

# Eclampsia or epilepsy? The intriguing experiences of pregnant women diagnosed with preeclampsia and eclampsia: A descriptive exploratory study

SAGE Open Medicine

Volume 12: 1–9

© The Author(s) 2024


Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/20503121241271768

journals.sagepub.com/home/smo



Dorothy Serwaa Boakye<sup>1</sup> , Vida Maame Kisiwaa Amoah<sup>2</sup>, Christian Amoah<sup>3,4</sup>,  
Agartha Aful Boateng<sup>1</sup>, Charles Owusu Aduomi-Botchwey<sup>1</sup>, Florence Bamfo<sup>4</sup>  
and Jennifer Boampong<sup>4</sup>

## Abstract

**Aim:** The purpose of this study was to explore the experiences of pregnant women who suffer the stressful effects of preeclampsia and eclampsia through pregnancy, delivery, and postpartum.

**Methods:** A descriptive exploratory approach was adopted to gather in-depth data from women diagnosed with preeclampsia and eclampsia during pregnancy from February to March 2022. Purposive sampling was used to enlist 12 participants from a Municipal Hospital in the Ahafo region of Ghana. Data were analyzed thematically following Braun and Clark approach.

**Results:** The study found that women had strong negative emotional reactions after being diagnosed with preeclampsia or eclampsia. They frequently felt guilty, angry, scared, in denial, or disbelief about their condition. Many women held mistaken beliefs about the diseases (they misconstrued eclampsia to be epilepsy) and isolated themselves, mainly because of false perceptions and stigma around their illness in the community. Participants expressed unfulfilled needs for informational and emotional support. The information they received about their condition was insufficient, contradictory, and confusing. Some women also felt pressured into having cesarean deliveries without enough discussion or say in the decision-making process.

**Conclusion:** These findings reveal important psychosocial impacts of preeclampsia/eclampsia and gaps in condition-specific education and empathetic, patient-centered communication. Improving provider knowledge and counseling skills along with community awareness may help address these unmet needs among Ghanaian women facing this threat to maternal health.

## Keywords

Eclampsia, emotional, experiences, informational needs, preeclampsia, pregnant women

Date received: 19 March 2024; accepted: 27 June 2024

## Introduction

Preeclampsia is a hypertensive, multisystem disorder of pregnancy that significantly contributes to maternal and fetal/neonatal morbidity and mortality.<sup>1,2</sup> The condition can appear from the 20th week of pregnancy to the first week after birth. The blood pressure of preeclampsia patients is 140/90 or higher in general or a repeated high BP measure after 4h; but even if the blood pressure of 140/90 is not reached, increased systolic pressure by 30 or diastolic pressure by 15, with proteinuria of 0.3 g or more in a 24-h urine sample is required adequately for the diagnosis of preeclampsia.<sup>3,4</sup> Other clinical manifestations of the condition include headaches, visual disturbances,<sup>5,6</sup> pulmonary edema,

oliguria, thrombocytopenia,<sup>7,8</sup> impaired liver function,<sup>9</sup> intrauterine growth restriction,<sup>10</sup> general swelling (edema),

<sup>1</sup>Department of Health Administration and Education, University of Education, Winneba, Winneba, Ghana

<sup>2</sup>Department of Nursing, College of Health Sciences, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

<sup>3</sup>Department of Behavioral Sciences, College of Health Sciences, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

<sup>4</sup>Komfo Anokye Teaching Hospital, Kumasi, Ghana

### Corresponding author:

Dorothy Serwaa Boakye, Department of Health Administration and Education, University of Education, Winneba, P.O. Box 25, South Campus, Winneba, Central +233, Ghana.

Email: dsboakye@uew.edu.gh



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons

Attribution-NonCommercial 4.0 License (<https://creativecommons.org/licenses/by-nc/4.0/>) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access pages (<https://us.sagepub.com/en-us/nam/open-access-at-sage>).

and placental abruption.<sup>5</sup> These manifestations collectively contribute to significant physical and physiological impact on both the mother and the baby.

Eclampsia is a complication of preeclampsia and is defined as the new onset of grand-mal seizure(s) and/or unexplained coma during pregnancy or postpartum in a woman with preeclampsia.<sup>11</sup> It causes different kinds of multiple-organ failure.<sup>12</sup> According to the existing literature, the disorder is responsible for 70,000 maternal deaths and 500,000 infant deaths globally per annum and delivery is the only mode of treatment for preeclampsia.<sup>13,14</sup> In developing regions, the case fatality rate from eclampsia can be as high as 15% for mothers and 22% for babies.<sup>15</sup>

In sub-Saharan Africa, eclampsia has been identified as one of the top three causes of maternal mortality.<sup>16</sup> A systematic review from 2015 to 2020 estimated that hypertensive disorders of pregnancy accounted for 27.2% of maternal deaths in East and Central Africa, 17.8% in Southern Africa, and 22.7% in West Africa.<sup>16</sup> In Ghana, it is estimated that 7.6% of pregnancies are affected by hypertensive disorders.<sup>17</sup> Reports from two major tertiary-level hospitals indicate that hypertensive disorders have become the primary cause of maternal mortality, surpassing hemorrhage.<sup>17,18</sup> Undoubtedly, the disease requires aggressive treatment aimed at stabilizing the mother and delivery of the baby to prevent maternal and/or neonatal morbidity.<sup>19,20</sup>

In addition to adverse health consequences of preeclampsia and eclampsia, it is known for stressing mothers emotionally, physically, socially, and economically because of the trauma, pain, financial resource, and support these pregnant women and their infants, who are often born preterm require to survive. The majority of research conducted in Ghana in relation to preeclampsia and eclampsia have focused on knowledge and the clinical aspects such as etiology, incidence, prevalence, medical case studies, recurrence, maternal, and neonatal outcomes and management/treatment of the illness.<sup>21–23</sup> However, none to our knowledge has addressed issues related to the needs/experiences of pregnant women diagnosed with preeclampsia and eclampsia. Moreover, empirical data on the experiences of pregnant women with PE/E is limited in sub-Saharan Africa. A recently published scoping review on the experiences of women with hypertensive disorders of pregnancy by Sakurai et al.<sup>24</sup> provided shreds of evidence to suggest that women with such pregnancy-related conditions are burdened psychologically, physically, socially, and financially. None of the included studies were from West, North, and South Africa though the inclusion criteria made provision for articles describing the experiences of women with PE/E in all countries. Only an article from Tanzania<sup>25</sup> was featured. Information on and an understanding of the experiences of these women is needed to devise an appropriate support system for pregnant mothers with similar challenges. Furthermore, as suggested by Sakurai et al.,<sup>24</sup> the mothers' experiences of PE/E may provide insights or reflect the care and interventions administered and the

gaps in the healthcare system. The objective of the study was to explore the emotional experiences and informational needs of pregnant women who suffer the stressful effects of preeclampsia and eclampsia.

## Materials and methods

### Study design and setting

The study followed a qualitative research approach that employed a descriptive exploratory study to gain in-depth and rich data for better insight into the personal experiences of pregnant women with a history of preeclampsia and eclampsia. The research was conducted at a Municipal Hospital in the Ashanti Region of Ghana. The hospital is the largest health facility within the municipality with the largest antenatal and maternal health care services. It serves as the referral center for the subdistricts in the Ahafo Ano North Municipality and is accessed by people from different socioeconomic backgrounds. The hospital is an accredited center for providing maternal and other health care services for the general public.

### Study participants and sampling

The study population constituted all pregnant women with a history of preeclampsia and eclampsia who went through labor either through a spontaneous vaginal delivery or a caesarean section. Criteria for inclusion into the study were pregnant women within gestational age 24–40 weeks, have a medical history or record of preeclampsia or eclampsia, mothers who lost their babies to preeclampsia and/or eclampsia within 0–1 year and those who gave informed consent. Limiting inclusion to women with a documented history of PE or EC helped maintain homogeneity within the study sample. Exclusion criteria were the inability to read, understand, or write the Twi or English language, and those who were seriously ill as at the time of data collection to maintain data reliability and ensure participant comprehension and engagement. Participants were purposively selected for inclusion into the study. The obstetrics and medical records of the pregnant women plus the attendance register at the Maternal and Child Health Clinic assisted in our selection of this specialized population. From the pool of specialized samples selected, only those who agreed to share their experiences with us and satisfied the inclusion criteria were contacted and arranged for interviews. Data saturation determined the sample size. Participants were recruited and interviewed in a consecutive and purposive manner until the research team collectively determined that the concepts had been sufficiently explored. At this point, a total of 12 participants had been interviewed.

### Data collection

A semistructured interview was conducted with the pregnant women who met the inclusion criteria and voluntarily consented to participate in the study. To ensure that all relevant

topics were addressed in this research, a semistructured interview guide was developed from a review of the related literature to ensure that unexpected change in conversation during the interview do not move away from the topic and even if it happens, the conversation is brought back to focus. The questions were peer-reviewed by two independent researchers with expertise in the phenomenon under study and piloted with two participants. The transcripts from the two interviews were reviewed and analyzed for modifications which included the addition of probing questions such as *What specific emotions did you experience? how was this emotion expressed and to whom was this specific emotion directed to?* and prompts to seek clarification on jargons and terms not clearly understood (e.g., How do you mean?). The interviews were one-on-one and took place over 1 month (from February to March 2022). The location of the interview was determined by the interviewee and took place mainly in their homes and the hospital premises. Privacy was ensured and each interview session varied from 45–60 minutes. A trusting relationship was established between the participants and interviewer through continuous explanation of the purpose, nature, and reason for the study to the participants before the actual interview. The interviews were tape-recorded with permission from the participants and field notes were taken alongside. The interviews were facilitated by the first author who has backgrounds in maternal health and qualitative research methodologies. The first author is a nurse and a lecturer, and currently pursuing a PhD in nursing but have never worked at the selected health facility nor has she come into contact with any of the participants until this study and therefore may be considered as an “outsider.”<sup>26</sup>

### Data analysis

All interviews conducted in Twi were transcribed verbatim and translated into English by the first author who is a Twi speaker and a native of the Ashanti Kingdom. A Twi language instructor from the Department of African Language, University of Education verified the translated transcript for accuracy. Braun and Clark<sup>27</sup> approach to thematic analysis of qualitative data was adopted. The transcripts were read several times, key and significant statements were noted and extracted, and meanings were formulated for the significant statements and coded into categories by DSB and VMKA. A coding framework was developed and applied to all transcripts. Similar phrases were then grouped to reflect a unique structure of a cluster of themes. The grouped clusters of themes that reflected significant concepts were merged to form a unique theme. The meaning of the entire emergent themes was studied and then integrated into comprehensive descriptions of the experiences of pregnant women with PE/E. Illustrative quotations were identified and selected to help substantiate the themes and also brings the reader closer to the direct understanding of the participants’ viewpoint. All authors reviewed

the coded data extracts that make up the themes, subthemes, and illustrative quotes and checked if it reflected accurately the meanings depicted by the data set. Further validation of the data was done by returning the themes, subthemes, author interpretation of the data and quotations to all the participants to ask if it resonates with their experiences. Finally, the authors met to agree on the findings and the report. Tong et al.<sup>28</sup> recommendation on the consolidated criteria for reporting qualitative research checklist was followed.

### Rigor and reflexivity

Several strategies and techniques as enshrined in Lincoln and Guba<sup>29</sup> were employed. One approach was to provide thick, detailed descriptions of participants’ experiences, incorporating direct quotes to preserve their voices and offer rich insights into their perspectives. Additionally, the researchers carefully explained their sampling methods, ensuring diversity among the women interviewed in terms of factors such as age, parity, and the severity of the disease.

Member checking was another important aspect of establishing rigor, involving the validation of findings by presenting them back to participants for feedback and confirmation. Furthermore, to enhance reliability and agreement on emerging themes, two researchers independently coded the data. Maintaining an audit trail was crucial for documenting methodological decisions and the data analysis process, ensuring transparency and accountability. This involved keeping detailed records of the research process, including data collection methods, analytical techniques, and any revisions made along the way. Reflexivity was achieved by explicitly addressing the researchers’ backgrounds, fields of expertise, and relationship to the research topic. The research team was cross-disciplinary involving practitioners, educationists, and behavioral scientists who were both fluent in the local language and English allowing for diverse and objective analysis and conceptual and thematic interpretations.

### Ethics

Ethical approval was granted by the Kwame Nkrumah University of Science and Technology research and ethics committee (CHRPE/AP/577/21) and administrative approval was granted by the health facility. Participation in the study was voluntary. Participants were provided with written informed and verbal consent after providing them with information/explanation of the entire research process. They were further assured of privacy, anonymity, and confidentiality. No third parties had access to the tapes or transcripts. Due to the sensitive nature of the topic, each participant received a copy of the consent form with the contact numbers of a psychologist. None of the participants took up the offer for additional counselling and none withdrew after being enrolled.

**Table 1.** Characteristics of participants with preeclampsia and eclampsia in the study.

Participant	Age (Years)	Marital status	Level of education	Occupation	Mode of delivery	Diagnosis	Parity
1	36	Married	Basic	Self-employed	Caesarian section	Eclampsia	Multiparous
2	28	Married	Secondary	Self-employed	Caesarian section	Mild preeclampsia	Multiparous
3	30	Married	Basic	Self-employed	Caesarian section	Severe preeclampsia	Nulliparip
4	26	Single	Basic	Self-employed	Caesarian section	Mild preeclampsia	Multiparous
5	38	Married	Basic	Self-employed	Caesarian section	Eclampsia	Multiparous
6	32	Married	Tertiary	Teacher	Caesarian section	Mild preeclampsia	Multiparous
7	34	Married	Basic	Unemployed	Caesarian section	Severe preeclampsia	Multiparous
8	33	Married	Secondary	Self-employed	Caesarian section	Severe preeclampsia	Multiparous
9	30	Married	Secondary	Self-employed	Caesarian section	Mild preeclampsia	Multiparous
10	32	Married	Tertiary	Teacher	Caesaria section	Mild preeclampsia	Multiparous
11	27	Cohabi Ting	Secondary	Self-employed	Spontaneous vaginal delivery	Mild preeclampsia	Multiparous
12	35	Married	Basic	Self-employed	Caesarian section	Severe preeclampsia	Multiparous

## Results

### *Characteristics of participants with preeclampsia and eclampsia in the study*

Six of the participants had basic education, 4 had secondary education, and 2 had tertiary education. Ten were between the ages of 26 and 35. Nine were involved in self-employed. Eleven delivered by caesarean section (CS). Two had eclampsia, 4 severe preeclampsia, and 6 had mild preeclampsia. Eleven were multiparous with number of children between 1 and 4 (Table 1).

### *Main findings*

The analysis of the data set led to the emergence of two themes and nine subthemes (see Figure 1).

## **Theme I: Emotional experiences of participants**

All the participants expressed some form of emotions during the study. However, their emotions varied. Six subthemes emerged from this theme.

### *Subtheme a: Anger*

Some of the participants expressed immense anger and frustration and vent their anger on the health personnel. They felt the midwives were not being truthful with them concerning their medical condition and their need for admission, extra care and medications. Others did not express anger explicitly but admitted they were angry at the health workers.

A participant expressed her anger as follows:

In fact, I couldn't agree with them because I walked to the hospital myself and now they are telling me I'm sick. I really argued with them because I knew I was not sick. When they

refused to side with me, I got angry and was almost leaving the hospital but one midwife came and calmed me down. (P12)

Another participant added:

I did not express anger explicitly, but I was angry. I shouldn't have gotten pregnant at all. (P10).

### *Subtheme b: Guilt*

The participants perceive that they initiated the disease process by not taking their antenatal care seriously and resorting to traditional/herbal remedies. Some participants clarified that they disregarded the health education provided by midwives and neglected appointments because they perceived it as an attempt to instill fear in them.

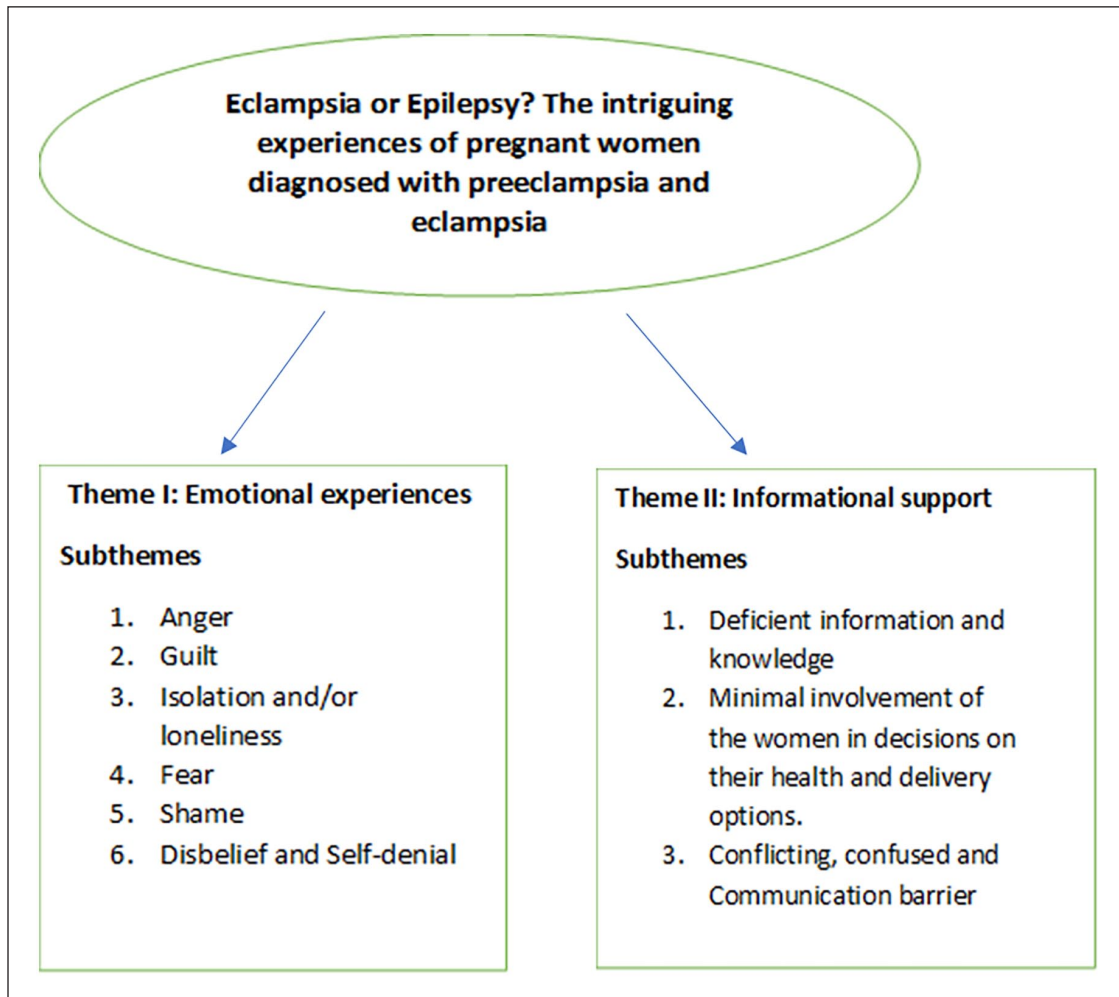
A participant expressed her guilt as follows:

I am responsible for my condition. The midwife told me my blood pressure is rising so I should come to the hospital anytime I experienced a slight headache. I thought the midwife was trying to put fear in me so I wouldn't miss the antenatal clinic. I refused to heed her advice. If I had died, it would have been my own doing. (P3).

The participants acknowledged receiving advice from a midwife about monitoring their rising blood pressure and seeking medical attention if they experience symptoms like a slight headache. However, they admit to dismissing this advice, attributing it to the midwife's attempt to instill fear in order to ensure attendance at antenatal appointments.

### *Subtheme c: Isolation and/or loneliness*

Because of the misconception, and stigma associated with the condition, the majority of participants preferred not to be seen or visited by their community members, close relatives, or friends.



**Figure 1.** Diagrammatic representation of the themes and subthemes.

I told the nurses I didn't want any visitors at all. I preferred to be alone. In my neighborhood people think my condition is like epilepsy. Before you know it, they have tagged you with epilepsy. (P9).

The participant's reluctance to have visitors stems from a fear of being stigmatized or misunderstood by their community. They expressed concern that their condition, likely preeclampsia or eclampsia, is misconstrued as epilepsy by people in their neighborhood.

#### **Subtheme d: Fear**

All the participants expressed some form of fear. Eight of the participants confessed they were extremely afraid of losing their babies and their lives. The participants expressed a profound sense of foreboding, acknowledging their fear and uncertainty about the outcome of their pregnancy, specifically the loss of their baby. However, four participants even though were also afraid, were of the firm belief that they can

deliver their babies safely because of what the doctor at the Antenatal Clinic (ANC) and the midwives had told them.

A participant expressed her fear as

I knew I was going to lose my baby, I was really scared, and it was the midwives who gave me hope. I pray no pregnant woman is diagnosed of this. The health staff encouraged me but it was still not easy for me. (P3).

The support and reassurance offered by the healthcare staff are seen as valuable sources of comfort and strength to participants.

#### **Subtheme e: Shame**

Those who unfortunately experienced rhythmic muscular contractions or seizures in the home before being conveyed to the hospital narrated the experience as shameful because people within their neighborhood misconstrued eclampsia to be epilepsy. In fact, as further explained by participants, all

convulsive symptoms/signs were misdiagnosed by the members of their community as epilepsy and the affected individuals are usually stigmatized.

One participant had this to say:

I suddenly fell off the chair and didn't notice what was happening. A neighbor who came to my aid told me she met me on the floor shaking and so all the other neighbors thought I had epilepsy. Soon they will start pointing fingers at me. . . how do I wipe off this shame? (P 5).

### *Subtheme f: Disbelief and self-denial*

Almost all the participants were in disbelief. They simply couldn't accept such a diagnosis. Some felt they didn't deserve such a diagnosis and even recounted breaking down into tears. Others simply refused to accept the diagnosis because they thought, they had been diagnosed with a condition similar to epilepsy.

One echoed:

I couldn't believe what the midwife was telling me. I constantly assured myself, this can't be true, this must be a joke! (P8).

This response from the participant suggests a psychological defense mechanism aimed at coping with distressing or unexpected news. It portrays the initial shock and denial experienced by the participants upon receiving unexpected information, highlighting the emotional complexity of processing difficult news.

## **Theme II: Informational support**

### *Subtheme a: Deficient information and knowledge*

Some of the participants confirmed to have heard of eclampsia before, unfortunately, their description and explanation of what preeclampsia and eclampsia showed they had inadequate knowledge on the condition and some also had a misconception. An understanding from this study showed participants received little or no education on preeclampsia or eclampsia. Some blamed their lack of understanding of the medical condition on the midwives at the ANC.

A participant shared her opinion as

It's not that they don't educate us but it's mostly centered on the diet, and preparation toward delivery. They hardly give us information on what preeclampsia and eclampsia are even when you are diagnosed early. (P7)

Almost all the participants had an ANC booklet but could neither read nor comprehend the information in the booklet.

Even though, they gave us an ANC booklet containing some information I could not understand the information in the booklet. (P11)

Some of the participants mentioned that their sources of information on PE/E were the antenatal clinic, community, and family members who had ever suffered from the condition or were witnesses of others' condition. It is obvious the misconceptions they held toward the condition were from inadequate or wrong information and erroneous beliefs passed on to them in their communities.

### *Subtheme b: Minimal involvement of the women in decisions pertaining to their health and delivery options*

According to the majority of the participants, doctors didn't ask for their thoughts neither did they communicate in detail what their condition was and the reason for the caesarean section. A few of the women expressed that they wanted to be involved in the decisions concerning their care, therapeutic regimen and mode of delivery but were never consulted. Though the CS could have been the best delivery option for them, their noninvolvement in decisions made them felt the CS was imposed on them:

I was sitting down while they deliberated on my issue, but they didn't ask me anything. I knew they meant well for me so it didn't bother me though it would have been better if they had asked for my opinion. I didn't know what was going on except when the midwife said you will have C.S. (P9)

### *Subtheme c: Conflicting, confused and communication barrier*

The lack of words to explain preeclampsia and eclampsia in the Twi language (a local Ghanaian language), coupled with participants' low levels of education limited their understanding and constituted a barrier to communication. From participants narratives, it is obvious the doctors used medical language (English) while speaking Twi to them. The use of both the local dialect and the English made a lot rather confused:

Hmm one Doctor managed to explain things to me but I didn't understand one thing he said. He didn't come to my level. Yes, he spoke Twi (A local Ghanaian dialect) but he was still using big English (medical terms). I'm sure he realized how confused I was after talking to me because he smiled and tapped me on the shoulder. (P8)

Others too were of the view that the information they had received from the doctors and the nurses were conflicting. For instance, some explained, the nurses had told them their condition was mild so they could deliver through spontaneous vagina delivery but were later informed by the doctor to get ready for a caesarean section:

I knew I would deliver myself (meaning delivery through the vagina) because the nurse said my condition didn't require

surgery, only for the doctor to come back and say, get ready for the theatre. (P2)

This quotation highlights the confusion and frustration experienced by the participants due to conflicting information from healthcare providers regarding their delivery method.

## Discussion

This qualitative study delved into the experiences of Ghanaian women diagnosed with preeclampsia and eclampsia. The participants reported a wide range of emotions, including guilt, anger, fear, denial, and disbelief, upon receiving their diagnosis. Anger, in particular, was either openly expressed or internally repressed, and it was directed toward themselves or displaced onto healthcare personnel through both body language and speech. This finding aligns with existing literature, which identifies anger as a common emotional response associated with high-risk pregnancies. In this study, feelings of guilt were associated with self-blame, as participants believed their current condition may have resulted from their refusal or inability to attend antenatal care appointments regularly, adhere to prescribed medications, or honor scheduled medical appointments. This finding highlights the complex interplay between personal agency, trust in healthcare providers, and the influence of perceived motivations behind medical advice. It also underscores the importance of effective communication between healthcare providers and patients, as well as the potential consequences of disregarding medical recommendations. Contrarily, the feelings of guilt in the Kidner and Flanders-Stepans<sup>30</sup> study were blamed on the loss of the baby or not having the physical strength to care for the baby. Interventions such as early client contact, follow-up calls, home visits to improve scheduled ANC appointments, treatment regimen, and instruction on lifestyle modifications is crucial to reduce pregnancy risk in PE/E.<sup>31–33</sup> Findings from this study showed that hospitalization, the fear of stigma and/or gossip evoked a sense of and a need for isolation or loneliness in participants as against the findings of Leichtentritt et al.<sup>34</sup> which reported isolation as a result of being admitted to intensive care unit (ICU), problems in communication, or being on a ventilator. By expressing their preference to be alone and avoiding visitors, the participants seek to protect themselves from potential judgment or labeling based on the community's misunderstanding of their medical condition. This statement highlights the participant's awareness of societal attitudes and their efforts to maintain a sense of autonomy and dignity in managing their health. It also underscores the importance of addressing misconceptions and stigma surrounding health conditions, particularly in communities where they may contribute to social isolation and discrimination to assist the successful integration of the mothers back into the communities.

Fear, disbelief, and self-denial were mainly due to the diagnosis, Caesarean section, and loss of life. Conversely, in

another study,<sup>35</sup> fear was due to the loss of a baby or life, and self-denial was linked to the diagnosis of preeclampsia. This finding reflects a deeply emotional and fearful experience of pregnancy complications, related to preeclampsia or eclampsia. The lack of understanding of PE/E as an entirely different medical condition from epilepsy also accounted for their extremely negative reaction to the diagnosis and a majority of their emotional experiences. Health workers need to be aware of the distressing effects of PE/E on the psychological well-being of the mothers and devise interventional approaches such as psychotherapy, emotional support, spousal engagement, and early bonding between the mothers and their babies to help limit the impact on their mental health.

Our study highlighted informational support as the unmet need of participants in this study. Almost all the participants lacked sufficient knowledge regarding PE/E and felt that the midwives at the antenatal clinic did not help their understanding of the condition. A similar finding is reported by Savage and Hoho.<sup>36</sup> For those who received any information, they stated that the information relayed to them was scanty, confusing, and conflicting. Others complained their opinions were not sought concerning the decision to go for CS and felt treatment and the need for CS were imposed on them. Similar to Brăila et al.<sup>37</sup> and Fleury et al.,<sup>38</sup> our study participants had insufficient knowledge and/or misconception about the cause and the condition itself. Due to this lack of adequate information, some misconstrued eclampsia to be epilepsy. Eclampsia, however, is a complication of pregnancy, while epilepsy is a preexisting pathology of pregnancy.<sup>39</sup> This finding underscores the importance of clear and consistent communication between healthcare professionals and patients, as well as the significant impact such communication breakdowns can have on patients' perceptions and experiences during childbirth. The findings of our study indicate a need for health workers to gather resources and implement educational interventions to equip these pregnant women with the right knowledge as the mothers are likely to seek information from unauthorized sources which will further reinforce their misconception. Raising awareness of PE/E through public health education campaigns will go a long way to undo the stigmatization of women affected by the condition in the communities.

## Limitation and strength

The noninclusion of the health workers and recruitment from a single facility may be considered a limitation as it limited the intervariability of responses and experiences. Interviews were conducted only at one-time point and may limit understanding of how women's perspectives may evolve over the course of diagnosis, treatment, and recovery. Data collected only through interviews means relying on self-report which may be subject to social desirability bias.

Nonetheless, the study had some strength, it is the first qualitative study reporting on the experiences of mothers

diagnosed with PE/E in Ghana. The researchers ensured credibility, confirmability, and member checking and provided a detailed description of the methodological process which helps readers to make judgments about the transferability of the findings to their own setting.

### *Implication for policy and midwifery practice in Ghana*

The findings have revealed important lapses in informational and other support systems for expectant mothers with preeclampsia and eclampsia. Moving forward, our research suggests that antenatal care services should prioritize offering informational support to help mothers comprehend, correct misconceptions, and alleviate any fear and stigma associated with the condition.

The Ghana Government together with the Ministry of Health could as well employ strategies such as Parentline Victoria, Maternal and child health services, and Early parenting center<sup>40</sup> adopted by other developed countries to assist mothers with high-risk pregnancies after labor. Such initiative has significant obstetrics, the emotional, social, and financial impact on the mother and their families especially because the experience has deterred some of the participants from planning future pregnancies. Furthermore, facilitating interactions between affected women and those who have similarly endured preeclampsia and eclampsia could offer therapeutic and supportive benefits. Our research team recommends adopting this approach in hospitals responsible for caring for women with preeclampsia and eclampsia.

### **Conclusion**

Participants were emotionally strained due to the distressing effects of preeclampsia and eclampsia. They had misconceptions about the disease and were afraid of being stigmatized. The women's experience of internalized shame and stigma may hinder their successful reintegration into their communities after discharge and may adversely affect their mental health. Having the women speak to persons who have similarly endured PE/E could be therapeutic and supportive. Our research team recommends this approach to hospitals in charge of women with PE/E and suggests community education and sensitization through mass media and durbars to correct any misconception and stigma surrounding the disease. Informational, and emotional support as a holistic care will greatly benefit the women.

### **Acknowledgements**

We extend our sincere gratitude to all the participants who shared their personal experiences with the researchers and to the health facility for permitting us to use the facility.

### **Author contributions**

DSB, VMKA, CA, AAB, COAB, FB, and JB made a substantial contribution to the concept or design of the work; or acquisition,

analysis, or interpretation of data, DSB and VMKA drafted the original article, CA, AAB, COAB, FB, and JB revised it critically for important intellectual content. All authors approved the version to be published.

### **Availability of data and materials**

All data sets are available upon reasonable request from the corresponding author and consent of the participants.

### **Declaration of conflicting interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### **Funding**

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

### **Ethics approval and consent to participate**

All methods were carried out following relevant guidelines and regulations enshrined in the Declaration of Helsinki. This study was approved by the Kwame Nkrumah University of Science and Technology Research and Ethics Committee (CHRPE/AP/577/21). Written and verbal informed consent was obtained from all subjects.

### **Consent for publication**

Not applicable.

### **ORCID iD**

Dorothy Serwaa Boakye  <https://orcid.org/0000-0002-6153-1273>

### **Supplemental material**

Supplemental material for this article is available online.

### **References**

1. Hypertension in pregnancy. Report of the American College of Obstetricians and Gynecologists. Task force on hypertension in pregnancy. *Obstet Gynecol* 2013; 122(5): 1122–1131.
2. National Institute of Health. *Implementing recommendations for dietary salt reduction where are we? Where are we going? How do we get there? A summary of a National Heart, Lung, and Blood Institute workshop*. NIH publication, 1996, No. 55-728N.
3. Overton E, Tobes D and Lee A. Preeclampsia diagnosis and management. *Best Pract Res Clin Anaesthesiol* 2022; 36(1): 107–121.
4. von Dadelsen P, Bone JN, Sandhu A, et al. Choosing blood pressure thresholds to inform pregnancy care in the community: an analysis of cluster trials. *BJOG* 2023; 130(10): 1275–1285.
5. ACOG. Preeclampsia and high blood pressure during pregnancy. American College of Obstetricians and Gynecologists, <https://www.acog.org/womens-health/faqs/preeclampsia-and-high-blood-pressure-during-pregnancy> (2022, accessed 24 October 2023).



6. Lo JO, Mission JF and Caughey AB. Hypertensive disease of pregnancy and maternal mortality. *Curr Opin Obstetr Gynecol* 2013; 25(2): 124–132.
7. Villar J, Say L, Shennan A, et al. Methodological and technical issues related to the diagnosis, screening, prevention, and treatment of pre-eclampsia and eclampsia. *Int J Gynecol Obstetr* 2004; 85: S28–S41.
8. Steegers EA, von Dadelszen P, Duvekot JJ, et al. Preeclampsia. *Lancet (London, England)* 2010; 376(9741): 631–644.
9. Payne B, Magee LA and von Dadelszen P. Assessment, surveillance and prognosis in preeclampsia. *Best Pract Res Clin Obstetr Gynaecol* 2011; 25(4): 449–462.
10. Qu H and Khalil RA. Vascular mechanisms and molecular targets in hypertensive pregnancy and preeclampsia. *Am J Physiol Heart Circ Physiol* 2020; 319(3): H661–H681.
11. Jayanna K, Mony P, BM R, et al. Assessment of facility readiness and provider preparedness for dealing with postpartum hemorrhage and pre-eclampsia/eclampsia in public and private health facilities of northern Karnataka, India: a cross-sectional study. *BMC Pregnancy Childbirth* 2014; 14: 304.
12. Bhojwani K, Agrawal A and Agrawal AK. Study of histopathological changes in the placenta in preeclampsia. *Cureus* 2022; 14(10): e30347.
13. Malik A, Jee B and Gupta SK. Preeclampsia: disease biology and burden, its management strategies with reference to India. *Pregnancy Hypert* 2019; 15: 23–31.
14. Magee LA, Brown MA, Hall DR, et al. The 2021 International Society for the Study of Hypertension in Pregnancy classification, diagnosis and management recommendations for international practice. *Pregnancy Hypertens* 2022; 27: 148–69.
15. WHO. *WHO recommendations for prevention and treatment of pre-eclampsia and eclampsia*. Geneva: WHO, 2023. <https://www.who.int/publications/i/item/9789241548335>
16. Musarandega R, Nyakura M, Machezano R, et al. Causes of maternal mortality in Sub-Saharan Africa: a systematic review of studies published from 2015 to 2020. *J Global Health* 2021; 11: 04048.
17. Adu-Bonsaffoh K, Oppong SA, Binlinla G, et al. Maternal deaths attributable to hypertensive disorders in a tertiary hospital in Ghana. *Int J Gynecol Obstetr* 2013; 123(2): 110–113.
18. Acquah-Arhin R and Kwawukuwe E. Trends in eclampsia at Korle Bu Teaching Hospital, Accra Ghana. *Niger J Clin Pract* 2003; 6(1): 1–4.
19. Tranquilli AL, Landi B, Giannubilo SR, et al. Preeclampsia: no longer solely a pregnancy disease. *Pregnancy Hypertens* 2012; 2(4): 350–357.
20. Barnett R and Kendrick B. HELLP syndrome—a case study. *N Z J Med Lab Sci* 2010; 64: 14.
21. Mensah K, Nkansah C, Appiah SK, et al. Predictive values of NLR, PLR and MPV for pre-eclampsia in pregnancy: a retrospective cross-sectional study in a teaching hospital, Ghana. *Int J Res Rep Hematol* 2022; 5(2): 264–273.
22. Beyuo TK, Lawrence ER, Kobernik EK, et al. Clinical presentation and predictors of eclampsia among women with hypertensive disorders of pregnancy in Ghana. *Pregnancy Hypertens* 2022; 30: 171–176.
23. Atluri N, Beyuo TK, Oppong SA, et al. Challenges to diagnosing and managing preeclampsia in a low-resource setting: a qualitative study of obstetric provider perspectives from Ghana. *PLoS Global Public Health* 2023; 3(5): e0001790.
24. Sakurai S, Shishido E and Horiuchi S. Experiences of women with hypertensive disorders of pregnancy: a scoping review. *BMC Pregnancy Childbirth* 2022; 22: 146.
25. Mukwenda AM, Mbekenga CK, Pembe AB, et al. Women's experiences of having had, and recovered from, eclampsia at a tertiary hospital in Tanzania. *Women Birth* 2017; 30(2): 114–120.
26. Kerstetter K. Insider, outsider, or somewhere in between: the impact of researchers' identities on the community-based research process. *J Rural Soc Sci* 2021; 27(2): 99–117.
27. Braun V and Clarke V. Conceptual and design thinking for thematic analysis. *Qual Psychol* 2022; 9(1): 3.
28. Tong A, Sainsbury P and Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care* 2007; 19(6): 349–357.
29. Lincoln YS and Guba EG. But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *New Direct Prog Eval* 1986; 1986(30): 73–84.
30. Kidner MC and Flanders-Stepans MB. A model for HELLP syndrome: the maternal experience. *J Obstetr Gynecol Neonatal Nurs* 2004; 33(1): 44–33.
31. East C, Conway K, Pollock W, et al. Women's experiences of preeclampsia: Australian action on preeclampsia survey of women and their confidants. *J Pregn* 2011; 2011: 375653.
32. Wotherspoon AC, Young IS, McCance DR, et al. Exploring knowledge of pre-eclampsia and views on a potential screening test in women with type 1 diabetes. *Midwifery* 2017; 50: 99–105.
33. Sripad P, Kirk K, Adoyi G, et al. Exploring survivor perceptions of pre-eclampsia and eclampsia in Nigeria through the health belief model. *BMC Pregnancy Childbirth* 2019; 19: 431.
34. Leichtentritt RD, Blumenthal N, Elyassi A, et al. High-risk pregnancy and hospitalization: the women's voices. *Health Soc Work* 2005; 30(1): 39–47.
35. McCoyd JL, Curran L and Munch S. They say, "If you don't relax. . . you're going to make something bad happen": women's emotion management during medically high-risk pregnancy. *Psychol Women Quart* 2020; 44(1): 117–129.
36. Savage AR and Hoho L. Knowledge of pre-eclampsia in women living in Makole Ward, Dodoma, Tanzania. *Afr Health Sci* 2016; 16(2): 412–419.
37. Brăila AD, Fortofoiu MC, Velea R, et al. Eclampsia and epilepsy. Differential diagnosis. Associated diagnosis. In: *13th conference of the Romanian-German society of obstetrics and gynecology*, Timisoara, Romania, 2017.
38. Fleury C, Parpinelly M and Makuch MY. Development of the mother-child relationship following pre-eclampsia. *J Reprod Infant Psychol* 2010; 28(3): 297–306.
39. Roberts LM, Davis GK and Homer CS. Pregnancy with gestational hypertension or preeclampsia: a qualitative exploration of women's experiences. *Midwifery* 2017; 46: 17–23.
40. Pregnancy support—fathers partners and carers. Better Health. <http://betterhealth.vic.gov.au/health/serviceandsupport/Pregnancy/support—fathers/partners/and/carers/Better/Health/Channel/> (2021, accessed 2 September 2023).