

Exploring protective and resilience-promoting factors for maternal mental health in low- and middle-income countries (LMICs): A qualitative thematic analysis of patient advocacy content

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Abstract

Background: Numerous studies across low- and middle-income countries (LMICs) have provided evidence on the risk factors for perinatal mental health. Eventful pregnancies such as diagnosis of preeclampsia adds another layer of concern to the maternal mental health concerns, this is because preeclampsia (PE) is a major cause of maternal and perinatal mortality and morbidity, especially in low and middle-income countries. On the contrary, research on protective and resilience-promoting factors for these eventful pregnancies is still sparse and a better understanding of these positive health factors could add to existing intervention approaches.

Methods This reflexive thematic analysis included various materials (e.g. documents, webinars, written stories, events and a documentary) that captured perspectives from pregnant and postpartum women, healthcare providers. These materials were developed by Action on Preeclampsia Ghana (APEGH), a survivor and patient-led Ghanaian non-governmental organization working to educate and raise awareness about preeclampsia.

Findings Five overarching themes of resilience and protective factors- were identified: existing policies, structures and facilities; support from relatives; effectiveness of healthcare system and healthcare providers; availability of psychological counselling and other protective and resilience promoting factors.

Discussion and conclusion: In this research, institutions and organisational partnerships have been identified as being able to serve as protective factors for maternal mental health and for women diagnosed with preeclampsia. Diverse support from partners, family and other institutions can be of emotional, practical and social support. Effective healthcare services that are holistic can increase resiliency for maternal mental health. Interventions at the community level also serve as resilience-promoting. Finally, education about misconceptions and empowering women to oversee their wellbeing could serve as a protective and resilience promoting factor in eventful pregnancies such as being diagnosed with preeclampsia.

Background

Maternal health refers to women's health during pregnancy, childbirth, and the postpartum period and is a global goal manifested in the Sustainable Development Goals (SDGs)³. More specifically, SDG target 3.1 aims to reduce maternal mortality to less than 70 per 100,000 live births worldwide⁰³. However, optimal maternal health care transcends surviving pregnancy and childbirth and encompasses reducing maternal injury and disability, promoting health and well-being in a respectful manner^{03,13}. The vast majority (99%) of maternal mortality and morbidity occurs in low- and middle-income countries (LMIC)⁰². One in ten (10%) pregnant postpartum women experience a mental disorder, primarily depression¹⁴. This is even higher in LMIC, with 15.6% during pregnancy and 19.8% postpartum. Affected women cannot function properly and this contributes to the children's growth and development being negatively affected¹⁴. Numerous risk factors for adverse perinatal mental health have been identified in LMIC and

include, poverty, migration, exposure to intimate partner violence, and conflict situations¹⁴. On the contrary, research on *protective and resilience-promoting factors* is still sparse. Protective factors are defined as behaviors, genetic, psychological, environmental, or other characteristics that are associated with a lower probability that a woman will develop a perinatal mental disorder or that reduce the severity of a perinatal mental disorder⁰⁴. Resilience-promoting factors are factors that help women successfully adapt to challenging experiences through mental, emotional, and behavioral flexibility and adaptation to external and internal demands and are therefore more intentional in nature compared to protective factors⁰⁴. Resilience is also defined as healthy or adaptive functioning over the passage of time in the aftermath of adversity²⁵ in this case eventful pregnancies. In other words, in the presence of adversity, protective factors supersede the risk of developing mental problems or other difficulties and provide a more positive outcome than might be expected in the context of such adversity²⁶. Therefore, resilience cannot be easily explained as just the opposite of risk²⁷. Thus, irrespective of the evidence on risk factors in pregnancy and postpartum periods, results from research with a unique focus on protective factors and resilience in pregnant women is also needed. A better understanding of this positive health factors could add to existing intervention approaches, which generally focus on reducing risk factors but are challenged with situations such as financial sustainability, inadequate skilled workforce, and poorly implemented mental health policies¹⁷. In addition, it reoriented the narrative away from a deficit to include perspectives of (community) resilience and strength. Identifying and investing in protective factors that promote women's resilience can also strengthen the sustainability of a preventive approach to improving maternal health and well-being as these can be integrated into interventions and help curb mental health distress that exists during pregnancy and postpartum period¹⁵.

Methods

Aim and study design

This study aimed to explore protective and resilience-promoting factors for maternal mental health among women affected by preeclampsia in Ghana. A qualitative research design was employed, using reflexive thematic analysis to examine patient advocacy materials. This approach was selected for its theoretical flexibility and its suitability for analysing experiential data, enabling an in-depth understanding of participants' lived experiences, perceptions, and coping mechanisms. [19]

Setting and data sources

The study was conducted using secondary qualitative data derived from materials produced by Action on Preeclampsia Ghana (APEGH), a patient-led advocacy organisation focused on awareness, education, and support for women affected by preeclampsia. Data sources included publicly available and organisation-provided materials such as webinars, documentary content, written patient narratives,

and recordings from a support group programme launch event. These materials captured experiences from Ghana within a broader low-resource context.

Data selection and characteristics

A purposive sampling strategy was used to identify relevant materials. Content was included if it: (1) featured women diagnosed with preeclampsia or discussions relating to their experiences; (2) addressed maternal mental health; and (3) contained references to protective or resilience-promoting factors.

The dataset comprised narratives from women with lived experience of preeclampsia (experts-by-experience), as well as contributions from healthcare professionals and maternal health advocates, including clinical psychologists, midwives, nurses, obstetricians and gynaecologists, and medical officers. This combination of experiential and professional perspectives enabled a multi-layered understanding of maternal mental health in this context.

Data collection and processing

All included materials were transcribed verbatim. Where audio clarity was limited, unclear sections were marked accordingly. Transcriptions were conducted by one researcher and cross-checked against the original recordings by a licensed clinical psychologist to ensure accuracy and completeness.

Data analysis

Data were analysed using reflexive thematic analysis as described by Virginia Braun and Victoria Clarke. An inductive approach was adopted to allow themes to emerge directly from the data without imposing predefined categories.

The analysis followed six phases: familiarisation with the data, initial code generation, searching for themes, reviewing themes, defining and naming themes, and producing the report. Coding was conducted using NVivo software.

An initial open coding process was used to identify meaningful data segments reflecting values, beliefs, attitudes, and lived experiences. This was followed by more detailed, line-by-line coding to refine and organise codes into broader categories. Codes representing protective and resilience-promoting factors were grouped into themes based on conceptual similarity.

Themes were developed collaboratively through iterative discussion among the research team, which included a clinical psychologist, an epidemiologist, and the primary analyst. Representative quotations were selected to illustrate each theme and to preserve the richness of participants' accounts.

Rigour and trustworthiness

To enhance analytical rigour, an iterative and reflexive approach was maintained throughout the analysis. Coding and theme development were reviewed and discussed among researchers with interdisciplinary expertise. Reflexivity was applied to acknowledge the influence of researchers' perspectives on interpretation. The use of verbatim transcripts and illustrative quotations further supported credibility and transparency.

Ethical considerations

This study used secondary qualitative data consisting of previously recorded webinars, videos, and patient stories that had been authorised for public dissemination through APECGH platforms for advocacy, education, and research. Direct consent was therefore not sought specifically for this secondary analysis. The analysis formed part of a broader research project on maternal mental health in low- and middle-income countries, with a focus on Ghana, which received ethical approval from the Ghana Health Service Ethics Review Committee. The use of secondary data followed applicable ethical standards for research involving human participants.

This analysis forms part of a broader research project on maternal mental health in low- and middle-income countries, which received ethical approval from the Ghana Health Service Ethics Review Committee. All procedures adhered to established ethical standards for research involving secondary qualitative data.

Statistical analysis

Not applicable, as this study employed a qualitative design.

Results

In the thematic analysis, six primary sources were analyzed: four individual patient stories of experience with preeclampsia, a documentary with other patient stories, and the proceedings of the launch of APECGH's group counselling program, which primarily contains expert opinions on the topic (Additional File 1, Table 2).

The analysis identified 32 protective and resilience-promoting factor codes, which were categorized into five overarching themes and 13 sub-themes (categories). The five overarching themes were existing policies, structures and facilities; support from relatives of women; effectiveness of healthcare system and healthcare providers; availability of psychological counselling and one miscellaneous category with "other" protective and resilience promoting factors mentioned. Both protective and resilience promoting factors were used interchangeably and could not therefore be separated in the themes. All themes, categories, and codes are summarized in Table 1 and discussed in more detail in the next section.

Table 1

Themes, categories, and codes identified in the thematic analysis of protective and resilience-promoting factors for mental health for women with preeclampsia experience (*Themes marked in bold, categories in bold, and italics; codes in black*)

Existing policies, structures and facilities	Support from relatives of women	Effectiveness of health care system and health care providers	Availability of psychological counselling	Other protective and resilience-promoting factors
Involvement and support from organizations and institutions	Financial support	Psychological care	Group counselling	Other protective and resilience-promoting factors
Increased focus on psychological health by institutions and organisations	Financial support by husband	Early screening of pregnant woman's mental health	Introduction of group counselling	Counteract stigma and misconceptions about pregnancy complications
Partnerships between organisations	Practical support	Early treatment of mental health problems	Sharing of experiences among women	Empowerment of woman
Support from institutions in addressing maternal mental health issues	Practical support by partner	Increased focus on psychological health by healthcare providers	Supporting and learning from each other	
	Practical support by family	Psychological first-aid by healthcare providers	Partner included in group counselling	
	Emotional and social support	Relationship and communication with woman	Family included in group counselling	
	Emotional support by partner	Good relationship between woman and healthcare provider	Introduction of psychological counselling	
	Emotional support by family and friends	Empathetic healthcare provider	Introduction of psychological counselling in general	
		Good communication by healthcare providers regarding pregnancy complications	Psychological counselling in church	
		Quality of healthcare	Psychological first-aid by church counsellors	
		Increase in healthcare	Quality and training of counsellors	

Existing policies, structures and facilities	Support from relatives of women	Effectiveness of health care system and health care providers	Availability of psychological counselling	Other protective and resilience-promoting factors
		providers	Training of counsellors	
		Good training of healthcare providers	Qualified practitioners in counselling	
		Quantity of care		
		Quality of healthcare and providers		

Existing policies, structures and facilities

Existing policies, structures and facilities were primarily discussed during the APECGH's launch of the group counselling program that examined the role of institutions and organizations in Ghana in promoting resilience in maternal mental health. Institutions and organizations mentioned relevant for mental health protection and resilience were the Ghana Health Service, the Ministry of Health, the Ministry of Gender and Social Protection, health insurance companies, organizations involved in traditional care practices, and non-governmental organizations working to improve mental health. One code identified was "increased focus on mental health by institutions and organizations", with several experts on this topic mentioning the lack of focus on maternal mental health set by institutions and organizations also due to the main emphasis placed on the physical health of expectant mothers. A policy maker suggested that maternal health care should not only consider the physical well-being of the mother, but there should be a shift towards also incorporating the psychological and social dimensions of pregnancy, as can be read in the following quote from the digital launch:

"Unfortunately, these [our institutions] haven't been very helpful or I would better say we have not received the type of result that we expected from our institutions because our institutions usually focus on the physical well-being of mothers leaving out to a great extent the psychological and the social dimension of it. So we are aware that preeclampsia for instance creates some level of anxiety in mothers and the holistic way of managing would mean that there should be a psychological approach, so that those who go through complications (...) revive to a great extent to their new or original status but that has not been the case in most of the situations." ~ Ghana Health Service Official in the Launch of APECGH Group Counseling program

A factor that was mentioned often by several speakers was the introduction of partnerships between organisations in order to support each other in improving the status quo of perinatal mental health and in introducing initiatives that promote resilience to developing mental health disorders, as the APECGH Group Counseling Program aims to do. Partnerships between organisations interested in traditional care are seen as facilitative toward the provision of the holistic care needed in Ghana.

“It is good that within the coming years we [Ghana Health Service] will be able to form formidable partnerships with APECGH Ghana and any other organisation that is interested in helping in this direction of holistic care so that at the end of the day women in Ghana who (...) deliver childbirth receive the best care which will consider them as biological beings, psychological beings, and social beings and that will be the holistic care that we think we (...) in this country every day.”~ Participant in the Launch of APECGH Group Counseling program

Lastly, the support from institutions and organisations for women experiencing preeclampsia was found to be protective. Doing research on the topic, playing an advocate for improved holistic health care, or the provision of interventions like the APCEGH Peer Counseling Program, was seen as vital in order to improve maternal mental health. In the following quote, institutions themselves are even described as "a source of solace" and several institutions and organisations are listed to assist women with the challenges that come with pre-eclampsia:

“So, what is the way forward? In our current situation we look through institutions as a source of solace. And here we are talking about the Ghana Health Service, the Ministry of Health, the Ministry of Gender and Social Protection and all other agencies, health insurances to come and hand in support to most of these women when they go through challenges during childbirth as we are familiar with.”

~ Head of the Safe Motherhood Program Ghana Health Service in the Launch of APECGH Group Counseling program

Support from the relatives of women

Support from relatives like the mother, the partner, or the family of the women in general was identified as helpful and likely to benefit their wellbeing in various ways in the stories of womens’ preeclampsia experiences. Relatives were seen as sources of financial support, practical support, and emotional support. Help with housework was frequently mentioned as practical support, as well as running errands and buying medicines for the woman. Within these three categories, five codes could be identified: “Financial support by husband”, “Practical support by family”, “Practical support by husband”, “Emotional support by family and friends” and “Emotional support by husband”. One woman who described her experience with preeclampsia mentioned the following in this context:

“My husband was very supportive, he was available anytime, financially, physically, emotionally, purchased all medications and many. And since my husband works I also had to bring my younger sister to come and help with the house chores for my husband to be able to go to work.”

~ Anonymous woman in Story of Hope 7

The financial, practical, and emotional support by the husband were all explored and with our professional knowledge classified to be protective of the women's mental health during pregnancy. The practical support by family members, like the sister, concerning house chores was mentioned as well. Emotional support from the partner was mentioned most often as a source of solace, followed by support from the family in the Stories of Hope:

"Supported by my family members, especially my husband and mother, I managed to put myself together. They were holding my hand along the way."

~ Anonymous woman in Story of Hope 5

Effectiveness of the healthcare system and healthcare providers

The role of the healthcare system at a macro level and the healthcare providers at the micro level in improving the status quo of maternal mental health was extensively covered within the stories of the women as well as by professionals in the field in the support group launch. One category formed the *psychological dimension* of healthcare given to pregnant women who experience pregnancy complications. Statements identified in this context were "Increased focus on psychological health by healthcare providers", "Early screening of mental health", "Early treatment of mental health problems" and "Psychological first-aid by healthcare providers". It was mentioned that healthcare providers such as midwives, nurses, and doctors involved in the care of pregnant women with pre-eclampsia should not only focus on identifying physical complaints of the women during pregnancy, but also keep an eye on their mental state, therefore taking a more holistic approach in caregiving. Also mentioned was that early screening for mental health problems can lead to these problems being treated at an early stage and prevent mental disorders from worsening during pregnancy and postpartum. Additionally, it was reported that the healthcare providers detecting mental health problems in a patient could give out some psychological first-aid²⁸ in order to limit the distress before referral. One expert during the launch hereby suggested giving midwives and nurses training to be able to identify mental health problems and provide such psychological first-aid:

"So what we can do is to give the midwives and nurses some kind of training so that they'll be able to identify and give some kind of psychological support."

~ Speaker from audience in the Launch of APECGH Group Counseling program

The *relationship between the healthcare providers and the women as well as the communication between the providers* and the women was found as being influential on their mental health state. The three codes "Good relationship between woman and healthcare provider", "Empathetic healthcare provider" and "Good communication by healthcare providers regarding pregnancy complications" were incorporated into this category as codes. One professional mentioned a *good relationship* with the healthcare provider as a protective factor since this would make women more likely to confide with the healthcare provider and might prevent the delay of symptom reporting of mental health disorders. Healthcare providers should be empathetic towards the woman and make her feel safe and understood during pregnancy complications to make her experience less traumatic. Additionally, it was found to be crucial that the healthcare providers communicate pregnancy complications directly to the woman for her to be able to make sense of her condition. Multiple women noted the lack of communication about their diagnosis in their stories, one mentioning this:

"But the sad thing is that they never tell you what was happening. I had to read through google and you know google doesn't give you all the right answers. So, I think one of the times, I just went to one of the nurse's rooms and I saw the charts about high blood pressure, preeclampsia, eclampsia and what happens. So that was when I realised that I was suffering from preeclampsia"

~ Patient story by Anonymous woman in Preeclampsia Diaries Documentary

This story is specifically about how a woman found out about her condition herself through the internet and an information board at the hospital due to healthcare providers not informing her about her condition, which could introduce uncertainty, anxiety or stress about her physical condition²⁰. It could be protective if healthcare providers inform the women about their condition and the risks related to it for the women to also build trust towards the healthcare workers and be knowledgeable about their condition²⁰.

The last category identified refers to the quality of the healthcare system and the healthcare providers, entailing four aspects to be protective for women's mental health, which are "Increase in healthcare providers", "Good training of healthcare providers", "Quantity of care" and "Quality of healthcare and providers". In this respect, professionals have criticised healthcare being understaffed and not being sufficient in quality to provide the holistic care that is required. One professional hereby stated the following:

"Others would also probably argue that we even don't have the personnel or the professional skill to address most of the psychological dimension and provide the holistic care that we've been advocating for."

~ Head of the SafeMotherhood Program Ghana health service in the Launch of APECGH Group Counseling program

The lack of skill and staff was addressed as one of the challenges which keeps healthcare institutions from providing sufficient and quality support for women experiencing mental health issues. While also addressing the importance of empathy by healthcare workers, the quality of care was also addressed in another comment during the launch:

"I believe part of the training our midwives can relate very well to the pregnant woman since they've learned that pregnancy puts one in a stressful mental state. Our attitudes as midwives, instead of helping the client, sometimes makes them more stressed. Quality of care is an issue and we are working towards that and the person says I pledge to continue to be an agent of change."

~ Speaker from the audience in the Launch of APECGH Group Counseling program

In addition, it was mentioned that the quantity of care and attention given by healthcare providers to women could also have a protective effect, as more attention could increase the likelihood of healthcare providers identifying change in mood and affect and detect mental health problems in their patients and could also make women feel more supported. Finally, good training of healthcare providers is needed so that they can take the protective measures mentioned above, such as exhibiting empathy toward the patient and engaging in good communication with the patient about pregnancy complications. One professional summarised many factors discussed above quite well in her statement:

"There is a need for good training and risk communication and support during pregnancy, not just letting mothers know about the risk but supporting them through the fear they may experience."

~ Speaker from the audience in the Launch of APECGH Group Counseling program

Availability of Psychological Counselling

During the introduction of the Group Counseling program by APECGH, the importance of psychological counselling in improving maternal mental health was frequently mentioned, and reference was made not only to the importance of group counselling but also to the importance of introducing psychological counselling in general. Within the theme of psychological counselling, four categories emerged which refer to the type of counselling offered, the introduction of psychological counselling generally and the quality of the counselling offered. The categories are **"Introduction of psychological counselling", "Psychological counselling in churches", "Group counselling" and "Quality and training of counsellors"**. Regarding the introduction of psychological counselling, it was suggested having at least one psychologist attached to antenatal clinics will be helpful. The importance of making room for individual counselling besides the option of group counselling to fit the needs of women that need psychological support individually was also illuminated. To improve awareness about pregnancy complications like pre-eclampsia, counselling as a tool to provide education about the condition was identified as being protective. One expert in this respect stated the following:

"I would like to say that counselling applies to many other areas so far as the issue of pregnancy and preeclampsia is concerned. For example, it is important for people who are planning to marry to understand this condition or disorder before they get married. Which means that during the pre-marriage counselling, especially the specific topic of childbearing and parenting, people should be talking about conditions or disorders related to pregnancy, and specifically preeclampsia."

~ Rev. of the church in the Launch of APECGH Group Counseling program

One woman additionally pointed out in her story about her experience that the introduction of such support in the local dialect could promote awareness even more efficiently. In line with the importance of religion in Ghanaian society, the inclusion of church or religious counsellors in the provision of mental health services was discussed. In this context, it was discussed that these church counsellors could be trained to expand their counselling skills and offer support to pregnant women with pregnancy complications:

"On the other hand, the lay practitioners are almost everywhere, they are in the churches, most of them are in the churches. And they are focused on pre-marital counselling and marital counselling, so what I believe we can do, because the churches are everywhere, is to train these church counsellors, give them additional skills, so that they'll be able to help."

~ Speaker from the audience in the Launch of APECGH Group Counseling program

Group counselling was, given the purpose of the virtual conference, the most discussed variation of counselling. Regarding what group counselling should entail, the following was stated, incorporating the aspects of this program quite well:

"We will do our best to recruit all mothers if possible into this program such that weekly, we would gather at this possible venue and then go through the distresses, then challenges and then find solutions together, share the experiences, so that we can go support all pregnant women who go through preeclampsia, to have a very safe pregnancy and to feel supported in this process."

~ Clinical Psychologist in the Launch of APECGH Group Counseling program

'Sharing experiences' was hereby often mentioned within the context of group counselling and was often mentioned to be protective for women included in the program. This was espoused as a protective factor which will help not make women feel isolated and alone during their eventful pregnancy and realise there are others who also experience the same. Linked to this, "supporting and learning from each other" was also identified as a resilience-promoting factor. This meant women could come together and teach each other how they dealt with difficult conversations such as receiving their diagnosis and the chances of losing their pregnancy. This is entailed in the group counselling promoted by APECGH Ghana:

"So that not just share the pain and the experience but ways they can be better, solutions that are working for this, because in this group therapy, what you learn is that you are not alone, so in this group therapy you can learn new skills from other people and how they are going about it."

~ clinical psychologist in the Launch of APECGH Group Counseling program

To make the group counselling as efficient as possible, it was discussed expanding the tentacles of the program and including family and the woman's partner into the program. It was concluded that the relatives of the pregnant woman can better support her in her pregnancy if they are involved in the counselling and in the process learn some skills to support her and also understand her physical condition better. The following was stated by one expert represented in the launch:

"I think it is quite important that we also consider the partners of women who have pregnancy-related complications because sometimes we are doing all these things for a woman and we don't even inform her partner or her husband and sometimes even when we do we just say it casually, "Oh she needs this and that", but it doesn't sink in, he doesn't internalise it so how is he going to support her or how is he going to be on board with the treatment that we are giving, so I think that in the long term, it's also about expanding the tentacles of this program, not just for women that are experiencing complications but also for their partners and for their families as well."

~ Obstetrics and gynaecology researcher in the Launch of APECGH Group Counseling program

Lastly, the quality of the practitioners leading the counselling sessions and the training of such counsellors was elaborated on. It was hereby advised that more counsellors should be trained and that the practitioners leading the sessions should be licensed practitioners:

"I would like to (...) them [APECGH] on to make use of licensed qualified practitioners when they are offering the services because a person in the field understands the theories behind the therapy and the skills that the person uses."

~ Rev. of the church in the Launch of APECGH Group Counseling program

Other protective and resilience-promoting factors

Two other protective factors were identified that did not match any theme discussed previously. A frequently mentioned factor was "counteracting stigma and misconceptions about pregnancy," which

referred to the assumption that women must keep quiet about their pregnancy complications to not be labelled as being weak or not being fertile²⁸, but also to misconceptions that exist about mental health problems during pregnancy and pregnancy complications in general. Throughout the launch, the notion of “breaking the barriers” was repeatedly discussed, like in the following excerpt:

“We need to continue to break the barriers that pregnancy complications affect women just in that moment it's something that they often times live with for a very long time”

~ Obs and Gynae researcher in the Launch of APECGH Group Counseling program

Finally, women's empowerment, a factor related to addressing stigma and misconceptions, was elaborated on and refers to having a voice to talk about pregnancy complications and their impact on their mental health as well, and having a voice within the family circle to better navigate problems within the family, something that a healthcare provider or counsellor may not be able to address.

Overall, support from a variety of sources in the form of emotional, practical, financial, or social support was found to be the most important factors in fostering protective and resiliency during and after pregnancy and emerged as a predominant theme in the material analyzed.

Discussion

This thematic analysis of various activities and materials from the patient- and survivor-led organisation Action on Preeclampsia Ghana (APECGH) identified several protective and resilience-promoting factors for maternal mental health. These include existing policies, healthcare structures and facilities, the effectiveness of healthcare providers and systems, psychological counselling, and notably, the support of relatives. Each of these factors contributes in varied ways to the mental well-being of women affected by preeclampsia, particularly during pregnancy, childbirth, and the postpartum period.

Although maternal mental health research has grown over the past two decades, particularly in low- and middle-income countries (LMICs), investigations into protective and resilience-promoting factors remain limited²¹. Even more underexplored is the mental health of women affected by pregnancy complications such as preeclampsia [22]. Most existing studies, primarily from high-income countries, tend to focus on identifying risk factors for maternal mental health¹⁴. To ensure context-specific and effective interventions, there is a pressing need to understand the resilience mechanisms and protective factors relevant to LMICs [23]. These constructs are complex, often cyclical, and shaped by individual, familial, institutional, societal, and cultural dynamics³⁰ [29]. [11, 12]

The role of multiple stakeholders emerged strongly in this study. Governmental agencies, health facilities, patients and their families, traditional healthcare providers, and patient-led non-governmental organisations (such as APECGH) all contribute to protection and resilience, depending on the timing, mode, and setting of the support provided. Governments are particularly tasked with establishing and maintaining functional healthcare infrastructures³³. Additionally, they bear the responsibility of

implementing sustainable, accessible, and well-funded mental health policies³³. Such policies can improve patient experiences, treatment effectiveness, and the long-term sustainability of services³⁴ [34]. [30, 33]

However, other studies have highlighted that the sheer diversity of health-influencing factors, growing demand on healthcare systems, and limited resources mean that governments alone cannot meet all healthcare needs, especially in mental health [31]. Non-governmental and advocacy organisations thus play a critical bridging role. These groups can lead awareness campaigns, convene platforms for discussion, and advocate for women's mental health during and after pregnancy [35]. Their value has been acknowledged in literature, which notes that NGOs often step in to deliver services traditionally provided by governments, particularly in resource-constrained settings³². [37, 39]

Another critical finding relates to patient inclusion. In the launch webinar of a counselling support group, the importance of including patients in all aspects of their healthcare especially decisions concerning mental health was emphasised. This aligns with evidence from other studies which highlight the use of patient navigators or advocates as a strategy to enhance care and resource access during critical health moments [36], such as a preeclampsia diagnosis. Patient advocates provide a crucial perspective, drawing from lived experience and representing the needs of the populations they serve [38]. [37]

Furthermore, the role of traditional healthcare providers particularly traditional birth attendants (TBAs) was recognised as protective. In rural and resource limited areas, TBAs often serve as the first point of care^{39 40}. In Ghana³⁹ and other parts of Africa⁴¹, TBAs are known to provide psychological support alongside physical care [40]. Their integration into maternal mental health policy and programming is thus essential⁴¹, recognising that they are already deeply embedded within community healthcare dynamics. [39]

In sum, these findings support the case for a multi-stakeholder, culturally informed, and inclusive approach to maternal mental health especially for women facing pregnancy complications like preeclampsia. Greater investment in both formal healthcare systems and community-based support structures will be key to building resilience and promoting mental well-being.

Support from the relatives of women

Support during pregnancy, childbirth, and the postpartum period plays a crucial role in promoting mental health among women diagnosed with preeclampsia⁴⁴. Emotional, practical, financial, and social support emerged as key resilience-promoting factors. Partners, family, and friends were frequently cited as sources of this support, making women feel protected and connected. Family connections offer a sense of meaning and purpose, while also providing tangible and emotional resources that promote well-being⁴⁵. However, the quality of these relationships matters greatly, as supportive interactions such as love, care, and advice contribute positively⁴³, whereas stressors like frequent arguments or excessive demands can have negative effects on mental health through psychosocial, behavioural, and physiological pathways⁴⁴. [42] [56]

Among the various types of support, emotional support from family and partners was consistently emphasized as particularly crucial. It offers reassurance, encouragement, and a sense of closeness and belonging, which helps to bolster hope and confidence. This aligns with findings from other studies that highlight emotional support as a protective factor for mental health. In addition, practical support including childcare, household help, and other forms of instrumental aid from family, partners, and friends was identified as vital in enhancing resilience. Research has shown that women with stronger practical support networks experience lower levels of postpartum depression [57]. [41]

Financial support also emerged as a significant protective factor, echoing findings from other studies [43,44]. Limited financial resources have been associated with reduced access to optimal postpartum care, especially for low-income individuals, which in turn negatively impacts mental health outcomes. Furthermore, studies have linked low socioeconomic status to increased rates of postnatal depression. These insights underscore the importance of financial assistance in supporting maternal mental health. [45, 46] [24]

In sum, emotional, practical, and financial support collectively help women navigate the stressors and daily challenges associated with pregnancy and postpartum life, particularly for those facing medical complications such as preeclampsia [43,43,44]. These forms of support enhance resilience and serve as vital buffers against the development of mental health disorders during this vulnerable period.

Effectiveness of the healthcare system and healthcare providers

Availability of psychological care, quality healthcare provision, patient-healthcare provider relationship and communication were key factors brought up as ensuring effective healthcare system and service provision. According to the WHO [9], holistic healthcare is the sure bet to morbidity and mortality reduction amongst the populace, and this is not without the inclusion of psychological care services for pregnant and postpartum women especially in low resource settings [9]. [16, 18, 21]

Choi [49] and colleagues [48] have reported from their study that quality of healthcare services is associated with patient satisfaction and a satisfied patient is one with less stressors [49]. Also reported in other studies [50] is that patients communicated information about their conditions and the process of treatment helped them understand the professional better and know what to expect from them, improving the relationship they had. Also reported in the literature [51] is the link between employee (healthcare provide) satisfaction, quality of care and patient (pregnant and postpartum women) satisfaction. Indicating satisfied employees deliver better services leading to patient satisfaction. Finally, quality and continuity of relationships between a patient and healthcare provider influence the quality of delivered services [50]. This is dependent on the quality of the interaction between a healthcare provider and a patient considering the healthcare provider's personal attributes of empathy, compassion and honesty and technical expertise to attain the pregnant and postpartum woman's trust [50]. [47]

Availability of Psychological Counselling

Early psychological intervention, group counselling, religious (Church-based) counselling, and the training of counselling service providers were identified as distinct yet complementary protective factors for maternal mental health among pregnant and postpartum women diagnosed with preeclampsia. Early assessment and intervention allow for the timely detection and management of psychological disorders⁵², preventing escalation and promoting better outcomes⁵². Tailored interventions such as therapy, counselling, and lifestyle adjustments can mitigate the impact of emerging mental health symptoms. Group counselling, particularly through peer support and shared experiences, has also been shown to strengthen resilience by offering emotional support and reducing feelings of isolation during pregnancy and the postpartum period ^{52,53}. [12]

Religious counselling emerged as another key protective factor, providing spiritual guidance, emotional reassurance, and a sense of community. For many women, faith forms a core part of their identity and serves as a crucial coping mechanism, particularly during health crisis like preeclampsia [55]. Furthermore, the continuous training of counsellors was highlighted as essential in promoting effective mental health care. Well-trained professionals are better equipped with the skills, knowledge, and adaptability needed to provide culturally relevant and responsive support ^{54,55}. Together, these interventions contribute to a comprehensive and multifaceted approach that strengthens mental health resilience in the perinatal period [53]

Other protective and resilience-promoting factors

Counteracting stigma and misconceptions about pregnancy as well as empowering women were mentioned as protective and resilient promoting factors. These factors present a supportive environment making women feel valued, informed, and capable, while reducing the risk of mental health disorders during pregnancy and postpartum [58]. To reduce stigma and myth, accurate information about pregnancy, childbirth, and postpartum recovery through healthcare providers, community programs, and media is protective⁵⁹. Disinformation on cultural misconceptions and norms that may contribute to stress or mental health issues is crucial⁵⁸. Tailored education that respects cultural contexts while promoting mental health awareness is important in building resilience amongst pregnant and postpartum women⁵⁹. This education involves ensuring they have access to accurate information and resources so they can make informed decisions about their pregnancy and childbirth⁵⁹. This includes understanding their rights and birth plans⁵⁹. Women being in control of these decisions reduces anxiety and fosters a sense of empowerment⁶¹. [47, 56]

Development of strong support networks, including partners, family, friends, and peer groups as discussed above, helps women feel supported and empowered ^{44,43}. Assurance of a network to rely on can significantly enhance resilience during stressful times for pregnant and postpartum women⁵⁹. Women leading support groups or advocating for maternal health rights⁵⁹, can also enhance their resilience⁵⁹. [56]

Limitation and strengths of study

First, a major strength of the study lies in its innovative and diverse data source approach. By drawing from APECGH materials such as interviews, a counselling support group launch, and a documentary, the research captures personal narratives and shared experiences, which provide rich contextual insight into the psychological impact of preeclampsia. This unique form of secondary data allows for the inclusion of varied stakeholders and perspectives, enhancing the depth and scope of the qualitative analysis⁵⁹.

Second, the expertise of licensed clinical psychologists and qualitative researchers enabled a meaningful interpretation of data that was not originally intended for research. Although protective and resilience-promoting factors were not explicitly elicited, expert analysis allowed for valuable deductions from the participants' narratives, reflecting real-life mental health challenges and coping strategies.

Third, the inclusion of emotionally expressive material despite being edited for storyline purpose offers authentic insights into lived experiences. This approach not only enriches understanding but also highlights the emotional nuances often overlooked in traditional data collection. It provides a robust background to guide future targeted research and intervention development.

First limitation stems from the nature of the source material. APECGH, as an organisation primarily focused on education and advocacy about hypertensive disorders in pregnancy, shaped the content to serve advocacy purposes rather than research. As such, mental health constructs like resilience or protective factors were not directly probed, making it necessary to infer these elements indirectly. [28]

Secondly, the material analysed often emphasized patients' shared experiences for advocacy rather than structured exploration of psychological themes. This introduces a bias toward narratives that support psychological counselling and may not fully capture a diverse range of perspectives, including those less inclined to seek or value such support.

Thirdly, some materials, such as the documentary, were edited by others, potentially for storyline impact. This editorial process may influence how experiences and emotional expressions are portrayed, limiting the rawness and spontaneity often valued in qualitative research.

Lastly, the difficulty in finding adequate materials for analysis itself reflects a broader limitation, the current scarcity of research on culturally specific protective and resilience factors for maternal mental health, particularly in relation to preeclampsia. This gap emphasizes the need for more intentional studies and policy engagement in this area.

Conclusion

We synthesized stakeholder perspectives on protective and resilience-promoting factors for maternal mental health in the context of preeclampsia in a low- and middle-income country (LMIC). The findings highlight the role of institutional and organizational partnerships in providing emotional, practical, and social support, as well as the importance of holistic healthcare services in enhancing maternal resilience. Community-based psychosocial interventions, particularly group counseling, were identified

as effective resilience-promoting strategies. Additionally, education to address misconceptions and empower women was seen as crucial in fostering mental well-being during high-risk pregnancies. Future research should address gaps in knowledge, and interventions should be locally adapted while drawing on evidence-based approaches like the APECGH consultation model to better support maternal mental health.

Abbreviations

APECGH

Action on Preeclampsia Ghana

LMICs

Low-and Middle-Income Countries

RTA

Reflexive Thematic Analysis

NVivo

Qualitative Data Analysis Software

WHO

World Health Organization

GHS

Ghana Health Service

MMH

Maternal Mental Health

HCPs

Healthcare Providers

Declarations

Ethics: This study used secondary qualitative data authorised for public dissemination by APECGH. The broader research project received ethical approval from the Ghana Health Service Ethics Review Committee.

Consent for publication:

Not applicable

Competing interests:

The authors declare that they have no competing interests

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Author Contribution

Author Contributions A.E.N., M.S.S.W., and J.L.B. conceived the study. A.E.N. and K.W.M.B. contributed to data acquisition. A.E.N. and M.S.S.W. conducted the data analysis and interpretation. A.E.N. and M.S.S.W. drafted the manuscript. J.L.B. reviewed and contributed to the revision of the manuscript. K.W.M.B., H.B.A., K.K.L., D.E.G., A.O.T., B.D.K., and M.M. contributed to the interpretation of findings and critically reviewed the manuscript. All authors reviewed and approved the final manuscript and agreed to be accountable for all aspects of the work.

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Data Availability

All data generated or analysed during this study are from publicly available sources and are included in this published article and its supplementary information files.

References

1. Naeem M, Ozuem W, Howell K, Ranfagni S. A step-by-step process of thematic analysis to develop a conceptual model in qualitative research. *Int J Qual Methods*. 2023;22. 10.1177/16094069231205789.

2. Firoz T, Sanghvi H, Merialdi M, von Dadelszen P. Pre-eclampsia in low and middle income countries. *Best Pract Res Clin Obstet Gynaecol*. 2011;25(4):537–47.
3. World Health Organization. Maternal mortality. <https://www.who.int/news-room/fact-sheets/detail/maternal-mortality>. Accessed 16 Jan 2023.
4. American Psychological Association. APA dictionary of psychology. <https://dictionary.apa.org/>. Accessed 23 Jan 2023.
5. Action on Preeclampsia Ghana. Home - Action on Preeclampsia Ghana. <https://apecghana.org/>. Accessed 23 Jan 2023.
6. Chappell LC, Cluver CA, Kingdom J, Tong S, Pre-eclampsia. *Lancet*. 2021;398(10297):341–53. 10.1016/S0140-6736(20)32335-7.
7. Mautner E, Stern C, Deutsch M, Nagele E, Greimel E, Lang U, et al. The impact of resilience on psychological outcomes in women after preeclampsia: an observational cohort study. *Health Qual Life Outcomes*. 2013;11:194. 10.1186/1477-7525-11-194.
8. Tenny S, Brannan JM, Brannan GD. Qualitative study. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK470395/>
9. World Health Organization. Health and well-being. <https://www.who.int/data/gho/data/major-themes/health-and-well-being>. Accessed 2024.
10. Jamison DT, Breman JG, Measham AR, et al. editors. Disease control priorities in developing countries. Washington (DC): World Bank; 2006.
11. Wainberg ML, Scorza P, Shultz JM, Helpman L, Mootz JJ, Johnson KA, et al. Challenges and opportunities in global mental health: a research-to-practice perspective. *Curr Psychiatry Rep*. 2017;19(5):28. 10.1007/s11920-017-0780-z.
12. Helmreich I, Kunzler A, Chmitorz A, König J, Binder H, Wessa M, et al. Psychological interventions for resilience enhancement in adults. *Cochrane Database Syst Rev*. 2017;2017(2):CD012527. 10.1002/14651858.CD012527.
13. World Health Organization. WHO recommendations on antenatal care for a positive pregnancy experience. Geneva: WHO; 2016.
14. World Health Organization. Maternal mental health. <https://www.who.int/teams/mental-health-and-substance-use/promotion-prevention/maternal-mental-health>. Accessed 2024.
15. Office of the Surgeon General. The Surgeon General's call to action to improve maternal health. Washington (DC): US Department of Health and Human Services. 2020. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK568218/>
16. Lu HQ, Hu R. Lasting effects of intrauterine exposure to preeclampsia on offspring and the underlying mechanism. *AJP Rep*. 2019;9(3):e275–91. 10.1055/s-0039-1695004.
17. Moore A, Bertotti M, Hanafiah A, Hayes D. Factors affecting the sustainability of community mental health assets: a systematic review. *Health Soc Care Community*. 2022;29(6):e3369–83. 10.1111/hsc.13929.

18. von Dadelszen P, Magee LA. Preventing deaths due to the hypertensive disorders of pregnancy. *Best Pract Res Clin Obstet Gynaecol*. 2016;35:83–102. 10.1016/j.bpobgyn.2016.05.005.
19. Understanding. Accessed thematic analysis. <https://www.thematicanalysis.net/understanding-ta/>. 2024.
20. Wu D, Lowry PB, Zhang D, Tao Y. Patient trust in physicians matters: understanding the role of a mobile patient education system and patient–physician communication in improving patient adherence behavior. *J Med Internet Res*. 2022;24(12):e42941. 10.2196/42941.
21. World Health Organization. Strengthening maternal mental health in Ghana: situational analysis. <https://www.afro.who.int/sites/default/files/2024-02/MMHD%20Situational%20Analysis.pdf>. Accessed 2024.
22. Gumusoglu SB, Chilukuri ASS, Santillan DA, Santillan MK, Stevens HE. Neurodevelopmental outcomes of prenatal preeclampsia exposure. *Trends Neurosci*. 2020;42(4):253–68. 10.1016/j.tins.2020.02.003.
23. Zhang Y, Zhang H, Liu X, Li Z, Wang Y, Liu S, et al. A concept analysis of maternal resilience against pregnancy-related mental health challenges in low- and middle-income countries. *Healthcare*. 2024;12(16):1555. 10.3390/healthcare12161555.
24. McCann JK, Freire S, de Oliveira CVR, Ochieng M, Jeong J. Father involvement is a protective factor for maternal mental health in Western Kenya. *SSM Ment Health*. 2024;5:100318. 10.1016/j.ssmmh.2024.100318.
25. Southwick SM, Bonanno GA, Masten AS, Panter-Brick C, Yehuda R. Resilience definitions, theory, and challenges: interdisciplinary perspectives. *Eur J Psychotraumatol*. 2014;5:25338. 10.3402/ejpt.v5.25338.
26. Fletcher D, Sarkar M. Psychological resilience: a review and critique of definitions, concepts and theory. *Eur Psychol*. 2013;18:12–23. 10.1027/1016-9040/a000124.
27. Stainton A, Chisholm K, Kaiser N, Rosen M, Upthegrove R, Ruhrmann S, et al. Resilience as a multimodal dynamic process. *Early Interv Psychiatry*. 2019;13:725–31. 10.1111/eip.12726.
28. Shah K, Bedi S, Onyeaka H, Singh R, Chaudhari G. The role of psychological first aid to support public mental health in the COVID-19 pandemic. *Cureus*. 2020;12(6):e8821. 10.7759/cureus.8821.
29. Berg JA, Woods NF. Overturning *Roe v. Wade*: consequences for midlife women's health and well-being. *Womens Midlife Health*. 2023;9(1):2. 10.1186/s40695-022-00085-8.
30. Fleming J, Ledogar RJ. Resilience, an evolving concept: a review of literature relevant to Aboriginal research. *Pimatisiwin*. 2008;6(2):7–23.
31. Rajabi M, Ebrahimi P, Aryankhesal A. Collaboration between the government and nongovernmental organizations in providing health-care services: a systematic review of challenges. *J Educ Health Promot*. 2021;10:242. 10.4103/jehp.jehp_1312_20.
32. Oechler Solana EF. Public private not-for-profit partnerships: delivering public services to developing countries. *Procedia Eng*. 2014;78:283–91.

33. Luxon L. Infrastructure—the key to healthcare improvement. *Future Hosp J*. 2015;2(1):4–7. 10.7861/futurehosp.2-1-4.
34. Atkinson S, Ingham J, Cheshire M, Went S. Defining quality and quality improvement. *Clin Med (Lond)*. 2010;10(6):537–9. 10.7861/clinmedicine.10-6-537.
35. McCloskey L, Bernstein J, Amutah-Onukagha N, et al. Bridging the chasm between pregnancy and health over the life course: a national agenda for research and action. *Womens Health Issues*. 2021;30(3):204–18. 10.1016/j.whi.2021.01.002.
36. Ruderman RS, Dahl EC, Williams BR, Davis K, Feinglass JM, Grobman WA, et al. Provider perspectives on barriers and facilitators to postpartum care for low-income individuals. *Womens Health Rep*. 2021;2(1):254–62. 10.1089/whr.2021.0009.
37. Guardino CM, Schetter CD. Coping during pregnancy: a systematic review and recommendations. *Health Psychol Rev*. 2014;8(1):70–94. 10.1080/17437199.2012.752659.
38. Davidson AR, Morgan M, Ball L, Reidlinger DP. Patient advocates' views of patient roles in interprofessional collaborative practice in primary care: a constructivist grounded theory study. *Health Soc Care Community*. 2022;29(6):e5775–85. 10.1111/hsc.14009.
39. Adatara P, Afaya A, Baku EA, Salia SM, Asempah A. Perspective of traditional birth attendants on their experiences and roles in maternal health care in rural areas of Northern Ghana. *Int J Reprod Med*. 2018;2018:2165627. 10.1155/2018/2165627.
40. World Health Organization. Trends in maternal mortality: 1990 to 2010. Geneva: WHO; 2011.
41. Thipanyane MP, Nomatshila SC, Musarurwa HT, Oladimeji O. The roles and challenges of traditional health practitioners in maternal health services in rural communities of South Africa. *Int J Environ Res Public Health*. 2022;19(20):13597. 10.3390/ijerph192013597.
42. Reblin M, Uchino BN. Social and emotional support and its implication for health. *Curr Opin Psychiatry*. 2008;21(2):201–5. 10.1097/YCO.0b013e3282f3ad89.
43. Rook KS, Underwood LG. Social support measurement and interventions: comments and future directions. In: Cohen S, Underwood LG, Gottlieb BH, editors. *Social support measurement and intervention*. New York: Oxford University Press; 2000. pp. 311–33.
44. Coursaris CK, Liu M. An analysis of social support exchanges in online HIV/AIDS self-help groups. *Comput Hum Behav*. 2009;25(4):911–8.
45. Hartwell SW, Benson PR. Social integration: a conceptual overview and two case studies. In: Avison WR, McLeod JD, Pescosolido BA, editors. *Mental health, social mirror*. New York: Springer; 2007. pp. 329–52. 10.1007/978-0-387-36320-2_14.
46. Collins NL, Dunkel-Schetter C, Lobel M, Scrimshaw SC. Social support in pregnancy: psychosocial correlates of birth outcomes and postpartum depression. *J Pers Soc Psychol*. 1993;65(6):1243–57. 10.1037/0022-3514.65.6.1243.
47. Coast E, Leone T, Hirose A, Jones E. Poverty and postnatal depression: a systematic mapping of the evidence from low and lower middle income countries. *Health Place*. 2012;18(5):1025–35.

48. Choi K, Lee H, Kim C, Lee S. The service quality dimensions and patient satisfaction relationships in South Korea. *J Serv Mark.* 2005;19(3):140–9.
49. Mosadeghrad AM. Factors affecting medical service quality. *Iran J Public Health.* 2014;42(2):210–20.
50. Haas JS, Cook EF, Puopolo AL, Burstin HR, Cleary PD, Brennan TA. Is the professional satisfaction of general internists associated with patient satisfaction? *J Gen Intern Med.* 2000;15(2):122–8.
51. Singh V, Kumar A, Gupta S. Mental health prevention and promotion: a narrative review. *Front Psychiatry.* 2022;13:898009. 10.3389/fpsy.2022.898009.
52. Ge-Ge H. Family resilience of cancer patients: a concept analysis. *Front Nurs.* 2024;11:153–8.
53. Verner G, Epel E, Lahti-Pulkkinen M, Kajantie E, Buss C, Lin J, et al. Maternal psychological resilience during pregnancy and newborn telomere length: a prospective study. *Am J Psychiatry.* 2021;178:183–92.
54. Aggarwal S, Wright J, Morgan A, Patton G, Reavley N. Religiosity and spirituality in the prevention and management of depression and anxiety in young people: a systematic review and meta-analysis. *BMC Psychiatry.* 2023;23(1):729. 10.1186/s12888-023-05091-2.
55. Manookian A, Tajvidi M, Dehghan-Nayeri N. Inner voice of pregnant women: a qualitative study. *Iran J Nurs Midwifery Res.* 2019;24(3):167–71. 10.4103/ijnmr.IJNMR_105_18.
56. Fricchione GL, Borba CP, Alem A, Shibr T, Carney JR, Henderson DC. Capacity building in global mental health: professional training. *Harv Rev Psychiatry.* 2012;20(1):45–55. 10.3109/10673229.2012.655211.
57. Al-Mutawtah M, Campbell E, Kubis HP, Erjavec M. Women's experiences of social support during pregnancy: a qualitative systematic review. *BMC Pregnancy Childbirth.* 2023;23(1):782. 10.1186/s12884-023-06089-0.
58. Mwakawanga DL, Mwilike B, Kaneko M, Shimpuku Y. Local knowledge and derived practices of safety during pregnancy, childbirth and postpartum: a qualitative study among nurse-midwives in urban eastern Tanzania. *BMJ Open.* 2022;12(12):e068216. 10.1136/bmjopen-2022-068216.
59. Ahad AA, Sanchez-Gonzalez M, Junquera P. Understanding and addressing mental health stigma across cultures for improving psychiatric care: a narrative review. *Cureus.* 2023;15(5):e39549. 10.7759/cureus.39549.

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