

Research Article

Delivery Experience of Women with Epilepsy in Agro-Pastoral Community, South West Ethiopia

Rahel Yaekob^{1*} and Tefera Belachew²

¹Department of Population and Family Health, Faculty of Public Health, Institute of Health Jimma University, Jimma, Ethiopia

²Department of Human Nutrition, Faculty of Public Health, Institute of Health, Jimma University, Jimma, Ethiopia

Abstract

Introduction: Every year, an estimated 2.4 million people are newly diagnosed with epilepsy due to multiple factors. Mainly, poor obstetric care, which leads to higher prenatal brain injury, is thought to be the main cause of epilepsy. The majority of epilepsy sufferers are women in their reproductive age group and the disorder affects approximately 0.5% to 1.0% of women of childbearing age. Thus, this study aimed to assess the delivery experiences of women with epilepsy in the Agro-pastoral community, in southwest Ethiopia.

Methods: The phenomenological approach was employed to gather data on Women with Epilepsy (WWE) on their delivery experience. The study population was women with epilepsy in the reproductive age group (15- 49 years old) in the selected areas. Data were collected from participants through in-depth individual interviews with 15 WWE who experienced childbirth. Verbatim transcripts were analyzed to uncover the meaning of the experiences of the participants.

Results: The pregnancy and childbirth experiences of WWE were clustered into five theme clusters. These included childbirth experiences, family and Institutional care and support, epilepsy and maternal death, pregnancy and seizure, and breastfeeding. Numbers were used to identify participants during the interview instead of names for privacy purposes.

Conclusion: Women with epilepsy need special attention before, during, and after pregnancy to improve maternal and child health. Preconception counseling and education by health professionals are mandatory to improve the awareness of WWE.

Keywords: Delivery; Epilepsy; Preconception care; Pregnancy; Breastfeeding

Introduction

Epilepsy is a chronic brain disorder that is characterized by recurrent seizures [1]. Epilepsy affects people of all ages and often has no identifiable cause in about half of the people with the condition. The illness may be due to various factors, including genetic influence, head trauma, brain conditions, infectious diseases, prenatal injury, and developmental disorders [2,3]. The majority of women suffering from epilepsy are in the reproductive age group [4], and it affects approximately 0.5% to 1.0% of women of childbearing age and it is the most common serious neurological condition in pregnancy [5]. Seizures and antiepileptic drugs influence all aspects of women's experiences of having a child: from preconception, pregnancy, and childbirth, to the postnatal stage and infant care [6,7].

Epilepsy is prevalent all over the world, more than 50 million people worldwide have epilepsy, but more in Low and Middle-Income Countries (LMICs). Nearly 80% of people living with epilepsy are found in LMICs. Every year, an estimated 2.4 million people are newly diagnosed with epilepsy. Two-thirds of newly diagnosed cases

of epilepsy are also found in LMICs [1]. In Sub-Saharan Africa (SSA), the estimated median prevalence of epilepsy is 14.2 per 1000 total population [8]. Mainly the burden of epilepsy was observed among women of reproductive age [9], which is important to achieve optimal reproductive health outcomes by controlling seizures in women with epilepsy [10].

According to a study conducted in Ethiopia epilepsy affects an estimated 5.2 per 1000 of the population, among these 4.6 are females [11], but only 2% to 13% of people with epilepsy living in rural areas receive medical treatment [12]. The high prevalence of epilepsy in Ethiopia is mainly believed to be due to poor obstetric care with a consequent increased prenatal brain injury [3]. Many of the causes of epilepsy are preventable, the consequence of birth injuries often due to a difficult pregnancy or childbirth, can lead to epilepsy [8]. Preventing head injury, which is the most effective way to prevent post-traumatic epilepsy, and accessing antenatal and perinatal care, which can reduce new cases of epilepsy caused by complications at birth like lack of oxygen or trauma [1].

Effective preconception counseling and good medical care during pregnancy are essential for the treatment of pregnant women with epilepsy [13]. According to the 2015 MBRRACE-UK report, 86% of women with epilepsy who died of Sudden Unexpected Death in Epilepsy (SUDEP) had not received pre-pregnancy counseling [14]. A systematic review conducted in sub-Saharan Africa, revealed that none of the retrieved studies reported on pre-conceptual counseling for WWE in SSA [15].

The risk of death during pregnancy for women with epilepsy is almost ten times higher than that of the general population [16]. Generally, pregnancy does not alter the frequency of seizures in

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***Corresponding author:** Rahel Yaekob, Department of Population and Family Health, Faculty of Public Health, Institute of Health Jimma University, Jimma, Ethiopia, Tel: +251911117838

WWE. Although percentages vary across studies, in approximately 60% of patients, seizure frequency is similar to that of the pre-pregnancy baseline, whereas 15% experience an increase in frequency and 15% experience a decrease [17]. In Sub-Saharan Africa, perinatal causes of epilepsy are between 2% and 65% of all cases of epilepsy; also, the consequence of birth injuries due to a difficult pregnancy or childbirth can lead to epilepsy [8]. The proportions of breastfeeding practice vary between and within countries [18]. In the US, the initiation rate is 83.2 %, with only 57.6 % breastfeeding at 6 months, and 35.9% breastfeeding at 12 months [19] and in Scandinavian countries, the breastfeeding initiation rates are around 90% and this indicates women with epilepsy have higher breastfeeding rates [20].

According to the Neurodevelopmental Effects of Antiepileptic Drug (NEAD) study group reports 42% of women with epilepsy were breastfeeding their babies for up to six months [21]. WWE is affected by multiple factors and studies have shown that WWE is affected by different psychological, sexual, and reproductive issues [6,7,22,23]. There are limitations of evidence regarding the delivery experience of WWE in southwestern Ethiopia. Thus, this study aimed to investigate the delivery experience of women with epilepsy aged 15-49 years in the agro-pastoral community, in southwest Ethiopia.

Objectives of the study

The main objective of this study was to investigate the delivery experience among women with epilepsy aged 15-49 years in the agro-pastoral community, in Southwest Ethiopia.

Materials and Methods

Study area and period

The study was conducted in Bench-Sheko and the Southwestern Omo zone of Southwest Ethiopia from July to October 2022. Bench-Sheko and South West Omo Zones are found in the Southwest Omo region. Southwest Omo region was a newly inaugurated region and parted from Southern Nation Nationalities and people's region. The bench-Sheko zone capital city, Mizan-Aman is located 561 km away from Addis Ababa in the Southwest direction. Bench-Sheko zone is divided into two town administration (Mizan-Aman and Ceeze), and six agrarian districts (Sheko, Semen-Bench, Debub-Bench, Shey-Bench, Gidi bench, and Guraferda districts). The total population of the Zone was 339,629 of whom 169,814 were women. Southwest Omo Zone capital city, Jemu is located 683 Km away from Addis Ababa in the southwest direction. Southwest omo zone is divided into two town administration (Jemu and Bachuma), and six pastoral/semi-pastoral districts (Surma, Meint Goldia, Meint Shesha, Wanech, Gesha, and Bero districts). The total population of the Zone was 285,826 of whom 144,329 were women. The two Zones have four hospitals from those two hospitals are newly established and not start working currently, 40 health centers, and 300 health posts. The estimated number of women within reproductive age groups is 181, 974 (Unpublished data from zonal health office surveying by the principal investigator).

Study design and study period

Qualitative research method was employed to examine social interaction within an individual, social and cultural setting and additionally explore the individual meanings assigned to those experiences. The phenomenological approach was employed to gather data from women with epilepsy toward delivery experience in Bench Sheko and Southwest Omo zone of Southwest Ethiopia from July 2022 to October 2022.

Source and study population

The source population was all women in the reproductive age group (15-49 years old) in selected areas. Whereas, the study population was women with epilepsy in the reproductive age group (15-49 years old) in the selected areas.

Inclusion and exclusion criteria

Women in the reproductive age group (15-49 years) who are permanent residents or who lived in the area for at least six months, WWE who have given birth to a live infant within 2 years of the study, on AEDs treatment for at least 6 months before conception, during pregnancy, and after childbirth, absence of any psychological disorders, ability to participate in an in-depth personal interview, and willingness to share one's own experience was used as inclusion criteria, whereas WWE who are unable to communicate due to health problem, severely ill and non-voluntaries was excluded from the study.

Sample size determination and Sampling technique

The sample size was kept until saturation of ideas was reached. A purposive sampling technique was employed to select women with epilepsy.

Data collection technique

Women with epilepsy aged from 15-45 years who fulfill the inclusion criteria were recruited from the study area. The face-to-face in-depth individual interview was employed as a method of data collection for this study. An open-ended semi-structured interview was employed. The interview was voice recorded with the permission of the participant. This will help us to capture the description as told, thereby ensuring the accuracy of the data collection and enabling the participants to engage with the interview rather than concentrating on note-taking with purposive sampling techniques.

Data analysis

The audio recordings were transcribed and the transcripts of the data were read and reread for clarity and familiarity. Data, relevant to the research question was identified, and participants' repetitive and vague expressions were omitted. The remaining data relevant to the study was analyzed by using ATLAS.ti software and organized into thematic categories and organized by descriptions of experience. Significant statements were identified and grouped into meaning units and themes. Similar codes and categories were identified within and between each participant and organized into themes. Recruitment for in-depth interviews ceased when no new themes emerged from the analysis process. The results were presented in thematic experiences and perceptions. Participant quotes were included to provide further illustration of the analysis.

Data quality assurance

Credibility, transferability, authenticity (educative, tactical, ontological, and catalytic) conformability, and dependability were addressed throughout the collection and analysis of data.

Dissemination of the findings

The study findings were disseminated to the concerned body through publication in reputable journals. The dissertation or document of the study was presented to the Jimma University Institute of Health Sciences.

Ethical issue

Ethical clearance was obtained from the Research and Ethical

Review Board of Jimma University, a postgraduate school to request a budget and get permission for this study. Official letters were written to concerned bodies. Informed consent was obtained from study participants.

Results

Eighteen women were invited to participate and 16 were accepted. One woman refused to participate due to illness. All of the participants were married. The mean age of the participants was 32 years with a Standard Deviation (SD) of 1.34 years. Eleven women are from the Me'énit community; the other two are from Bench; one is from Sheko and Kaffa respectively. The majority were illiterate and the rest were in grades 5, 9, and 12. (Table 1).

From the 15 semi-structured interviews, five (5) themes emerged. These included Childbirth experiences, family and Institutional care and support, epilepsy and maternal death, pregnancy and seizure, and breastfeeding. Numbers were used to identify participants during the interview instead of names for privacy purposes.

Theme one: childbirth experience

Preconception care: Preconception care is encouraged for women with epilepsy on the Anti-Epileptic Drug (AEDs) to assist them to prepare for pregnancy and modifying medication to adjust seizure control and reduce the risk of fetal malformation. In this study, almost all of the participants did not get preconception counseling but the majority of the participants were antenatal care follow up as some mothers narrated:

.... No, I didn't get any preconception counseling, but I have follow-up during pregnancy (participant 15, a 26-year-old, and mother of one).

Another one said:

.... No, I didn't get any preconception counseling but during pregnancy health professionals check our abdomen by laying on the bed (participant 9, a 25-year-old, and mother of three).

Another mother has no preconception counseling but she has adequate information during pregnancy and gave her story as:

... My doctor told me that follow-up during pregnancy is important for the health of the mother and her baby and also, they check the pregnancy by touching the abdomen and they give medication to refill blood (participant 5, a 25-year-old, and mother of four).

Place of childbirth: All fifteen women who participated in the

study believe that facility-based care is best for mother and child and also they indicated that they know the advantages of health facility-based delivery care and they obtained information about potential maternal and newborn complications through health education provided to them during ANC visits. But the majority of the participants had ANC follow-up and home birth due to different reasons as some mothers narrated:

The one woman who gave birth at home, clearly stated that she would have preferred to deliver at a health facility and it was an accident for her to deliver at home. She says..... It is difficult to go to the health facility because the labor was progressed and when I try to call, we have no telephone and no transportation to go there. And also the labor started at night so how can I go to the health facility? (Participant 6, a 36-year-old, mother of seven).

The other woman who gave birth at home, stated that she would have preferred to deliver at home: because as I know my mom gave birth in the home so I also deliver my child in my home by the aid of assistant (Participant 1, a 30-year-old, mother of one).

Women who sought care in health facilities in our sample confirmed that they did not have transportation to go to the health facility. Women's experiences indicated that ... because the labor started at night and there is no transportation to go to the health center (Participant 13, a 30-year-old, mother of three).

Other women stated that during childbirth caregiver or assistant is important to go to the health facility to help the women... at that time when the labor started, I have no one with me to go to the health center (Participant 9, 25-year-old, mother of three).

The majority of the women with epilepsy have normal childbirth history and healthy babies. A woman to have a home birth she needs to carefully consider the possibility of having a seizure during labor. If the women have a seizure during labor the newborn baby's oxygen supply may be reduced. Hypoxia due to a poor supply of blood to the fetus and head injury during labor and delivery is one of the causes of epilepsy. The study participant expresses their feeling as:

... I don't know the cause of the disease but the women have follow-up and she gave birth with good handling and the baby's head is not damaged during delivery may not be got the disease... poor handling and trauma of the baby's head during birth may cause.... follow up during pregnancy and childbirth in a safe way can minimize the disease occurrence ... (Participant 11, a 38-year-old, mother of two).

Table 1: Participants' demographic data.

Participant code	Age	Marital status	Ethnicity	Residence	Religion	Education	Occupation	Income
1	30	married	Me'énit	Rural	Orthodox	Illiterate	Farmer	Farming
2	35	married	Me'énit	Rural	Orthodox	Illiterate	Farmer	Farming
3	35	married	Me'énit	Rural	Orthodox	Illiterate	Farmer	Farming
4	40	married	Me'énit	Rural	Orthodox	Illiterate	Farmer	Farming
5	35	married	Me'énit	Rural	No religion	Illiterate	Farmer	Farming
6	25	married	Me'énit	Rural	Orthodox	Illiterate	Farmer	Farming
7	36	married	Me'énit	Rural	Orthodox	Illiterate	Farmer	Farming
8	25	married	Me'énit	Rural	Orthodox	Illiterate	Farmer	Farming
9	38	married	Me'énit	Rural	Orthodox	Illiterate	Farmer	Farming
10	25	married	Me'énit	Rural	Protestant	Illiterate	Farmer	Salary
11	38	married	Kaffa	Urban	Protestant	Grade 12	Housewife	Farming
12	32	married	Bench	Urban	Protestant	Grade 5	Housewife	Farming
13	29	married	Sheko	Urban	Protestant	Illiterate	Farmer	Farming
14	26	married	Bench	Urban	Protestant	Grade 9	Student	Farming
15	30	married	Me'énit	Rural	Protestant	Illiterate	Farmer	Farming

The other women said ... may be due to poor handling the baby may get the disease and the baby delivered in the hospital is relatively safe (Participant 12, a 31-year-old, mother of one).

Delivery position: The delivery position is important to prevent head injury during childbirth. With proper care and handling, we can minimize head injury and also minimize the occurrence of epilepsy due to trauma of the baby's head during childbirth. Of fifteen interviewed mothers ten of them explain their delivery position as a semi-setting position and the others use squatting, supine, and sitting position.

One woman expressed her experience who delivered her children in a semi-sitting position stated: ... I gave birth to my children in a semi-sitting position with the aid of two persons during childbirth... and one person support me at the back and the other takes care of my baby (Participant 7, a 25-year-old, mother of two).

The other women who gave birth in a sitting position stated that I gave birth to my child by sitting position.... using wood for support and also two peoples hold me in both directions (Participant 4, a 35-year-old, mother of seven).

Theme two: family and institutional care and support

Family support: Most participants were very pleased with the help of neighbors who are epileptic and live in the camp with them during seizures and pregnancy. The participants said that they were disappointed with their family members showed their feeling during the first incident of an epileptic seizure. The participants said that they have negative feelings such as depression, anxiety, and unhappiness with the substantial care of family members. The woman expressed her feeling about the perception of the family stated as.... I am stressed because of the disease... I have no help from my family ... they didn't understand me even my mom...she is crying...I want to accomplish my study but nobody helps me...still cry... even though they didn't ask about the medication I took ... Now I will stop the drug and I will plan to die ...still cry... (Participant 15, a 26-year-old, mother of one).

The majority of the participants are banished from the family in early childhood when the seizure started and they expressed their feeling: my family send me to town ...when I have the disorder and they said "we meet with you when we came to town otherwise the community disrespects us when we live together" Participant 5, a 25-year-old, mother of four).

The other woman also has a negative feeling about her family's perception towards the disease stated that My family banished me because our neighbor said "if she urinates in the river the disease transmits to our children and they are also affected by the disease so send her to town" ... they have a negative attitude toward me... (Participant 4, a 35-year-old, mother of seven).

And also the other woman stated that... my family sends me to town when I have the disorder and they said: "we meet with you when we came to town otherwise the community disrespects us when living together" (Participant 6, a 36-year-old, mother of seven).

The other woman lives in the epileptic camp and she has a negative feeling about her family's perception towards the disease, and she acknowledges her neighbors statedin my childhood when the disease started my family send me to the town and I am here thereafter... But here we all are epileptic and we live together without any problem (Participant 1, a 30-year-old, mother of one).

Institutional care and support: The majority of participants revealed great gratitude for the healthcare workers' assistance. The participants said that communicating with a health care professional, although the meetings were very good, was effective in helping to alleviate their problems. The majority of women's experiences of care and support received in the health facilities are very interesting according to the women's expressions as some mothers narrated:

... they are equally seen as other patients ... even we got sick with another disease like malaria they treat us like other patients and also we get help from both governmental and non-governmental facilities... and also they help us during pregnancy and childbirth (Participant 1, a 30-year-old, mother of one).

The other women said that... health care providers are equally seen as other patients.... They help us during pregnancy and childbirth... and also they give food for us during childbirth (Participant 8, a 38-year-old, mother of four).

As some women express the perception towards health professionals depends on the care they took from the individual unit reflected by women that some health care providers were unethical and violated the rights of the patients as one mother who was a history of stillbirth narrated:

... Health care professionals working in psychiatric unit... they advise me to follow during pregnancy... but I don't know about labor ward ... because I missed my child because of them...they didn't help me during that time ... (Participant 15, a 26-year-old, mother of one).

And also the other women express as they do not see as other patients and also they reject us... Even if we want drugs they refuse and ask for a letter from the woreda health office... but health care professionals in the labor ward during labor time do not reject us and help us ... (Participant 10, a 35-year-old, mother of four).

Theme three: epilepsy and maternal death

Causes of maternal death were directly related or indirectly related to pregnancy. Epilepsy was classified as one of the indirect causes of maternal death. The majority of women who participated in the study expressed that epilepsy may cause death during pregnancy and childbirth. The mother expressed their experience as: ...epilepsy may cause death during pregnancy and delivery... if the seizure occurs during pregnancy and the women fall with her abdomen... the mother and her baby are also in danger... they may die due to the disease (Participant 11, a 38-year-old, mother of two).

Another woman said: yes, epilepsy may cause death during pregnancy and delivery...if the seizure occurs during pregnancy and the women fall without any person's help.... she may die or fall with her abdomen the mother and her baby also be in danger and they may die (Participant 13, a 30-year-old, mother of three).

Also, another woman expressed: epilepsy may cause death during pregnancy and delivery... if the seizure occurs during pregnancy ... the women fall into a fire or in the jungle or with her abdomen the mother and her baby are also in danger and they may die (Participant 12, a 31-year-old, mother of one).

Theme four: pregnancy and seizure

It is difficult to predict how pregnancy will affect epilepsy but the majority of the participant stated that they do not expect that pregnancy may cause a seizure, as some mothers stated: ... I don't think that pregnancy may induce the seizure ... (Participant 1, a

30-year-old, mother of four).

The other participant asked about pregnancy causing a seizure and expressed their feeling as: ...no I don't think... even during pregnancy I am safe and no seizure occurs during pregnancy and childbirth... (Participant 2, a 35-year-old, mother of three).

Some participants experienced unanticipated variability in seizures during pregnancy. Women who experienced seizures during pregnancy stated that: ... pregnancy may not induce the seizure but I have a seizure during pregnancy (Participant 11, a 38-year-old, mother of two) and the other women stated:pregnancy induced the seizure... because I have seizure... when I took 30 mg of phenobarbitone and the health professionals increasing medication because of uncontrolled seizures during pregnancy... (Participant 15, a 26-year-old, mother of one).

Theme five: breastfeeding

Feeding breast milk to newborn babies has many advantages, including improving the baby's health by providing important antibodies in breast milk that are good for the baby's health. Breastfeeding also helps the mother and baby bond during the early months and also for many women, it is an essential part of the experience of motherhood. All of the study participants in our study support that breastfeeding is essential for baby growth. As participants expressed their feeling: ... the disease does not affect breastfeeding... and the disease is not transmitted to the child during breastfeeding.... It is possible to feed our babies ... (Participant 11, a 38-year-old, mother of two).

Discussion

This study explored and presents the delivery experiences among women with epilepsy. The care of WWE during reproductive age has been increasing recently among healthcare providers [24]. Studies show that effective preconception counseling and good medical care during pregnancy are essential for the treatment of pregnant women with epilepsy [13]. Preparation for pregnancy before conception in WWE has not been achieved in this study. Most participants became pregnant without any prior preparation or planning and which tells a lack of pregnancy preparation. This result is in line with other studies which indicated that 69.8% of WWE were at risk of unintended pregnancies and > 90% of WWE studied had not planned their pregnancies [25]. Another study report shows that 86% of women with epilepsy who died of sudden unexpected death in epilepsy (SUDEP) had not received pre-pregnancy counseling [14]. A systematic review conducted in sub-Saharan Africa, revealed that none of the retrieved studies reported on pre-conceptual counseling for WWE in SSA [15]. Another study shows that participants who had planned their pregnancies had less anxiety about fetal malformations than those who did not plan for pregnancy [26]. This explains the importance of education and counseling before planning a pregnancy in women with epilepsy.

In this study majority of the participants were gave birth at their homes due to different reasons but skilled care during pregnancy, delivery, and postpartum are vital interventions in reducing maternal and neonatal morbidity and mortality [27]. Another study shows that for a woman to have a home birth it needs to carefully consider the possibility of having a seizure during labor [16]. Home delivery is dangerous for WWE because they are susceptible to having seizures during labor and are also at risk of developing anticonvulsant-related hemorrhage [28]. This result is supported by another study when large

distances to maternity facilities lead frequently to deliveries at home without qualified assistance [8].

In this study majority of the participants believe that poor handling of the newborn baby during childbirth may cause head injury and which can lead to a seizure disorder. This result is in line with the previous study which shows that birth injuries often due to a difficult pregnancy or childbirth can lead to epilepsy [8]. In this study Hypoxia due to a poor supply of blood to the fetus and head injury of the newborn during labor and delivery is one of the causes of epilepsy. This result is in line with another study, if the women have a seizure during labor the newborn baby's oxygen supply to the brain may be reduced [16]. With proper care and handling, we can minimize head injury and also minimize the occurrence of epilepsy due to trauma of the baby's head during childbirth. The delivery position of the women is important to prevent head injury during childbirth. In this study majority of the participant used a semi-setting position during childbirth. This result is contrary to the other study that a woman gives birth to the baby in a standing position, or partially standing (her two knees touching the ground in a genuflect position [1]).

This study shows that support from their relatives especially their neighbors is very interesting but their family members are neglected and stigmatized due to the illness. Other studies support that epilepsy-related stigma has still a major concern in SSA, especially among WWE [10], with extensive negative consequences on pregnancy outcomes through poor pregnancy follow-up and regular home deliveries among WWE [29]. And also this study shows the majority of the participants are banished from the family in early childhood when the seizure started. This result is also in line with the study for a cultural reason they drop children into the forest in the mid of the jungle [22] and forced migration of epileptic patients to towns and also the families of the victims would kick them out of their village and they come into towns [22,23].

The professional contribution was very important in enhancing the quality and safety of epilepsy treatment [30] health care professionals are well placed to provide the support that women need during childbirth [31] in this study majority of participants revealed that great appreciation for the health care workers. The majority of women were communicating with healthcare professionals and it was very effective in helping them to alleviate their problems. This study is in line with another study that health care workers were helping them and also alleviating their anxiety. They support them with professional knowledge and medication adjustments and also they appreciate their empathetic attitude [32].

Causes of maternal death were directly related or indirectly related to pregnancy. Epilepsy was classified as one of the indirect causes of maternal death [15]. The majority of women who participated in the study expressed that epilepsy may cause death during pregnancy and childbirth. This result is in line with other studies, deaths in WWE or sudden unexpected death (SUDEP) accounted for 79% [15]. This result shows the potential risks of uncontrolled seizure during pregnancy and in the postpartum period. Based on studies in the UK gives an estimated death rate from epilepsy among women with epilepsy (SUDEP) during childbirth is approximately 10 times higher than women without epilepsy [15]. Another study revealed that Maternal death from epilepsy has increased gradually over the last three decades and SUDEP is the most commonest cause of maternal death from epilepsy in the last 15 years in the UK [5]. The result shows us an increase in epilepsy-related maternal deaths and further

attention is needed for improvement. Another Matched case-control study conducted in Denmark revealed that only 0.57% of maternal death was diagnosed by the mother with epilepsy. This result was lower than our study and had previously been reported from the UK.

It is difficult to predict how pregnancy affect epilepsy but pregnancy can cause physical and emotional stress as well as increased tiredness and this may cause the seizure more frequent [2]. In this study, the participants have different views toward pregnancy and seizures. The majority of the participant stated that they do not expect that pregnancy may cause seizures and also they feel good and other experiences seizure during pregnancy. This result in line with the other study revealed that 66.6% of women were seizure-free and about 33.4% of pregnant women had seizures during their pregnancies [2].

Breastfeeding is sufficient and beneficial for infant nutrition in the first 6 months of life and breastfeeding immediately after birth also helps the uterus to contract and reduces postpartum blood loss [27]. Breastfeeding is essential and very important for baby growth and has no negative developmental effects in infants that have been exposed to breastfeeding [33]. Our study shows that all the study participants have to breastfeed their babies without restriction. The previous study showed those breastfeeding mothers with epilepsy had higher IQ [33]. Other study shows that there are factors that influence a mother's decision to breastfeed [2]. But on the contrary other study shows that it is a common misconception that drugs taken by the mother are retained in the breast milk [34]. Among women taking AEDs, some believe that the drug exposure for the child is higher during breastfeeding than pregnancy and breast milk will produce an unnecessarily prolonged drug exposure for the infant.

Conclusion

The results of this study show that WWE needs special attention before, during, and after pregnancy to improve maternal and child health. In this study preconception care is very low this tells us preconception counseling and education by health professionals are mandatory to improve the awareness of WWE. There is also a knowledge gap and misconception about epilepsy by the family and surrounding community which resulted in stigma and discrimination against epileptic women. Maternal mortality in women with epilepsy was considerably higher. This finding would be helpful for WWE who are planning pregnancy and also for health professionals in developing appropriate counseling and educational programs to support this population.

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