

A study to assess the effect of information booklet regarding obstetrical danger signs among the antenatal mothers attending antenatal clinic in a selected hospital, Assam

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Abstract

BACKGROUND: Knowledge related to obstetrical danger signs among pregnant women is very important to improve the maternal and fetal health outcomes. The present study aims to assess the effect of information booklet on the knowledge related to obstetrical danger signs among the antenatal mothers attending antenatal clinic.

MATERIAL AND METHOD: A quasi experimental study was carried out for one month among the antenatal mothers who visited the antenatal clinic of a civil hospital, Assam. A one group pre-test post-test design was used. 60 participants were selected for the study through non probability convenience sampling technique. Data was collected using a pre-tested and pre-designed demographic performa and structured knowledge questionnaire. A self structured information booklet on obstetrical danger signs was distributed among the participants after pre-test.

RESULTS: The study revealed that pre-test mean knowledge score was 8.08 ± 2.942 and post-test mean knowledge score was 18.16 ± 2.285 with mean difference was 10.08, the calculated 't' value was 36.36 with $p < 0.05$. This signifies that information booklet was effective in improving the knowledge regarding obstetrical danger signs on the antenatal mothers attending antenatal clinics.

CONCLUSION: In present study total post test knowledge score was significantly higher than that of pre test as evidenced by $t=36.36(p < 0.05)$. Thus the booklet have provided effect on improving knowledge of the antenatal mothers. On the basis of finding the researcher concluded that the booklet was effective.

Keywords: Obstetric danger signs, pregnant women, knowledge, awareness, maternal mortality morbidity, pregnancy.

Introduction

Pregnancy, also known as gestation, is the time during which one or more offspring develops inside a woman. A multiple pregnancy involves more than one offspring, such as with twins. Pregnancy usually occurs by sexual intercourse, but can occur through assisted reproductive technology procedures. A pregnancy may end in a live birth, a spontaneous miscarriage, an induced abortion, or a stillbirth. Childbirth typically occurs around 40 weeks from the start of the last menstrual period (LMP). This is just over nine months where each month averages 31 days. When measured from fertilization it is about 38 weeks¹.

Pregnancy (gestation) is the physiological process of a developing fetus within the maternal body. In a woman's life, pregnancy is regarded as a normal phenomenon. However, around 40% of pregnancies are said to be high risk, which could lead to adverse maternal and fetal outcomes. Every woman needs to be aware of the danger signs that occur during pregnancy, labour and post delivery, as complications can be unpredictable.²

Women with high-risk pregnancies should receive care from a special team of health care providers to ensure the best possible outcomes. In India about 20-30% pregnancies belong to high risk category, which is responsible for 75% of perinatal morbidity and mortality. Early detection and effective management of high risk pregnancy can contribute substantially in reduction of maternal and fetal adverse outcomes.³

Obstetric danger signs are unexpected obstetric signs that can lead to maternal health complications. These danger signs are mainly classified into danger signs during pregnancy, child birth, and postpartum. Common danger signs during pregnancy include severe vaginal bleeding, blurred vision, and swollen hands/face, and common danger signs during child birth include severe vaginal bleeding, retained products of concept tissue/retained placenta, convulsions, prolonged labor (>12 hours), and major danger signs during postpartum includes foul smelling vaginal discharge, severe vaginal bleeding, and fever.⁴

According to WHO, hemorrhage is the leading cause of maternal mortality worldwide, hypertensive disorders associated with pregnancy namely eclampsia, embolism also claim significant number of lives. In South East Asia the lifetime risk of maternal death is 1 in 200 among the pregnant females.⁵

Maternal mortality as defined by WHO, refers to “deaths of women while pregnant or within 42 days of termination of pregnancy, irrespective of duration and site of pregnancy or its management but not from accidental or incidental causes.”⁶

High maternal mortality ratio (MMR) is a cause of concern for a number of countries worldwide. Despite this global achievement, MMR continues to be a major public health challenge in developing countries where MMR can be up to 15 times higher than that in developed countries⁷. Most causes of maternal mortality are preventable and attributed to three delays: delay in the decision to seek care, delay in reaching the place of care, and delay in receiving appropriate care⁸.

Poor knowledge of danger signs is a major contributor to delays in seeking obstetric care and hence to high maternal mortality and morbidity. Informing women about obstetric danger signs is among the strategies designed to enhance the utilization of skilled care whenever obstetrics complications are anticipated⁹.

If women and their families can recognize the obstetric danger signs and promptly seek health care services, significant amount of maternal morbidity and mortality could be prevented. Therefore, increasing women’s knowledge about the obstetric danger signs would improve early detection of problems and reduce the delay in deciding to seek obstetric care^{10,11}. Thus, one of the key strategies for reducing maternal mortality is increasing knowledge of the obstetric danger signs among women, family and community at large.

Many pregnant woman and their families in developing countries have limited understanding of obstetric danger signs and thereby for which they delay in reaching health facilities even when obstetric danger signs occurs. Increasing knowledge of pregnancy danger signs is considered a strategy which encourages the utilization of skilled care during pregnancy. ODS could be prevented significantly when a woman and her families recognize ODS as a life-threatening condition and seek health care early.¹²

Objectives of the Study:

To assess the pre test and post test level of knowledge regarding obstetrical danger signs among antenatal mothers.

To determine the effect of information booklet regarding obstetrical danger signs on the knowledge of antenatal mothers attending antenatal clinics.

To find the association between pre test levels of knowledge regarding obstetrical danger signs with selected demographic variables.

Materials and Methods:

Study design: A pre-experimental one group pre-test post test study.

Study setup: A hospital based pre-experimental one group pre-test post test study was conducted in the month of March 2022 at Ante-natal clinic in Swahid Tilak Hemram Gunabhiram Civil Hospital, Morigaon, Assam.

Study population: The present study was conducted among the antenatal mothers attending antenatal clinic of Swahid Tilak Hemram Gunabhiram Civil Hospital, Morigaon, Assam.

Sample Size: 60 antenatal mothers attending antenatal clinic of Swahid Tilak Hemram Gunabhiram Civil Hospital, Morigaon, Assam: who gave consent have been selected for the study.

Sampling technique: The study was conducted by non probability convenient sampling technique until required sample size was attained. Every 3rd women visiting the antenatal clinic was selected for the study. This procedure was repeated till the required sample size was achieved.

Inclusion Criteria:

Antenatal mothers who
Are present at antenatal clinic during the time of the study.
Give consent for participation

Exclusion Criteria:

Antenatal mothers who
Are severely ill.

Study Tool: A structured questionnaire was prepared for pre and post test.

The tool consists of following sections-

SECTION A: Demographic performa

SECTION B: Self- structured knowledge questionnaire regarding obstetrical danger signs.

Statistical Analysis

Statistical analysis was done using a licensed version of SPSS 21. Descriptive analysis was done by calculating frequency and percentage distribution of demographic variables and mean and standard deviations of pre-test and post-test level of knowledge. Effect of information booklet on level of knowledge was analyzed by paired 't'test. Chi-square and Fisher's exact test is used to associate the demographic variables with the pre-test level of knowledge. The data is represented in the form of tables, bar diagram and pie diagram.

Results

A total of 60 antenatal women attending antenatal clinic at Swahid Tilak Hemram Gunabharam Civil Hospital were studied.

Sociodemographic Profile:

Age of the study participants was normally distributed. Minimum age was 18 years and the oldest participant was 33 years old. Maximum participants 27 (45%) of the participants were in the age group 21-25 years. Most participants 36 (60%) followed Hinduism and 24 (40%) followed Islam. No participants were from any other religion. Highest 28 (46%) participants have the educational qualification till high school followed by 19 (32%) till higher secondary and above, 7 (12%) others and 6 (10%) primary education. Maximum 40 (66%) of the participants were housewives. Out of all participants about 37 (62%) were primigravida and 23 (38%) were multigravida. 40 (67%) antenatal women belongs to joint family followed by 20 (33%) from nuclear family. 22 (37%) of the participants had <4 antenatal visits, 18 (30%) of the participants had 4 antenatal visits and 20 (33%) of the participants had >4 antenatal visits. About 39 (65%) antenatal women have said that they have previous knowledge about obstetrical danger signs and most of them 22 (36%) had said their source of information is a health care provider. Majority 50 (83%) participants have said they don't have any previous history of experiencing obstetrical complication and 53 (88%) said they don't have any bad obstetrical history in the family.

Table 1: Frequency and percentage distribution of sociodemographic variables of the antenatal mothers

Sociodemographic data	Frequency	Percentage
Age in years		
< 20 years	14	23
21-25 years	27	45
26-30 years	15	25
> 30 years	4	7
Religion		
Hinduism	36	60
Islam	24	40
Education of the participant		
Primary	6	10
High school	28	46
Higher secondary and above	19	32
Others	7	12
Occupation of the participant		
Housewife	40	66
Service	6	10
Self employed	13	22
Others	1	2
Gravida		
Primigravida	37	62
Multigravida	23	38

Monthly family income ≤10,001 10,002-29,972 29,973-49,961 49,962-74,755	7 24 23 6	12 40 38 10
Type of family Joint family Nuclear family	40 20	67 33
No of antenatal visits < 4 visits 4 visits > 4 visits	22 18 20	36.7 30 33.3
Previous information regarding obstetrical danger signs Yes No (i). If yes, source of information Health care provider Mass media Family members	39 21 22 13 4	65 35 36.6 21.7 6.7
Previous history of experiencing Obstetrical complication Yes No 10 (i). If yes, specify Miscarriage Stillbirth Abortion PIH PPH	10 50 3 1 2 3 1	16.7 83.3 5 1.7 3.3 5 1.7
Any bad Obstetrical history in the family Yes No	7 53	11.7 88.3

Table 2: Frequency and percentage distribution of level of knowledge regarding obstetrical danger signs among antenatal mothers before and after administration of information booklet.

Level of knowledge	Before		After		n=60
	F	%	f	%	
Inadequate knowledge	45	75	0	0	
Moderate knowledge	15	25	38	63.3	
Adequate knowledge	0	0	22	36.7	

Table 2 depicts the frequency and percentage distribution of level of knowledge regarding obstetrical danger signs among antenatal mothers before and after administration of information booklet. Results revealed that in pre-test majority 45(75%) of participants had inadequate knowledge and 15(25%) of participants had moderate knowledge while in post-test majority 38(63.3%) of participants had moderate knowledge and 22(36.7%) of participants had adequate knowledge regarding obstetrical danger signs among antenatal mothers.

Table 3: Association between pre test knowledge regarding obstetrical danger signs among antenatal mothers with selected demographic variables.

S. No	Demographic variables	Pre-test knowledge		χ^2 value	df	n=60
		Inadequate	Moderate			
1	Age in years			8.435	1	0.055 ^{NS} (Fisher's exact test)
	< 20 years	14	0			
	21-25 years	20	7			
	26-30 years	8	7			
> 30 years	3	1				
2	Religion			0.0	1	1.000 ^{NS} (Fisher's exact test)
	Hinduism	27	9			
	Islam	18	6			
3	Education of the participant			8.388	1	0.1479 ^{NS} (Fisher's exact test)
	Primary school	5	1			
	High school	23	5			
	Higher secondary/above	10	9			
Others	7	0				
4	Occupation of the participant			0.786	1	0.7337 ^{NS} (Fisher's exact test)
	Housewife	30	10			
	Service	5	1			
	Self employed	9	4			
Others	1	0				
5	Gravida			0.588	1	0.443 ^{NS}
	Primigravida	29	8			
	Multigravida	16	7			
6	Monthly family income			5.932	1	1.000 ^{NS} (Fisher's exact test)
	≤10,001	7	0			
	10,002-29,972	16	8			
	29,973-49,961	19	4			
49,962-74,755	3	3				
7	Type of family			0.0	1	1.000 ^{NS} (Fisher's exact test)
	Joint	30	10			
	Nuclear	15	5			

						exact test)
8	No of antenatal visits < 4 visits 4 visits > 4 visits	11 16 18	11 2 2	11.58	2	0.0045* (Fisher's exact test)
9	Previous information Yes No	25 20	14 1	7.057	1	0.0001* (Fisher's exact test)
10	Previous history of experiencing Obstetrical complication Yes No	7 38	3 12	0.160	1	0.0108* (Fisher's exact test)
11	Any bad Obstetrical history in the family Yes No	6 39	1 14	0.485	1	0.6678 ^{NS} (Fisher's exact test)

* $p < 0.05$ level of significance NS-Non significant *S-Significant

Table 3 shows that there was significant association between pre test knowledge with selected demographic variables such as No. of antenatal visit, Previous information, Previous history of experiencing Obstetrical complication.

It is concluded that knowledge on obstetric danger signs is independent on Age, Religion, Education, Occupation, Gravida, Monthly Family Income, Type of Family, Bad obstetrical history in the family.

Discussion:

The present study aimed to assess the effect of information booklet related to obstetrical danger signs among antenatal mothers attending antenatal clinic in a selected hospital, Assam. The conceptual framework used for the present study was based on CIPP MODEL by Daniel L Stufflebeam (2003). The present research study adopted a quantitative research approach with one-group pretest-post-test design. Data were collected from the antenatal mothers after taking informed consent and ensuring confidentiality of the data collected. Tools used in the study were demographic variable and structured knowledge questionnaire. Non probability convenience sampling technique was used to select the samples consisting of 60 antenatal mothers. Pre test was conducted on the 1st day and after the pre-test information booklet was distributed among the antenatal mothers. The participants are told to read the booklet and come back for post-test after 7 day. On the 7th day post test knowledge score was assessed with the same questionnaire.

The statistical finding of the present study reveals that in pre-test, majority i.e. 75% (45) has inadequate knowledge, 25% (15) antenatal mothers had moderate knowledge and none of the antenatal mothers had adequate knowledge. In post test 63% (38) antenatal mother had moderate knowledge and 37% (22) antenatal mother had adequate knowledge and no one had inadequate knowledge. Similar finding was seen in a study conducted by Suganthi C. on Effectiveness of Structured Teaching Programme on Knowledge regarding Warning Signs of Pregnancy among primi gravida mothers at Chennai. The study findings depicted that in pre test 70% of primi gravid women had inadequate knowledge and 27% of had moderate knowledge and only 2%

had adequate knowledge. Whereas in post test 5% of primigravid mothers had inadequate knowledge, 22% had moderate knowledge and 73% of them had adequate knowledge.¹³

Finding of the present study reveals that pre test mean knowledge score was 8.08 ± 2.942 and post test mean knowledge score was 16.78 ± 3.618 with mean difference was 8.70 with obtained t value 36.36 at $df=59$ was statistically significant at $p < 0.05$ level. As the calculated value is greater than the tabulated value the null hypotheses is rejected and research hypotheses is accepted i.e. the mean post test knowledge regarding obstetrical danger signs is significantly higher than mean post-test knowledge. These results are comparable to a study conducted by Savita (2021) on Effectiveness of planned teaching programme on danger signs in pregnancy of antenatal mothers in terms of knowledge in Kamla Nehru Mother and Child Hospital. The finding of the present study is supported by this study. The findings of the study revealed that, the mean post-test knowledge (14.2) were higher than their mean pre-test knowledge (6.3). The planned teaching programme on danger signs during pregnancy was found to be effective to enhancing the knowledge of antenatal mothers.¹⁴

The findings of the present study shows that there is significant association between pre test knowledge with selected demographic variables such as no of antenatal visit, previous information and previous history of experiencing obstetrical complication. Thus null hypotheses were rejected and research hypotheses were accepted i.e. there is significant association between the pre-test levels of knowledge regarding the obstetrical danger signs with selected demographic variables. Radha, Nandyala U. (2020) have conducted a similar study "A study to assess the effectiveness of structured teaching programme on knowledge regarding identification of warning signs of pregnancy among antenatal mothers." The study depicts that age, previous knowledge, source of information and occupation were found significant. It shows that knowledge was influenced by age, previous knowledge, source of information and occupation. It was inferred that there was a significant association between post-test knowledge scores and their selected demographic variables regarding identification of warning signs of pregnancy among antenatal mothers¹⁵.

Conclusion

The present study was conducted to Assess the effect of information booklet regarding obstetrical danger signs among the antenatal mothers attending antenatal clinic in a selected hospital, Assam. The study reveals that total post test knowledge score was significantly higher than that of pre test as evidenced by $t=36.36(p < 0.05)$. Thus the booklet have provided effect on improving knowledge of the antenatal mothers. On the basis of finding the researcher concluded that the booklet was effective.

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