

RESEARCH ARTICLE

Awareness of Obstetric Danger Signs among Pregnant Women in Tertiary Care Teaching Hospital

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ABSTRACT

Due to lack of awareness about the danger signs of pregnancy women fail to seek care in the right time for life-threatening complications of pregnancy and child birth. This cross-sectional study was undertaken to assess the knowledge regarding danger signs among pregnant women. A self structured questionnaire was used in the study. For this, 100 women attending antenatal outpatient department (OPD) were enrolled. Chi-square test has been used to demonstrate the difference between study subject characteristics and level of significance selected for this study ($p \leq 0.05$). About 6.38% of subjects having good awareness about danger signs are from age group 20 to 25 years and 10.25% of subjects with good awareness are from 25 to 30 years. In case of 20% of subjects have fair knowledge that means they know about 50 to 75% of obstetric danger signs while 73% of subject has poor knowledge about danger signs. Among which majority, i.e. 46.48% of subjects are from age 20 to 25 years and 93.33% from large family size have poor awareness about danger signs. Majority of subjects having good knowledge about obstetric danger signs have completed their secondary (7.69%) and university (9.52%) education. About 61% of the subjects know about danger signs of pregnancy. Among which major source of knowledge is health personnel (57.37%) and other source of knowledge is mass media (42.63%). In case of 50% of subjects knows about bleeding. Thus, it is the most common obstetrical danger sign that is known by subject population.

Keywords: Awareness, Obstetric danger signs, Pregnant women.

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INTRODUCTION

High levels of perinatal (49 per 1000 births), neonatal (39 per 1000 births) and maternal mortality (301 per 100,000 live births) remain major public health challenges in India.^{1,2} About one-third of neonatal deaths occur on first day of life, and majority of maternal death occur during labor, delivery, and within 24 hours postpartum.³ The common causes of maternal deaths are hemorrhage, postpartum infection, hypertensive disorders, obstructed labor and abortion complications.⁴ With assumption that 'Every pregnancy faces risk',^{5,6} women should be made aware of danger signs of obstetric complications during pregnancy, delivery and postpartum.^{7,8}

The danger signs are not actual obstetric complications but symptoms that are easily identified by nonclinical personnel. Knowledge of danger signs of obstetric complications is an essential first step in the appropriate and timely referral to essential obstetric care.⁹ Knowledge of obstetric sign is the strategy aimed at enhancing utilization of skilled care during low-birth risks and emergency obstetric care in complicated cases.¹⁰

METHODOLOGY

- *Study design:* A cross-sectional study.
- *Study setup:* Study was conducted in Outpatient Department (OPD) of Obstetrics and Gynecology (OBGY), Lata Mangeshkar Hospital, a tertiary care teaching hospital of NKP Salve Institute of Medical Sciences and Research Center, Digdoh Hills, Nagpur, Maharashtra.
- *Study population:* The study has been conducted among the women visiting OPD of OBGY of Lata Mangeshkar Hospital for regular checkup.
- *Sample size:* One hundred antenatal women who gave consent have been considered from OPD.

Inclusion Criteria

Antenatal women who has been attending OPD at the time of data collection and who were interested enough to participate in the study were informed about the study in the language understandable to them and written consent was obtained. All antenatal women who were ready to give consent are included.

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Exclusion Criteria

Nonpregnant women attending OPD was excluded. The antenatal women who did not show enough willingness and interest to participate in the study are also excluded from the study.

A structured interview schedule was developed by the researcher after reviewing of the relevant literature to collect the necessary data. It comprised of following parts:

- *Part 1:* Sociodemographic data, such as age, level of education, occupation, number of family members, etc.
- *Part 2:* Obstetric characteristics, such as gravidity, parity, abortions, antenatal follow-up and presence of any complications, etc.
- *Part 3:* Questions related to knowledge about obstetric danger sign among women, like bleeding PV, edema feet, fever, severe headache, convulsions, lack of blood, blurred vision, etc.

STATISTICAL ANALYSIS

Statistical analysis has been performed using MS Office-Excel. The data have analyzed in terms of objectives of study using descriptive statistics. Chi-square test has been used to demonstrate the difference between study subject characteristics and level of significance selected for this study is $p \leq 0.05$.

- *Good awareness:* Ability to mention > 75% of obstetric danger signs.
- *Fair awareness:* Ability to mention 50 to 75% of obstetric danger signs.

Table 1: General characteristics of study subjects

General characteristics	n = 100	Percentage
<i>Age (years)</i>		
20-<25	47	47
25-<30	39	39
30-<35	11	11
>35	3	3
<i>Level of education</i>		
Illiterate	3	3
Primary	12	12
Secondary	64	64
University or more	21	21
<i>Occupation</i>		
Housewife	82	82
Working	18	18
<i>Number of family members</i>		
<3	36	36
4	36	36
6	13	13
8+	15	15
<i>Religion</i>		
Hindu	41	41
Muslim	14	14
Buddhist	39	39
Christian	6	6

- *Poor awareness:* Ability to mention up to 50% of obstetric danger signs.

RESULTS

Table 1 shows the general characteristics of study subjects. It is observed that 47% of the subjects were aged 20 to <25 years old, 39% aged 25 to <30 years old, 11% were aged 30 to < 35 years and only 3% were aged 35 years and above. Regarding the level of education only 3% of subjects were not able to read and write, 12% subjects finished primary education, 64% of subjects had completed secondary education and 21% subjects had graduated from university. As to their occupation, majority of subjects were housewives, i.e. 82 and 18% subjects, were working. As regards to number of family members it is found that 15% of population lives within large family with 8+ family members in it, 36% of subjects live within small families having 3 or <3 members. More than half of population lives in families with 4 to 6 members in it. As per religion, Hindu and Buddhist community had almost equal population, i.e. 41 and 39% respectively. Only 6% subjects were Christian and 14% were Muslim.

Table 2: Clinical characteristics of the study subjects

Clinical characteristics	n = 100	Percentage
<i>Gravidity</i>		
Once	48	48
Twice	38	38
3 times	10	10
More than 3 times	4	4
<i>Parity</i>		
None	55	55
Once	35	35
Twice	7	7
3 times	3	3
More than 3 times	—	—
<i>Number of ANC visit</i>		
Less than 4	65	65
5-8	22	22
9-12	9	9
More than 12	4	4
<i>Type of previous delivery</i>		
None	48	48
Normal	30	30
Cesarean section	20	20
Instrumental delivery	2	2
<i>Place of previous delivery</i>		
Home	5	9
Government hospital	28	53
Private hospital	12	23
Primary Health Center (PHC) or Rural Health Center (RHC)	8	15
<i>Knowledge of danger signs</i>		
Yes	61	61
No	39	39
<i>Source of information</i>		
Health personnel	35	57.57
Mass media	26	42.63



Table 2 shows that 48, 38, 10 and 4% subjects were pregnant one, two and three and more than three times respectively. Thirty-five percent subjects delivered one time and 7% subjects delivered two times and 3% subjects delivered three times. Thirty percent of them had normal spontaneous vaginal delivery, 20% had cesarean section and 2% had instrumental delivery. Place of delivery was home (9%), government hospital (53%), private hospital (23%) and PHC/RHC (15%).

Table 3 shows that 6.38% of subjects having good awareness about danger signs are from age group 20 to <25 years old and 10.25% of subjects with good awareness are from 25 to <30 years old. Twenty percent of subjects have fair knowledge that means they know about 50 to 75% of obstetric danger signs. Seventy-three percent of subject has poor knowledge about danger signs. Among which majority, i.e. 46.48% of subjects are from age 20 to <25 years old. A total of 93.33% from large family size have poor awareness about danger signs. Majority of subjects having good knowledge about obstetric danger signs have completed their secondary (7.69%) and university (9.52%) education.

Table 4 shows that 61% of the subjects know about danger signs of pregnancy. Among which major source of knowledge is health personnel (57.37%) and other source of knowledge is mass media (42.63%).

Table 5 shows that 50% of subjects knows about bleeding. Thus, it is the most common obstetrical danger sign that is known by subject population. Other danger signs which are known by subjects are blurred vision (35%), swollen hand/feet/face (48%), lack of blood/weakness (22%), convulsions (10%), retained placenta (23%), labor lasting > 12 hours (16%), episiotomy wound problems (4%), high fever and headache (7%).

DISCUSSION

About 529,000 mothers die each year from maternal causes, out of which 99% of deaths being from the developing world.¹¹ Five direct complications account for more than 70% of maternal deaths: hemorrhage (25%), infection (15%), unsafe abortion (13%), eclampsia (very high blood pressure leading to seizures—12%) and obstructed labor (8%). A total of 99% of all maternal deaths occur in developing countries, where 85% of population lives. While these are the main causes of maternal death, unavailable, inaccessible, unaffordable, or poor quality care is fundamentally responsible.¹² 'A healthy mother and a healthy baby' is the motto of mother and child health (MCH) services in our country. Indian health policy makers have made preventive health services as the basic platform on which our country's health stands. This means more importance to increasing awareness

Table 3: Relation between general characteristics and level of awareness in study subjects

General characteristics	Good		Fair		Poor		p-value
	Number	Percentage	Number	Percentage	Number	Percentage	
Age							
20-<25	3	6.38	11	23.40	33	70.22	> 0.05
25-<30	4	10.25	7	17.04	28	71.79	
30-<35	—	—	2	18.18	9	81.82	
>35	—	—	—	—	3	100	
Level of education							
Illiterate	—	—	—	—	3	100	0.03
Primary	—	—	3	25	9	75	
Secondary	5	7.69	12	18.46	47	73.43	
University	2	9.52	6	28.57	13	61.9	
Occupation							
Housewife	7	8.53	16	19.51	59	71.95	> 0.05
Working	—	—	4	22.22	14	77.78	
No. of family members							
Less than 3	3	8.33	10	27.77	23	63	> 0.05
4	3	8.33	7	19.44	26	72.23	
6	—	—	3	23.07	10	76.93	
8+	—	—	1	6.67	14	93.33	
Religion							
Hindu	4	10	9	22.5	27	67.5	> 0.05
Muslim	—	—	3	21.42	11	78.58	
Buddhist	3	7.69	6	15.38	30	76.92	
Christian	—	—	1	16.67	5	83.33	

Table 4: Relation between clinical characteristics and level of awareness in study subjects

Clinical characteristics	Good		Fair		Poor	
	Number	Percentage	Number	Percentage	Number	Percentage
<i>Gravidity</i>						
Once	2	4.16	11	22.92	35	72.92
Twice	4	10.52	4	10.52	30	78.94
3 times	—	—	4	40	6	60
More than 3 times	—	—	1	25	3	75
<i>Parity</i>						
None	9	16.36	11	20	35	63.64
Once	2	5.71	3	8.57	30	85.71
Twice	—	—	3	42.86	4	57.14
Three times	—	—	—	—	3	100
<i>Type of previous pregnancy</i>						
Normal	6	20	2	6.67	22	73.33
Cesarean section	3	15	6	30	11	55
Instrumental	—	—	1	50	1	50
<i>Place of previous delivery</i>						
Home	—	—	—	—	5	100
Government hospital	2	7.14	6	21.42	20	71.43
Private hospital	6	50	3	25	3	25
PHC/RHC	1	12.5	3	37.5	4	50
<i>Knowledge of danger signs</i>						
Yes	7	11.47	20	32.78	34	55.73
No	—	—	—	—	39	100
<i>Source of information</i>						
Health personnel	6	18.18	13	39.4	14	42.42
Mass media	1	3.57	7	25	20	71.42

Table 5: Distribution of study subjects according to knowledge of danger signs

Observations	n = 100
<i>Knowledge of obstetric danger signs</i>	
Yes	61
No	39
<i>Danger signs during pregnancy</i>	
Bleeding	50
Blurred vision	35
Swollen hands/feet/face	48
Lack of blood	22
Convulsions	10
High fever and headache	7
<i>Danger signs during labor</i>	
Severe bleeding	50
Retained placenta	23
Labor lasting >12 hours	16
High fever and headache	7
<i>Danger signs in PNC</i>	
Severe bleeding	50
Weakness	22
Visual disturbances	35
Swollen hand/feet/face	48
Episiotomy wound problem	4
Convulsions	10

among the masses regarding health and disease as well as to erase old myths, which applies very true to antenatal care.¹³ The goal of clinical practice is not only to increase

the knowledge of the people and to promote healthy lifestyle by providing good education and services but also to recognize signs of possible complications during pregnancy and treat them promptly and effectively.¹⁴

Thus, present study is carried out in aim to assess the level of knowledge regarding danger signs in pregnancy among antenatal women at tertiary care teaching Hospital. Nearly, 100 subjects were enrolled in the study by obtaining their informed consent. Initially, demographic variables have been assessed and findings suggested that educational status had significant association with the level of knowledge on danger signs during pregnancy. However, similar study conducted by Kempa Cheluvamba Hospital, Bengaluru, showed that a significant association is present between the knowledge scores of mother with age, education, type of family, area of residence and income, but religion is not significantly related.¹⁴ In that study results pertaining to knowledge scores are as follows, very poor knowledge 11%, poor 51%, average 26%, good 10%, very good 2%. Also, a similar type of study was conducted by Narayana Medical College and Hospitals, Nellore. Result of this study are given as 6.6% has very poor knowledge, 43.3% poor, 46.6% average, 3.3% good knowledge.¹⁵ In our present study, 7% subject have good knowledge about obstetric danger signs, fair 20%, poor knowledge 73%, out of which



39% does not know anything about danger signs. Some studies have shown that indicators, such as low income, financial strain, mother's occupation, education and lower social status have a small but significant predictive relationship to postpartum depression, adding to the basic point that proper awareness is deficient in the target population.¹⁶⁻¹⁸ Overall, a low level of awareness among pregnant women is noted in several other studies, more importantly in developing and under developed nations in other parts of the globe.^{4,19,20} This study help in assessment of knowledge on danger signs in pregnant women in Lata Mangeshkar Hospital, Nagpur. Subjects not knowing about the danger signs were told about it and a small contribution was made in creating awareness among pregnant women. It also helped in understanding the problems faced by patient and clinicians and became tool for providing awareness among this woman. Thus, information obtained from study will help the services providers for improving the antenatal care services. Eventually, it will help to meet the need for safe motherhood, as pointed out by Millennium Development Goals.

CONCLUSION

Our study showed that there is poor knowledge regarding the danger signs of pregnancy among pregnant women. Also, more than one-third of subjects (39%) have no idea about the obstetrical danger signs. From this study, we recommend that there is need of planned strategies for increasing the awareness of women about obstetric danger signs.

LIMITATION

In our study, sample size was small (100 subjects) and, hence, the results drawn cannot be generalized. Studies with larger sample size need to be undertaken to draw definitive results. Women were not asked about if they were having any complications in their pregnancy.

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