scientific reports

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Psychological health in marginalised women living in witches' camps in Ghana

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Anxiety and depression are prevalent mental health issues, particularly affecting older women in vulnerable circumstances. In Ghana, older women accused of witchcraft endure severe mental health challenges due to stigmatisation and isolation. Many are sent to live in witches' camps for safety, where they face limited access to care. This study investigated the prevalence of anxiety and depression among marginalised women in witches' camps compared to women in the general population, highlighting the social factors associated with their mental well-being. The researchers employed a cross-sectional quantitative study design. Data were collected from 168 women from two witches' camps in northern Ghana and 100 women from the general population using the Dagbani version of the Hospital Anxiety and Depression Scale (HADS). Camp participants were also asked supplemental questions about their living conditions and circumstances. Anxiety and depression scores were significantly higher among camp residents (M = 14.73, SD = 1.46 for anxiety; M = 17.85, SD = 1.55 for depression) compared to the general population (M = 6.18, SD = 2.43 for anxiety; M = 4.18, SD = 3.00 for depression). Common health complaints among the women from the witches' camps were joint pain and hypertension. Social isolation and poor living conditions may have also impacted the women's mental well-being in the witches' camps. Many women in the camps relied on traditional medicine for treatment, and despite desiring to return home, many remained uncertain if they could go home. Women in witches' camps in Ghana experience significantly higher anxiety and depression as well as adverse social conditions, such as poor housing, isolation, and unemployment. The study emphasises the need for mental health interventions addressing the unique emotional needs of these women and highlights the role of social determinants in mental health policies.

Keywords Social conditions, Depression, Anxiety, Social determinants of health, Witcraft, Women

Anxiety and depression are common mental health conditions that affect people across all different age groups[1]. Research has outlined the widespread mental health issues affecting older populations, especially older women in vulnerable circumstances[2–4]. Research evidence further indicates that older adults experience a higher prevalence of these conditions than younger age groups[5].

Depression affects around 7–20% of older adults, while anxiety disorders impact approximately 10–20% of older individuals[2,5]. Furthermore, studies suggest that women generally report higher rates of anxiety and depression compared to men, making it crucial to investigate these conditions specifically in older women[6–8]. Depression constitutes a primary factor behind disability on a global scale and plays a significant role in the overall burden of disease worldwide[3]. In Ghana, mental health disorders affect an estimated 13% of the population, with approximately 3% experiencing moderate to severe conditions such as schizophrenia, bipolar disorder, and major depression[9]. Despite this burden, access to mental health care remains limited due to widespread stigma, underfunding (less than 1% of the national health budget), and a severe shortage of trained professionals—there are fewer than 50 psychiatrists for a population of over 30 million (Osei et al., 2015; Roberts et al., 2022). The Mental Health Act (Act 846) of 2012 was enacted to protect the rights of persons with mental illness and promote community-based care under the supervision of the Mental Health Authority[10–12]. Yet, cultural practices that

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lead to accusation of predominantly older women of witchcraft severely curtail the lives of these women, who are generally banished to live in the "witches" camps with resultant social isolation and accompanying stressors impacting their well-being.

Several factors contribute to the development and exacerbation of anxiety and depression among older individuals[5,13]. These factors can be categorised into personal, social, and health-related aspects. Personal factors may include genetic predisposition, previous mental health history, personality traits, and coping mechanisms. Social factors such as loneliness, social isolation, loss of loved ones, retirement, and financial challenges can significantly impact mental well-being. Within the older population, women face specific challenges that may increase their susceptibility to anxiety and depression[14–16]. Sociocultural factors, including gender roles and gender inequalities, may contribute to higher rates of mental health issues in older women. Gender issues such as violence or abuse[17] and cultural practices against women can also impact their mental well-being[18–21].

Prevalence statistics relating to high depression and anxiety are mainly from Western countries, and more studies are required to explore the prevalence of psychological distress in Africa. Persecuted individuals who often face discrimination and isolation are also susceptible to higher rates of mental health problems and disorders than the general population[13,22]. Marginalised people in Africa may face mental disorders due to limited access to adequate social resources such as housing, income, employment, education, social support, and healthcare.

One marginalised group in Ghana are women accused of witchcraft. Witchcraft in Ghana is understood as the ability to cause harm, misfortune, or illness through spiritual or supernatural means. It is a culturally embedded belief that explains adversity such as unexplained deaths, illness, infertility, or economic hardship (Adinkrah, 2011). These deeply ingrained cultural beliefs or phenomena in the country[23] make accused women susceptible to violent attacks[24]. These attacks impact the physical safety of the accused and their mental health and emotional well-being[25,26]. Accusations of witchcraft disproportionately affect older women – often widows or women without strong family protection – and are fueled by social tensions, gender discrimination, and poverty (Schmidt, 2021). Accused individuals are often violently expelled from their communities to live in witches' camps and subjected to public shaming or physical abuse. Witch camps are settlements found primarily in northern Ghana where women accused of witchcraft are sent often involuntarily for "safety" or social exile[23]. These camps, such as those in Gambaga, Gnani, and Kukuo, are usually established and run by traditional leaders or shrine custodians[27–29]. The women rarely choose to go but are sent there by family or community leaders to avoid being attacked or killed. Living conditions in the camps are generally poor, with limited healthcare, sanitation, or legal protection[29].

Studies have shown that accusations of witchcraft can lead to emotional disturbances and stigmatisation, which can exacerbate mental health issues among marginalised individuals who already face challenging life trajectories[30–32]. Those accused of witchcraft are sometimes sent to live in witches' camps. The witches' camp represents an established traditional institution that offers a practical and vital refuge for individuals, often older women, who have been accused of practising witchcraft and have subsequently been expelled from their community[33]. Witches' camps offer a sanctuary for women who have been accused of witchcraft, affecting their social, psychological, and emotional well-being. The women lack social care support in their frail life.

Overall, it appears that the entrenched beliefs surrounding witchcraft in Ghana may significantly impact the mental health and well-being of those accused of witchcraft, highlighting the need for greater attention to be given to mental health services in Ghana[34]. An exploratory qualitative study by Yakubu, Siegert[35] suggested that mental health problems are common among the women in the witches' camps of northern Ghana. Moreover, Ghana's lack of mental health services and support makes it difficult for women in these situations to receive adequate care. The goal of the present study, therefore, was to collect cross-sectional quantitative data on the anxiety and depression symptoms marginalised women living in witches' camps and compare those with a gender- and age-matched sample of women from the general population of Ghana. Additionally, for the sample of women in the witches' camps associations of psychological distress scores with a range of relevant indicators of living circumstances were explored.

Method

Study design

The researchers employed a cross-sectional quantitative study design.

Ethical approval and consent to participate

The authors' obtained institutional ethics approval from the Auckland University of Technology Ethics Committee (AUTEC) in New Zealand, with reference number 19/213 and from the Ghana Health Service Ethics Committee with an approval number GHS-ERC002/09/19. Written permission was obtained from GL Assessment to use the HADS for this study. Informed consent was obtained from the women participants before data collection. All methods were carried out in accordance with relevant ethics guidelines and regulations.

Study setting

This study was conducted in the Gambaga and Gnani witches' camps and the Mion district of the northern region of Ghana and the Gambaga community in the northeastern region of Ghana. The two witches' camps were purposively selected because they represented Ghana's largest and oldest witch camp facilities. Consultations conducted prior to data collection with stakeholders (including the social worker of the Gambaga camp and the Gnani Earth priest) of the witches' camps indicated that 100 women accused of witchcraft lived in the Gambaga witch camp and more than 360 women and 150 men at the Gnani witches' camp in 2019. However, at the time of data collection in July 2021, the Gambaga witch camp population had decreased to 95 women due to two deaths and three women who had been reintegrated back into their communities.

Study participants, and recruitment procedure

The women recruited from the Gambaga and Gnani witches' camps were selected using a convenience sampling approach. These two camps were purposively chosen due to their prominence as the oldest and largest camps in Ghana. At the time of data collection in July 2021, there were 95 women in the Gambaga camp, a slight decline from the 100 women identified in 2019, owing to two deaths and the reintegration of three women. Inclusion criteria for participation included a minimum stay of six months in the camp. Women who were newly admitted or too frail to participate in the interviews were excluded. Also, women who could not speak the Dagbani language or have poor health to participate were excluded.

Women from the general population were recruited from the Mion district in the northern region and the Gambaga community in the northeastern region of Ghana. For the women from the general population, a simple random sampling technique was adopted to ensure a representative sample of women, matching the demographic profile of the women in the camps. With the support of key stakeholders, a social worker from the Gambaga and a local school teacher from the Mion districts, a list of eligible women within each community was compiled. Each woman on the list was assigned a number, and participants were randomly selected. The key stakeholders helped identify and locate the selected individuals. Women were eligible to participate if they were permanent residents of the selected communities and had no association with any witches' camp. Those who did not identify with the community or were outside the selected research area were excluded. Women who had been reintegrated into the communities from the witches' camps were also excluded.

Like the women in the camps, these participants completed the Dagbani version of the HADS, administered orally by the researchers in Dagbani to ensure comprehension, cultural sensitivity, and inclusivity. Data collection, conducted in July 2021 through structured face-to-face interviews, also included additional questions developed by the research team to explore the psychosocial experiences and social conditions affecting the mental well-being of women residing in the witches' camps. These supplementary questions provided context-specific insights into the unique challenges faced by women accused of witchcraft. For women from the general population, only the HADS was administered, and researchers similarly read the questions aloud to ensure comprehension. All interviews were conducted in private settings to protect confidentiality and encourage honest responses. Informed consent was obtained from all participants prior to data collection.

Measures

The Hospital Anxiety and Depression Scale (HADS) is a 14-item scale that measures anxiety and depression[36]. Seven items on the scale measure anxiety, and the other seven measure depression. Each item offers four response options scored on a 4-point Likert scale ranging from 0 to 3, with a maximum score of 21 for each subscale. Scores of 11 or higher on either subscale indicate significant psychological morbidity, while scores of 8–10 indicate borderline abnormal scores, and 0–7 indicate normal scores[36,37]. Although the anxiety and depression questions are spread throughout the questionnaire, they are scored as separate subscales[38]. The Dagbani version of the HADS was translated and validated by Yakubu[39]. In the validating process, Item 5 of the anxiety subscale was deleted due to low factor loading. For that reason, the Dagbani version of the HADS presents anxiety scores as a total score from 10 items and depression scores as a total score from 11 items. The Dagbani HADS demonstrated strong internal consistency, with a Cronbach's alpha of 0.90 for the anxiety subscale and 0.89 for the depression subscale. McDonald's omega also indicated excellent reliability, with scores of 0.91 and 0.90 for the anxiety and depression subscales, respectively. Reliability coefficients above 0.70 are considered indicative of good internal consistent.

For the participants in the witches' camps, the survey contained supplemental questions, consisting of 13 closed-ended questions, a follow-up question requiring brief answers, and two entirely open-ended questions. The supplemental questions inquired on areas relating to participants' health-seeking behaviours in the camp, loneliness, lack of social amenities, and housing conditions. In addition to the above, the two open-ended questions were meant to enquiries about any strategies by the camp women to improve their mental well-being as well as any health-seeking behaviours in the camps.

Data analysis

All analyses were conducted using IBM SPSS statistics version 23. Due to lack of availability of age data, this variable could not be used as a co-variate. Prior to analyses, the variables were checked for deviations from normality. There was no evidence that parametric statistics were not appropriate. The alpha-level for this study was set as 0.05. An independent-samples *t*-test was conducted to compare the mean scores between the two participant groups. Additionally, descriptive and frequency analyses were performed to summarise responses to the supplemental questions. In addition, the two open-ended questions results were analysed thematically, and the findings summarized[40,41]. This aimed to establish links to relevant social factors and to provide an overview of reported psychological issues, the absence of social amenities, and participants' suggested solutions and support strategies that to improve their mental and emotional health needs. The analysis also examined perspectives on culturally appropriate health and social care provision, as well as recommendations for improving healthcare service experiences.

Results

Of the 170 older women from the witches' camps of northern Ghana invited to participate in the study, 168 completed the questionnaire (more than 98% response rate). Additionally, all 100 women from the general population (Northeast and Northern regions) participated in the study (response rate of 100%). The women from the camps and the general population's ages were not reported because their ages were unclear, as they did not know their date of birth. The women did not have any records of their ages. In situations where age information needs to be used in the camp, this is typically estimated. In sub-Sahara Africa, there have been issues

with birth registration. Even though some African governments have made some progress in registering births, in the past, many people did not have a birth registration and therefore do not have any record of their date of birth and an accurate age[42,44,44]. Due to the lack of the availability of the age data, this variable could not be used as a co-variate. There was no evidence that parametric statistics were not appropriate. Although precise age data could not be collected due to participants' uncertainty about their dates of birth, the association between witchcraft accusations and older women in this context is well-established in local cultural narratives and prior research[45,47,48,48]. In northern Ghana, the label of "witch" is disproportionately attributed to women perceived to be elderly typically those beyond reproductive age or showing signs of frailty or cognitive decline[49,50]. As such, the present study's focus on the mental health of women in witches' camps was justified as it was grounded within the broader sociocultural understanding that older women are especially vulnerable to such accusations and the resulting psychosocial harms.

As presented in Table 1, none of the women in the camp had any formal or non-formal education. All the participants spoke and understood the Dagbani language. Participants also did not know their monthly income or their annual income level. Most of the women participants from the witches' camps were Konkomba by ethnicity, and the smallest ethnic groups in the camps were Chekosi, Frafra, Kamba, and Kusasi. In the general population sample, slightly more than half of the participants were Mamprusis. All participants understood and spoke the Dagbani language. A summary of the demographic data is presented in Table 1.

Of the 168 women in the witches' camps who responded to the questionnaire, only one reported having a room of her own. Most women had no adult in the camp to help them with their day-to-day activities. A few women had their grandchildren living with them. However, most grandchildren were noticeably young and unable to provide much help. A small number had another camp resident as a support person.

For the women from the witches' camps, the questionnaire also inquired about who had accused them of witchcraft and the factors that led to their banishment to the camp. Most women reported being accused by members of their community, while a few had been specifically accused by a co-wife. Community members in this context included co-tenants, extended family relations, and neighbours from the village.

Regarding jobs, most of the women in the camp were farming before their banishment ($n = 123$, 73%). These types of farming included pig farming, fowl rearing, and growing cereals. A few were engaged in petty trading ($n = 14$, 8.3), shea butter production ($n = 13$, 7.7), and pito brewing (local drink) ($n = 7$, 4.2), while others were housewives ($n = 11$, 6.5). However, arrival at the witches' camp meant that many lost their jobs.

Following their banishment to the witches' camps, nearly half of the women ($n = 76$, 45%) were found to be unemployed. Many relied on collecting firewood from nearby forests ($n = 53$, 32%) to sell within the community as a means of survival. A smaller portion ($n = 39$, 23%) worked on local farms, assisting others to earn a basic daily income. On the other hand, and regarding the employment status of the women from the general population, majority were also engaged in farming ($n = 73$, 73), while around a quarter ($n = 23$ 23%) were petty traders, and three (3%) were engaged in Shea butter making, and one other (1%) was a housewife.

Most participants reported having no health issues ($n = 151$, 89.9%) before being banished to the camp. Just a few ($n = 17$, 10.1%), however, did experience health challenges before their banishment, such as joint pains, waist pains, headaches, and difficulty walking. On the other hand, a substantial proportion of women ($n = 137$, 81.5%) encountered health issues after having been banished, including joint pains, general body pains, and waist and knee discomfort. Also, some of the other health concerns highlighted by participants included piles, hypertension, vision problems, and difficulties with mobility.

To compare the levels of anxiety and depression between women in witches' camps and women from the general population, an independent-sample t-test was conducted. As seen in Table 2, the findings indicated a significant difference in anxiety scores between the two groups, with women in the camps ($M = 14.73$, $SD = 1.46$) reporting significantly ($t(\text{df}) = 39.33$, $p < .05$) higher levels of anxiety than women from the general population ($M = 6.18$, $SD = 2.43$). Similarly, the results showed a significant difference in depression scores between the two

Variable	Women in the camp *n* (%)	General population *n* (%)
Region Northeast Northern Upper east Savannah	83(49.4) 82 (48.8) 2 (1.2) 1 (0.6)	75(75) 24(24) 1(1) 0(0)
Religion Christian Muslim Traditional	107(63.7) 34(20.2) 27(16.1)	83(83) 17(17) 0(0)
Ethnicity Bimoba Chekosi Dagomba Frafra Kamba Konkomba Kusasi Mampriga	3(1.8) 1(0.6) 6(3.6) 1(0.6) 1(0.6) 121(72) 1(0.6) 34(20.2)	13(13) 0(0) 12(12) 0(0) 0(0) 19(19) 0(0) 56(56)

Table 1. Demographic profile of the participants from the witches' camp ($n = 168$) and general population ($n = 100$).

Cohort	Women in the camp ($n=168$)		Women in the general population ($n=100$)		
Subscales	M	SD	M	SD	t-value (p-value)
Anxiety	14.73	1.46	4.18	2.43	$t=39.33$ $p<.01$
Depression	17.85	1.55	6.18	3.00	t = 36.11 $p<.01$

Table 2. Comparing means for anxiety and depression in the camp women and women from the general population.

Question	Not answered	Yes n (%)	No n (%)
Does a community psychologist visit the camp?	0 (0)	0(0)	168 (100)
Do you have potable drinking water in this camp?	0(0)	168 (100)	0(0)
Do you ever feel hemmed in a hole?	0(0)	168 (100)	0(0)
Do you feel that larger dwelling rooms should be built in this camp?	0(0)	168 (100)	0(0)
Do you feel lonely at times?	3(3)	160 (95.2)	3 (1.8)
Do you feel isolated from your home community?	0(0)	165 (98.2)	3 (1.8)
Do you feel at times that people from the community are pointing fingers at you?	0(0)	165 (98.2)	3 (1.8)
Do you sometimes feel that people are talking ill about you?	0(0)	165(98.2)	1.8(3)
Do you have anybody to talk to about your worries and concerns?	16(9.5)	32 (19)	120(71.4)
Do you attend a clinic when you are unwell?	1(0.6)	112 (66.7)	55 (32.7)

Table 3. Camp women's living conditions.

groups, with women in the camps ($M=17.85$, $SD=1.55$) reporting significantly higher levels of depression than women from the general population ($M=4.18$, $SD=3.00$).

When asked about emotional well-being and as seen in Table 3 and 95.2% ($n=160$) of participants reported feeling lonely at times, while 1.8% ($n=3$) denied such feelings, and 3 individuals (3%) did not answer the question. Feelings of social disconnection were prevalent, with 98.2% ($n=165$) indicating a sense of isolation from their home communities.

In terms of social support, a majority of women (71.4%, $n=120$) reported that they did not have anyone to talk to about their worries and concerns. Only 19% ($n=32$) stated they had someone to confide in, while 9.5% ($n=16$) did not answer this question.

All participants (100%) reported feeling "hemmed in a hole", reflecting a possible sense of restriction or confinement in their living environment. Furthermore, all respondents agreed (100%) that larger dwelling rooms should be constructed, suggesting significant dissatisfaction with current housing space. However, when queried about the circumstances under which they would like to return home, many women in the camp expressed that they would do so if their families accepted them back. However, others indicated they would never return.

The answers to the open-ended questions revealed that the women in the witches' camps often coped with ill health by resorting to traditional medicine, using herbs for various ailments. For instance, they used herbal remedies for malaria and other diseases like boil infections. Also, local herbs were utilised to alleviate toothaches, body aches, and joint pains. The women identified several key areas requiring urgent attention to improve their overall health and well-being in the camps. These included basic health and mental health needs, social amenities, infrastructure, economic empowerment, and healthcare support. Access to essential items such as food, potable water, clothing, mosquito nets, and adequate security was highlighted as critical for their physical and mental well-being. In terms of infrastructure, the women emphasized the need for improved social amenities, including decent housing, larger and more spacious rooms, a clinic, electricity, and sanitation facilities such as Kumasi Ventilated Improved Pit (KVIP) latrines. For those caring for grandchildren within the camps, the absence of educational facilities was a major concern, and they requested the establishment of a school. Additionally, the women expressed the need for a corn mill to reduce the physical burden of manual grain processing. To support their livelihoods and promote economic self-sufficiency, the women called for assistance to engage in independent farming, as well as access to financial support and bursaries for their grandchildren's education. They also recommended that the government enrol them in the National Health Insurance Scheme (NHIS) and construct a hospital within the camp. The presence of clinics and trained healthcare personnel, they noted, would significantly enhance their access to care and contribute to improved mental health outcomes.

Discussion

In the present cross-sectional study, we investigated symptoms of anxiety and depression and surveyed the living conditions of marginalised women residing in witches' camps in Northern Ghana. Compared to women from the general population, those in the camps experienced significantly higher levels of anxiety and depression,

underscoring a critical mental health disparity. This disparity appears influenced not only by the trauma of witchcraft accusations and social banishment but also by the broader structural and social conditions in which these women live.

Due to the uniformly negative conditions within the camps, it was not possible to identify which specific factors contributed most to the elevated mental health symptoms. However, the study identified several widely acknowledged detrimental factors such as social isolation, lack of psychological support, limited access to healthcare, and the absence of stable income-generating opportunities. These align with the social determinants of health, which the World Health Organization defines as non-medical factors influencing health outcomes, such as housing, income, education, and access to care[51,53,53].

The women in the camps unanimously agreed with the description of their environment as feeling like being "hemmed in a hole," reflecting a sense of restriction or confinement. Many also reported dissatisfactions with the size of their dwelling spaces, further illustrating inadequate housing[54,55], an important social determinant of health.

Access to healthcare was limited. Although most participants reported attending community clinics when unwell due to the absence of health facilities within the camps, they also reported feeling stigmatised by community members who pointed fingers or spoke ill of them. This stigma, combined with feelings of loneliness and social disconnection, reflects their isolation from home communities. Many women reported having no one to talk to about their concerns. These barriers likely influence their health-seeking behaviour; many resorted to traditional medicine for both physical and emotional needs. Cultural and social factors significantly shape how individuals utilise mental health services[56,58,58].The lack of healthcare highlights a critical gap in access to healthcare, emotional and psychological support services. This lack of healthcare infrastructure also underscores the inadequate response to the mental health consequences of stigma and social exclusion experienced by the women.

The high prevalence of anxiety and depression symptoms may also be linked to the loss of traditional social support systems that often provide emotional stability in later life. Constant exposure to stressors and the threat of further loss likely compounds this effect[59,60].

This study challenges clinical models of depression that view it solely as an individual disorder. As General, Services[56] argued, mental health is also shaped by cultural and social contexts, especially among marginalised populations[51,61]. The cumulative psychological burden of social and structural barriers was evident in the high anxiety (M = 14.73) and depression (M = 17.85) scores among camp residents. These impairments may limit their participation in community life and functional capacity, further affecting their mental well-being. If unaddressed, these issues pose obstacles to achieving the targets outlined under the United Nations' Sustainable Development Goals (SDGs) 3 (good health and well-being) and 5 (gender equality).

In the general population sample, the presence of anxiety and depression symptoms may be partly explained by the compounded vulnerabilities of being female and older in a patriarchal society like Ghana[62,63].

The WHO Global Commission on Social Determinants of Health has emphasised that housing, food, employment, and education are central to health equity[64,66,66]. In this study, participants who were physically frail or needed extra support reported having no access to social care, highlighting the exclusion of marginalised individuals from basic social protections[58].

This study demonstrates how the social determinants of health such as housing, food security, employment, and social support shape the emotional well-being of women secluded from the benefits of mainstream society. The comparison between women in witches' camps and those in the general population revealed significantly higher levels of distress among camp residents, likely due to the compounded effects of banishment, stigma, and lack of support[58,67].

The persistent stressors faced by women in the camps may explain their greater levels of anxiety and depression[68]. While depression is common among women, the heightened psychological symptoms among camp residents are indicative of the additional burden imposed by their marginalised environment[58,62,68]. The combined effects of social exclusion, lack of care, and enduring stigma contribute to poor mental health outcomes[67], confirming findings by Yakubu et al. (2024) that the absence of basic social care facilities negatively impacts the well-being of marginalised communities.

Implications for mental health services and community interventions

Following the findings, there is an urgent need for culturally sensitive, community-based mental health interventions that reflects to the unique needs of women in witches' camps and other vulnerable and marginalised groups in similar predicaments. First, mobile mental health outreach clinics could be established to provide routine psychological assessments, and counselling for camp residents and marginalised groups who exist in our communities. These services should be delivered by trained community health workers and psychologists fluent in local languages and reflect to cultural beliefs around witchcraft and mental illness. Second, anti-stigma campaigns involving local chiefs, religious leaders, and former accusers could be introduced to promote community reintegration and reduce social isolation, so the camp residents do not feel hemmed in a hole as it was reflected in the findings. Thirdly, the integration of traditional healing practices with mental health care may improve service acceptability and help bridge the gap between belief systems and evidence-based care. In addition, targeted livelihood programs such as financial supports and social care provisions could meaningful life, and support to improve psychological stress associated with social provisions. Finally, policies must include marginalised women in national health and social protection schemes, including the expansion of Ghana's Livelihood Empowerment Against Poverty (LEAP) programme to reach camp residents. These interventions should be framed within a broader human rights and social justice agenda to align with SDG 3 (good health and well-being) and SDG 5 (gender equality).

Conclusion

Our paper highlighted the diminished mental health and emotional well-being of marginalised women in witches' camps in Ghana compared to women from the general population. The results revealed a higher level of anxiety and depression experienced by women from the witches' camps, which may be attributable to several social factors, including poor housing, unemployment, stigma, loneliness, and social isolation. Our paper also revealed that anxiety and depression cannot just be attributed to individual factors but should also be understood within the broader cultural and social context. Our study sends a signal that anxiety and depression should also be understood in the context of a larger cultural and social framework rather than solely attributing them to personal characteristics. The extent of the vulnerability of the women from the witches' camps was further demonstrated by the contrast between the women from the general population and the women from the camps. Noteworthy is the fact that substantial anxiety and depression symptoms were also revealed in our study among women from the general population.

Our study, therefore, elucidates and advocates for targeted interventions that will address the unique emotional well-being and needs of marginalised women, emphasising the importance of social determinants in mental health frameworks and policies.

Data availability

Data availability statementThe data that support the findings of this study are available upon request from the corresponding author.

Received: 23 March 2025; Accepted: 25 June 2025
Published online: 10 November 2025

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Acknowledgements

AcknowledgementsThe authors would like to acknowledge the support of this research through an award of scholarshipfrom the AUT Doctoral Scholarship Committee. We would also like to thank the older women from the Gambaga and Gnani Witches' camp and also the women from Gambaga and Mion Districts who participated in this study for their time and efforts.

Author contributions

ContributionsConception and design of the study: Y.H.Y., C.K., and R.S. Ethics: Y.H.Y, E.H., and L.A. Acquisition of the data: Y.H.Y., and L.A. Analysis of the data: Y.H.Y., E.H. and C.K. Drafting the manuscript and tables: Y.H.Y., E.H., C.H. All authors have reviewed and edited the manuscript.

Declarations

Conflict of interest

The research is produced from a dissertation and was supported by the Auckland University of Technology Vice Chancellor Doctoral Scholarship to the corresponding author's (YHY) doctoral study.

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