**Knowledge about pregnancy danger signs among mothers attending ANC in Jugal hospital, Harari regional state, Ethiopia, 2019**.

 **Arif Hussen**

**Harar Health Science College, Department of Pediatrics Nursing, East Ethiopia**

**Email address:**

**arifhussen.ah@gmail.com**

**Abstract**

Background: Every pregnant woman faces the risk of sudden, unpredictable complication that could end in death or injury to mother or infant. Each year, approximately 287,000 women die from complications related to pregnancy and childbirth in developing countries. Maternal mortality ratio (MMR) in developing regions is 15 times (240/100,000 live births) higher than in developed regions (16/100,000live births)

Objective: The aim of this study was to determine the Knowledge about pregnancy danger signs among mothers attending ANC in Jugal hospital, Harari regional state, Ethiopia

Methods: Institution based cross-sectional study design was conducted. A systematic random sampling technique was used to select study participants from pregnant mothers attending ANC during the time of data collection. Data was collected using structured questionnaire and it was entered in to EPI Data version 3.1 software program and exported to SPSS version 20 software for analysis.

Result: - A total of 316 pregnant women were included in the study with a response rate of 86%. The study indicate that 44.67% of the respondents had knowledge on danger signs of pregnancy and there was an association with the knowledge on danger signs of pregnancy and the age of the respondent and educational status of the respondent.

Conclusion: - The study finding shows that poor awareness about danger signs of pregnancy among ANC attendant in Jugal hospital, Harari Regional State. The study also have got significant association between educational status, the age of the mother and Knowledge about pregnancy danger signs among mothers attending ANC in Harari regional state.

Keywords: Danger sign; Knowledge; Institutional based; Antenatal care

**Introduction**

Every pregnant woman faces the risk of sudden, unpredictable complication that could end in death or injury to mother or infant. [1].

Danger Signs are problems that face the mother during pregnancy, labour and the post – partum period ,this includes any bleeding from the vagina, no matter how slight, swelling of the face or hands or legs, Severe headache, dimness or blurring of vision, Severe or continuous pain in the abdomen. In addition, it includes severe or continuous vomiting, chills or fever, Pain or burning with urination, sudden escape of fluid from the vagina in the second half of pregnancy, if the baby (fetus) moves less than you are used to, or stops moving and pelvic or abdominal pain [2].

Each year, approximately 287,000 women die from complications related to pregnancy and childbirth in developing countries. Maternal mortality ratio (MMR) in developing regions is 15 times (240/100,000 live births) higher than in developed regions (16/100,000live births) [3].

Sub-Saharan Africa had the highest maternal mortality ratio at 500 maternal deaths per 100,000 live births. Most of the studies have been reported that Ethiopia is one of the six countries that contribute about 50% of the maternal deaths; the others are India, Nigeria, Pakistan, Afghanistan and the Democratic Republic of Congo [4]

Studies conducted in south west Ethiopia, Arbaminch and Benchmaji indicated that the level of awareness on pregnant women about obstetric danger signs during pregnancy was low [5,6]. Low awareness of danger signs and symptoms during pregnancy contribute to delays in seeking and receiving skilled care. For that matter, increased awareness is essential for reducing delays in seeking health care and in reaching a health facility.

Despite these all problem, no articles found in the study area showing the severity of the problem that encourage the concerned bodies to take remedial action. The study therefore aims to fill this gap by assessing the current status of knowledge about pregnancy danger signs among mothers attending ANC in Jugal hospital, harai regional state, Ethiopia, 2019.

**Methodology**

Study setting and study design

The study was conducted at jugal hospital, Harar city which is found 525 km to East of Addis Ababa. It has a total of 342 staffs among these 208 of them are health care professionals whereas the rest are non-health professionals, (administrative staffs) the hospital is found in Harar towns. It is the first governmental hospital in Ethiopia established in 1902 GC, named as Misrak Arbegnoch Hospital and the hospital changed its name to jugal hospital. Currently, the hospital is providing ANC with six midwives, two of them are BSc. And the rest are diploma nurses. Institutional based quantitative cross sectional study design was conducted. Data was collected from June 1th-15th, 2019.

Sample size determination and sampling procedure

All pregnant women attending ANC and selected as study unit that met the inclusion criteria was included in the study and systematic random samplings was used.

The following assumptions were made to determine the sample size: The formula to calculate the sample size was n= (zα/2)²p (1-p)/ D², Where n=number of the study subjects Z= the standardized normal distribution curve value for the 95% confidence interval (1.96) P= the level of Knowledge on obstetric danger signs during pregnancy, it was 31.9% in the study done in Balegoba (7), d=the desired precision of the estimate (the margin of error between the sample and population, 5%) = (1.96)²x 0.319 (1-0.319) / (0.05)² =333+33 =366 = The total sample size after computing for 10 % non-response rate was 366.

Data collection, quality and analysis

Data was collected using A structured questionnaire. And, the data collectors were four BSc. midwives. The questionnaire were gathered and checked for completeness. For data processing and analysis, SPSS version 20 was used. Data checked for completeness and consistency; Coded data was entered into computer programs after the required cleaning was done. Univariate, Bi-variate and then multivariate analysis was carried out. Odds ratio (OR) with confidence intervals and p-values were calculated the output of the analysis were given and odds ratio with their respective confidence intervals. P- Value of 0.05 taken as level of significance.

Ethical issues

Ethical clearance was obtained from Harar Health Science College research ethical committee before the staring of the field work. An official letter of co-operation was written to jugal hospital. Consent was obtained from administrative body of the hospital and the participants. Confidentiality of the data has been kept throughout the study.

# RESULT

#  Socio-demographic characteristics of the study subjects

## Among a total of 366 sampled participants, 316 mothers were participated making response rate of 86%. Majority 122(38.61%) of the clients were age 26-29.regarding marital status majority 300(94.94%) of the clients were married and 190(60.13%) were house wife in occupation. Regarding the level of educational status 108(34.18%) was illiterate. (Table 1).

Table1: Distribution of socio-demographic characteristics of respondents, for the study of Knowledge about pregnancy danger signs among mothers attending ANC in Jugal hospital, Harari regional state, Ethiopia, 2019.

|  |  |  |  |
| --- | --- | --- | --- |
| Variable |  | Frequency | Percent (%) |
| Age | 15-19 | 10 | 3.16 |
|  21-25 | 85 | 26.90 |
|  26-29 | 122 | 38.61 |
|  30-34 | 55 | 17.41 |
|  35-39 | 34 | 10.76 |
| ≥40 | 10 | 3.16 |
| Marital status | Single | 16 | 5.06 |
|  Married | 300 | 94.94 |
| Religion |  Orthodox | 75 | 23.73 |
|  Muslim | 205 | 64.87 |
|  Protestant | 36 | 11.39 |
| Ethnicity | Oromo | 196 | 62.03 |
| Amhara | 95 | 30.06 |
|  Tigre | 5 | 1.58 |
|  Harari  | 15 | 4.74 |
| Ethio- Somale | 5 | 1.58 |
| Occupation  |  House Wife | 190 | 60.13 |
|  Employee of GO/NGO | 101 | 31.96 |
|  Business | 25 | 7.91 |
| Educational Status  |  Illiterate | 108 | 34.18 |
| Read and Write  | 69 | 21.84 |
| Elementary | 30 | 9.49 |
| Secondary | 49 | 15.51 |
| College or University | 60 | 18.99 |

## Obstetric characteristics of the respondents

From total number of respondents 133(42.09%) had history of 2 pregnancies and 26 (8.23%) mothers were pregnant for more than four times. Regarding first pregnancy age 217(31.33%) mothers got their first pregnancy at age greater than 20 years. from the total number respondents 75(23.73%) had previous risk of pregnancy. In the case of ANC follow up, only 15 (4.7%) mothers had ≥4 visits. (Table 2).

## Table2: Obstetric characteristics of the respondents, for the study of Knowledge about pregnancy danger signs among mothers attending ANC in Jugal hospital, Harari regional state, Ethiopia, 2019

|  |  |  |  |
| --- | --- | --- | --- |
| Variables |  | Frequency | Percent |
| Gravid | 1 | 88 | 27.85 |
| 2 | 133 | 42.09 |
| ≥3 | 95 | 30.06 |
| Parity | None | 88 | 27.85 |
| 1-4 | 202 | 63.92 |
| ≥4 | 26 | 8.23 |
| Age at 1st pregnancy | <20 | 99 | 68.67 |
| >20 | 217 | 31.33 |
| Previous risk of pregnancy | Yes | 75 | 23.73 |
| No | 241 | 76.27 |
| Number of ANC visit | 1 | 146 | 46.20 |
| 2-3 | 155 | 49.05 |
| ≥4 | 15 | 4.75 |

## Source of information regarding obstetric danger signs during pregnancy

Almost all 311(98.42%) had heard obstetric danger signs during pregnancy. From those who heard obstetric danger signs majority 251(80.7%) of the study participants answered the signs that indicate the pregnant or/and the pregnancy has illness. 175(56.27%) of the study participants had got danger signs information from health personnel followed by media, friends and relatives with 106(34.08%), 21(6.75%) and 9(2.89%) respectively.

## Knowledge on danger signs during pregnancy

Out of the 316 respondents, 311 (98.42%) reported that they had got information about obstetric danger sign during pregnancy. From those who had the information , majority 246(79.10%) identified severe vaginal bleeding at any time during pregnancy as danger sign while the least was fever, identified only by 56(18.01%) of the participants. (Table 3)

## Table 3: Knowledge on danger signs during pregnancy among participants, for the study of Knowledge about pregnancy danger signs among mothers attending ANC in Jugal hospital, Harari regional state, Ethiopia, 2019

|  |  |  |  |
| --- | --- | --- | --- |
| No | Danger sign pregnancy | Frequency | Percent |
| 1 | Vaginal bleeding | 246 | 79.10 |
| 2 | Absent/ decreased fetal movements | 189 | 60.77 |
| 3 | Convulsion | 179 | 57.56 |
| 4 | Severe vomiting | 178 | 57.33 |
| 5 | swelling of the body | 168 | 54.02 |
| 6 | foul smelling vagina discharge | 142 | 45.66 |
| 7 | blurring of version | 79 | 25.40 |
| 8 | Severe abdominal pain | 63 | 20.26 |
| 9 | severe frontal headache | 57 | 18.33 |
| 10 | Fever | 56 | 18.01 |

From the Study participants who responded correctly considered as having awareness about danger signs of pregnancy, based on this 138(44.67%)of respondent have knowledge where as the rest 173(55.33) do not have knowledge about danger sign of pregnancy.

**Factor affecting knowledge of danger sign during pregnancy**

In Bi-variate logistic regression analysis, Age, Marital status, Occupation, Educational status, Age of 1st pregnancy and number of ANC visit were statistically significant associated with knowledge of danger sign during pregnancy.

Variables which showed statistically significant associations with knowledge of danger sign during pregnancy in the bi-variate analysis were re-entered in to Multi-variate logistic regression, to control possible confounders.

After controlling the effect of other predictor variables, the multivariate logistic regression analysis showed statistically significant association between maternal Age and knowledge of danger sign during pregnancy as well as between Educational status and knowledge of danger sign during pregnancy with p-value<0.05.

In this study, the odds of having knowledge of danger sign during pregnancy was7.21 times higher among literate group than illiterate group, [AOR =7.21; 95% CI =1.17-27.90].

Furthermore, In this study, the odds of having knowledge of danger sign during pregnancy was 1.43 times higher among age greater than or equal to 26 years of age group than age less than 26 years of age group, [AOR=1.43; 95% CI=1.05-1.89].

# DISCUSSION

This research showed that 79.10% of respondents know vaginal bleeding, 60.77% reduced fetal movement and 54.02% swollen hand and face as danger sign of pregnancy. This finding is higher than study done at rural Tanzania which revealed 45.9% vagina bleeding, 1.2% reduced fetal movement and 10.7% swollen hand and face [8]. This difference might be due to the difference study areas, study design or sample size, the major difference might be this study was institutional at urban but study done at Tanzania were community based in rural area.

This study finding showed that 44.67% of the participants had knowledge about danger signs of pregnancy this is higher than study done in Alexandria, Egypt 26% [9], Jordan 15.2% [10] Uganda 20% [11] South Africa 16% [12] Tanzania 14.8% [13] Debra Birhan town 38.6% [14] AletaWondo 30.4% [15] Dar-es-salaam, Tanzania 31% [16] Salem, Tamil Nadu 34% [17], in contrary it was lower than study done in other part of Ethiopia, Tsegedi distric 58.8% [18] Debark town north west 47% [19], East Gojjam Zone 55.1% [20] Mekelle city Tigray 82.5% [21].The differences might be due to the difference study area, sample size, study setting and might be due variation in socio-economic difference of study participates.

In this study educational status study participants were affect the level of awareness, as educational status increase the level of awareness also increases. Similarly study done in Indonesia [22], Uganda [23], Bench maji[24], Mekele[21], showed that as educational status increases awareness also increased. Education is believed to be the most powerful influencing factor to increase women’s’ knowledge about danger signs of pregnancy.

In this study maternal age was one factor that has been indicated as predictors of awareness of danger signs of pregnancy. When maternal age increases level of awareness of danger sign of pregnancy became good. This finding is consistent with study done in Tsegedi district [18] Debark town north west Ethiopia 66.8% [19] Egypt [9] and Tanzania [13] Dar-es-salaam, Tanzania [8] Arba Minch Ethiopia [35] Mekelle city Tigray[24] but inconsistent with study done in Southeast Nigeria [26] that showed younger age groups were aware than those elderly. This might be explained as increased awareness among older women may be related to their own experiences of pregnancy and delivery which is an important source of their information, especially those who had complications associated with their pregnancy.

**Conclusion and Recommendation**

The study finding shows that poor awareness about danger signs of pregnancy among ANC attendant in Jugal hospital, Harari Regional State. The study also have got significant association between educational status, the age of the mother and Knowledge about pregnancy danger signs among mothers attending ANC in Harari regional state.

Based on finding of this study the following recommendations are forwarded. As women’s awareness about danger signs of pregnancy increase as women educational status increase women must empower to get education by the government. Medias better to give health education related to danger signs of pregnancy to minimize pregnancy related complications.

**Limitation of the study**

Since it was confined to women visiting Governmental health institution, the findings may not be generalized able to the women who did not visit health institution.

**References**

1. Central Statistical Agency and ORC Marco. Ethiopian Demographic and Health Survey, 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA; 2016.p-47-48

2. Midhet F, Becker S. Reproductive health .Impact of community-based interventions on maternal and neonatal health indicators: Pakistan. (2010) v.(7): 2-10

3. Requejo J, Victora C, Bryce J; Scientific Review Group of Countdown to 2015 (2014) Dataresource profile: maternal, newborn and child survival. Int J Epidemiology (2014) v.43: p-586-596.

4. Federal democratic republic of Ethiopia Ministry of health monitoring health inequality: an essential step for achieving health equity. Illustrations and fundamental concepts. Geneva;World HealthOrganization;2015(http://apps.who.int/iris/bitstream/10665/164530/1/WHO\_HIS\_HSI\_2015.1\_eng.pdf?ua=1, accessed 5 October (2015).

5. DestaHailu, Haile MariamB erhe. Knowledge of Obstetric Danger Signs and its Associated Factors in Arba Minch Town, Ethiopia. American Journal of Health Research (2014) v.2: p-255-259.

6. Dile M, Taddesse D, Gedefaw M, Asmama T . Knowledge of Obstetric Danger Signs and itsAssociated Factors in Debaytilatgin District, Ethiopia: A Community Based Cross Sectional Study.GynecolObstet (Sunnyvale) (2015) v. 5: p-315

7. Bogale and Markos. Knowledge of obstetric danger signs among child bearing age women in Goba district, Ethiopia: cross-sectional study BMC Pregnancy and Childbirth (2015) P.3

8. Declare M. Knowledge about safe motherhood and HIV/AIDS among school pupils in a rural area in Tanzania. BMC pregnancy and childbirth (2007) 7: 5.

9. Rashad WA, EssaRM.Women‟s Awareness of Danger Signs of Obstetrics Complications in Egypt. Journal of American Science 2010; 6(10): 1299-1306.

10. Okour A, Alkhateeb M, Amarin Z (2012) Awareness of danger signs and symptoms of pregnancy complication among women in Jordan. Int JGynaecol Obstet 118: 11–14.

11. Mbalinda SN, Nakimuli A, Kakaire O, Osinde MO, Kakande N, et al.(2014) Does knowledge of danger signs of pregnancy predict birthpreparedness? A critique of the evidence from women admitted withpregnancy complications. Health Res Policy Syst 12: 60.

12. Coleman A (2014) Нe Use of ICT Tools (Mobile Phones) to ImproveAwareness of Pregnancy Danger Signs among Pregnant Women in RuralCommunities of South Africa. J Communication 5: 203-209.

13. Urassa DP, Pembe AB, Mganga F (2012) Birth preparedness andcomplication readiness among women in Mpwapwa district, Tanzania.Tanzan J Health Res 14.

14. Solomon AA, Amanta NW, Chirkose EA, Badi MB (2015) KnowledgeAbout Danger Signs of Pregnancy and Associated Factors AmongPregnant Women in Debra Birhan Town, Central Ethiopia. Sci J PublicHealth 3: 269-273.

15. Hailu M, Gebremariam A, Alemseged F (2010) Knowledge AboutObstetric Danger Signs Among Pregnant Women In Aleta WondoDistrict, Sidama Zone, Southern Ethiopia. Ethiop J Health Sci 20: 25–32.

16. Mwilike B (2013) Knowledge of danger signs during pregnancy andsubsequent health seeking actions among women in Kinondonimunicipality, Tanzania. Makerere University's Institutional Repository1-56.

17. Mahalingam G, Venkateasan M (2014) Mother’s Knowledge of WarningSigns of Pregnancy, Labour and Puerperium. Int J Med Sci Public Health3: 720-722.

18. Hailu D, Berhe H (2014) Knowledge about Obstetric Danger Signs andAssociated Factors among Mothers in Tsegedie District, Tigray Region,Ethiopia 2013: Community Based Cross-Sectional Study. PLoS One 9:e83459.

19. Mengesha E, Taye H (2015) Нe Level of Awareness on Danger Signs ofPregnancy and Associated Factors among ANC Attendant PregnantWomen in Debark Town, North West Ethiopia 2012. Glob J Publ HealthEpidemiol 2: 106-113.

20. Amenu G, Mulaw Z, Seyoum T, Bayu H (2016) Knowledge about DangerSigns of Obstetric Complications and Associated Factors amongPostnatal Mothers of Mechekel District Health Centers, East GojjamZone, Northwest Ethiopia. 6cLentLficD 3495416: 7.

21. Abiyot T, Kassa M, Buruh G, Kidanu K (2015) Awareness of ObstetricDanger Signs and its Associated Factors among Pregnant Women inPublic Health Institutions, Mekelle City, Tigray, Ethiopia 2014. JPregnancy Child Health 2: 3.

22. SugiartoT.Knowledge and practice of maternal health care in Indonesia. Journal of Kependudukan Indonesia( 2007) v. 2: p.1-16.

23. Kabakyenga et al.Knowledge of obstetric danger signs and birth preparedness practices among women in rural Ugandareproductive-health-journal 2011, p-8

24. Demissie et al. Level of Awareness on Danger Signs of Pregnancy among Pregnant Women Attending Antenatal Care in Mizan Aman General Hospital, Southwest, Ethiopia, J Women’s Health Care 2015,V-4,P-3-4

25. Workineh Y, Hailu D, Gultie T, Degefu N, Mihrete M, et al. (2014)Knowledge of obstetric danger signs and its associated factors in ArbaMinch town, Ethiopia. Am J Health Res 2: 255-259.

26. Ossai EN, Uzochukwu BS (2015) Knowledge of Danger Signs ofPregnancy among Clients of Maternal Health Service in Urban and RuralPrimary Health Centres of Southeast Nigeria. Community Med HealthEduc 5: 2.