence were identified. Interpersonal factors identified were poor communication, lack of mutual respect, and poor communication, while organisational factors such as inadequate staff, inadequate infrastructure and logistics, and unavailability of antipsychotics were reported. Moreover, the study identified community-level factors such as stigma and cultural beliefs, while policy-level factors such as laws regarding suicide, patient rights, and non-inclusion of mental health services into the National Health Insurance Scheme were reported as factors influencing the management of schizophrenia by mental health nurses.

**Conclusions** Addressing these factors is essential to ensure sustainable improvements and the effective management of schizophrenia. It is imperative to consider these factors when designing interventions and policies to optimise the management of schizophrenia by mental health nurses in Ghana.

## STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This study used the descriptive phenomenology design and is reported in line with the Consolidated Criteria for Reporting Qualitative Research recommendations.
⇒ The study was conducted in one of the sixteen regions of Ghana; information from mental health nurses in the other regions could have generated novel insight into the study.
⇒ Like all qualitative studies, the findings of our study lack generalisability.

## INTRODUCTION

Schizophrenia is a long-term, complicated mental health condition that presents a variety of management-related difficulties for healthcare workers.[1] The condition is estimated to have a prevalence of 0.49%.[2] It is characterised by symptoms such as hallucinations, delusions and inappropriate behaviour, among others.[3] It has also been described as a chronic condition with a decline in function[4] associated with poor adherence to treatment regimens.[5] As a chronic mental health condition, mental health nurses (MHNs) play a key role in providing care and assistance to patients with schizophrenia.[5] Management of schizophrenia requires the biopsychosocial approach, and this approach is affected by various factors at the individual, interpersonal, organisational, and social levels.[6] Under the various socioecological levels outlined above, various factors have been identified as discussed below.

The lack of knowledge and non-compliance to treatment regimens among patients with schizophrenia have been found to contribute to some of the challenges nurses managing this illness face.[7] It has been reported that nurses' knowledge of mental health conditions is quite low and has been

an impediment, especially in the full implementation of integrating mental health into primary healthcare policy in South Africa.[8] According to Boukouvalas *et al*,[9] curriculum adjustments and specific training programmes are required to give nurses the knowledge and abilities they need to manage complex conditions like schizophrenia.

The study also identified poor communication as one of the challenges faced by MHNs in the management of schizophrenia. This finding is consistent with findings reported by research by Aiken *et al*[10] who examined the experiences of nurses caring for persons with schizophrenia and brought to light the challenges of comprehending and interpreting unpredictable speech and mental processes. With this challenge in communication caused by patients' distorted communication, nurses are unable to understand the needs of the patients and unable to give their best.

Also, resource limitations have been a recurring issue and a challenge for the management of patients with schizophrenia. According to a study by Marie *et al*,[11] resource limitations (psychotropic drugs and supportive environment) exerted some influences on nurses' capacity to offer patients with schizophrenia with full therapy. The results underscored the need for adequate staffing, careful resource management and organisational support for optimal care delivery.

Additionally, Greenberg investigated factors that influence how persons with schizophrenia get care in acute psychiatric hospitals and reported that high patient-to-nurse ratios, murky regulations and a dearth of resources (psychotropics) were among the issues that challenged the care given to these patients.[12]

Finally, the issue of ethics where practitioners must be mindful of patients' autonomy against beneficence on the backdrop of patients having or lacking capacity is also a challenge in the management of this condition.[13] An example is the case of involuntary admission of a patient with acute schizophrenia against his wish or will and the ethical dilemma of an advance directive. While MHNs are inclined to ensure the treatment and recovery of the patient, the patient may resist treatment (which may be within their rights), and this becomes challenging for the care team.[14]

The WHO created the Mental Health Gap Programme to address the inadequate knowledge and personnel in the treatment of mental illness.[15] Although a good idea, it may just address one problem—the individual knowledge gap—instead of a comprehensive solution considering the socioecological factors that influence the management of mental illnesses.

To the best of our knowledge, it appears there are no studies within the Ghanaian context that have explored the challenges nurses face in their management of schizophrenia. This is however necessary since cultural context affects both the manifestation and the care of mental illnesses.[16] This study employed the socioecological model[17] to explore the multilevel factors that influence the management of schizophrenia by MHNs. This model considers the complex relationship between individual, interpersonal, community, organisational and policy factors of society and their role in bringing change to a particular health situation.[17] It is therefore appropriate to identify the challenges at the various levels of society. Hence, the aim of the study was to explore the challenges experienced by MHNs in the management of patients with schizophrenia. This will inform policymakers about the challenges and provide an opportunity to solve them, thereby giving patients with schizophrenia the best care available. To achieve this, the study sought to answer the question: what challenges do MHNs experience in the management of patients with schizophrenia?

## METHODS

### Study design

The study employed descriptive phenomenology to explore the challenges experienced by MHNs in the management of schizophrenia. The design allowed the researchers to explore the challenges experienced by the participants without interpretation.[18] However, the socioecological model was the conceptual framework that underpinned the study. The Consolidated Criteria for Reporting Qualitative Research checklist guided the study's report[19] (see online supplemental file 1).

### Setting

The study was conducted in the Upper East Region of Ghana. The region is one of Ghana's sixteen administrative regions and has Bolgatanga as its capital. The region has 15 districts/municipalities with a population of 1 301 226 with 80% of the population living in rural areas. Almost all the districts/municipalities have state-owned hospitals and health centres with mental health units. These mental health units are staffed with baccalaureate and diploma-holder MHNs who render a wide range of mental health services to individuals with mental illnesses including schizophrenia. The region also has a psychiatric hospital located in the regional capital with only one psychiatrist who is supported by MHNs. The study was conducted in five of the facilities located in the urban, periurban and rural areas of the region.

### Population and sampling

Participants for this study were registered MHNs who worked in the mental health units of the five institutions chosen for this study. The MHNs in each facility were approached face-to-face by the first author, and those with at least 1 year experience in practice and who were willing to participate in the study were recruited. Using the purposive sampling approach, the researchers were able to recruit participants who met the inclusion criteria. Individuals who met the inclusion criteria and did not previously know any of the researchers were recruited to avoid biases in the participant selection. None of the researchers had a prior relationship with the participants. Leaflets containing additional information about

the study were given to potential participants. The study was only open to participants who voluntarily agreed to partake and gave written informed consent. In total, 18 MHNs were included in the research as determined by data saturation, a point of data redundancy where no new data emerged.[20]

### Data collection tool and procedure

A semistructured interview guide was the main tool for conducting individual in-depth interviews with each participant. The interview guide addressed a range of subjects including participant demographic characteristics and the multilevel challenges experienced by MHNs when managing individuals with schizophrenia (see online supplemental file 2). Probing questions were developed in accordance with the objective of the study, the conceptual framework and a review of appropriate literature. The interview guide was piloted with four MHNs at one of the selected health institutions 1 week before the start of actual data collection to improve interviewing procedures, detect errors in the interview guide and make the necessary revisions to assure dependability and correctness.[21]

The final research did not include anyone who took part in the pilot study. Each interview was done by the first author, a male psychiatrist with vast experience in qualitative research and passionate about the management of persons with mental illness. Each interview lasted 30–40 minutes and took place in the nurses' room (participants' preference) in the health facilities with no one else present. In addition to noting major non-verbal cues and observations in a field notebook during interviews, all interviews were audio-recorded with permission from the participants using a digital voice recorder. Open-ended questions and follow-up questions were used to closely assess the participants' narration.[22] No repeat interviews were conducted, and no participant dropped out of the study.

### Data analysis

The first and second authors independently coded and analysed the data. Colaizzi's seven-step approach to evaluating descriptive phenomenology data was used in the manual analysis of the data, which was done concurrently with data collection.[23] The audio-recordings of the interviews were transcribed verbatim, and Colaizzi's seven-step approach to qualitative data analysis was used and guided by the socioecological model. The seven steps are outlined below:

- Step 1: The first and second authors familiarised themselves with each transcript by reading it several times to fully comprehend the subject matter.
- Step 2: For each transcript, all comments and expressions reflecting the challenges MHNs face when treating schizophrenia were collated.
- Step 3: Meanings were adduced for the identified phrases and statements about the challenges MHNs experienced in managing patients with schizophrenia.
- Step 4: The meanings adduced were supported by the field notes and grouped under the emerging themes as deduced from the conceptual framework (socioecological model).
- Step 5: To include all the components, a comprehensive and in-depth description of the challenges faced by MHNs in the management of schizophrenia was written.
- Step 6: To convey the challenges experienced by MHNs in the management of schizophrenia, the extensive descriptions were then condensed into a few short sentences.
- Step 7: The extracted statements were then returned to the participants to validate and provide feedback. However, at this point, no substantial information was added.

Soft copies of the transcripts were kept on the first author's password-protected computer in a safe folder using manual data management. Each transcript also had codes inserted to preserve participant privacy.

### Trustworthiness

The Lincoln and Guba criteria of transferability, credibility, confirmability and dependability were applied throughout the study to ensure trustworthiness.[24] To ensure credibility, the researchers used the purposive sampling method to select only participants with pertinent experience on the phenomenon under study. Also, the researchers achieved credibility by collecting data from five different health facilities (space triangulation).[25] To ensure dependability, the first and second authors independently coded and analysed the data. To ensure transferability, the researchers provided details of the research setting, sample characteristics and procedure (thick description) to facilitate replication of the study by future researchers.[26] To ensure confirmability, the researchers returned the transcripts to the participants for comments and corrections (member checking) throughout the concurrent data analysis period.[27]

### Patient and public involvement

None.

## FINDINGS

Participants in this study were MHNs in the Upper East Region. The modal age range was 33–40 (50%). Most of the participants were males (55.6%) and married (61.1%). The modal duration of work as an MHN was 6–10 years (55.6%) and about 83.5% of participants had obtained diplomas, with the remaining obtaining degrees. Over 72% of participants work in hospitals, while the rest work in health centres (28%). A summary can be found in table 1.

Five themes were identified based on the socioecological model: individual factors, interpersonal factors, organisational factors, community-level factors and

Table 1 Sociodemographic characteristics of participants

| Variable | Number (n) | Percentage |
|---|---|---|
| Age | | |
| 25–32 | 8 | 44.40 |
| 33–40 | 9 | 50.00 |
| 41–47 | 1 | 5.60 |
| Sex | | |
| Female | 8 | 44.40 |
| Male | 10 | 55.60 |
| Marital status | | |
| Single | 7 | 38.90 |
| Married | 11 | 61.10 |
| Duration of work | | |
| 1–5 | 6 | 33.30 |
| 6–10 | 10 | 55.60 |
| 10–15 | 1 | 5.55 |
| >15 | 1 | 5.55 |
| Educational level | | |
| Diploma | 15 | 83.30 |
| Degree | 3 | 16.70 |
| Place of work | | |
| Health centre | 5 | 27.78 |
| Hospital | 13 | 72.22 |

Table 2 The multilevel factors influencing the management of schizophrenia by nurses

| Themes | Subthemes |
|---|---|
| Individual factors | Condition at presentation |
| | Side effects of medication |
| | Poor adherence and poor insight |
| | Inadequate knowledge |
| Interpersonal factors | Lack of mutual respect and trust |
| | Lack of family support |
| | Poor communication |
| Organisational factors | Inadequate logistics |
| | Inadequate infrastructure |
| | Unavailability of antipsychotics |
| | Inadequate staff |
| | High cost of admission |
| Community-level factors | Stigmatisation |
| | Cultural beliefs |
| Policy-level factors | Laws regarding suicide |
| | Inadequate funding |
| | Poor implementation of existing laws |
| | Non-inclusion of mental health to National Health Insurance Scheme |
| | Rights of patients |

policy-level factors. These themes with their corresponding subthemes are presented in table 2.

### Theme 1: individual factors

Identified factors at the individual level were as follows: condition at presentation, side effects of medications, poor adherence and insight, and inadequate knowledge.

#### Condition at presentation

Some participants mentioned that the signs and symptoms the patients presented with to the hospital impacted the treatment of the patient.

> Patients' paranoid beliefs (positive symptoms) make management a bit difficult since those who present acutely show a lot of paranoia, suspicion, and physical aggression. This makes the treatment very challenging. (MHN 014)

#### Side effects of medications

Most of the participants admitted that the side effects of medications experienced by patients challenge the management of the condition. They explained that these side effects from the drugs make it difficult for patients to accept treatment offered to them by MHNs.

> Another factor is the side effects of medications that the patients experience. This makes it difficult for them to continue with the treatment. (MHN 005)

#### Poor adherence and poor insight

All participants responded that poor adherence to the treatment regimen and poor insight into the diagnosis of schizophrenia make management of the condition challenging for MHNs.

> Patients' non-adherence is a major part of the challenges we face in the management of schizophrenia. They do not admit being ill hence refuse to take the medications the right way hence difficult to manage. (MHN 007)

#### Inadequate knowledge

Most MHNs admitted that they lacked adequate knowledge about the management of schizophrenia, which affects their ability to make the right diagnosis hence affecting the management of schizophrenia.

> Furthermore, regarding the prescriber, sometimes arriving at the appropriate diagnosis becomes a problem because taking of history is sometimes difficult. (MHN 013)

### Theme 2: interpersonal factors

Identified interpersonal factors were the lack of mutual respect and trust, lack of family support and poor communication.

### Lack of mutual respect and trust

Patients' trust in the healthcare provider and mutual respect between MHNs and patients were a source of worry for nurses in this study. MHNs opined that patients do not trust the healthcare provider and hence are not open enough, making the diagnosis and treatment challenging. They further enunciated that the lack of mutual respect between them and the patients made the management very challenging.

> … I think some of these are the lack of trust from the patient to share their concerns or secret with the prescribers. (MHN 001)

> Another challenge here is the lack of mutual respect between the client and the service giver and this affects the therapeutic relationship. (MHN 012)

### Lack of family support

Support and cooperation from the family of patients with schizophrenia are important factors in the management of schizophrenia. They are responsible for bringing the patient to the service for care and also a source of motivation in the patient's adherence to the care plan.

In this study, some MHNs posited that families do not give support to their relatives with schizophrenia in their care, and this affects the management. They further opined that poor cooperation between the family, the MHN and the patient affected the care provision.

> Another challenge I see is the lack of family support and this really affects the treatment or management of schizophrenia. (MHN 018)

> Lack of adequate cooperation from family caregivers and the lack of adequate supported decision making on the part of patients and mental health workers is a major challenge in the management of schizophrenia. (MHN 016)

### Poor communication

Most participants found poor communication as a barrier to the management of schizophrenia. They explained that because of the distorted communication from patients with schizophrenia, nurses are unable to understand their needs and respond appropriately.

> Poor communication with the schizophrenia clients and their significant others which makes the management very difficult. (MHN 015)

## Theme 3: organisational factors

The study found some organisational factors that influenced the management of patients diagnosed with schizophrenia. Specifically, inadequate logistics, inadequate infrastructure, unavailability of antipsychotics, high cost of admission and inadequate staff were barriers to providing care for patients diagnosed with schizophrenia by MHNs.

### Inadequate logistics

The participants in this study acknowledged that inadequate logistics, such as the unavailability of motorbikes, was a barrier to their effective management of patients with schizophrenia. They stressed that this challenge hindered their ability to carry out home visits and follow-ups on the patients. Some enunciated that due to poor internet service in the hospital, they are unable to provide timely care for patients since the use of electronic patient consultation systems requires internet access.

> … the challenge of logistics and resources to support the appropriate management of clients. Home visits, follow up, and are not effective as a result of these challenges. (MHN 004)

> The hospital is using systems (Helix) base for treatment, sometimes there is always network problems which affect my patients' care since patients cannot be seen nor reviewed without internet access. (MHN 003)

### Inadequate infrastructure

Inadequate infrastructure was a major barrier to the provision of holistic care for patients diagnosed with schizophrenia. MHNs espoused that in most instances, they needed to detain or admit patients but were unable to do this due to the lack of a dedicated ward for patients with mental illness.

> Inadequate infrastructure for adequate admission is a major challenge since most of the schizophrenia clients who require admission cannot be admitted. (MHN 002)

To buttress the point of inadequate infrastructure, some participants recounted that the inadequate infrastructure has led to very small mental health units where patient consultations occur in the presence of several other people thereby breaching patient confidentiality. This they said makes it uncomfortable for patients to adequately speak about their symptoms and challenges thereby affecting the quality of care.

> The small size of the various mental health units creates confidentiality challenges making it difficult for people to open up with their symptoms. (MHN 006)

### Unavailability of antipsychotics

MHNs indicated that lack of psychotropics was a major barrier to the management of patients with schizophrenia. They also reiterated that the lack of the required drugs led to several relapses patients experienced. They further explained that the institutional delays in the supply of medications compounded their difficulties in providing adequate care for patients with schizophrenia.

> Also, the non-availability of antipsychotic medications is also a big challenge since patients at times do not get their medicines which keeps them stable.

This also makes the management of schizophrenia difficult. (MHN 007)

### Inadequate staff

All participants underscored the effects of inadequate staff in their various facilities on the management of clients with schizophrenia. This challenge they said impacted them negatively. Due to staffing challenges, they were sometimes swamped with work which had a rippling effect on the physical and mental health of the caregivers and the quality of care they provided to the clients.

Also, inadequate staff, this impact negatively on the care provider and patient relationship. (MHN 012)

### High cost of admission

Some participants opined that it was very expensive to get a patient admitted at the only available facility in the region where their patients could be referred to for admission, and this made it difficult for them to refer such patients hence affecting the care of the clients.

High cost of admission processes as policies make it hard for patients requiring admissions to get admitted for appropriate care. (MHN 005)

## Theme 4: community-level factors

A couple of community-level factors had significant impacts on the management of patients with schizophrenia by MHNs. The factors identified were as follows: stigmatisation and cultural beliefs about the causes of mental illnesses.

### Stigmatisation

Most participants indicated that stigma towards patients with schizophrenia was a major challenge in the management of the condition. They opined that this was the reason why some people hid their relatives with schizophrenia and deprived them of care. They also mentioned that because of the fear of stigma even towards the relatives, they were uncomfortable in bringing the patients for care.

Stigma from the community is one of the main factors that affects the management of schizophrenia. Because of stigma, people may hide or refuse to come for care. Also, for the fear of stigma, even caregivers may refuse to send patients for care. Schizophrenia patients may really look bad and so are more exposed to stigma. (MHN 006)

### Cultural beliefs

Most MHNs intimated that cultural beliefs about the causes of mental illnesses in the communities make the management of schizophrenia challenging. Some community people attribute mental illness to spiritual causes and hence resort to spiritual and faith-based healers for mental healthcare. With such a belief, they are likely not to adhere to the treatment offered by the MHNs. This makes the care for these patients very challenging.

…Most of the time you will prescribe medication for a patient, but relatives convince the patient to stop and rather take herbal treatment. (MHN 013)

… certain communities believe that the condition is spiritual and hence are not compliant with the hospital management. (MHN 009)

## Theme 5: policy-level factors

Factors identified under this theme were as follows: inadequate funding, poor implementation of existing laws, laws regarding suicide, non-inclusion of mental health to the National Health Insurance Scheme (NHIS) and rights of patients.

### Laws regarding suicide

Some participants reported that the law on suicide in Ghana had challenges for the management of schizophrenia. Since suicidal attempts are quite common among patients with schizophrenia, patients with schizophrenia who survive suicidal attempts find it difficult to come to the hospital for fear of being arrested due to the criminalisation of suicidal attempts in Ghana.

Also, the issue of criminalization of suicide in the laws of Ghana. We know that suicide attempts are common among patients with schizophrenia. Once it's a criminal offense, people who attempt will not report and hence lead to default of treatment. (MHN 010)

### Inadequate funding

Participants in this study complained that poor funding for mental health by the central government is a challenge in their management of schizophrenia.

I also think that there is inadequate funding for mental health in general and this makes it difficult to manage all mental health cases of which schizophrenia is inclusive. (MHN 008)

### Poor implementation of existing laws

Most MHNs believe that the inability of the government to implement the free mental healthcare policy is making their management difficult.

Management of schizophrenia at the policy level is considered free but, on the ground, it is not really free. Clients who can afford are those who will access care. (MHN 001)

Non-availability of medications is a main factor. Government policies say mental health is free while is not. Also, the drugs are procured by the government hence not procuring enough means inadequate drugs to manage these patients. (MHN 003)

### Non-inclusion of mental health to NHIS

All participants were of the view that the non-inclusion of mental healthcare in the NHIS was a major challenge in the management of schizophrenia. The care of patients with schizophrenia is cost-intensive, and because these patients must pay out of pocket, adherence to their treatment regimen is a challenge.

> Another main challenge on the policy side is the non-addition of mental health care onto the national health insurance scheme. This had deprived the patients with schizophrenia who are also poor the chance of getting appropriate healthcare while being protected financially. (MHN 004)

> Government policies such as not including most of the drugs on the NHIS scheme and even the total care of patients with schizophrenia makes managing them difficult. (MHN 018)

### Rights of patients

Most MHNs identified some of the rights of patients as a challenge to the management of schizophrenia. They opined that the right of patients with mental illness (schizophrenia) to refuse treatment as per the quality rights manual means no help can be offered to them especially those who present acutely without insight.

> The issues of "rights" …cannot force treatment on individuals which means that the patient has the right to refuse treatment hence an acutely ill who refuses treatment becomes difficult to manage. This can be a challenge. (MHN 016)

## DISCUSSION

The current study aimed to explore the multilevel factors that influence the management of schizophrenia by MHNs in the Upper East Region, Ghana. The results revealed that a multiplicity of factors at the individual, interpersonal, organisational, community and policy levels influence the management of schizophrenia by MHNs.

Consistent with previous studies, individual factors such as the side effects of medication,[28] poor adherence,[29] poor insight,[30] the condition in which a patient present[4] and inadequate knowledge[31] significantly influenced the management of schizophrenia by MHNs. Antipsychotic medications are commonly prescribed to manage symptoms of schizophrenia.[32] However, these medications can have various side effects, such as sedation, weight gain, movement disorders, sexual dysfunction and metabolic changes.[33 34] Therefore, patients who experience these side effects may be reluctant to continue taking the medication as prescribed, and this may lead to non-adherence, reduced effectiveness, relapse and poor treatment outcomes. Also, nurses' inadequate knowledge about the diagnostic criteria of schizophrenia hindered their effective management of schizophrenia. In Ghana, due to the inadequate number of psychiatrists,[35] mental health services are widely provided by MHNs. This therefore calls for in-service training for these vital staff to improve upon their knowledge levels and their professional abilities to make the care for patients with schizophrenia better.

In this study, interpersonal factors were found to influence the management of schizophrenia by MHNs, and this finding is congruent with earlier studies.[36] Interpersonal factors such as the lack of mutual respect and trust,[37] lack of family support[30] and poor communication[31 38 39] significantly impacted the management of schizophrenia by MHNs. Mutual respect and trust between the caregivers and the client are vital in any healthcare setting, especially when managing individuals with schizophrenia. When MHNs lack respect and trust in their patients or vice versa, it leads to a breakdown in the therapeutic relationship.[40] This then makes the management of the patients difficult. Also, communication plays a crucial role in managing schizophrenia.[38] Poor communication complicates the therapeutic relationship, emphasising the need for improved communication strategies and patient-centred care approaches to foster trust and engagement in treatment.[40]

Resources are vital for effective mental healthcare delivery. However, in Ghana, mental health service delivery is affected by inadequate resources. Notably, less than 1% of the total health budget is spent on mental health.[41] Our findings resonate with prior studies which reported that organisational factors such as inadequate logistics,[29] inadequate staffing,[38] inadequate infrastructure and unavailability of antipsychotics[42] greatly influenced the management of mental disorders. These factors can create challenges that impact the quality of care and treatment outcomes for individuals with schizophrenia. Logistical constraints create difficulties in the effective treatment of patients with schizophrenia.[43] This particularly hindered home visits and follow-up care in the current study. Also, insufficient infrastructure including inadequate physical facilities and dilapidated buildings can hinder care.[42] Ghana has not developed the infrastructure of mental health facilities to keep pace with population expansion.[44] Therefore, without appropriate infrastructure, MHNs struggle to provide a therapeutic and safe environment for patients, impacting their ability to deliver comprehensive care. This was evident in the current study as patients with schizophrenia could not be admitted due to inadequate infrastructure (dedicated wards for patients with mental health). Again, whereas antipsychotic medications are the cornerstone of schizophrenia management,[45] their unavailability hinders the provision of appropriate psychopharmacological interventions, leading to an increased risk of relapse among patients.

The backbone of a robust healthcare system is the capacity, adequacy and effectiveness of the functioning human resources; however, weaknesses exist in this area in Ghana's mental health services. Evidence shows that there is a heavy burden and over-reliance on nurses with

very few available psychiatrists and other specialists.[38 44 46] The insufficient number of MHNs to meet the demands of caring for individuals with schizophrenia often results in reduced quality of care, compromised patient safety and limited time for important therapeutic interventions such as counselling and patient education. Therefore, efforts to increase the number of MHNs in the study region are crucial to promote mental health service delivery.

Our findings further indicate that some community-level factors influenced the management of schizophrenia by MHNs. This finding is in line with previous studies.[30 47] Community factors such as stigmatisation[47 48] and cultural beliefs[39] significantly impacted the management of mental illness. The stigma associated with patients with schizophrenia results in negative attitudes, stereotypes and discrimination against them. Stigma discourages individuals with schizophrenia and their families from seeking help, leading to delayed or inadequate treatment. Again, cultural beliefs can significantly influence the perception and management of schizophrenia.[39] Different cultures in Ghana have unique understanding of mental health and illnesses, which impacts the acceptance of psychiatric diagnoses and treatments. In some Ghanaian cultures, mental illness is believed to be a result of a curse or possession by evil spirits.[49] Consequently, cultural beliefs may result in alternative traditional healing practices, which may not align with evidence-based care.[50] Therefore, it is imperative to initiate and implement community-level mental health awareness programmes that are culturally sensitive and target to demystify the negative beliefs about mental illness, specifically, addressing stigma, building support networks and providing culturally sensitive care.

Like a previous study,[39] our findings show that policy-level factors influenced the management of schizophrenia by MHNs. Laws regarding suicide, inadequate funding, poor implementation of existing policies, high cost of admission, irregular supply of medication, non-inclusion of mental health to NHIS and rights of patients were policy-level factors that influenced the management of schizophrenia. Before being recently repealed, Ghana had a law that criminalised attempted suicide.[51] Most individuals with schizophrenia are at a higher risk of attempting suicide.[52] Therefore, individuals with schizophrenia who attempt suicide shy away from openly discussing their symptoms or seeking treatment because of fear of prosecution. Also, in Ghana, although the mental health fund is the source of funding for mental health services,[53] the inadequacy of the fund has resulted in limited resources and limited access to essential medications and therapeutic interventions. Therefore, MHNs struggle to provide care to individuals with schizophrenia due to resource constraints, compromising the quality and effectiveness of their interventions. Again, although the government of Ghana passed the Mental Health Act 846 more than a decade ago,[53] the poor implementation of the act has undermined its effectiveness.[54] MHNs encounter difficulties in accessing necessary resources, coordinating care and implementing evidence-based practices due to gaps in the implementation of the existing law. Moreover, high costs associated with hospital admissions and psychiatric care impede access to timely treatment for individuals with schizophrenia. Contrary to the Mental Health Act provision that mental healthcare is free,[53] individuals with schizophrenia always make out-of-pocket payments for the cost of mental health services including admissions. Although the psychiatric hospital in the region offers inpatient services, clients must make out-of-pocket payments for the services rendered. In essence, individuals who cannot afford the cost of admission often experience increased severity of symptoms and poorer outcomes. Further, the aspiration to remove all financial barriers and achieve universal healthcare in Ghana by 2030[55] necessitated the creation of the NHIS, which seeks to remove all financial barriers to healthcare.[56] However, mental health conditions, including schizophrenia, are not adequately covered by the NHIS. The only psychiatric hospital in the region only accepts out-of-pocket payments since their services are not covered by the NHIS. Therefore, MHNs encounter difficulties in providing comprehensive care due to limited financial support for their patients, resulting in suboptimal treatment. Addressing these policy-related challenges is essential in ensuring effective and equitable management of the condition.

The above study provides evidence of the contextual challenges experienced by MHNs in the Upper East Region and probably the first in Ghana. Employing a qualitative study design provided an opportunity to explore these challenges in detail. Also, using the socio-ecological model allowed for exploration of these challenges across all levels of society which provides a holistic understanding of the problem.

Despite these strengths, the study design used exposes the study to certain biases such as social desirability bias. This however was avoided by ensuring that the participants and the interviewer did not have any prior knowledge of each other. Also, limiting the study to the Upper East Region implies denying other MHNs in other parts of the country the opportunity to express their own experiences which could have generated novel insights. Furthermore, the transferability of the findings to other places may be a challenge because of the study design used. To mitigate this limitation, we have reported the details of our research methodology including the interview guide and sample characteristics so that the study can be replicated in a similar setting.

## CONCLUSION

The study provides insights into important multilevel factors at the individual, interpersonal, organisational, community and policy levels that influenced the management of schizophrenia by MHNs. These factors can undermine the efforts of MHNs to manage individuals with schizophrenia effectively. Addressing these factors is essential to ensure sustainable improvements and the

effective management of schizophrenia. It is imperative to consider these factors when designing interventions and policies to optimise the management of schizophrenia by MHNs in Ghana.

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**Ethics approval** The study was approved by the Committee on Human Research, Publication and Ethics (CHRPE) of the Kwame Nkrumah University of Science and Technology (KNUST; reference number: CHRE/AP/038/23). Institutional approval to carry out the study was obtained from the five health facilities before data collection. All the MHNs gave written approval and signed the informed consent form to be interviewed and audio-recorded. The study processes were explained to all the MHNs including their rights to voluntarily participate and withdraw from the study without penalties. The privacy and anonymity of the MHNs were protected as participants' names were replaced by unique identification codes (MHN 001…MHN 018).

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