

Research Article

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Knowledge, Attitude and Practice Towards Obstetric Danger Signs During Pregnancy Among Women Attending Antenatal Care at Mettu Karl Referral Hospital, Ilu-Ababore Zone, Southwest Ethiopia 2021

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Abstract

Background: Danger signs of pregnancies are a warning signs that women encounter during pregnancy, child birth and postpartum. Insufficient knowledge about danger signs of pregnancy is one of the major contributing factors for maternal deaths. Knowledge of obstetric danger signs and birth preparedness are strategies aimed at enhancing the utilization of skilled care during low-risk births and emergency obstetric care in complicated cases in low-income countries. When mothers do not recognize the danger signs in pregnancy and if they don't react timely, adverse effects can occur to the mother, the unborn problems among women in developing countries. positive attitude of mothers towards obstetric care is also effective way of improving maternal, pregnancy and newborn health. This study was aimed to assess knowledge, attitude and practice towards obstetric danger signs during pregnancy among mothers attending Antenatal care at Mettu Karl Referral Hospital, Ilu-Ababore zone, Southwest Ethiopia, 2021.

Methods: An institutional based cross-sectional study was conducted from January 25 to February 10/2020/21 in Mettu Karl Referral Hospital on a sample of 292 mothers who are pregnant by using systematic random sampling. Before collecting actual data, pretest was done to assure data quality and after collecting we had check completeness then enter manually, analyze in tally sheet and scientific calculator.

Results: Out of the 292 respondents with a response rate of 100%, 266 (91.1%) reported that they had got information about danger sign during pregnancy. Two hundred fifty-five of the study participants had positive attitude by scoring the mean value and above. Majority of the study participants have claimed as they did not experience any obstetric danger signs during pregnancy. From 39(13.4%) who experienced obstetric danger signs, 36(12.4%) had good practice.

Conclusion: This study showed level of knowledge, attitude and practice about obstetric danger signs during pregnancy were higher when compared to previous studies in our country and the most frequently reported one is vaginal bleeding but it needs further study and awareness on different area of the country.

Keywords: attitude; danger signs; Ethiopia; knowledge; mettu karl referral hospital; practice; pregnancy; southwest

Introduction: Background

The danger signs are signs of serious Obstetric complications which may occur during pregnancy, labor and childbirth, and during the postnatal period [1]. When mothers do not recognize the danger signs in pregnancy, adverse effects can occur to the mother, the unborn baby, or the pregnancy itself [2]. Even if maternal health has significantly improved in the 21st century, but too many women continue to die or suffer severe pregnancy complications every year [3]. Many of the complications that result in maternal deaths are unpredictable and can occur without warning at any time during pregnancy and childbirth [4]. Low awareness of danger signs and symptoms during pregnancy, labor, delivery and postpartum contribute to delays in seeking and receiving skilled

care. Awareness of the danger signs of obstetric complications is the essential first step in accepting appropriate and timely referral to obstetric and newborn care. Increased knowledge and awareness are essential for reducing delays in seeking health care and in reaching a health facility. Communities and individuals should be empowered not only to recognize pregnancy related risks, but they must also have the means to react quickly and effectively once such problems arise [5, 6, 7]. Maternal morbidity and mortality reduced if the mothers and their families can identify obstetric danger signs and quickly get health care [8].

The national reproductive strategy of Ethiopia has seated a strategic plan as 80% of all families, including mothers should recognize at least three danger signs

associated with pregnancy-related complications [9]. Recognizing obstetric danger signs timely and react quickly after occurrence is vital part to decrease maternal mortality and morbidity, Maternal mortality is the leading cause of the adult female deaths in many countries. Women's death during childbirth often means death for the newborn, and both death and disabilities translate into emotional, social, and economic hardships for women's older children, their entire families, and even for communities [7]. Every minute, a woman dies due to causes related to pregnancy, childbirth and postnatal period [10]. Maternal deaths are avoidable, if women with complications are able to identify and seek appropriate emergency obstetric care which makes a difference between life and death [11]. Maternal deaths have both direct and indirect causes. Around 80% of maternal deaths worldwide is brought about by direct obstetric complications The five major global causes of maternal death are: severe bleeding (mostly bleeding postpartum), infections (also mostly soon after delivery), unsafe induced abortion, hypertensive disorders in pregnancy (eclampsia) and obstructed labour. Globally, about 80% of maternal deaths are due to these causes. Hemorrhage alone accounts for one third of all maternal deaths in Africa, yet many of these deaths are preventable. Severe bleeding after birth can kill a healthy woman within two hours if she is unattended. Obstetric fistula resulting from obstructed labor is a long-term complication suffered by as many as two million women). Indirect causes such as malaria, diabetes, hepatitis, anemia and other cardiovascular disorders which are aggravated by pregnancy can also lead to maternal death [12,13].

Awareness of the danger signs of obstetric complications is the essential first step in accepting appropriate and timely referral to obstetric and newborn care. Raising awareness of women on danger signs of pregnancy, childbirth and the postpartum period improve mother's attitude to seek medical care and is crucial for safe motherhood [7]. When mothers do not recognize the danger signs in pregnancy, adverse effects can occur to the mother, the unborn baby, or the pregnancy itself.

Adverse effects include

Illness or death of the mother, for instance, severe bleeding can lead to anemia or death of the mother, infection to the unborn baby through prematurely ruptured membranes, when amniotic fluid leaks from the vagina. If not attended to, this can lead to fetal or neonatal morbidity and mortality, termination of a

pregnancy before term in vaginal bleeding. Maternal hypertension or fever, can lead to increased numbers of neonatal deaths or prematurely born babies who may eventually die due to inadequate facilities to care for them [14]. A mother's death in childbirth denies her children their natural, primary care giver and significantly increases the risk that her infant will die or fail to survive to age 5. A mother's death also has an extremely detrimental effect on her children's access to education and health care. Many children who survive without mothers also risk being emotionally lost [12,14,13].

Most maternal deaths are avoidable, as the health care solutions to prevent or manage complications are well known. All women need access to antenatal care in pregnancy, skilled care during childbirth, and care and support in the weeks after childbirth. It is particularly important that all births are attended by skilled health professionals, as timely management and treatment can make the difference between life and death [12,14]. According to the Ethiopian Federal Ministry of Health, only 10% of the deliveries is attended by health professionals. In one nation where the maternal mortality ratio is 676 per 100,000 live and IMR 59/1000 and NMR 37/1000 live births which are the highest in the world. In Ethiopia, there is little information about the knowledge, attitude and practice of obstetric danger signs during pregnancy since the introduction of Health Extension Workers (HEWs), despite the national Reproductive strategy aim to raise the awareness to 80% in the area in which HEW are deployed [15]. Studies conducted in Aleta Wondo district, indicated that the knowledge level of pregnant women about obstetric danger signs (during pregnancy, childbirth and postpartum period) was low and affected by residential area. Therefore, the identified deficiencies in awareness should be addressed through maternal and child health services by designing an appropriate strategy including provision of targeted information, education and communication. In spite of great potential of knowledge, attitude and practice of obstetric danger signs in reducing the maternal and newborn deaths its status is not well known in most of Sub-Saharan Africa including Ethiopia [16]. The study therefore aims to fill this gap by assessing the current status of knowledge, attitude and practice of danger signs among mothers in the study area.

Methods

Study design, period and setting

Institutional based cross-sectional study was conducted at Mettu Karl referral hospital from January 25/2020-February 10/2021. Mettu town, Oromiya, which is located 600 km to south west of Addis Ababa. Mettu is a market town in south western Ethiopia located in Illubabore zone of Oromia region. This town has a latitude and longitude of 8°18'N 35°35'E and an altitude of 1605 meters. Mettu Karl hospital is the only referral hospital in this Zone, serving about 2.1 million people from Illu Ababor Zone, Gambella Regional State and adjacent Southern Nation and Nationalities Peoples region. The Hospital health service covers, outpatient department, Intensive Care Unit, Obstetrics and Gynecology and in patient services (medical, pediatrics and surgical wards). The hospital also has medical, surgical and gynecological referral clinics and emergency intervention unit and it is one of the fistula centers in Ethiopia. Mettu Karl Hospital has 123 technical and 157 supportive staffs. The number of reproductive age women (15-49 years) is 10,963 from Illubabore zone health office. Total ANC follower in the previous year (2012 E.c) at Mettu Karl referral hospital was 1722 (ANC1=1337 and ANC4=385) from MKRH report and ANC follower before data collection is 234 (ANC1=176 and ANC4=58).

Source Population

All pregnant mothers who had ANC follow up at Mettu Karl referral hospital.

Study Population

All mothers who were pregnant and had ANC follow up at the time of data collection.

Inclusion Criteria

All pregnant mothers who came for ANC visit, are mentally and physically capable of being interviewed and those who were volunteer to participate in the study.

Exclusion Criteria

Mothers who were critically sick and unable to respond were excluded.

Sample Size Determination

The sample size was calculated by using single population proportion formula, we use (31.9% (About one third, 179 (31.9%) of mothers were knowledgeable) from the previous research in Goba district, Bale zone Ethiopia [34].

$$n = z^2 \cdot p \cdot (p-1) / d^2$$

n=total study population

z= level of significant which is 1.96

p= prevalence which is population proportion 0.32

d = margins of error which is 0.05

$$n = \frac{(1.96)(1.96)(0.32)(0.68)}{(0.05)(0.05)} = 334$$

According to the data obtained from previous year annual report of ANC from MCH unit of this hospital, the total pregnant women's were 1722. Since it was less than 10,000, and we used correction formula.

$$nf = \frac{ni}{1 + ni/N}$$

$$nf = \frac{334}{1 + 334/1630} = 278$$

Therefore, sample size is 334 and with adjustment for a 5% rate of non-responses yielded a final sample size of 292.

Sampling Technique and Procedure

By using systematic random sampling, we calculated the sampling fraction as follows;

Total ANC follower during 21/04/2013-20/05/2013 E.C at Mettu Karl referral hospital is 234. $K = 234/292 = 1$.

So, every pregnant mother (consecutive) taken as study participants until the required sample size is filled. The first participant was selected using lottery method.

Data Collection

Data was collected with interview-based questionnaire. The Data was collected by our classmate students (two fourth year midwifery students from other groups) for reducing biases. The questionnaire consists of six parts with a total of 34 questions. The first part is about socio-demographic characteristics of the study participants composed of six questions. The second part is about past obstetric history: the third, fourth and fifth part are about knowledge, attitude, and Practice of respondents respectively. The sixth part explains availability of health institution of respondents in the near place.

Data Quality Assurance

To keep the quality of data pre testing of questionnaire was conducted on 5% (15 pregnant women) of sample size at Mettu Health center. After collecting data, we had check completeness and consistency to improve quality of data. We were discussing each other and we gave some explanation

to data collectors on the aspect of data collection tools, interview and questioning techniques.

Data Processing and Analysis

After collecting data, we had check completeness and consistency then enter manually, analyze in tally sheet and scientific calculator. Tables were used to present the data.

Variables Of the Study

Dependent variable

- Knowledge
- Attitude
- Practice

Independent variable

Socio demographic factors:

- Age
- Marital status
- Religion
- Ethnicity
- Educational status
- Monthly income
- occupation
- Parity
- History of still birth
- Number of children,
- Live birth
- gravidity
- Time taken to the nearest health facility
- Number of ANC follow up
- Operational Definition

Danger signs: Presence of condition that increases the chances of pregnant woman and/ or her unborn child dying or having poor health. Such danger signs are severe headache swelling of face and hand, right

upper quadrant pain, vaginal bleeding, decrease fetal movement, foul smelling vaginal discharge [35].

Good knowledge: participants who score above the mean value for knowledge related question.

Poor knowledge: refers those participants who answer knowledge questions below the mean value [36].

Positive Attitude: refers to those participants who answer the attitude questions and score above the mean value [36].

Negative Attitude: refers to those participants who answer the attitude questions and score mean value and below the mean value [36].

Good practice: refers to those participants who seek medical care first when they experience obstetric danger signs [36].

Poor practice: refers to those participants who seek care from an older woman first, and who stayed home when they experience obstetric danger signs.

Result

Socio-demographic characteristics of the respondents

A total of 292 pregnant mothers were included in the study, yielding a response rate of 100%. Thirty six percent of the respondents are at the age of 25-29 years. The majority, 76.4% (223) of respondents were ethnically Oromo, and the dominant religion was Orthodox, 36% (105) followed by Protestant 34.9% (102). Majority 266 (91.1%) of the women were married and most 119(40.8%) of the respondents were housewives. Seventy-three (25%) had completed primary school and above and 146 (50%) of the respondents had income >2000 birr during the survey.

Table 1: Distribution of socio-demographic and economic variables of respondents, In Mettu Karl Referral Hospital, Ilu-Ababore zone, Southwest Ethiopia,2021(n=292).

| Variable | Frequency | Percent (%) |
|-----------------------|-----------|-------------|
| Age | | |
| 15-19 | 9 | 3.1 |
| 20-24 | 60 | 20.5 |
| 25-29 | 106 | 36.3 |
| 30-34 | 85 | 29.1 |
| >=35 | 32 | 11 |
| Total | | 100 |
| Residence | | |
| Rural | 118 | 40.4 |
| Urban | 174 | 59.6 |
| Total | | 100 |
| Marital status | | |

| | | |
|--|-----|-------|
| Married | 266 | 91.1 |
| Single | 6 | 2.1 |
| Divorced | 7 | 2.4 |
| In relationship | 3 | 1 |
| Widowed | 10 | 3.4 |
| Total | | 100 |
| Religion | | |
| Orthodox | 105 | 36 |
| Muslim | 82 | 28.1 |
| Protestant | 102 | 34.9 |
| Others | 3 | 1 |
| Total | | 100 |
| Ethnicity | | |
| Oromo | 223 | 76.4 |
| Amhara | 46 | 15.8 |
| Gurage | 5 | 1.7 |
| Tigrie | 15 | 5.1 |
| Others | 3 | 1 |
| Total | | 100 |
| Educational status | | |
| Cannot read & write | 29 | 9.9 |
| read & write only | 58 | 19.9 |
| primary education (1-8) | 73 | 25 |
| secondary education (9-12) | 70 | 24 |
| tertiary education (college or university) | 62 | 21.2 |
| total | | 100 |
| Occupation | | |
| Private employee | 17 | 5.8 |
| Government employee | 69 | 23.6 |
| Merchant | 53 | 18.1 |
| Housewife | 119 | 40.8 |
| Student | 4 | 1.4 |
| Farmer | 30 | 10.3 |
| Total | | 100 |
| Monthly income | | |
| <500 birr | 8 | 2.74 |
| 500-1000birr | 26 | 8.91 |
| 1000-1500 | 60 | 20.55 |
| 1500-2000 | 52 | 17.8 |
| >2000 | 146 | 50 |
| Total | | 100 |

Obstetrical characteristics of the respondents

Out of total number of respondents 200(68.5%) had history of 2-4,5(1.7%) had history of 5 and above pregnancies and 87(29.8%) mothers had pregnancy once. Regarding first pregnancy age 279 (95.5%) mothers got their first pregnancy at >18 years while 13 (4.5%) had pregnancy at <18. About 203 (69.5%) respondents had 1 and 2 live children whereas 67 (30.5%) who have 3 and above live children.

Knowledge on danger signs during pregnancy

Two hundred sixty-six (91.1%), mothers heard information (who had information) about obstetric danger signs and 169 (57.8%) heard about danger sign from health personnel followed by media 91 (31.1%). From those who had the information,223(76.3%) were identified severe vaginal bleeding at any time during pregnancy as danger sign. Swelling of the body 87 (29.8%), persistent headache 161(55.1%), Abdominal pain 126(43.1%), blurred vision 116 (39.7%), and High fever 93 (31.8%) were also indicated by the study

subjects as danger signs. Severe vaginal bleeding was the most frequently mentioned complication by women during pregnancy. From those who had the

information, 185(69.5%) did have good knowledge about obstetric danger signs whereas 81 (30.5%) of them did have poor knowledge.

Table 2: Knowledge of respondents towards obstetric danger signs, In Mettu Karl Referral Hospital, Ilu-Ababor zone, Southwest Ethiopia, 2021 (n=292).

| Variable | Category | Frequency | Percent |
|--|--|-----------|---------|
| Have you heard about danger signs during pregnancy? | Yes | 266 | 91.1 |
| | No | 26 | 8.9 |
| Where do you get the information about danger sign? | From health care personnel | 169 | 57.8 |
| | From friends | 20 | 6.8 |
| | From elder | 11 | 3.7 |
| | From mass media | 91 | 31.1 |
| What do you mean by danger signs during pregnancy? | Complications which occur during pregnancy | 231 | 79.1 |
| | Any disease which occurs during pregnancy | 29 | 9.9 |
| | A Disease Which Passes through heredity | 26 | 8.9 |
| | A Complication Which Cannot Be Treated | 6 | 2.1 |
| please mention obstetric danger signs you know | Vaginal bleeding | 223 | 76.3 |
| | foul smelling Vaginal discharge | 61 | 20.9 |
| | Swollen body | 87 | 29.8 |
| | severe nausea & vomiting | 56 | 19.2 |
| | Severe headache | 161 | 55.1 |
| | Fever | 93 | 31.8 |
| | Decrease fetal movement | 106 | 36.3 |
| | Blurring of vision | 116 | 39.7 |
| | Right upper quadrant pain | 99 | 33.9 |
| | burning sensation during urination | 78 | 26.7 |
| | abdominal pain | 126 | 43.1 |
| When does these danger sign occur? | During pregnancy | 173 | 59.2 |
| | After child birth | 98 | 33.6 |
| | Any time | 21 | 7.2 |
| When the mother faced these danger signs, she should go where? | Health facility | 254 | 86.9 |
| | Traditional birth attendant | 38 | 13.1 |
| Bleeding through the genital tract is a risk for pregnant mother | Yes | 243 | 83.2 |
| | No | 49 | 16.8 |
| Can obstetric danger sign transmitted from one to another? | Yes | 32 | 10.9 |
| | No | 260 | 89.1 |
| Can any woman develop obstetric danger Signs during pregnancy? | Yes | 207 | 70.9 |
| | No | 85 | 29.1 |

Attitude towards obstetric danger signs

Majority 272 (93.1%) of the study respondents were agreed with importance of knowing obstetric danger signs. Two hundred sixty-five (90.7%) of the study participants agreed that knowing obstetric danger signs is important because women will seek medical care on time. Regarding the prevention of obstetric

danger signs 155(53.1%) of the respondents were agreed. Most 242(82.9%) disagree on the idea that mothers who develop obstetric danger signs should seek help from traditional birth attendants. Two hundred fifty-five 255(87.3%) of the study participants had positive attitude by scoring the mean value and above but 37(12.7%) of the participants had negative attitude.

Table 3: Attitude of respondents towards obstetric danger sign in Mettu Karl Referral Hospital, Ilu-Ababore zone, Southwest Ethiopia, 2021 (n=292).

| Indicators of attitude | 3-point Likert scale | | |
|---|----------------------|-----------|----------|
| | Agree | Disagree | Neutral |
| | N (%) | N (%) | N (%) |
| It is important for women to know obstetric danger signs during pregnancy | 272(93.1%) | 8(2.7%) | 12(4.1%) |
| To know about obstetric danger signs is important because women will seek medical care on time. | 265(90.7) | 8(2.7) | 19(6.5) |
| To know obstetric danger signs is important because the danger signs will not go away by their own. | 263(90.1) | 15(5.1) | 14(4.8) |
| A woman can prevent danger signs during pregnancy. | 155(53.1) | 125(42.8) | 12(4.1) |
| Mothers who develop obstetric danger signs should seek medical advice. | 248(84.9) | 5(1.7) | 39(13.4) |
| Mothers who develop obstetric danger signs should seek help from traditional birth attendants. | 44(15.1) | 242(82.9) | 6(2) |

Practice of obstetric danger signs

Majority 253(86.6%) of the study participants have claimed as they did not experience any obstetric danger signs during pregnancy. From 39(13.4%) who

experienced obstetric danger signs, 36(12.4%) had good practice seek medical care when they faced problem but 3(1%) of the study subjects had Poor practice.

Table 4: practice towards danger sign among of mothers at Mettu Karl Referral Hospital, Ilu-Ababore zone, Southwest Ethiopia, 2021 (n=292).

| Variable | Value | Frequency | Percent |
|--|----------------------------|-----------|---------|
| Have you experienced obstetric danger signs during your pregnancy? | Yes | 39 | 13.4 |
| | No | 253 | 86.6 |
| what action was you taken when you face danger signs? | Went to health institution | 36 | 12.4 |
| | Went to TBA | 2 | 0.7 |
| | Stayed at home | 1 | 0.3 |

Discussion

The finding of this study indicated that (91.1%), mothers heard information about danger signs and from those who had the information, 185(69.5%) did have good knowledge about obstetric danger signs whereas 81 (30.5%) of them did have poor knowledge. Two hundred fifty-five (87.3%) of the study participants had positive attitude and 39(13.4%) who experienced obstetric danger signs had good practice about key danger signs during pregnancy.

Knowledge of obstetric danger signs during pregnancy

Based on this study from those who had the information of obstetric danger signs 76.5% identified severe vaginal bleeding at any time during pregnancy which is higher than the findings, Burkina Faso (39.4%) [37], Guatemala (31.0%) [38] and in Aleta Wondo district (45.9%) [39]. This difference might be due to socio-cultural difference and difference of study period. According to this study 81 (30.5%) of respondents did have poor knowledge

about obstetric danger sign during pregnancy which is less than the study done in Aleta Wondo district 39.1% and Tsegedie district 35.1% [39,40]. The differences might be due to socio economic, time gap and health education provided. Based on this study from those who had the information of obstetric danger signs 76.3% identified severe vaginal bleeding at any time during pregnancy as obstetric danger sign which is greater than the findings in Debrebrihan, Ethiopia which was 68.2% [36]. This difference might be due to the current health policy being applied is increasing the awareness about obstetric complication to prevent maternal and child death. According to this study 8.9% of the study respondents were unable to mention an obstetric danger sign which is less than the study done in harer town 30% [41]. The variation of result is due to difference in study period and difference in study area. As well as differences might be due to socio economic and health education provided.

Attitude of obstetric danger signs during pregnancy

In this study, two hundred seventy-two (93.1%) of the study participants agreed that knowing obstetric danger signs is important because women will seek medical care on time. A study done in Debrebirhan indicated that 88% the study participants agreed that knowing obstetric danger signs is important [36] due to time and cultural differences. Regarding the prevention of obstetric danger signs by mothers 53.1% of the respondents were agreed. This is in line with the studies conducted in Debrebrihan, [36].

Practice of obstetric danger signs during pregnancy

According to this study only thirty-nine (13.4%) of the study participants experienced obstetric danger signs and 12.4% had good practice. A study done in Indonesia, revealed that among the pregnant women who attended ANC, 36.6% of the respondents gave correct answers to a question on common practice such as, it is necessary to go to the hospital when severe headache or vision problems happen in pregnancy [42]. The difference might be due to socio demographic, study period and area difference. The study done in Debrebrihan also indicate that majority of the pregnant mothers had not faced danger signs of pregnancy [36].

Conclusion

Based on this study 91.1% of the study participants had heard obstetric danger signs during pregnancy which is higher than study done in Burkinafaso, Guatamala, Tsegedie District and Deberebrhan. Regarding the attitude of the respondents 93.1% of the study respondents were agreed with importance of knowing obstetric danger signs which is higher than that was done in debrebrihan. This study shows even though the level of knowledge and attitude of women about danger signs of obstetric complication among pregnant women attending ANC follow up in Mettu karl hospital seems high as compared to past studies, it is not sufficient to prevent the burden related to complication during pregnancy. The most frequently cited obstetric complication during pregnancy was vaginal bleeding.

Declarations

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Consent for publication

Not needed

Competing interests

No conflicting of interest.

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Ethical declaration

Ethical approval was obtained from Mettu University College of health sciences department of Midwifery ethical review committee. Willingness of the participants for the study was the core element of ethical consideration.

Clear information about the study should be given for the participants before starting data collection and confidentiality of the information and respondent was assured. The participants had the right to withdraw from the study at any time without explanation and without penalty or loss of benefit.

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