

**AWARENESS REGARDING OBSTETRIC DANGER SIGNS AMONG PREGNANT WOMEN AT A TEACHING HOSPITAL, CHITWAN, NEPAL**Jayalaxmi Shakya<sup>\*1</sup>, Sabita Sharma<sup>2</sup>, Preeti Shakya<sup>3</sup> and Jaya Prasad Singh<sup>4</sup><sup>1,2</sup>Department of Womens Health and Development, School of Nursing, Chitwan Medical College, Chitwan, Nepal.<sup>3</sup>Surveillance Medical Officer, World Health Organization, Nepal.<sup>4</sup>Department of Public Health, Chitwan Medical College, Chitwan, Nepal.

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**ABSTRACT**

Obstetric danger signs are unexpected that can lead to maternal and newborn complications. These danger signs are mainly classified into three categories like; severe vaginal bleeding, swollen hands/face, and blurred vision during pregnancy; prolonged labor, convulsions and retained placenta during labour and postpartum hemorrhage and fever during postnatal period. The study aimed to find out the awareness regarding obstetric danger signs among pregnant women at a Teaching Hospital, Chitwan. A cross sectional study was carried out at Gynaecology / Obstetric Outpatient Department, Chitwan Medical college Teaching Hospital (Gynae/Obs OPD, CMCTH), Chitwan. Total 150 respondents were selected by using non-probability consecutive sampling techniques. Data were collected by using structured interview schedule, and analyzed in descriptive and inferential statistics, presented in tables and interpreted accordingly. More than half of the respondents (55.3%) had below 26 years, and 74.0% resided in urban and belonged to Hinduism 80.0%. Likewise 52.7% were Brahmin / Chhetri, 39.3% had higher level education and 54.0% were home maker. Lower than half of the respondents (43.3%) had poor awareness, 34.0% fair awareness and 22.0% good awareness regarding obstetric danger signs. Lower than one fourth of the pregnant women have good awareness regarding obstetric danger signs during pregnancy, child birth and postpartum period. Thus awareness program is required to be provided by health workers regarding obstetric danger signs during antenatal checkup to pregnant women for better maternal and neonatal outcomes.

**KEYWORDS:** Awareness, Obstetric Danger Signs, Pregnant Women, Chitwan.**INTRODUCTION**

Pregnancy is a period when women's bodies go through normal physiological changes which may be entirely normal throughout pregnancy, childbirth, and postpartum period. However, this normal process may sometimes be overcome by serious complications which may affect the life of mothers and newborns contributing to maternal mortality and morbidity to the highest level. Raising awareness of women on danger signs of pregnancy, childbirth and the postpartum period is crucial for safe motherhood.<sup>[1-4]</sup>

The obstetric danger signs are classified into three categories during pregnancy, labour and post partum. Every pregnant woman faces the risk of sudden, unpredictable complications that could contribute for maternal and neonatal death.<sup>[5-7]</sup> Each year approximately 287,000 women die from complications related to pregnancy and childbirth; 99% of these deaths occurring in developing countries. Maternal mortality ratio in developing regions is fifteen times higher than in developed regions.<sup>[8-10]</sup>

Obstetric danger signs are problems that mothers experience during pregnancy, labour and the postpartum period such as bleeding from the vagina, swelling of the face or hands, severe headache, sudden escape of fluid from the vagina and less fetal movement.<sup>[11,12]</sup> World health organization (WHO) reported that, globally, an estimated number of 289,000 women died during and following pregnancy and childbirth related problems in 2013 alone, showing a decline of 45% from 1990 report. Developing countries like sub-Saharan Africa 2% and South Asia 24% together contribute 86% of the problem.<sup>[13,14]</sup>

In Nepal, maternal mortality ratio is significantly high due to life threatening obstetric complications which could be prevented if women are made aware about and able to identify obstetric danger signs. Ultimately, improving the knowledge will empower them and their families to make prompt decision and action needed. So, researchers are interested to assess awareness regarding obstetric danger signs among pregnant women in Gynae /Obs OPD of CMCTH, Chitwan, Nepal.

## MATERIALS AND METHODS

A descriptive cross sectional study was adopted to find out the awareness regarding obstetric danger signs among pregnant women at CMCTH, Gynae/Obs OPD. The study was carried out from January to April 2023.

Ethical approval was obtained from Chitwan Medical College Institutional Review Committee (CMC- IRC), Chitwan. A voluntary written informed consent was obtained from each respondent by clarifying the purpose of the study prior to data collection. Each respondent was allowed to have voluntary choice for the participation. Respondents' dignity was maintained by giving right to withdraw from the research study at any time they wanted. They were also assured of confidentiality and their privacy. Each respondent was well informed about the face-to-face interview that was taken on individual basis.

The questionnaire was peer-reviewed by all authors and two academic experts on midwifery and two obstetricians reviewed the questionnaire for content validity and appropriateness of questions. Further validation was done through pretesting 10% of the total sample in Gynae/Obs OPD of CMCTH which were excluded from the final study.

The population of this study was the pregnant women attending in Gynae/Obs OPD of CMCTH. A total 150 respondents were selected. Non probability consecutive sampling technique was used to collect the data by using structured interview schedule in the separate corner outside of OPD. The collected data were analyzed in descriptive and inferential statistics. Analyzed data were presented in tables and interpreted accordingly.

## RESULTS

**Table 1: Respondents' Socio-demographic Characteristics.**

n=150	
Characteristics	No. (%)
<b>Age in completed years</b>	
≤ 26	83 (55.3)
≥ 26	67 (44.7)
<i>Median = 26 years, IQR = Q3-Q1 = 29-23, min=18, max= 39 years</i>	
<b>Place of residence</b>	
Urban	111 (74.0)
Rural	39 (26.0)
<b>Religion</b>	
Hinduism	120 (80.0)
Non-Hinduism	30 (20.0)
<b>Ethnicity</b>	
Brahmin/Chhetri	79 (52.7)
Janjati	55 (36.6)
Dalit	69 (10.7)
<b>Education of the respondents</b>	
Illiterate	7 (4.7)
Literate	44 (29.3)
Basic level	40 (26.7)
Higher Level	59 (39.3)
<b>Education of the husband</b>	
Illiterate	19 (12.7)
Literate	33 (22.0)
Basic level	35 (23.3)
Higher Level	63 (42.0)
<b>Occupation of the respondents</b>	
Home maker	81 (54.0)
Agriculture	32 (21.3)
Service	37 (24.7)
<b>Occupation of the husband</b>	
Agriculture	56 (37.3)
Service	62 (41.4)
Working Abroad	32 (21.3)

Table 1 shows that more than half of the respondents (55.3%) had below 26 years. Likewise, majority of the respondents (74.0) resided in Urban. Most of the

respondents (80.0%) belonged to Hinduism and the 52.7% were Brahmin / Chhetri. On the educational side 39.3% respondents had higher level and respondents'

husband 42.0% had higher level of education. Similarly, more than half of the respondents (54%) had engaged in

home maker and the respondents' husband 41% were service holder.

**Table 2: Respondents' Obstetric Information.**

n=150

Number of pregnancy	No. (%)
Primi	82 (54.7)
Multi	68 (45.3)
<b>Place of delivery(n=68)</b>	
Home	1(1.5)
Government Hospital	42(61.8)
Private Hospital	25 (36.7)
<b>Sources of information (MR)*</b>	
Television	73 (48.7)
Radio	49 (32.7)
Health professionals	110 (73.3)
Neighbor/Relatives	87 (58.4)

\*MR=Multiple responses

Table 2 indicates that more than half of the respondents (54.6%) had first pregnancy likewise 61.8% had delivered baby in government hospital. Similarly

majority of the respondents (73.3%) received information about obstetric danger sign by health professionals.

**Table 3: Respondents 'Awareness regarding Obstetric Danger Signs during Pregnancy and its Prevention.**  
n=150

Danger sign during pregnancy (MR)*	Correct Response No.(%)
Difficulty in breathing	68 (45.3)
Bleeding during pregnancy	96 (64.0)
Sudden gush of fluid before labor	65 (43.3)
Excessive vomiting	87 (58.0)
Severe headache	66 (44.0)
Swelling of hands, feet and face	64 (42.7)
Loss of fetal movement	74 (49.3)
Premature contraction	49 (32.7)
High grade fever	73 (48.7)
Dysuria	29 (19.3)
<b>Prevention from Danger sign during pregnancy(MR)*</b>	
Attend ANC visits (completed 4 visit)	120 (80.0)
Early detection of danger signs	71 (47.3)
Early decision of medical treatment	83 (55.3)
Timely arrangement of transportation	63 (42.0)

(MR)\*=Multiple Responses

Table 3 reveals that more than half of the respondents had aware about bleeding during pregnancy and excessive vomiting similarly more than 40% of the respondents had awareness on swelling of hands, feet and face, sudden gush of fluid before labor, severe headache, swelling of hands, feet and face, loss of fetal movement, high grade fever respectively. Likewise

below 32% respondents had aware on premature contactation and dysuria during pregnancy.

Similarly most of the respondents (80.0%) had visited ANC regularly whereas 42.0% had aware about timely arrangement of transportation for prevention from danger signs during pregnancy.

**Table 4: Respondents' Awareness regarding Obstetric Danger Signs during Labour and its Prevention.**

n=150

Danger signs during labor (MR)*	Correct response No. (%)
Severe bleeding	121(80.7)
Retained placenta	57(38.0)
Prolonged labor (> 12 hours)	72 (48.0)
High grade fever (104 <sup>0</sup> F)	71 (47.3)

Severe headache	59 (39.3)
Convulsion	36 (24.0)
Mal position/ presentation	47 (31.3)
<b>Prevention from Obstetric Danger Signs during Labor (MR)*</b>	
By delivering the baby at health institution	136 (90.7)
By going home after 24 hours of child birth at health institution	61 (40.7)
By going home after 2 hours of child birth at health institution	41 (27.3)
By giving mild massage on uterus after child birth	46 (30.7)

(MR)\*=multiple Response

Table 4 reveals that most of the respondents (80.7%) had aware about severe bleeding during labour whereas 24.0% of the respondents answered convulsion which is one of the most danger signs of eclampsia during labour.

Similarly, most of the respondents (90.7%) had aware about prevention from obstetric danger signs during

labour by delivering the baby at health institutions. Likewise, 27.3% of the respondents had aware about prevention from obstetric danger signs during labour by going home after 2 hours child birth at health institutions.

**Table 5: Respondents' Awareness regarding Danger Signs during Postnatal Period and Care of Newborn Baby.**  
n=150

Danger sign during the postnatal period (MR)*	Correct response No. (%)
Postpartum hemorrhage	125( 83.3)
Postpartum psychosis	38 (25.3)
Postpartum infection	70 (46.7)
Retention of urine	60 (40.0)
Retention of placenta	51 (34.0)
<b>Care of newborn baby (MR)*</b>	
Wash the baby immediately after birth	94 (62.7)
Dry and wrap immediately after birth	100 (66.7)
Cord care	74 (49.3)
Exclusive breast feeding	98 (65.3)
Kangaroo Mother Care if birth weight less than 2000 gram	42 (28.0)
Observe the baby for urine within 24 hours	4 (2.7)

(MR)\*=Multiple Response

Table 5 indicates that most of the respondents (83.3%) had aware about postpartum hemorrhage is one of the most danger sign of postnatal period likewise one fourth of the respondents (25.3) had aware about postpartum psychosis is the danger signs during postnatal period.

Similarly, the two third of the respondents (66.7) had aware about care of new born baby first dry and wrap immediately after birth whereas only 2.7% had aware about observe the baby for the passage of urine within 24 hours.

**Table 6: Respondents' Level of Awareness regarding Obstetric Danger Signs.**  
n=150

Level of Awareness regarding Obstetric Danger Signs	No. (%)
Good awareness	33 (22.0)
Fair awareness	52 (34.7)
Poor awareness	65 (43.3)

Table 6 shows that among 150, lower than half of the respondents (43.3%) had poor awareness whereas 34% had fair awareness and below one fourth (22.0%) of the

respondents had good awareness regarding obstetric danger signs.

**Table 7: Association between Level of Awareness and Socio-demographic information.**

Variables	Level of awareness			P – value
	Good awareness	Fair awareness	Poor awareness	
	Age	No. (%)	No.(%)	No. (%)

1-26 years	18 (21.7)	29(34.9)	36 (43.4)	0.994
27-39 years	15(22.4)	23(34.3)	29(43.3)	
<b>Place of residence</b>				
Urban	27 (24.3)	40(36.0)	44(39.7)	0.26
Rural	6(15.4)	12(30.8)	21(53.8)	
<b>Religion</b>				
Hinduism	28 (23.3)	39(32.5)	53(44.2)	0.49
Non- Hinduism	5(16.7)	13(43.3)	12(40.0)	
<b>Education of respondents</b>				
Illiterate	0 (0)	3(42.9)	4(57.1)	0.04 <sup>f</sup>
Literate	6(13.6)	19(43.2)	19(43.2)	
Basic level	6(15.0)	12(30.0)	22(55.0)	
Higher level	21(35.6)	18(30.5)	20(33.9)	
<b>Education of husband</b>				
Illiterate	1(5.3)	11(57.9)	7(36.8)	0.14 <sup>f</sup>
Literate	6(18.2)	10(30.3)	17(51.5)	
Basic Level	7 (20.0)	14(40.0)	14(40.0)	
Higher Level	19(30.2)	17(27.0)	27(42.8)	
<b>Occupation of respondents</b>				
Home maker	13(16.0)	28(34.6)	40(49.4)	0.02 <sup>f</sup>
Agriculture	12(37.5)	6(18.8)	14(43.8)	
Service	8(21.6)	18(48.6)	11(29.8)	
<b>Occupation of Husband</b>				
Agriculture	15(26.8)	14(25.0)	27(48.2)	0.42
Service	12(19.4)	25(40.3)	25(40.3)	
Working abroad	6(18.8)	13(40.6)	13(40.6)	
<b>Number of pregnancy</b>				
≤Two	31(23.7)	46(35.1)	54(41.2)	0.31 <sup>f</sup>
≥Two	2(10.5)	6(31.6)	11(57.9)	

Table 7 shows that there is significant association between respondents' education and occupation with level of awareness on obstetric danger signs.

Whereas age, place of residence, religion, respondents' husbands' education and occupation and number of pregnancy were not associated with level of awareness regarding obstetric danger signs.

## DISCUSSION

A total 150 pregnant women were participated in the present study. Majority of them were in the age group of 26 years and below (55.3%). Majority of the pregnant women (74%) were resided from urban area and most of them were belonged to Hinduism (80%). More than fifty percentage from Brahmin /chhetri (52.7). More than one third of the pregnant women were higher level educated (39.3). Only 4.7% were illiterate and more than fifty percentage (54.0%) were home maker. Forty two percentage of the husband of pregnant women were high level educated and they were service holder.

In the present study found that less than one fourth of the pregnant women (22.0%) have good awareness, 34.7% fair awareness and 43.3% have poor awareness about obstetric danger signs. The findings of this study is contradict with another study conducted in Nepal, majority of the pregnant women (66.0) had adequate knowledge, moderate knowledge 13.0%, below thirty

percentage had inadequate knowledge (21.1%) about danger signs<sup>[13]</sup> because it might be due to setting of the study, educational level and pregnant women with primi gravida those who have no idea about danger signs.

In the present study, showed that more than half of the pregnant women (55.3%) were below 26year, 80.0% Hindu, 39.3% higher education and 42.0% home maker. The finding of the similar study done in Nepal in line with age 62.6% and religion 81.7% Hindu, 35.7% higher education and 60.7% home maker.<sup>[13]</sup> because it might be due to the population of Nepal following same culture.

Present study, revealed that more than two third of the pregnant women were aware about vaginal bleeding during pregnancy (64.0%), followed by swelling of hands feet and face 47.8%, high fever 48.7% respectively. The finding of the another study conducted in Hyderabad is supported that 64.5% of the pregnant women were aware about per vaginal bleeding, 47.8% swelling hands, feet/face and, high fever 46.7% respectively. It is due to both are south Asian developing country and have similar culture as well.<sup>[14]</sup> The finding of the another study done in India also supported that majority of the pregnant women (65.9%) had knowledge on vaginal bleeding during pregnancy is the danger sign.<sup>[15]</sup>

In the present study found that most of the pregnant women (80.7%) had aware of severe vaginal bleeding during labour and followed by prolonged labour (48.0%), mal presentation (31.3%). The findings of the another study done in south west Ethiopia is contradictory like severe vaginal bleeding (61%), prolonged labour (17.4%), cord prolapse (20.1%) respectively. This difference might be due to setting of the study.<sup>[16]</sup>

Regarding the danger signs during postnatal period, most of the pregnant women (83.3%) had aware about postpartum hemorrhage. This finding is consistent with the finding of the study done in Nepal (88.3). This finding is higher than study done in Uganda (56.7%). This difference might be due to the facility based survey.<sup>[17]</sup>

### CONCLUSIONS

It is concluded that lower than one fourth of the pregnant women have good awareness regarding obstetric danger signs during pregnancy, child birth and postpartum period. Thus awareness program is required to be provided at CMCTH Gynae /Obs OPD by health workers regarding obstetric danger signs during antenatal checkup to pregnant women for better maternal and neonatal outcomes.

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