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ASSESS THE KNOWLEDGE ON OBSTETRIC DANGER SIGNS AMONG PREGNANT WOMEN ATTENDING ANTENATAL CARE SERVICE AT SELECTED SETTING

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ABSTRACT

Introduction: Obstetric danger signs (ODS) represent critical indicators of potential complications during pregnancy, labor, delivery, and the postpartum period. Common danger signs during pregnancy include severe abdominal pain, vaginal bleeding, blurred vision, and persistent headaches. During labor and delivery, prolonged labor, heavy bleeding, and retained placenta are critical warnings, while postpartum signs include fever, severe bleeding, and foul-smelling discharge. Their recognition by pregnant women and their families is crucial for timely intervention and reducing maternal and neonatal mortality.

Methodology: Quantitative approach with non-experimental descriptive research design was chosen. A total of 75 pregnant women were selected through convenient sampling technique. Structured questionnaire was the data collected tool.

Results: The study showed that 60% of pregnant women had inadequate knowledge about pregnancy-related complications, with a mean score of 1.6, a median of 1, and a standard deviation of 0.71. Around 33.3% of participants demonstrated a moderate level of knowledge, while only 6.7% had adequate knowledge. The low mean score and high percentage of inadequate knowledge suggest a significant gap in awareness regarding pregnancy-related complications.

Conclusion: The study concluded that the pregnant women have a poor knowledge of ODS, the targeted educational intervention is essential to increase the knowledge level and decrease the ratio of maternal death rate among pregnant women.

INTRODUCTION

Obstetric danger signs (ODS) represent critical indicators of potential complications during pregnancy, labor, delivery, and the postpartum period. Their recognition by pregnant women and their families is crucial for timely intervention

and reducing maternal and neonatal mortality.

Obstetric danger signs are categorized into those occurring during pregnancy, labor and delivery, and the postpartum period. Common danger signs during pregnancy include severe abdominal pain, vaginal bleeding, blurred vision, and persistent headaches. During labor and delivery, prolonged labor, heavy bleeding, and retained placenta are critical warnings, while postpartum signs include fever, severe bleeding, and foul-smelling discharge. Awareness of these signs is essential for prompt referral to skilled healthcare providers.

The lack of awareness of ODS poses a significant barrier to addressing maternal health challenges. A study in Kigali, Rwanda, found that only 56.6% of women could identify at least three danger signs during pregnancy. Awareness dropped dramatically during labour and postpartum, with only 9.2% and 17.5% able to identify three signs, respectively. This knowledge gap is compounded by factors such as low education levels, rural residency, and socioeconomic constraints. Strengthening ANC services and ensuring that every contact between pregnant women and healthcare providers includes education on ODS can significantly reduce delays in seeking care and improve outcome.

The need for this study is underscored by the persistence of preventable maternal deaths despite global health initiatives. By identifying the knowledge gaps in ODS recognition, this research will contribute to reducing the first delay in care-seeking behavior, ultimately improving maternal and neonatal outcomes. It aligns with global health priorities, offering actionable insights to bridge the gap between awareness and timely care.

AIM OF THE STUDY

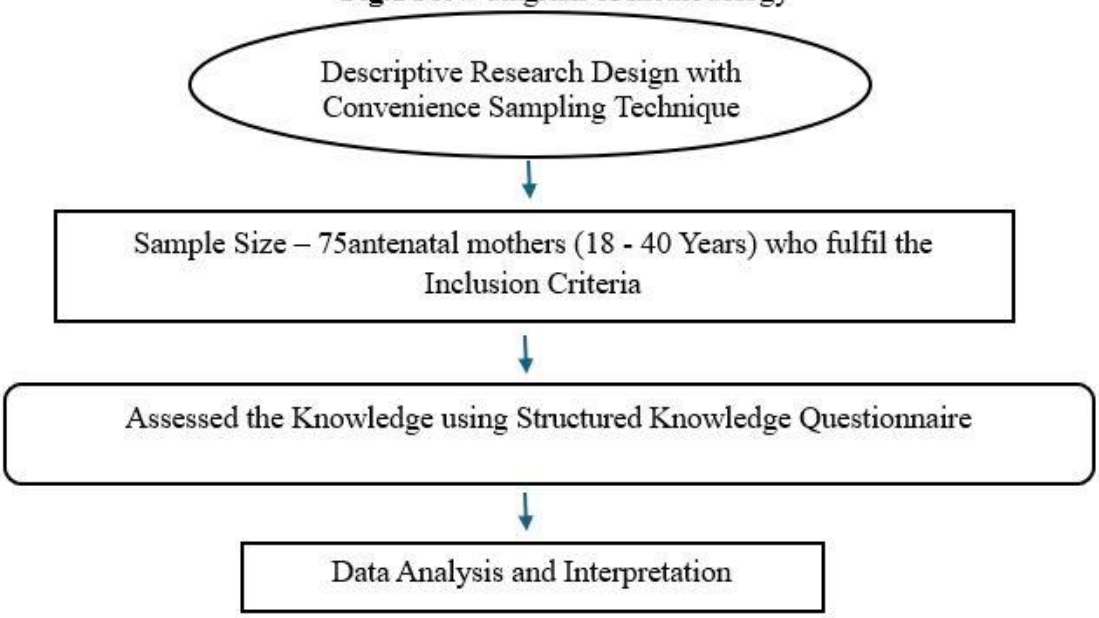
To assess the knowledge on obstetric danger signs among pregnant women attending antenatal care service.

METHODS AND MATERIALS

Quantitative research approach was employed to assess the knowledge of obstetrical danger signs among antenatal mothersusing a descriptive research design. The independent variable was the Obstetric danger signs, and the dependent variables wasantenatal mothers' knowledge. The study was conducted at PMCH&RI, Chennai, among 75 antenatal mothers. The sample size was determined using power analysis and selected through convenience sampling. Inclusion criteria were antenatal mothers aged 18–40years, attending antenatal clinic, aged 18 years and above,

any trimester of pregnancy, understand Tamil and English, giving informed consent, while antenatal motherswith mental illness, not willing to participate in the study, not given consent formswere excluded. Data were collected using a Background variables, a 15-item multiple-choice knowledge questionnaire. Content validity was ensured by expert review, and reliability was confirmed through a pilot study with 10antenatal mothers (r = 0.96 for knowledge). Ethical approval was obtained, informed consent and confidentiality were maintained, and participation was voluntary. The pilot study confirmed the feasibility and reliability of the methodology.

Fig.1 Flow diagram of methodology



STATISTICAL ANALYSIS

TABLE1: FREQUENCY AND PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES. **N= 75**

S. No	Variables	Frequency	Percentage (%)
1	**Age**		
	a. 18 – 22	10	13.3
	b. 23 – 27	45	60

	c. 28 – 32	18	24
	d. More than 30	02	2.7
2	**Occupation**		
	a. Daily wages	06	08
	b. Business	04	5.3
	c. Professional	09	12
	d. Home maker	56	74.7
3	**Educational status**		
	a. Illiterate	02	2.8
	b. Primary	08	10.6
	c. Higher Secondary	17	22.6
	d. Graduate	48	64
4	**Monthly income**		
	a. < 10,000	14	18.7
	b. 10,000 to 20,000	30	40
	c. > 20,000	31	41.3
5	**Place of residence**		
	a. Urban	47	62.7
	b. Rural	28	37.3

The demographic variables regarding Age the majority of participants 60% fall in the 23–27 years age group.Occupation a significant majority (74.7%) are homemakers.Regarding Educational Status, most participants (64%) are graduates and 10.6% have only primary education, and a small percentage (2.8%) are illiterate.About Monthly Income, the income distribution is fairly balanced, with 41.3% earning more than ₹20,000 per month, followed by 40% earning ₹10,000–₹20,000, and 18.7% earning less than ₹10,000.Whereas Place of Residence, the majority (62.7%) reside in urban areas, while 37.3% live in rural areas.

TABLE 2: FREQUENCY AND PERCENTAGE DISTRIBUTION OF OBSTETRIC VARIABLES

N= 75

S. No	Variables	Frequency	Percentage (%)
1	**Parity**		
	a. Primipara	38	50.6
	b. Multipara	37	49.4
2	**Utilization of antenatal Services**		
	a. Yes	26	34.6
	b. No	49	65.4
3	**Antenatal registration**		
	a. Registered	64	85.3
	b. Not registered	11	14.7
4	**Trimester of Pregnancy**		
	a. 0 – 12 weeks	9	12
	b. 13 – 24 weeks	22	29.3
	c. 25 – 26 weeks	27	36
	d. > 36 weeks	17	22.7
5	**History of any complications during previous pregnancy**		
	a. Yes	12	16
	b. No	63	84

Table2 shows the majority of participants (50.6%) are primipara, while 49.4% are multipara. Despite a high antenatal registration rate of 85.3%, only 34.6% of participants utilized antenatal services. Most participants (36%) are in their 25–36 weeks of pregnancy, followed by 29.3% in the 13–24 weeks trimester, and 22.7% in the >36 weeks trimester, while only 12% are in the early stage of pregnancy (0–12 weeks). A majority (84%) reported no complications in previous pregnancies, with only 16% experiencing complications.

TABLE 3: FREQUENCY AND PERCENTAGE DISTRIBUTION OF KNOWLEDGE ON OBSTETRIC SIGNS

N= 75

S. No	Variables	Frequency	Percentage (%)
1	Unusual fatigue	8	10.67
2	Severe vomiting	8	10.67
3	High blood pressure	11	14.67
4	Elevated blood sugar	9	12.00
5	Fever	7	9.33
6	Water breaks without labour pain	5	6.67
7	Foul smelling vaginal discharge	5	6.67
8	Vaginal Bleeding	3	4.00
9	Lower abdominal pain	7	9.33
10	Loss of fetal movements	5	6.67
11	Difficulty in breathing	1	1.33
12	Swelling in legs and Body	3	4.00
13	Headache	1	1.33
14	Epigastric pain	1	1.33
15	Seizure	1	1.33

Table 3 depicts,the data reveals a range of complications experienced by pregnant women, with high blood pressure (14.67%) being the most commonly reported issue, followed by elevated blood sugar (12%), unusual fatigue (10.67%), and severe vomiting (10.67%). Symptoms such as fever (9.33%) and lower abdominal pain (9.33%) were also observed among participants. Less frequently reported issues include water breaking without labor pain (6.67%), foul-smelling vaginal discharge (6.67%), loss of fetal movements (6.67%), vaginal bleeding (4%), and swelling in legs and body (4%). Rare complications like difficulty in breathing (1.33%), headache (1.33%), epigastric pain (1.33%), and seizures (1.33%) were noted in a small percentage of participants.

TABLE 4. LEVEL OF KNOWLEDGE REGARDING PREGNANCY-RELATED COMPLICATIONS AMONG PARTICIPANTS

S. NO	VARIABLE	FREQUENCY	PERCENTAGE	MEAN	MEDIAN	SD
1	Inadequate	9	60%	1.6	1	0.71
2	Moderate	5	33.3%			
3	Adequate	1	6.7%			

Table 4 represents the data indicates that the majority of participants (60%) had inadequate knowledge about pregnancy-related complications, with a mean score of 1.6, a median of 1, and a standard deviation of 0.71. Around 33.3% of participants demonstrated a moderate level of knowledge, while only 6.7% had adequate knowledge.

TABLE 5. ASSOCIATION BETWEEN KNOWLEDGE LEVELS ON PREGNANCY-RELATED COMPLICATIONS AND SELECTED DEMOGRAPHIC VARIABLES

S. NO	VARIABLES	Inadequate	Moderate	Adequate	Chi square
1	**Age**				
	e. 18 – 22	3	4	3	$\square^2$=1.042 df= 6 p=0.984 (NS)
	f. 23 – 27	14	18	13	
	g. 28 – 32	5	7	6	
	h. More than 30	1	1	0	
2	**Occupation**				
	e. Daily wages	2	2	2	$\square^2$ = 0.530 df=6 p=0.997 (NS)
	f. Business	1	2	1	
	g. Professional	3	4	2	
	h. Home maker	17	22	17	
3	**Educational status**				
	e. Illiterate	1	1	0	$\square^2$ = 1.163 df= 6 p= 0.979 (NS)
	f. Primary	2	3	3	
	g. Higher Secondary	5	7	5	
	h. Graduate	14	19	15	
4	**Monthly income**				
	d. < 10,000	4	6	4	$\square^2$ = 0.100 df=4
	e. 10,000 to 20,000	9	12	9	

	f. > 20,000	9	12	10	p= 0.999 (NS)
5	**Place of residence**				
	c. Urban	14	19	14	χ^2 = 0.046 df=2 p= 0.977 (NS)
	d. Rural	8	11	9	

Table 5 represents the study revealed no significant association between knowledge levels on pregnancy-related complications and selected demographic variables such as age (p=0.984), occupation (p=0.997), educational status (p=0.979), monthly income (p=0.999), and place of residence (p=0.977). Participants across different age groups, occupations, educational backgrounds, income levels, and residential areas showed similar distributions in inadequate, moderate, and adequate knowledge categories. Despite variations in demographic characteristics, the differences in knowledge levels were not statistically significant.

TABLE 6: ASSOCIATION BETWEEN KNOWLEDGE LEVELS ON PREGNANCY-RELATED COMPLICATIONS AND OBSTETRIC VARIABLES

S. NO	VARIABLES	Inadequate	Moderate	Adequate	Chi square
1	**Parity**				
	c. Primipara	15	13	10	χ^2 = 0.013 df= 1 p= 0.908 (NS)
	d. Multipara	12	15	10	
2	**Utilization of antenatal Services**				
	c. Yes	9	10	7	χ^2 = 7.053 df= 1 p= 0.0079 *****
	d. No	18	21	10	
3	**Antenatal registration**				
	c. Registered	20	24	20	χ^2 = 37.453 df= 1 p= 0.0063 *****
	d. Not registered	7	8	3	

4	**Trimester of Pregnancy**				
	e. 0 – 12 weeks	3	4	2	χ^2 = 9.427 df= 3 p= 0.0241 *****
	f. 13 – 24 weeks	7	8	7	
	g. 25 – 26 weeks	9	10	8	
	h. > 36 weeks	6	7	4	
5	**History of any complications during previous pregnancy**				
	c. Yes	5	4	3	χ^2 = 34.680 df= 1 p= 0.0034 *****
	d. No	0	25	18	

Table 6 revealed no significant association between parity (p=0.908) and knowledge levels, indicating that both primipara and multipara participants had similar levels of knowledge. However, a significant association was observed with utilization of antenatal services (p=0.0079), where participants who utilized these services demonstrated higher knowledge levels. Similarly, antenatal registration (p=0.0063) showed a highly significant association with knowledge, with registered participants having better awareness. Additionally, the trimester of pregnancy (p=0.0241) was found to be significantly associated with knowledge levels, with participants in the second and third trimesters showing improved awareness. Furthermore, a highly significant association was noted between history of complications during previous pregnancy (p=0.0034) and knowledge levels, as participants with prior complications displayed better understanding of pregnancy-related issues.

DISCUSSION

The analysis revealed that the majority of participants (60%) had inadequate knowledge about pregnancy-related complications, with a mean score of 1.6, a median of 1, and a standard deviation of 0.71. Around 33.3% of participants demonstrated a moderate level of knowledge, while only 6.7% had adequate knowledge. The low mean score and high percentage of inadequate knowledge suggest a significant gap in awareness regarding pregnancy-related complications, highlighting the need for targeted educational interventions to improve knowledge levels among expectant mothers.

RESULTS

The study explored the knowledge of pregnant women regarding ODS. The findings revealed that most pregnant women had limited awareness about ODS. So, the targeted educational intervention is essential to increase the knowledge level and decrease the ratio of maternal death rate among pregnant women.

CONCLUSION

The study on knowledge of obstetric danger signs among pregnant women attending antenatal care services addresses a critical aspect of maternal health. Recognizing and acting upon danger signs is essential for reducing delays in seeking care and preventing complications that contribute to maternal and neonatal mortality. Findings from this study will provide valuable insights into the awareness levels of obstetric danger signs and highlight gaps that need targeted interventions. By examining the influence of socio demographic factors, healthcare access, and antenatal education on knowledge levels, the study will offer actionable recommendations to improve maternal health literacy. Strengthening health education during ANC visits and incorporating community outreach can empower pregnant women to recognize warning signs and seek timely care.

LIMITATIONS

- The results may not be generalizable to all antenatal mothers.

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