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COLLEGE HEALTH SCIENCES

SCHOOL OF NURSING AND MIDWIFERY

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POSTGRADUATE PROGRAM

KNOWLEDGE OF OBSTETRIC DANGER SIGNS AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN ATTENDING ANTENATAL CARE AT HEALTH FACILITIES, IN TENTA WOREDA, SOUTH WOLLO, ETHIOPIA 2019, A CROSS SECTIONAL STUDY.

PRINCIPAL INVESTIGATOR: - Mr. MOHAMMED LEGAS (BSc)

A THESIS SUBMITTED TO SCHOOL OF GRADUATE STUDIES, ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES, DEPARTMENT OF NURSING AND MIDWIFERY AS PARTIAL FULFILLMENT OF MASTERS DEGREE IN MATERNITY AND REPRODUCTIVE HEALTH NURSING.

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APPROVAL SHEET

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I, the undersigned MSc student, declare that I have submitted my original work on a title KNOWLEDGE OF OBSTETRIC DANGER SIGNS AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN ATTENDING ANTENATAL CARE AT HEALTH FACILITIES, IN TENTA WOREDA, SOUTH WOLLO, ETHIOPIA 2019, A CROSS SECTIONAL STUDY.

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Name of student Signature Date

This thesis work has been submitted for examination with my approval as an advisor.

Approved by:

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APPROVAL BY THE BOARD OF EXAMINATION

This thesis by MOHAMMED LEGAS is accepted in its present form by the board of examiners as satisfying thesis requirement for the degree of masters in REPRODUCTIVE HEALTH AND MATERNITY NURSING.

EXAMINER:

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RESEARCH ADVISORS:

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STATEMENT OF DECLARATION

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LIST OF ACRONYMS AND ABBREVIATIONS

ANC…… Antenatal Care

AOR……. Adjusted Odd Ratio

CI……Confidence Interval

COR……Crud Odd Ratio

DSP……. Danger Signs of Pregnancy

EDHS……Ethiopian Demographic Health Survey

KODS…… Knowledge of Obstetric Danger Sign

MDG…… Millennium Development Goal

MM ……Maternal Mortality

MMR……Maternal Mortality Ratio

ODS……. Obstetric Danger Sign

OR ……. Odd Ratio

SDG……. Sustainable Development Goal

TWHB……. Tenta Woreda Health Bureau

USAID……. United States Agency for International Development

WHO…… World Health Organization.

FMOH……...Federal Ministry of Health

ABSTRACT

BACKGROUND: - Preventable maternal mortality and morbidity remain challenging in many countries like Ethiopia. Most cause of maternal deaths were preventable and the effect of three delays, from which one of the delay is delay in seek care. Poor knowledge about danger sign in pregnancy was a major contributor to delay in seeking obstetric care, this contributes to high maternal morbidity and mortality in a developing country like Ethiopia.

OBJECTIVES: - Assessment of Knowledge on obstetric danger signs and associated factors among pregnant women attending antenatal care at health facilities in Tenta Woreda, north Ethiopia.

METHODS: - Institution based cross-sectional study was employed and all health facilities in the Woreda were included in the study. The study subjects were selected using systematic sampling method and 293 women was proportionally allocated to respective health facilities. The tool had three parts, which is sociodemographic part, reproductive part and knowledge based. The data were collected by interviewed method. The data was entered using epi data (version 4.2) and export to SPSS version 25.00 for clearing and analysis and Logistic regression analyses were employed to identify factors associated with knowledge of obstetric danger signs. Using 95% CI variables with a p-value <0.05 were identified as statistically significant factors.

RESULT: - Two hundred eighty-seven mothers participated in the study making a response rate of 98%. From those participants' the knowledge of obstetric danger signs in the combination of three tracks (prenatal, postnatal, postnatal) were 78(27.2%). It also found that pregnant women who participated in this study, 128 (44.6%), 140(48%) and 132(46%) knew at least three danger signs during pregnancy, childbirth and postpartum period respectively. Being secondary education were 4.7 times knowledgeable than illiterate, (AOR=4.7, 95% CI 1.00,22.01) residency also another significantly determinant for maternal knowledge. Being urbanized were three times knowledgeable than the rural compartment (AOR=3.1, 95%CI=1.059,9.34).

CONCLUSION: A significant proportion of pregnant women in Tenta Woreda do not have knowledge of obstetric danger signs. Area of residence, occupation, education level gravidity and antenatal care service utilization were independently associated with the knowledge of women on obstetric danger signs. Thus, intervention programs aiming to improve women's knowledge about obstetric danger signs in the area of health facility, Federal ministry of health and research area.

Key words: Knowledge, Pregnant mother, Obstetrics Danger Sign, Antenatal Care, Health Facilities

1.INTRODTION

1.1. BACKGROUND

Maternal mortality refers to deaths with related to complications in pregnancy or childbirth or the death of the mother with in forty-two days of after delivery.

Globally, the maternal mortality ratio (MMR) was an estimated of 216 maternal deaths per 100 000 live births in 2015. From those developing regions account for approximately 99% and sub-Saharan Africa alone accounting for 66%, followed by Southern Asia (1).

Even if high MMR is a cause of concern for a number of country worldwide and different project are approved to reduce maternal mortality; still the reduction is not achieved their goal (2). Ethiopia is also one of the sub Saharan country which have 412 maternal mortality for every 100,000 live births in 2016 (3). The Percentage of women aged 15-49 years that were attended at least once ANC during pregnancy by skilled health personnel (doctor, nurse, or midwife) in sub Saharan countries were low, this may lead to negatively affected maternal knowledge (4).

Preventable mortality and morbidity remain challenging in many countries like Ethiopia. Every pregnant woman faces the risk of sudden unpredictable complication that could end with death or injury to the mother or baby. Pregnancy related complications couldn't be reliably predicted as mother cannot know the risk sign of pregnancy, which leads to morbidity and mortality (5).

Most cause of maternal deaths are preventable and the effect of three delays, from which the major one is delay in seeking care. poor knowledge about obstetric danger sign is a major contributor for this delaines. It further causes to maternal morbidity and mortality in developing country like Ethiopia. Informing women about obstetric danger sign is among the strategies to reduce maternal mortality due to pregnancy complication(6)

Obstetric danger sign (ODS) indicates that maternal health going to wrong in related to child birth; that lead to maternal mortality and morbidity. These danger signs are mainly classified as a major danger signs in the three respective child birthing period (prenatal, childbirth, postnatal). The major danger sign includes vaginal bleeding, swollen hands/face, and blurred vision in the prenatal period, severe vaginal bleeding, prolonged labor (>12 h), convulsions and retained

placenta occurred during labor and severe vaginal bleeding, foul-smelling vaginal discharge, and fever are occurring in the postnatal period are expected. Studies in Ethiopia and Tanzania shows that knowledge of women about danger signs during pregnancy, labor and postpartum are low (7-9). According to study finding Abeshige only 37.2 % of the participant were knowledgeable on birth preparedness and complication readiness, this study shows that more than 60% of the participant were going to complication due to lake of knowledge on obstetric danger sign (10). Inadequate knowledge about danger signs of pregnancy is one of the major contributing factors for maternal deaths.(11).

Danger signs of pregnancy's (DSP) are a warning signs which is eligible for all pregnant mother. It may occur during pregnancy, child birth and postpartum period. Therefore knowledge of obstetric danger sign is mandatory for all women who are pregnancy to save their life and reduce serious complications (6).

Obstetric Danger signs are not exactly mean that obstetric complications, they are symptoms that are well named by non-clinical personnel. However, like in many developing countries, knowledge of women about obstetric danger signs are low in Ethiopia. For such low knowledge level, factors associated are age, education level status, income decision power, place of delivery and possession of media could be direct or indirect effect(7)

1.2. STATEMENT OF THE PROBLEM

The pregnant mothers' knowledge on obstetric danger signs are less than 50% with the range of 21% to 48% in developing countries (9, 12, 13). Despite various motherhood initiative and intervention in Africa, studies in Tanzania and Uganda have shown that knowledge of obstetric danger sign during pregnancy, delivery and postpartum period was low in recent studies especially in rural population(13, 14)

The occurrence of high maternal mortality ratio evidenced by Ethiopian demographic health survey (EDHS) was 412 in 2016 which is more than the expected. One of the contributing factor for the less reduction is poor maternal knowledge on obstetric danger signs(3, 8).

Insufficient knowledge on obstetric danger signs among pregnant women are an effect on timely, appropriate management and that are a contributing factor for maternal death in the developing country (15)

Lack of knowledge on obstetric danger signs are linked with lack of preparedness contributes to the delay in utilization of skilled care. These results to high levels of maternal mortality and morbidity. The maternal morbidity and mortality could be reduced, if women and their families recognize obstetric danger signs and promptly seek health care. Increasing the knowledge of pregnant women on the danger signs would improve early detection of problems and reduces the delay in deciding to seek obstetric care(16, 17).

Despite there are efforts to decrease maternal morbidity and mortality interventions by the federal and state government of Ethiopia, like use of free maternal and child healthcare services, but still there is high in the maternal mortality ratio and decreased maternal health service utilization (3).

Health during pregnancy is essential to ensure the normal healthy and alive normal birth outcome. Therefore, to detect, predict and prevent potential complications during pregnancy, delivery and postpartum period maternal knowledge on obstetric danger sign is the first step. (18).

The Sustainable Development Goals (SDGs) now call for an acceleration of current progress in order to achieve a global MMR of 70 maternal deaths per 100 000 live births, or less, by 2030, working towards a vision of ending all preventable maternal mortality (1). So, this study aims to fill this gap by assessing the current level of women's knowledge and associated factors of obstetric danger signs among pregnant women living in Teneta woreda, Ethiopia.

1.3 SIGNIFICANCE OF THE STUDY

knowledge on obstetric danger sign is a crucial role for prevention of pregnancy related complications. Increasing maternal knowledge on obstetric danger sign is an instrument to reduce maternal mortality and morbidity using appropriate management. One of the tools to reduce maternal morbidity and mortality is adequate ANC, delivery in health facility & postpartum follow up; which is maximize by increase maternal knowledge in related to danger sign.

This study was designed with the specific focus of assessing the knowledge gap on obstetric danger sign and identify the factors to determine the maternal knowledge on obstetric danger sign among pregnant women attending antenatal care

The finding of this study will be important to guide public health planners and implementers in planning and designing appropriate intervention strategies in order to increase women's knowledge on ODS. Findings will provide information for the further researchers, policy makers to develop strategies and guidelines or standards for education of pregnant mother about danger signs. The finding also important for designing an interventional project towards improving maternal knowledge on obstetric danger sign in the study area

2. LITERATURE REVIEW

2.1 KNOWLEDGE ON OBSTETRIC DANGER SIGNS

Obstetric danger sign is a sign that occur from pregnancy up to postpartum period, which is an indicator of maternal and fetal health going to wrong in related to pregnancy.

Assessment of KODS among pregnant women's is the first step for appropriate and timely act on the prevention of pregnancy related complication. Delay in seeking care can be associated with lack of knowledge about obstetric danger signs. Knowledge about obstetric causes of maternal mortality is important to decrease the maternal mortality. understanding maternal knowledge on the obstetric danger sign is the basic measurement to attain global maternal health coverage. (19).

According to study conducted in India tertiary hospital about knowledge of danger signs among pregnancy indicates that lack of exposure to formal education and awareness of ODS was poor. knowledgeable about danger signs reveals that during pregnancy, during labor, and postnatal was 49.2%,27.2%, and 21.2%, respectively. The common danger signs enumerated by this study population were severe bleeding (20.1%), pain abdomen (8.6%), swelling of face and hands (6.7%), and reduced fetal movement (5.8%)(20)

A study conducted on social behavior package on maternal knowledge about obstetric danger signs among mothers in East Mamprusi District of Ghana shows that from a total of 1003 respondent's Only 51.1% of respondents could mention at least three of the danger signs and symptoms during pregnancy. Similarly, the most commonly mentioned danger sign of childbirth was excessive vaginal bleeding by 485(47.5%). Fast/difficult breathing and prolonged labor were mentioned by a relatively smaller percentage of the respondents. Totally the proportions of women who mention three or more danger signs during delivery in the whole sample was 29.4%, Vaginal bleeding, severe abdominal pain and decreased fetal movement were frequently mentioned as the danger signs of pregnancy(19).

A cross-sectional study conducted on knowledge of obstetric danger signs among recently-delivered women in Tanzania, Chamwino district stats that from a total 428 respondents ,108 (25.2%) respondents mentioned severe vaginal bleeding, 88 (20.6%) mentioned blurred vision,

and 86 (20.1%) mentioned swollen hands/ face. Of all respondents, 73 (17.1%), 60 (14.0%) and 68 (15.9%) respondents mentioned retained placenta, prolonged labor, and convulsions respectively(9)

studying in Uganda on knowledge of obstetric danger signs and birth preparedness practices among women in rural area indicates that, knowledge of key danger signs like severe vaginal bleeding was the most frequently mentioned complication by women during pregnancy. The majority of the respondents were able to mention at least one key danger sign in the phases of pregnancy (51.8%), childbirth (71.8%) and postpartum (71.6%). However, when the scores were combined for the three periods only 18.7% could mention at least 3 key danger signs in all three period (13).

Cross-sectional survey on knowledge of obstetric danger signs among women in rural Madagascar indicates that from a total of 372 women they mention at least one or more key danger signs during pregnancy was (80.9%).The most frequently mentioned key danger signs for pregnancy were fever (41.1%), headache (32.0%), swollen hands and body (28.8%), and vaginal bleeding (26.9%) (21).

community based cross-sectional study in Ethiopia Raya Kobo district, on Knowledge of obstetric danger signs and associated factors among reproductive age women indicates that from 493 respondents 46.7% in pregnancy, 27.8% in delivery and 26.4% in postpartum period were knowledgeable about key ODS. Vaginal bleeding (83.5%) and accelerated/decreased fetal movement (38.1%) were the two repteadely listed danger sign during pregnancy. Additionally, vaginal bleeding (91.2%) and retained placenta (58.7%) were mentioned obstetric danger signs during labor. During the postpartum period, vaginal bleeding (89.2%), offensive vaginal discharge (23.3%) and severe headache (23.1%) were the frequently known obstetric danger signs. (22).

A cross-sectional study conducted in Goba district, Ethiopia on Knowledge of obstetric danger signs among child bearing age women indicates that from a total of 580 respondents 179 (31.9%), 152 (27%), 124 (22.1%) mothers were knowledgeable about danger sign during pregnancy, Labor and postpartum period respectively. Severe vaginal bleeding in child birth 191(71.3%), and in postpartum period 150(76.5%) were the frequently listed danger sign (23).

A community based cross sectional study conducted in Debaytilatgin District on KODS and associated factors revealed that from total of 769 respondent mothers, 413 (53.7%) mentioned vaginal bleeding, 87 (11.3%) mentioned blurred vision and 49 (6.4%) severe abdominal pain as danger signs during pregnancy. Regarding to the knowledge of respondents on danger signs during labour and delivery, excessive vaginal bleeding 415 (54%), labour lasting more than 12 hours 325 (42.3%) were stated. (12).

A cross-sectional study conducted in Aneded woreda, Northwest Ethiopia on Knowledge of direct obstetric causes of maternal mortality and associated factors among reproductive age women indicates that from 844 respondents, 602(77.6%) mentioned obstetric hemorrhage, 524(67.5%) mentioned prolonged/obstructed labor. (24).

Community based cross-sectional study about knowledge on Obstetric Danger Signs and Associated Factors among Mothers in Tsegedie District, Tigray Region, Ethiopia showed that from a total of 485 respondents listed obstetric danger signs, vaginal bleeding by 238 (49.1%), swelling of the legs or face by 202 (41.6%), and absence of fetal movement by 159 (32.8%). Two hundred eighty-five (58.8%) respondents mentioned at least two danger signs during pregnancy and 170 (35.1%) didn't know any danger signs of pregnancy. The most commonly mentioned danger signs during labor and childbirth were excessive vaginal bleeding by 256 (52.8%), mal-presentation by171 (35.5%), labor lasting more than 12 hours by 151 (31.1%) and retained placenta by 146 (30.1%). Two hundred ninety-nine (61.6%) of respondents mentioned at least two danger signs during labor and childbirth. One hundred fifty-four (31.8%) didn't know any danger signs of labor and delivery. (7).

Study conducted in Yirgacheffe town, Gedeo zone, Southern Ethiopia About Knowledge of obstetric danger signs and associated factors among pregnant women attending antenatal care at health facilities with a total of 342 respondents the overall knowledge was 21.9%. among those168 (49.1%), 181 (52.9%),153 (44.7%), were found to be knowledgeable about danger signs during pregnancy, during child birth, postpartum period respectively. (8)

The study conducted in Erer district Somalia region on KODS and associated factors among pregnant women indicated that from a total of 632 respondents Only 98 (15.5 %) respondents were knowledgeable about obstetric danger signs in all categories (pregnancy, child-birth and

after childbirth). Around one third (31.8 %), one fourth (25.5 %) and around one fifth (19.1 %) of respondents had mentioned at least two danger signs during labor, pregnancy and postnatal period respectively. (25).

A study conducted in Debre Birhan on Knowledge About Danger Signs of Pregnancy and Associated Factors Among Pregnant Women shows that from a total of 355 respondents knowing of danger signs during pregnancy were 137(38.6%). From those 128(36.1%) stated that they were get information from health institutions, 116(32.7%) from friends, 91(25.6%) from health extension workers, 59(16.6%) from schools, 51(14.4%) from medical journals and 44(12.4%) from their neighbors(15)

2.2 ASSOCIATED FACTORS ON THE KNOWLEDGE OF OBSTETRIC DANGER SIGN

2.2.1 SOCIODEMOGRAPHIC BASED FACTOR

Study in East Mamprusi District of Ghana revealed that Maternal age at interview showed an independent association only with knowledge of women in the danger signs of pregnancy. Mothers aged at least 35 years were1.5 times (AOR = 1. 52) more likely to be knowledgeable about the danger signs of pregnancy as compared to those who were less than 25 years (19).

The study in Tanzania, chamwino district study factors associated with knowledge of obstetric danger signs are maternal age, maternal education, maternal occupation, and counseling on danger signs are the main one. knowledge of obstetric danger signs were two times higher among women who had primary education and above compared to those with no education (AOR = 1.96). Also, knowledge of obstetric danger signs were two times higher among employed women compared to unemployed women (AOR = 2.23). Additionally, women with an employed spouse were found to have two times knowledgeable of obstetric danger signs compared to their counterparts without an employed spouse (AOR = 2.10) (9).

Study in Raya kobo indicates that Mothers who attend secondary education were more likely to be knowledgeable about danger signs during pregnancy than illiterate (AOR: 3.63). Similarly, women who attend secondary education were about five times more likely to know danger signs of postpartum period than illiterate mothers (AOR: 5.31). Private employees were more knowledgeable about pregnancy danger signs than housewives (AOR: 5.41). (22).

The study in Goba district shows that, Mothers who can read and write were more likely to know obstetric danger signs than those who cannot read and write (AOR = 4.6). Government employee mothers were more likely to know obstetric danger signs of child birth than housewife (AOR= 3.6). Women who live in urban area were 2.2 times more likely to mention at least three danger signs during postpartum period as compared with rural counterparts (23).

Across sectional study in Debaytilatgin District revealed that Factor associated with obstetric danger sign in the binary logistic regression, analysis revealed that, being married, women education, occupation, income, and, age, By applying multiple logistic regressions, the significantly associated with dependent variables (p-values<0.05): occupation and educational status Pregnant women who had ANC follow up were 3.5 times more likely to have knowledge about obstetric danger signs during pregnancy, labor and the postpartum period when compared to those who do not have follow up (OR=3.46). married had 4.2 times more likely knowing the danger signs of pregnancy, (OR=4.2). (12).

Study in Aneded Woreda on knowledge of obstetric danger sign indicates that Factors associated by bivariate analysis were; age, educational status, occupation type, additional source of family income, family educational status, previous contact with health facility, respondents who knew the importance of medical follow-up during antenatal care, delivery and postnatal care, and previous exposure of obstetric complications like; hypertension, prolonged labor(24).

The study conducted in Yirga Chefie district showed that women in the age group 25–34 years old were 3.5 (AOR = 3.68) times more likely to be knowledgeable of obstetric danger signs in relation with women who were 35 years old and above. Women who can read and write but without formal education was 75% (AOR = 0.26) less likely to be knowledgeable about obstetric danger signs compared to women who attended secondary and above education. The chance of having knowledge of obstetric danger signs was 5 times (AOR = 4.65) higher among women whose husbands were merchant by occupation compared with governmental employed. Women living in urban areas were 3 times (AOR = 2.61) more likely to have knowledge of obstetric danger signs compared to those living in rural areas. It was figured out that knowledge of obstetric danger signs was more likely to increase among women with the age group 25–34 years old. (8).

Study in Somalia region Erer district revealed that the factor that contributed for KODS are age, educational status, occupation and living with any family member and currently attending formal education. pregnant women living in urban areas were 2.43 times more likely to have knowledge about obstetric danger signs compared to those living in rural areas (AOR = 2.43).(25).

Study in Debire Birhan on knowledge of pregnant mother on pregnancy danger sign showed that those who were from grade 9-10 (AOR= 8.53) and those who have diploma and above (AOR= 15.40) were 8.53 and 15.40 times more likely to have knowledge of danger signs during pregnancy than those who were can't read and write respectively (15).

1.2.2 REPRODUCTIVE HISTORY BASED FACTOR

Study in East Mamprusi District of Ghana revealed that pregnant mother who received adequate ANC services were about 1.5 times (AOR = 1.50) more likely to have knowledge on danger signs of postpartum compared to their counterparts who did not get adequate ANC(19)

The study in Tanzania, chamwino district study factors associated with knowledge of obstetric danger signs are stated that, the knowledge of obstetric danger signs were three times higher among women who were counseled on danger signs during ANC visits compared to those who were not (AOR = 3.42) (9).

Study in Raya kobo indicates that Mothers' who visit ANC clinic has 4 times more likely to be knowledgeable about danger signs during pregnancy than mothers' who had only one visit (AOR: 0.09). Mothers' who gave birth to their last child at health institutions were about two times more knowledgeable about labor danger signs than their counterparts who gave birth at home (AOR:2.41) (22).

Across sectional study in Debaytilatgin District revealed that Factor associated with obstetric danger sign in the binary logistic regression, analysis revealed that, being adequate ANC follow up, parity, and number of ANC, place of delivery was found to be an independently significant association with knowledge of obstetric danger signs. By applying multiple logistic regressions, the significantly associated with dependent variables (p-values<0.05): were Parity, marital status, ANC, place of birth, labor and the postpartum period when compared to those who do

not have follow up (OR=3.46). multi parity were 2.87 times more likely to know about obstetric danger signs when it compared to parity one (12).

Community based cross sectional study in Tsegedie district indicates that Mothers who previously gave birth in health institutions were about 12 times knowledgeable (AOR=11. 87)in pregnancy and (AOR=12.2) in childbirth about the obstetric danger signs as compared to those who gave birth at home (7).

Study in Somalia region Erer district revealed that Women who had been pregnant five or more times were 6.65 times more likely to be knowledgeable about obstetric danger signs compared with prim gravida women (AOR= 6.65) (25)

Study in Debire Birhan on knowledge of pregnant mother on pregnancy danger sign showed that women those who had ANC follow up in previous pregnancy were 2.03 times more likely to have knowledge of danger signs during pregnancy than those who didn't have previous pregnancy ANC follow up(15).

2.2.3 SOURCE OF INFORMATION BASED

Study in Aneded Woreda on knowledge of obstetric danger sign indicates that, source of information (radio), were significantly associated(24).

Community based cross sectional study in Tsegedie district indicates that Having a functional radio and/or television a significant association with the mentioning of at least two danger signs of pregnancy (AOR=2. 41) and childbirth (AOR=2. 04) (7).

The literature review indicates that there are supporting evidence about knowledge of ODS. reported rates of knowledge on obstetric danger sign vary from study to study. Additionally, some studies report on general rates of knowledge, other report on each individual rate knowledge which is differ greatly. Findings most often indicate poor knowledge on obstetric danger sign. Good knowledge most frequently seen in education label secondary and above. The overall tools that are used by different researchers for assessing knowledge are Vaginal bleeding, Difficulty of breathing, Loss of consciousness, High fever Severe Headache, Severe abdominal pain, blurred vision, Convulsion, Swollen Hand/face, Vaginal discharge, Mal-position/presentation, retained placenta, Labor lasting >12 hour

2.3 CONCEPTUAL FRAMEWORK

Studies and reports in different parts of the world reviewed different factors associated with knowledge of obstetric danger signs. For this study according to the literature review the main factors identified are socio demographic factors like age, educational status, occupation and income. This conceptual framework was adapted by the author from the literature. Different literatures suggest that reproductive history could affect negatively and positively the KODS

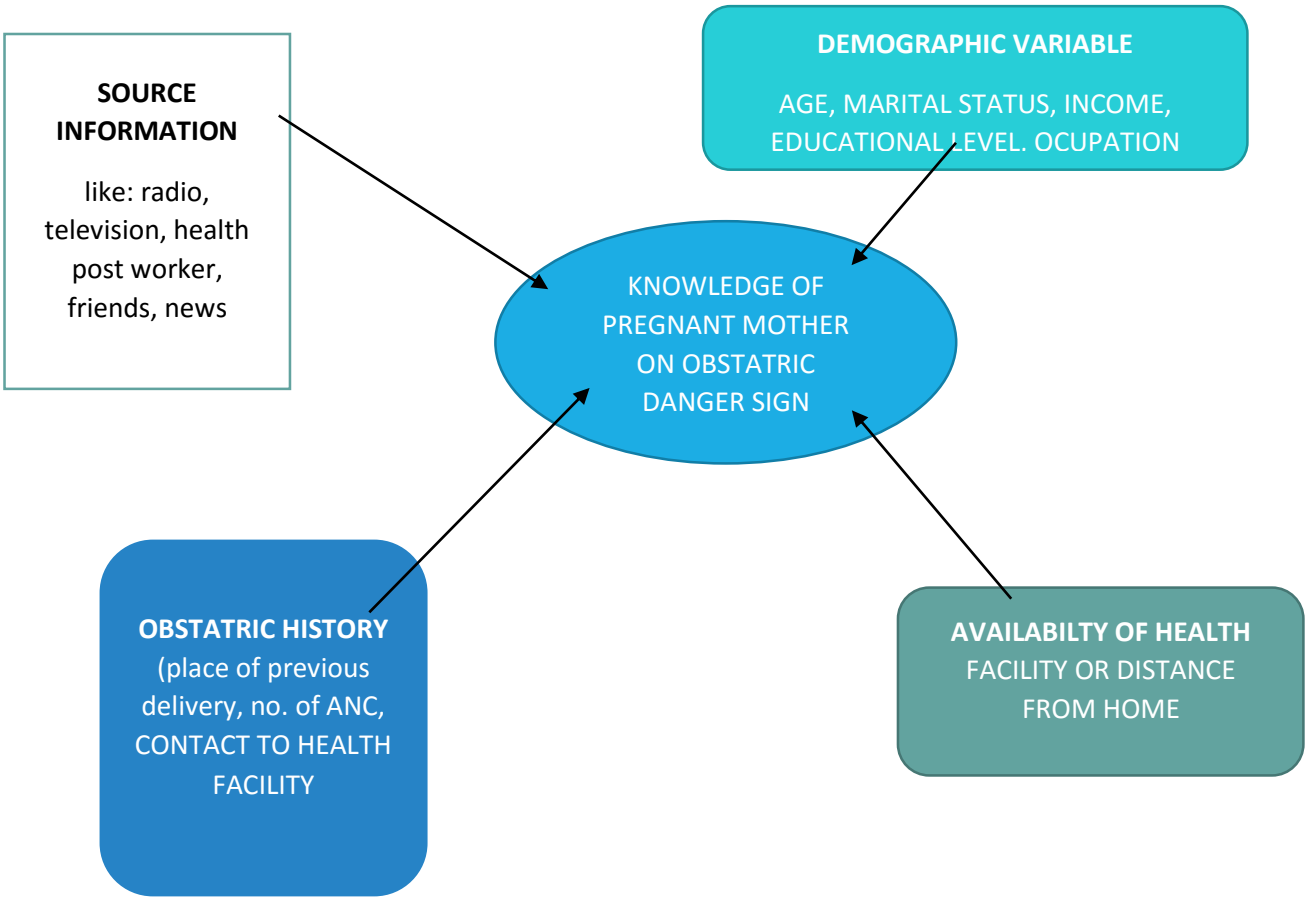

Figure 1:- Conceptual framework on knowledge of obstetric danger sign and associated factors among pregnant mother

2. OBJECTIVES

3.1 GENERAL OBJECTIVE

- The general objective of this study was to assess the Knowledge of obstetric danger signs and associated factors among pregnant women attending antenatal care at health facilities in Tenta Woreda, north Ethiopia,2019

3.1 SPECIFIC OBJECTIVES

-To assess the Knowledge of pregnant Mother on obstetric danger signs Tenta Woreda.

-To identify factors affecting knowledge regarding obstetric danger signs among pregnant mothers in Tenta Woreda.

4. METHODS AND MATERIALS

4.1. STUDY AREA

This study was conducted in tenta woreda, which is one of the woreda in Debub wollo zone amhara region of Ethiopia. Tenta woreda is located between 11°20′ north latitudes and 39°05′east longitudes with a total land area of 1316.34 square kilometers. Its capital city is Adjibar which is located 524 km north of Addis Ababa, and 601 km from Bahirdar, the capital city of Amhara Regional state and 128 kilometers from Dessie capital city of debub wollo. Tenta is bordered by legambo in south, by sayint in south west, by magdala in west, by beshilo river in north and kutaber in the east.

According to the 2007 Census conducted by Central Statistical Agency of Ethiopia (CSA); the woreda had a total population of 166,239 from those 81,938 are men and 84,301 are women. The largest ethnic group in the woreda has Amhara (99.93) and has 3 urban kebele and 29 rural kebele.

The woreda has also 30 health post and nine health centers and one primary hospital. The study includes nine health center and one primary hospital which have maternity service.

4.2 STUDY PERIOD

This study was conducted from April 20 to May 05, 2019.

4.3. STUDY DESIGN

Institution based cross sectional study was conducted

4.4 POPULATION

4.4.1 SOURCE POPULATION

All pregnant mothers who were living in Tenta Woreda

4.4.2 STUDY POPULATION

All pregnant mothers who had antenatal visit in Tenta Woreda health facilities

4.4.3 STUDY UNIT

The selected pregnant mother who follow antenatal care in health facilities at the time of data collection

4.5 INCLUSSION AND EXCLUSSION CRITERIA

4.5.1 INCLUSION CRITERIA

All pregnant mothers who had ANC follow up during data collection and willing to participate were included.

4.5.2 EXCLUSION CRITERIA

Those who were unable to speak and hear, have mental health problem and were critically ill were excluded from this study.

4.6 SAMPLE SIZE DETERMINATION

Single population proportion formula was used to estimate the sample size and the following

assumptions were made: -a proportion of 21.9% knowledgeable on obstetric danger signs from Yirga chefe(8) .

Level of significance 5% (α= 0.05), 95 % confidence level (Z α/2 = 1.96) and absolute precision or margin of error 5% (d = 0.05).

The following formula were used to calculate sample sizes.

n =$(Za/2)2*p(1-p)/d2$; then after substituting $\frac{(1.96)2\ (0.219*0.781)}{(0.05)2}$ =268

The minimum sample size required for the study was estimate to be 268 then by adding 10% for possible non-response rate, a total sample size of 293 were obtained

4.7 SAMPLING TECHNIQUES AND PROCEDURES

There were nine health centers and one primary hospital in tenta woreda, all health facilities were included in the study. Information regarding 2018 ANC attendance was collected from the selected health facilities for this study. (Depicted in the diagram below) which is on the basis of this proportional allocation of samples were made for each facility. Then study participants was selected using systematic sampling method from each health facility.

K= Study population/sample size, which was 739/293=2.5 and the formula to calculate from each facility were = $\frac{\textbf{facility population x total sample size}}{\textbf{Total population in health facilities}}$

then the sample from each facility were for

Yerima 81x 293/739 =32

For wortej =71x293/739=28

For mekena= 57x293/739 =23

For adjibar= 210x 293/739=83

For fito 59x293/739 =23

For Kollo 42x293/739=17

For Tenta 51x293/739=20

For Ambemariam =63x293/739=25

For Sadakorkora =66x293/739=26 and

For Tenta primary hospital= 39x 293/739=16

One every 2 pregnant mother selected, and k is first select by lottery method. and the health facilities participant were selected after proportional allocated as shown the diagram below

The Following Figure shows Schematic representation of the sampling procedure.

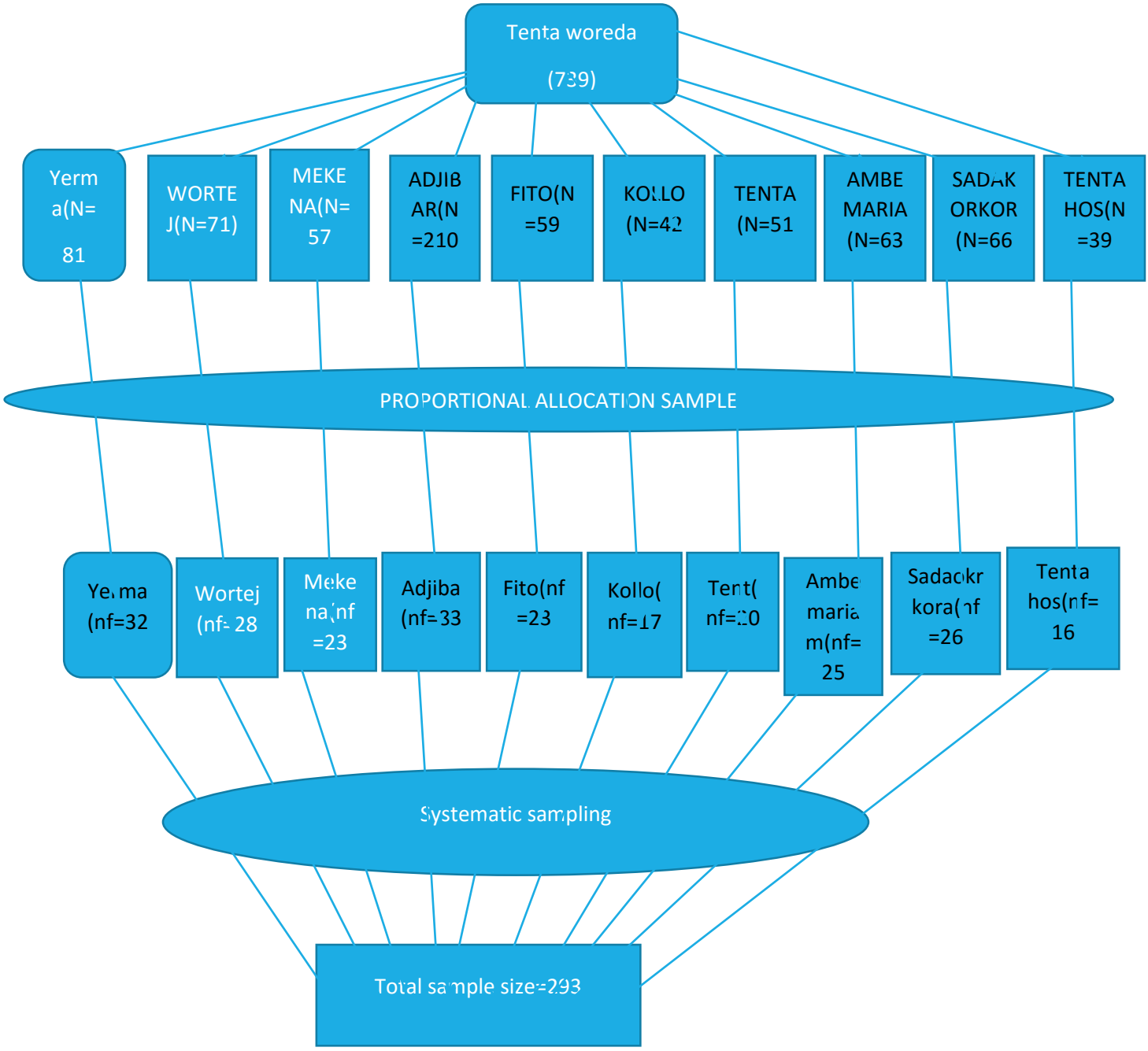

Figure 2:-schematic representation of sampling procedure for the study on knowledge of obstetric danger signs and associated factors among pregnant mothers in Tenta woreda

4.8 VARIABLES

4.8.1. DEPENDENT VARIABLE

Knowledge of pregnant mother on obstetric danger sign

4.8.2. INDEPENDENT VARIABLES

- **Demographic variables**
  - ✓ Age, marital status, income, education level,
  - ✓ Occupation
  - ✓ Parental education level
  - ✓ Residence
  - ✓ Parental educational level
- **Obstetric history**
  - ✓ place of previous delivery,
  - ✓ Number of ANC
  - ✓ Contact to health facility
- **Availability of health facility(distance)**

4.9. DATA COLLECTION INSTRUMENT

Structured questionnaire adapted from the result of different research done on KODS. It was first prepared in English and translate to Amharic then back to translate to English by expert. The questionnaire has 3 sections: the first section was socio demographic based questionnaire, the second section were reproductive history based questionnaire and the third were knowledge based questionnaire about ODS

4.10 DATA QUALITY CONTROL

The questionnaire was prepared first in English and translated in to Amharic and back translated to English by different qualified individuals to keep consistency of the data. Two-day training was given for data collectors on how to fill the questionnaire and overall data collection process before the actual time of data collection. pretest was conducted in 5% of sample size at similar population in akista woreda which was not include in the study. And correction was done in spelling error and local language for better understanding. Data was checked daily for completeness and consistency during data collection

4.11 DATA COLLECTION PROCEDURE

Training for data collectors and supervisor was given on the planned date. The data collection formats were made ready for use. Instruments was pre-tested before the actual data collection on the planned date.

The participants were requested to complete the questionnaire. Following informed consent and screening for exclusion criteria, each individual participant was requested to respond to the questionnaire. Primary data was collected from pregnant mothers who had ANC follow up in selected health facilities using interviewed method and Amharic version questionnaire used from April to May. For each facility one nurse or midwife was assigned to collect data. During data collection supervision was carried out and daily checking of the collected data was made.

Data collectors was supervised and questionnaire was checked for completeness and accurateness to determine the validity to the questionnaire. Any problem, arise during the data collection process appropriate intervention was made by the principal investigator

4.12. DATA ANALYSIS

Data was entered by epi data (version 4.2.0.0) and analyzed using SPSS software (version 25.0). It was coded, and cleaned before analysis. Using a confidence interval of 95% and p- value 0.05. Descriptive statistics was calculating to describe knowledge on obstetric danger signs. Binary logistic regression done to analyze the relationship between the dependent and independent variables.

Multiple logistic regression was used to analyze statistical significance because confounding variables can affect the binary logistic regression. Tables and graphs was used to present the results.

4.13 ETHICAL CONSIDERATION

Ethical clearance was received from AAU college of Health science, school of nursing and Midwifery research team prior to data collection. A formal letter was written by the department of nursing to the concerned office. Permission were asked from the responsible body of the unit. Each study participant was adequately informed about the purpose, methods, and anticipated benefits of the study by the data collectors. Respondents who were volunteer and was available at the time of data collection were interviewed without writing their names to ensure

confidentiality. Used reference materials for the study was coated and cited with their proper Authors, funding organization, the study subject, the institution, advisors and people supporting in searching literature (digital Liberian,) data collector, supervisors and all peoples contribute genuine suggestion and advise was duly acknowledged.

4.14. OPERATIONAL DEFINITIONS

OBSTETRIC DANGER SIGN: -are signs that occur due to pregnancy, childbirth and postpartum which endanger the health of the mother or fetus.

KNOWLEDGE: - Mothers, who know and understand the danger sign that will happen during pregnancy, childbirth and postnatal period

KNOWLEDGEABLE ON OBSTETRIC DANGER SIGN: - In this study there are 13 prenatal based danger sign, 10 child births danger sign and 9 postnatal based danger sign

- **Good knowledge: -** the respondent mention at least three key obstetric danger signs for each of the three periods (pregnancy, delivery and postpartum)
- **poor knowledge**: - the respondent maintains less than three key obstetric danger sign for each of the three periods (pregnancy, delivery and postpartum)

MATERNAL MORTALITY: - The death of a woman while pregnant or within 42 days of termination of pregnancy, from any cause related to or aggravated by the pregnancy

4.15 DISSMINATION OF THE RESULTS

Based on the work plan after data was collected and analyzed conclusion was drowning and discussion was made and public defense will be done at AAUHSC department of Nursing and Midwifery. After accommodating the external /internal examiner comment, and after getting permission from the concerned authority, information will be disseminated for the concerned body and to the public and publication of the findings will be considered.

5. RESULT

5.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Out of the total 293 mothers who were planned for the study, 287 were successfully interviewed yielding the response rate of 98%. The mean age of the respondents was 25.9 years (range 23 years). Most of the study participants were muslims,173 (60.3%). Majority of the respondents 255(88.9%) were married and 181 (63.1%) of them were housewife. Regarding their education 154(53.7%) of the participants had primary educational level.

Regarding partner education 128 (44.6 %) of respondents' husbands did receive primary education, and 152 (53 %) were involved in farmer. In case of getting information about obstetric danger signs, 153(53.3%) got information from colloquies. (see table 1. below)

Table 1:sociodemographic characteristics of respondents in tenta woreda health facilities,north Ethiopia,2019

Characteristics	Frequency	Percent
Age of respondents in year(n=287)		
<20	45	15.7
21-25	99	34.5
26-30	84	29.1
31-30	24	8.2
>35	35	12.5
Religion(287)		
Muslim	173	60.4
Orthodox	102	35.5
Protestant	11	3.8
Catholic	1	0.3
Marital status(n=287)		
Unmarried	17	5.9
Married	255	88.9
Divorce	13	4.5
Widowed	2	.7
Occupation(n=287)		
House wife	181	63
Civil servant	43	15
Farmer	28	9.8
Merchant	16	5.6
Daily labour	19	6.6
Educational level(n=287)		
Illiterate	52	18.1
Primary	154	53.7
Secondary	37	12.9

Collage and above	44	15.3
Residency (n=287)		
Urban	89	31
Rural	198	69
Paternal education(n=270)		
Illiterate	40	14.8
Primary	128	47.4
Secondary	63	23.3
Collage and above	39	14.5
Paternal occupation excluded the unmarried(n=270)		
Civil servant	31	11.5
Farmer	152	56.3
Merchant	71	26.3
Daily labour	16	5.9
Monthly income in birr in birr(n=287)		
0-600	93	32.4
601-1650	95	33.1
1651-3200	48	16.7
>3201	51	17.8
Distance from home to the nearest HF in minute (n=287)		
10-65	176	61.3
66-121	92	32.1
122-180	19	6.6
In case of getting information about ODS for alternative (n=287)		
From health personnel	104	36.3
From media	99	34.5
From family	97	33.8
Colloquies	153	53.3
From school	24	8.4

5.2 OBSTETRIC CHARACTERISTICS OF THE PARTICIPANTS

From the total number of respondents 111(38.7%) had history of 2-4 pregnancies and 19(6.6%) mothers were pregnant for more than four times. The other was first pregnancy. Majority, 262(81.3%) of the respondents had no history of abortion but only 25(8.7%) respondent had history of abortion births. In the case of previous history of antenatal care, 84(29.3%) had ANC (Antenatal Care) follow up.

Table 2:obstetric characteristics of respondents in tenta woreda,ethiopia,2019

previous obstetric characteristics	Frequency	Percent
Number of pregnancy (n=287)		
1	157	54.7
2-4	111	38.7
>=5	19	6.6
number of follow up in this pregnancy (n=287)		
1	131	45.6
2	61	21.3
3	56	19.5
>=4	39	13.6
ANC in previous pregnancy for those history of previous pregnancy(n=130)		
Ayes	84	64.6
No	46	35.4
previous place of delivery for those history of previous delivery(n=122)		
health facility	45	36.9
Home	38	31.1
Health facility and home	39	32
history of abortion(n=287)		
Yes	25	8.7
No	262	91.3
previous health facility contact (n=287)		
Yes	145	50.5
No	142	49.5

5.3 KNOWLEDGE ON OBSTETRIC DANGER SIGNS.

5.3.1 KNOWLEDGE ON OBSTETRIC DANGER SIGN DURING PRENATAL PERIOD

The Knowledge of obstetric danger signs during prenatal period were, 128 (44.6%) and 159 (55.4%), mothers were found to be not knowledgeable about danger sign during pregnancy. Most of the respondents (71.4%) knew that vaginal bleeding is a danger sign during pregnancy, reduce fetal movement was another danger sign identified by 32.4 % of respondents and from participants who were no listed any perinatal danger signs were 33(11.5%) as shown in table two below.

Table 3:the knowledge of respondent's on danger signs of prenatal period in tenta woreda ethiopia,2019

Respondent's knowledge on obstetric danger sign during pregnancy(n=287)		
Danger sign	Number of respondents who list pregnancy danger sign	Percent
Vaginal bleeding	205	71.4
Lag and face edema	66	23
Blurring of vision	63	22.4
Severe headache	46	16
Loss of consciousness	35	12.2
Difficult of breathing	39	13.6
Severe weakness	51	17.8
Severe abdominal pain	52	18.1
Reduce fetal movement	93	32.4
Water break before labour	44	15.3
Malodorous vaginal discharge	36	12.5
Persistent back pain	66	23
Persistent vomiting	94	32.8

5.3.2KNOWLEDGE ON DANGER SIGNS DURING LABOR AND CHILDBIRTH

The knowledge of respondents during child birth were, 140 (48%) and 147(51.2%), of women under the study were found to be not knowledgeable about danger sign during labour. Majority of the respondents (76.0%) knew that Severe vaginal bleeding is a danger sign during childbirth and 39.4%,31% were identified that retained placenta and cessation of labour were another danger sign that listed repeatedly by the respondent respectively. 22(7.7%) were no listed any danger sign. (see the table below)

Table 4.participants knowledge on obstetric danger signs during labour and child birth in Tenta Woreda,Etiopia,2019

Danger sign	No. of respondent who list labour danger signs	Percent
Severe vaginal bleeding	218	76
Coming of cord before head	72	25.1
Labour lasting more than 12 hrs.	32	11.1
Convulsion	48	16.7
Water break more than 8hrs	27	9.4
Malpresentation	68	23.7
Retained placenta	113	39.4
Persistent severe abdominal pain	63	22
High fever	45	15.7
Cessation of labour	89	31

5.3.3 KNOWLEDGE ON DANGER SIGNS DURING POSTPARTUM PERIOD

From a total of 287 respondents,132(46.0%) were knowledgeable and 155 (54.0%) study participants were found to be not knowledgeable about danger sign during postpartum period. Most of the respondents (71.8%) knew that severe vaginal bleeding is a danger sign during postpartum period. Severe abdominal pain, face and lag edema and sever weakness are repeatedly listed danger sign during postnatal and 29(10.1%) respondents were no listed any danger sign as shown the table below

Table 5:participants knowledge on postnatal danger sign in tenta woreda, ethiopia, 2019

Respondent's knowledge on obstetric danger sign during postnatal(n=287)		
Danger signs	No. of respondent who list postnatal danger sign	Percent
Severe vaginal bleeding	206	71.8
Abdominal pain	96	33.4
Fever	54	18.8
Offensive vaginal discharge	37	12.9
Convulsion	52	18.1

Severe weakness	81	28.2
Blurring of vision	70	24.4
Lag and face edematous	96	33.4
Uterine prolapse	59	20.6

5.3.4THE OVER ALL KNOWLEDGE OF RESPONDENTS.

The knowledge of obstetric danger signs in combination of the three tracks (prenatal, labor and child birth and postnatal period) as shown the figure below

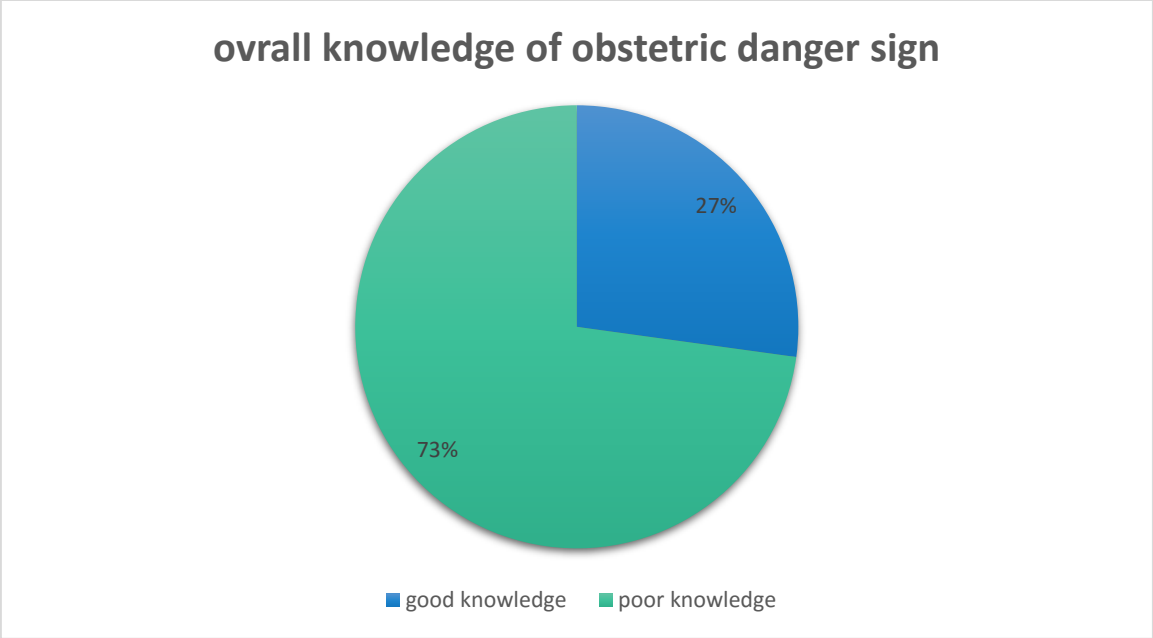

Figure 3 THE KNOWLEDGE OF PREGNANT MOTHER ON OBSTETRIC DANGER SIGN IN COMBINATION OF PRENATAL,CHILD BIRTH AND POSTNATAL IN TENTA WORED,ETHIOPIA,2019

5.3 FACTORS AFFECTING KNOWLEDGE OF OBSTETRIC DANGER SIGNS

Over all knowledge indicates that participants who list a minimum of three obstetric danger signs from each track (perinatal, child birth and postnatal). Crude odd ratio indicates that the age of pregnant mothers had an impact for maternal knowledge on obstetric danger signs, being maternal age 31-35 has seven times knowledgeable than age less than 20 (COR=7.32,95% CI=1.98,27.1).

In this study maternal educational status was significantly associated with knowledge about obstetric danger signs. Respondents who had a secondary education level had almost five times knowledgeable, (AOR=4.7 and 95% CI=1.00,32.01) than illiterate. The study showed that

mothers, who worked as civil servant, were about 9.8 times more knowledgeable about danger signs of pregnancy than housewives, (AOR=9.8 and CI=1.53,62.997).

Frequency of Antenatal care (ANC) visit was significantly associated with respondents' knowledge about obstetric danger signs. Mothers having four ANC follow-ups were thirteen times knowledgeable about obstetric danger signs than mothers having only one visit. Residence were an effect on the knowledge of mothers about obstetric danger signs, participants who were leave in urban area were three times knowledgeable than participants who leave in rural area AOR=3.1, and 95%CI=1.059, 9.34).

Health facility contact would increase the knowledge of health related problem, respondents who had previous health facility contact related to their health had eleven times knowledgeable than those who had no contact rather than the current pregnancy checkup (AOR=11.3, 95% CI=3.756,34.11) as shown in the table below

Table 6:The binary and multivariate regression of participants knowledge on obstetric danger sign in tenta woreda,Ethiopia,2019

Independent variable	Good knowledge N(%)	Poor knowledge N(%)	COR (95% CI) overall knowledge on ODS	P-value	AOR (95% CI) overall knowledge on ODS	p-value
AGE						
>20	4(8.9)	41(91.1)	1		1	
21-25	24(24.2)	75(75.8)	**3.28(1.06,10.1)**	**0.038**	3(.941,9.85)	0.063
26-30	32(38.1)	52(61.9)	**6.3(2.06,19.277)**	**0.001**	1.448(0.391,5.34)	0.579
31-35	10(41.7)	14(58.3)	**7.32(1.98,27.1)**	**0.003**	0.625(0.10,3.85)	0.602
>36	8(22.9)	27(70.1)	3.03(0.83,11.02	0.093	0.439(0.077,2.51)	0.356
Religion						
Muslim	37(21.4)	136(78.6)	1		1	
Orthodox	36(35.3)	66(64.7)	2(0.20,3.42)	0.12	1.4(0.638,3.13)	0.394
Protestant	4(36.4)	7(63.6)	2.1(0.58,7.56)	0.256	0.47(0.043,5.16	0.538
Catholic	1	0	Xx		Xx	
Occupation						
House wife	25(13.8)	156(86.2)	1		1	
Civil servant	36(83.7)	7(16.3)	**32(12.8,79.97)**	**0.000**	**9.8(1.53,62.997)**	**0.016**
Farmer	5(18.9)	23(81.1)	0.57(0.47,3.89)	1.357	0.879(0.246,3.14)	0.843
Merchant	12(75)	4(25)	**18(5.59,62.639)**	**0.000**	2.46(0.265,22.8)	0.429
Daily labor	0	19	0.124(0.016,0.95)	0.16	0.115(0.009,1.4)	0.090
Educational status						
Illiterate	5(9.6)	47(90.4)	1		1	
Primary	16(10.4)	138(89.6)	1.09(0.38,3.137)	0.87	**6.38(1.78,22.9)**	**0.005**
Secondary	23(62.2)	14(37.8)	**15(4.95,48.110)**	**0.000**	**4.7(1.00,22.01)**	**0.049**
Collage and above	34(77.3)	10(22.7)	**31.9(10.02,102.5)**	**0.000**	3.28(0.39,27.774)	0.277
Marital status						
Unmarried	2(11.8)	15(88.2)	1		1	
Married	73(28.6)	182(71.4)	3(0.67,13.48	0.15	0.18(0.026,1.25)	0.083
Divorce	2(15.4)	11(84.6)	1.36(0.166,11.233	0.773	0.007(0.00 , 0.192)	**0.003**
Widowed	1	1	Xx	xx	xx	Xx
Monthly income in birr						
0-600	7(7.5)	86(92.5)	1		1	
601-1650	18(18.9)	77(81.1)	**2.87(1.138,7.247)**	**0.025**	1.5(0.610,3.75)	0.370
1651-3200	18(37.5)	30(62.5)	**7.37(2.8,19.38)**	**0.000**	**4(1.34,12.17)**	0.013
>=3201	35(68.6)	16(31.4)	**26.9(10.18,70.98)**	**0.000**	**6.3(1.3,30.55)**	0.021
Residence						
Rural	20(10.1)	178(89.9)	1		1	
Urban	58(65.2)	31(34.8)	**16.6(8.8,31.44)**	**0.001**	**3.1(1.059,9.34)**	0.039
No. of follow up						
First	14(10.7)	117(89.3)	1		1	
Second	4(6.6)	57(93.4)	0.56(0.185,1.89)	0.365	**3.8(1.535,9.55)**	0.004
Third	36(64.3)	20(35.7)	**15(6.90,32.76)**	**0.000**	**8.7(2.09,36.319**)	0.003
>=fourth	24(40)	36(60)	**13.4(5.71,31.3)**	**0.002**	**12.8(1.28,128.39)**	0.030
Gravidity						
I	34(21.7)	123(78.3)	1		1	
II-IV	38(34.2)	73(65.8)	**1.88(1.09,3.25)**	**0.023**	0.847(0.32,2.22)	0.736
>=V	6(31.6)	13(68.4)	1.67(0.59,4.72)	.334	5.2(0.89,30.3)	0.067
Previous Health facility contact						
Yes	72(49.7)	73(50.3)	**22(9.27,53.9)**	**0.000**	**11.3(3.756,34.11)**	0.000
No	6(4.2)	136(95.8)	1		1	
Gate information from health personnel						
Yes	71(68.3)	33(31.7)	**54(22.87,127.9)**	**0.000**	**1.7(1.705,19.22)**	**0.032**
No	7(4.8)	176(95.2)	1			
From Media						
Yes	66(66.7)	33(33.3)	**29(14.29,60.19)**	**0.000**	**2.12(7.80,12.3200**	**0.004**
No	12(6.4)	176(93.6)				

6. DISCUSSION

The finding of this study indicated that the maternal knowledge on obstetric danger sign in the combination of three periods (prenatal period, child birth and postnatal period) were 78(27.2%). This finding is almost in line with the study finding in Yirgachefe (21.9%) (8). The similarity is may be due to almost similar, education level, pregnancy history, health facility contact. This finding was also higher than the study finding in errer, Somalia (15.5%), Uganda (18.7) and lower than the study finding in Debaytilatgin (56.8), mamprusi, Ghana (51.1) (12, 13, 19, 25). The difference is may be the population difference of the study unit in which the study were done reproductive age group, the health related strategy difference specially the studies those out of Ethiopia.

Below half of the respondents were, 128 (44.6%) knowledgeable about danger sign during pregnancy. This finding is consistent with the study conducted in Raya kobo, (46.7%), India (49.2) in which respondents mentioned at least three danger signs of pregnancy (20, 22). But higher than the study finding in Goba district, Ethiopia (31.9) (23). the difference is may be due to the study participant's education level, the residence of participants, the previous pregnancy difference of participants, the health professional awareness difference.

From the women under the study, 140 (48%) were knowledgeable about danger signs during labour and child birth. This finding was higher than the study finding in Raya, (27.8%), Goba district (27%) (22, 23). The difference is may be due to the participant's education level, the study population, and the reproductive history difference and the health education of professional's.

Additionally, 132 (46%) were knowledgeable about danger signs during postpartum period which is consistent with similar study in Yirgachefe (44.7%) in which women know at least three danger signs during postpartum period(8). The finding were not consistent with the study in Uganda (71.6%) (13). ThIS difference might be due to the difference of their variation in sociodemographic aspect, the education level, the residency of respondents.

In this study, Vaginal bleeding was the frequently listed obstetric danger sign during prenatal, 205 (71.4%), labour, 218 (76%) and postpartum period, 206 (71.8%). So it is less likely listed from the finding in Raya kobo,(83.5%) in prenatal, (91.2%) in child birth and (89.2%) in

postpartum(22) This could be an indication of awareness difference for women that bleeding is the main and fastest cause of maternal mortality. Blurring of vision 64(22.3), leg and face edema 66 (23%) and convulsion has listed by16.7 % were the obstetric danger signs mentioned by the study participants. These findings were consistent with the study conducted in chamwino, Tanzania, which had 20.6%, 20.1% and 15.9% in blurred of vision, swallow of leg and face and convulsion respectively(9). This similarity was might be due to approached sociodemographic condition, education level.

Regarding to the variable in which independently associated with knowledge of obstetric danger signs, participants who had secondary education level were 4.7 times knowledgeable about obstetric danger sign than illiterate (AOR=4.7, 95% CI=1.00,22.01). this finding was in line with the study conducted in in Tanzania, AOR=1.96, and Raya kobo, AOR=3.63(9, 22). This is the fact that education was one instrument to increase the understanding ability of maternal fitness to knowledge. Also, knowledge of obstetric danger signs were ten times higher among civil servant women compared to house wife (AOR = 9.8, 95% CI=1.53,62.997).This finding were consistent with the study finding in Goba district(23)

Women who live in urban area were three times more likely to mention at least three obstetric danger signs as compared with rural counterparts (AOR=3.1, and 95%CI=1.059,9.34). This variable was also found to have a significant association with other study conducted in Goba district, yirgachefe and erere, Somalia (8, 23, 25). This could be due to the fact that urban residents have better access to health information and maternal health services as compared with rural counterparts.Multivariate regression indicates that increase the number of Antenatal care follow up also increase the maternal knowledge on obstetric danger signs, participants who had four or more visited were 13 times knowledgeable on obstetric danger sign than one visitor, (AOR=12.8, 95%CI=1.28,128.39) this finding was in line with the study finding in Debaytilatgin, AOR=3.46 (12). In the binary logistic regression, analysis revealed that, adequate ANC follow up, women education, occupation, parity, income, and number of ANC, age, residence were found to be an independently significant association with knowledge of obstetric danger signs. This finding was congruent with the study finding in Debaytilatgin (12). This similarity may be due to all most similar sociodemographic aspect, health issue related policy.

7. LIMITATIONS OF THE STUDY

- The limitations of this study could be the small sample size which may make estimates unstable and associations between dependent and independent variables undetectable.
- The method cross sectional was another limitation, in which no detect cause and effect

8. CONCLUSION

In this study a significant proportion of mothers were not knowledgeable about the danger signs of pregnancy, labor and childbirth and postnatal. This indicates that many mothers were not have knowledge on obstetric dangerous signs and not appropriate seeking health care during antenatal care. Sever Vaginal bleeding was the most common spontaneously mentioned danger signs among the three periods. According to the result of this study, age, level of education, occupation, residence, health facility contact, antenatal care follows up were the predictors association factor for knowledge of mothers about obstetric danger signs during pregnancy, labor and post-partum period.

9. RECOMMENDATION

- ❖ For health facility
- ✓ Health professional should put efforts towards empowering women with education. It seems that educated women can retain the information received during ANC visit.
- ❖ For FMOH, regional health bureau, zonal health department, Woreda health office as well as other partner organizations working in the areas of reproductive health
- ✓ should strengthen and scale up strategies including: -
    - ➢ provision of information, education and communication targeting women, family, and the general community to promote the knowledge of women about obstetric danger signs
    - ➢ to design and distribute the maternal health booklets that highlight the obstetric danger signs
    - ➢ to encourage antenatal care providers and community health workers to provide frequent health education about these danger signs for all pregnant women.
    - ➢ ANC providers should improve the quality of counseling about obstetric danger signs and ensure that, every pregnant woman during ANC visit receive this counseling.
- ❖ For researcher
- ✓ The finding of this research indicates that maternal KODS were poor and the quality of counseling on antenatal care may or may not be possible reason. There for the recommendation to further researcher were to assess the quality of counseling in related to maternal knowledge on obstetric danger sign

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ANNEX I: INFORMATION SHEET FOR STUDY SUBJECTS

You are kindly invited to participate in this study, which involves all pregnant mother in antenatal care unit. The aim of this study is to assess knowledge of pregnant mother on obstetric danger signs and associated factors in Tenta woreda health facility antenatal care unit. Knowledge on obstetric danger sign is the corner stone in preventing further obstetric complication and use for appropriate management. Understanding obstetric danger sign is crucial to prevent morbidity and mortality for both mother and baby of the pregnant mother. Therefore, this study will be important by giving evidence about knowledge on danger signs of pregnancy among pregnant mother.

A. Purpose: the purpose of this study is to assess knowledge of pregnant mother on obstetric danger signs and associated factors in Tenta woreda health facility antenatal care unit

B. Duration: The duration of this study is from February15, 2019 to March 30, 2019

C. Procedures to be carried on: the procedure of data collection is easy and straight forward; data concerning your socio demographic characteristics, knowledge obstetric danger sign and reproductive history using standardized questioner by interviewer.

D. Risk and discomfort: there will be no any risk associated during data collection.

E. Expected benefits: You will not get special and direct benefit from this study. However, the finding of this survey will be useful for all pregnant mother in the future because this study result will be able us to understand the factor affect their knowledge on obstetric danger signs which is useful in delivering improved health service based on pregnant need.

G. Confidentiality: All your personal information collected for the purpose of the present study will be kept confidential.

H. Compensation: No compensation will be provided by participating in this study.

I. Termination of the study: Participation in the study is voluntary, and refusal to participate involves no penalty or loss of benefits to which you are otherwise entitled. The study participants have a right to

Keep hold information

Decline to cooperate in the study

To refuse provision of data

If you have question about the study the address of the principal investigator is:

Mohammed Legas Bereinto

Department of Nursing & Midwifery

College of Health Science, Addis Ababa University

Tel: 0921530286, e- mail address: - mohalegas86@gmail.com

ANNEX II: INDIVIDUAL CONSENT FORM

ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCE DEPARTMENT OF NURSING AND MIDWIFERY INDIVIDUAL CONSENT FORM FOR THE STUDY ON: ASSESSMENTS OF KNOWLEDGE OF PREGNANT MOTHER ON OBSTETRIC DANGER SIGNS AND ASSOCIATED FACTORS IN TENTA WOREDA HEALTH FACILITY ANTENATAL CARE UNIT, DEBUB WOLLO, ETHIOPIA, 2018/9.

My name is _____. I am working with the master's degree student Mohammed Legas, Addis Ababa University. Here at _____ Health facility unit we are interviewing pregnant women on knowledge of obstetric danger signs and associated factors. We believe that this study would help to bring increase knowledge on obstetric danger sign. We would like to assure your name will not be mentioned in the questionnaire and the information that you will give us will be kept confidential and only used for research purpose. You have full right to refuse to take part or to interrupt the interview at any time. But the information that you will give us is quite useful to achieve the objective of the study and to bring increase knowledge on obstetric danger sign.

Are you willing to participate in the study? 1- Yes 2 - No

If the answer is yes, thanks! Conduct the interview. If the answer is no, Thanks!

Don't force or reinforce an individual to participate in the survey

Interviewer's code ---------name ---------- signature -------

Date of interview ---------- date ----------month/2011 E. C.

Time of interview began _____ hours: minutes

Time of interview finished_____ hours: minutes

Checked on ---------- date----------month/2011E.C.

Complete 1

Incomplete 2 Other (specify) ----

QUESTIONNAIRE

SECION I SOCIO DEMOGRAPHIC CHARACTERISTICS

No.	Question	Response	Skip
1	How old are you?	……year (in completed year)	
2	What is your marital status?	A, single B, Married C, divorced D, widowed	
3	What is your religion?	A, Muslim B, orthodox C, protestant D, catholic E, other	
4	What is your occupation?	A, hause wife B, civil servant, C, farmer D, Merchant E, student F, other	

5	What is the highest education level you completed?	A Unable to read and write B. Able to read and write C. Primary D. Secondary E. College and above F. Other (Specify)	
6	Husband educational level	A. Illiterate B. Primary school C. Secondary school D.Higher education	
7	What is your hasband occupation?	B, civil servant, C, farmer D, Merchant E, student F, other	
8	What is your total monthly income?	_____ETH Birr	
9	What is your Place of origin?	A, Rural B. Unban	

10	The distance on foot from your home to the nearest health institution, explain in hours and minute	_____	

SECTION 2. REPRODUCTIVE HISTORY

11	No. of visit in this pregnancy		
12	No. of pregnancies including the current		
13	Have you followed antenatal care in the previous pregnancy	Yes No	
14	For how many pregnancies followed antenatal care		
15	Place of previous delivery?	H. facility Home Home & H. facility	
16	If the answer is home ques no.15 the number of deliveries in home		
17	If the answer is health facility ques no.15 the number of deliveries in health facilities		
18	Place of the recent delivery	H. facility Home	
19	Number of live births		
20	Number of still birth/ intrauterine fetal death		
21	Number of abortions		
22	If yes in ques no.21	1, induced 2, spontaneous	
23	Place of abortion if the answer is yes in no.21	1, Health institution 2, home	

24	Ether any complication in previous pregnancy, delivery and postpartum period		
25	Have you Previously contact to health facility	1, yes , no	

SECTION 3 KNOWLEDGE ASSESSMENT QUESTIONNAIRE ON OBSTETRIC DANGER SIGNS

	Occurrence period	List of danger sign	yes	no
26	From the listed below Which one occur during pregnancy? More than one response is possible.	vaginal bleeding,		
		swollen hands/face,		
		blurred vision		
		severe headache		
		Convulsions		
		Difficulty in breathing		
		Severe weakness		
		Severe abdominal pain		
		Accelerated/reduced fetal movement		
		Water breaks without labor		
		Malodorous vaginal discharge		
		Persistent back pain		
		Persistent vomiting		
		Others_____		
27	From the listed below Which may occur during labour? More than one response is possible.	Severe vaginal bleeding		
		Coming of cord before head		
		Labour lasting more than 12 h		

		Convulsions/fits		
		Water breaks more than 8hrs		
		Mal-presentation/position		
		Retained Placenta (1 hour)		
		Severe continuous abdominal pain		
		High fever		
		Cessation of labor pain		
		Others_____		
28	From the listed below which may occur during postpartum? More than one response is possible.	Severe vaginal bleeding		
		Severe abdominal pain		
		High fever		
		Severe weakness		
		Convulsion		
		Malodorous vaginal discharge		
		Blurring of vision		
		Swollen hands/face		
		Uterine prolapse		
		Others_____		
29	From where did get all this information about danger signs child bearing related? More than one answer possible.	Health professionals_____ Media_____ Parents/Family_____ From friends_____ In school_____ Others_____		

ANNEX III: AMHARIC VERSION

የጥናቱ ተሳታፊዎች የመረጃ ቅጽ

በቅድሚያ በዚህ ጥናት እንዲሳተፉ ስንል በአክብሮት ጥያቂያችንን እያቀረብን ጥናቱ በተንታ ወረዳ የርግዝና ክትትል የሚያደርጉ ነፍሰጡር እናቶችን ይመለከታል::ጥናቱ የሚያተኩረው ነፍሰጡር እናቶች ስለአደገኛ የርግዝና ምልክቶች ስላላቸዉ እዉቀት በተመለከተ ማጥናት ነው። አደገኛ የርግዝና ምልክቶችን አለማወቅ ወደ ወስብስብ የጤና ችግር ሊያመራ ሰለሚችል ይህውም ለተጨማሪ ህመምና ሞት ይዳሪጋል ስለዚህ አደገኛ የርግዝና ምልክቶችን ማወቅ ተጨማሪ ህመምና ሞት ለመከላከል በጣም ወሳኝ ነው:: ስለሆነም ይህ ጥናት ነፍሰጡር እናቶች እርግዝናን ተከትሎ ስለሚመጡ አደገኛ ምልክቶች ስላላቸዉ እዉቀት ሁኔታ በተመለከተ በማጥናት ለቀጣይ አገልግሎት ከፍተኛ አስተዋኦ ይኖረዋል::

ሀ. የጥናቱ ዓላማ፡ በዚህ ጥናት ነፍሰጡር እናቶች ስለአደገኛ የርግዝና ምልክቶች ስላላቸዉ እዉቀት በተመለከተ ማጥናት ነው።

ለ. የሚፈጀዉ ግዜ ይህ ጥናት የካቲት …. አስከ መጋቢት ….2011 ዓ.ም ባለው ጊዜ ውስጥ ይጠናቀቃል

ሐ. የናሙናና የመረጃ አወሳሰድ ሄደት፡- በዚህ ጥናት ከሚሳተፉ ነፍሰ ጡር እናቶች ስለማህበራዊ ሁኔታ፤ስለ ስነተዋለዶ ታሪክ ፣ስለ አደገኛ ምልክቶች እዉቀት በተመለከተ ቃለ መጠየቅ ይደረግለዎታል።

መ. ሊደርስ የሚችል አደጋ፡- በዚህ ጥናት ውስጥ አደጋ የሚያደርስ ድርጊት የለም።

ሠ. የሚገኝበት ጥቅም፡- ይህ ጥናት ለተሳታፊወች ልዩና ቀጥተኛ የሚባል ጥቅም የለውም።ይሁን እንጂ ሁሉም ነፍሰጡር እናቶች አደገኛ እርግዝናን ተከትለዉ ሊመጡ ስለሚችሉ ምልክቶች ስላላቸዉ እዉቀት ለማወቅ ይረዳል ብሎም ለነፍሰጡር አናቶች ወደፊት ትምህርት ለመስጠት ከፍተኛ አስተዋጽኦ ያደርጋል ።

ሚስጥራዊነት፡- የማንኛውም የጥናቱ ተሳታፊ መረጃ በሚስጥራዊነት ይያዛል። የእያንዳንዱን ግለሰብ መረጃ ከዋናው ተመራማሪና ከአማካሪዎቹ በስተቀር ማንም ሊያገኝ አይችልም።

ፈቃደኝነትን ስለማቋረጥ ፡ -በዚህ ጥናት ውስጥ የመሳተፍ መብትዎ ሙሉ በሙሉ በፈቃደኝነት ላይ የተመሰረተ ነዉ።በጥናቱ ለመሳተፍ ፈቃደኛ መሆን ወይም ራስዎን ማግለል ይችላሉ። እንዲሁም በጥናቱ ባለመሳተዎ ምክንያት በአሁን ወይንም የወደፊት የህክምና እርዲታዎ ላይ ተፅእኖ አይኖርም።

አድራሻ ማወቅ ካስፈለግዎ፡-

የዋናው ተመራማሪ አድራሻ ፤

ሙሀመድ ለጋስ በሬንቶ

በነርስ እና ሚድዋይፈሪ ትምህርት ክፍል

ጤና ሳይንስ ፋክሊቲ፤አዲስ አበባ ዩኒቨርሲቲ

ኢምይል mohalegas86@gmail.com

ሞባይል ፡ 0921530286

ANNEX IV፡ ለጥናቱ ቃለ መጠይቅ ለማድረግ የግለሰቦች ፍቃደኝነት መጠየቂያ ቅጽ

በአዲስ አበባ ዩኒቨርሲቲ ጤና ሳይንስ ኮሌጅ በነርሲንግ ትምህርት ክፍል በተንታ ወረዳ ነፍሰጡር እናቶች ስለአደገኛ የእርግዝና ምልክቶች ስላላቸዉ እወቀት እና ለማወቅ እና ላለማወቅ ምክንያት የሆኑትን ሁኔታዎች ለማጥናት የተዘጋጀ ቃለመጠይቅ ለሚደረግላቸው እናቶች ፍቃደኝነት መጠየቂያ ፎርም

ሰሜ ---------- ይባላል እኔ ከአዲስ አበባ ዩኒቨርሲት የማሰትረስ ድግሪዉን በ maternity and reproductive health nursing ከሚሰሩት መሀመድ ለጋስ ጋር አብሬ እየሰራሁ ነው። አሁን በዚህ በተንታ ወረዳ ጤና ተቐም የሚከታተሉ ነፍሰጡር እናቶች ስለአደገኛ መልከቶች ስላላቸዉ እወቀት እና ተያያዝ ጉዳዮች ለማጥናት ቃለ መጠይቅ እያደርግን ነው። ይህ ጥናት እናቶች ስለአደገኛ ከርግዝና ጋር ተያያዥ መልክቶች ያላቸዉን እዉቀት ያሻሽላል ብለን እናስባለን።

ስምዎ በዚህ መጠይቅ ውስጥ የማይጠቀስ መሆኑና በቃለ መጠይቁ የሚሰጡትን መረጃ ሁሉ በሚስጥር ተይዞ ለጥናት አገልግሎት ብቻ የሚውል መሆኑን ላረጋግጥልዎ እወዳለሁ። እርስዎ በዚህ ጥናት ላይ የመሳተፍ ያለመሳተፍ ወይንም በማንኛውም ወቅት ቃለ መጠይቁን የማቋረጥ ሙሉ መብት አለዎት ነገር ግን እርስዎ በጥናቱ ተሳትፈው የሚሰጡትን መረጃ ጥናቱን ውጤታማ ለማድረግና ነፍሰጡር እናቶች ስለአደገኛ ከርግዝና ጋር ተያያዥ መልክቶች ያላቸዉን እዉቀት ለማሻሻል ከፍተኛ ጠቀሜታ አለው።

በጥናቱ ለመሳተፈ ፍቃደኛ ነዎት?

1. አዎ 2. አይደለሁም።

መልሱ አዎን ከሆነ አመሰግናለሁ ቃለ መጠይቁን ያካሒዱ መልሱ አይደለሁም ከሆነ አመሰግናለው ወደ ሌላ ተጠያቂ ይለፉ፤ ግለሰቡ በመጠይቁ ለማሳተፍ ምንም አይነት ማሳገደጃ ወይም ጫና መደረግ የለበትም።

የጠያቂው ስም ---------- ፊርማ ----------

ቃለመጠይቁ የተካሄደበት ቀን ---------- ወር ---------- 2011 ዓ.ም

የገምጋሚው ስም ---------- ፊርማ ----------

የተመረመረበት ቀን ---------- ወር ---------- 2011 ዓ.ም

የተሟላ -1

ያልተሟላ -2

ሌላ ካለ ይግለጹ ----------

ክፍል አንድ፤ ስለማህበረዊ ሁኔታ መጠይቅ

ተቁ.	ጥያቄ	መልስ	Skip
1	እዲሜዎት ስንት ነዉ?	……አመት	
2	የትዳረወት ሁኔታ?	ሀ. ያላገባች ለ. ባለትዳር መ. የፈታች ሰ. የሞተባት ረ. ሌላ	
3	ሀይማኖተዎት ምንድን ነዉ?	ሀ. ሙስሊም	

		ለ. ኦርቶዶክስ መ. ፕሮቴስታንት ሰ. ካቶሊክ ረ. ሌላ	
4	ስራዎት ምንድን ንዉ?	ሀ. የቤት እመቤት ለ. የመንግስት ሰራተኛ ሐ. ግብርና መ. ነጋደ ረ. የቀን ሰራትኛ ሠ. ስራጥ ሰ. ተማሪ	
5	እስከ ስንት ድረስ ተምረዋል?	ሀ. ምንም አልተማርኩ ለ. የመጀመሪያ ደረጃ ሐ. ሁለተኛ ደረጃ መ. ከሌጅ እና ከዛ በላይ ሰ. ሌላ	
6	የባልተቤትዎ የትምህርት ደረጃ	ሀ. አልተማረም ለ. የመጀመሪያ ደረጃ	

		ሐ. ሁለተኛ ደረጃ መ. ኮሌጅ እና ከዛ በላይ ሰ. ሌላ	
7	የባለቤትዎ የስራ ሁኔታ	ሀ. የመንግስት ሰራተኛ ለ. ግብርና ሐ. ነጋደ መ. ተማሪ ሰ. የቀን ስራተኛ ረ. ሰራ ኣጥ ሠ. ሌላ	
8	አጠቃላይ የወር ገቢ?	_____ኢት ብር	
9	የሚኖሩበት ቦታ ?	ሀ. ከተማ ለ. ገጠር	
10	ለቤትዎ ቅርብ የሆነዉ የጤና ተቐም በእግር ምን ያክል ሰአት የርቃል፣በደቂቃ እና በሰኣት ይግላጡት		

ክፍል 2 የስነተዋልዶ ሁኔታን በተመለከተ

11	በዚህ እርግዝን ስንት ጊዜ ክትትል አደረግዋል		
12	ይሄንን ጨምሮ ሰንተኛ እርግዝና ነዉ?		

13	ከዚህ በፊት ባለ እርግዝና የርገዝና ጤና ክትትል አድርገዉ ያዉቃሉ	አወ አልተከታተልኩም	
14	መልሰወ አወ ከሆነ ለተ. ቁ.13 ለስንት እርግዝና ከትትል አደረጉ		
15	ከዚህ በፊት የት ነበር የወለዱት?	ሀ. ጤና ተቛም ለ.እቤት ሐ. ጤና ተቛም እና እቤት	
16	መልሰወ እቤት ከሆነ ለጥያቄ 15 ስንት ልጅ እቤት ዎለዱ		
17	መልሰወ ጡና ተቁም ከሆነ ለጥያቄ 15 ስንት ልጅ በጤና ተቀም ወለዱ		
18	ከዚህ እርግዝና በፊት ያለዉን የት ወለድሽ	ሀ. ጤና ተቀም ለ. እቤት	
19	ስንት ልጆችን በይወት ወለዱሽ		
20	ከመዉለደዎ በፊት ከ 7 ወር በሃላ የጠፋበዎት እርግዝና ነበር		
21	ዉርጃ አጋጠሞሽ ያዉቃል		
22	ተራ ቁጥ 21 አወ ከሆነ መልሱ	ሀ. በመድሀኒት ለ. በራሱ ነዉ	
23	ተራ ቁጥ 21 አወ ከሆነ መልሱ ዉርጃዉ የት ነበር	ሀ. ጤና ተቛም ለ. እቤት	
24	ከዚህ በፊት ባለ እርግዝና በእርገዝና፣በምጥ እና ከወሊድ በሃላ ችግር አጋጥሞሽ የዉቃል	ሀ. አወ ለ. አላጋጠመኝም	

25	ከሂህ በፊት ወደ ጤና ተቀም ከራስሽ ጋር በተያያዘ ሂደሽ ታዉቂያለሽ	ሀ.አወ ለ. አላዉቅም	

ክፍል 3 ስለአደገኛ የእርግዝና፣የወሊድ እና ከወሊድ በሁላ ሊከሰቱ ስለሚችሉ ምልክቶች በተመለከተ

	የሚፈጠሩበት ጊዜ	የአደገኛ ምልክቶች ዝርዝር	አዋ	አይደለም
26	ከተዘረዘሩት ወስጥ በእርግዝና ጊዜ ሊከሰቱ የምችሉት አደገኛ መለክቶች የትኞቹ ናቸዉ፣ ከአንድ በላይ መልስ የቻላል .	በምሀፀን ደም መፍሰስ		
		የእጅ እና እግር ማብጥ		
		አይን ላይ ብዥ ማለት		
		ከባድ የራስ ምታት		
		እራስን መሳት		
		የአተነፋፈስ ችግር መኖሩን ያዉቃሉ		
		ከመጠን ያለፈ መድከም		
		ከባድ የሆድ ህመም		
		የፅንስ እንቅስቃሴ መጨመር ወይም መቀነስ		
		የእንሽርት ዉሀ ከምጥ ቀድሞ መፍሰስ		
		ሽታ ያለዉ ከመሀፀን ፈሳሽ ማየት		
		የማያቀርጥ የጀርባ ህመም		
		የማያቀርጥ ማስመለስ		
		ሌላ_____		
27	ከተዘረዘሩት ወስጥ በወሊድ ጊዜ ሊከሰቱ የምችሉት አደገኛ	ከመጠን በላይ በምሀፀን ደም መፍሰስ		
		እትብት ከልጁ ቀድሞ መምጣት		

	መለክቶች የትኞቹ ናቸዉ፣ ከአንድ በላይ መልስ የቻላል .	ምጥ ከ 12 ሰአት በላይ መቆየት		
		እራስን መሳት		
		የእንሽርት ዉሀ ፈሶ ከ 8 ሰአት በላይ መቆየት		
		የልጁ አመጣጥ ትክክል አለመሆን		
		እንግዳ ለጂ ከተወለደ በሀላ ከ30 ደቂቃ በላይ መቆየት		
		የማያቆርጥ ከባደ የሆድ ህመም		
		ከፍተኛ ትኩሳት		
		ሌላ…….		
28	ከተዘረዘሩት ወስጥ ከወሊድ በሃላ ሊከሰቱ የምችሉት አደገኛ መለክቶች የትኞቹ ናቸዉ፣ ከአንድ በላይ መልስ የቻላል	ከመጠን በላይ በምህፀን ደም መፍሰስ		
		ከባደ የሆድ ህመም		
		ከፍተኛ ትኩሳት		
		ሽታ ያለዉ ከመህፀን ፈሳሽ ማየት		
		እራስን መሳት		
		ከመጠን ያለፈ መድከም		
		አይን ላይ ብዥ ማለት		
		የእጅ እና እግር ማብጥ		
		የመህፀን መገልበጥ		
		ሌላ		
29	ልጅ ከመዉለድ ጋር ተያይዞ ሊከሰቱ ስለሚችሉ አደገኛ ምልክቶች መረጃ ከየት አገኙ?	ጤና ባለሞያ_____ ሚድያ _____ ቤተሰብ _____ ከጎደኛ _____ ከትምህርት ቤት _____ ሌላ_____		
