

“A study to assess the effectiveness of structured teaching programme on knowledge regarding identification of warning signs of pregnancy among antenatal mothers”.

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ABSTRACT

Introduction: As per the WHO theme - Pregnancy is special: Let's make it safe. Aiming at this modern philosophy of obstetric nursing care stresses on meeting the total needs of pregnant women during the antenatal period. Women's knowledge about danger signs of obstetric complications is profoundly important to enhance utilization of skilled care during delivery and to seek emergency obstetric services. **The present study title:** Effectiveness of structured teaching programme on knowledge regarding identification of warning signs of pregnancy among antenatal mothers attending antenatal OPD'S in selected hospitals. The objective of the study to assess the pre-test knowledge regarding warning signs of pregnancy among antenatal mothers, to assess the post-test knowledge regarding warning signs of pregnancy among antenatal mothers, to compare pre-test and post-test knowledge score among antenatal mothers, to find out association of study findings with selected demographic variables. **Material and Methods:** In present study, researcher adopted a pre-experimental One-group pre-test post-test design. The study carried out 100 samples. A Non-probability Purposive Sampling Technique was used. Data analysis was done mainly using descriptive statistics chi-square and co-relation co-efficient. **Result:** Researcher applied chi-square and co-relation co-efficient. In pre-test 62(62%) of antenatal mothers were having inadequate knowledge and 38(38%) of antenatal mothers were having moderate knowledge. It was inferred that majority of the antenatal mothers were having inadequate knowledge in pretest. In post-test 41(41%) of antenatal mothers were moderate knowledge and 59(59%) of antenatal mothers were having adequate knowledge. It was inferred that majority of the antenatal mothers were having adequate knowledge in post-test. **Conclusion:** The structured teaching programme significantly brought improvement in the knowledge of antenatal women regarding warning signs of pregnancy. Analysis of data showed that there was significant increase in the post-test knowledge.

Keywords: (Effectiveness, Structured Teaching Programme, Knowledge, Warning Signs, Pregnancy, Identification, Antenatal Mother)

INTRODUCTION

Pregnancy is that wonderful period in a women's life when she spends each and every day in pleasant anticipation, waiting to hold bundle of joy in her arms at the end of pregnancy. All women need health care and attention during pregnancy. This care helps pregnant women to be healthier and have fewer problems in birth. Prenatal care should come from the women herself from her family and the community, and from midwife. On the other hand, pregnancy is usually normal and healthy, so people may not think that prenatal care is important but most midwives know that women who have good care during pregnancy are more likely to have safer births and healthier babies. During pregnancy women body changes to facilitate growth and development of fetus and adopt sterns of pregnancy. These changes can sometimes be comfortable and most of the time they are normal. Abnormal signs and symptoms may lead to serious complications for example-morning sickness may turn in to hyper emesis gravidarum. So make mother as alert as possible for any complications that are likely to arise. As per the WHO theme - Pregnancy is special: Let's make it safe. Aiming at this modern philosophy of obstetric nursing care stresses on meeting the total needs of pregnant women during the antenatal period. The government of India has chalked out an ambitious plan for child survival through safe motherhood with adequate emphasis on antenatal care and child care. Pregnancy is a special event in a women's life which requires extra care and safety. Danger signs of pregnancies are warning signs that women encounter during pregnancy, child birth and postpartum. It is important, to know this warning signs for women and health care providers to rule out serious complications and initiate treatment immediately. The most common danger signs during pregnancy that can increase the risk of maternal deaths are: vaginal bleeding, convulsions/fits, high fever, abdominal pain, severe headaches, blurred vision, absence of fetal movements, gush of fluid from vagina, foul smelling vaginal discharge.

NEED FOR THE STUDY

It is estimated that 50% to 70% of deaths occurs due to various problems related to pregnancy, labor and puerperium can be prevented through detection. The term warning sign emphasizes the obstetric approach to indicate the risk conditions. To detect these conditions patients need to be screened and problems need to be identified and managed to promote optimal pregnancy outcome. The warning signs are ;bleeding per vagina, premature rupture of membrane, convulsions, edema, headache during pregnancy, foul smelling discharge per vagina, fever, labor without progress for 12 hours, delayed placental delivery during labor; excessive bleeding from vagina during puerperium. Every pregnant woman faces the risk of sudden, unpredictable complication that could end in death or injury to herself or to her infant. Hence, it is necessary to employ strategies to overcome such problems as they arise. Lack of advanced planning for use of skilled birth attendant for normal birth and particularly in adequate preparation for rapid action in the event of obstetric complications are well documented factors contributing to delay in receiving skilled obstetric care. Maternal morbidity and mortality could be prevented significantly if women and their families recognize obstetric danger signs and promptly seek health care.

A study conducted in India, stated that the maternal mortality ranks at 420 per 100,000 live births. Most maternal deaths in India are caused by complications such as hemorrhage (29%), anemia (19%), sepsis (16%), obstructed labour (10%), unsafe abortion (9%) and (8%) hypertensive disorders of pregnancy. All these are potentially avoidable. Maternal death is not a vaccine preventable disease and there is no one short remedy for reducing maternal mortality. Maternal mortality is disease of poverty, affecting woman and their children, restricted by national borders and of little interest to anyone else.

OBJECTIVES OF THIS STUDY

- To assess the pre-test knowledge regarding warning signs of pregnancy among antenatal mothers
- To assess the post-test knowledge regarding warning signs of pregnancy among antenatal mothers.
- To compare pre-test and post-test knowledge score among antenatal mothers.
- To find out association of study findings with selected demographic variables.

REVIEW OF LITERATURE

Many studies have been carried out on knowledge regarding pregnancy warning signs. Review of the relevant studies was carried out from the textbooks, journals, articles; review of literature for the present study is organized under the following headings:

Review of literature for warning signs of pregnancy

An experimental study was conducted on nausea and vomiting in early pregnancy and its role in placental development concluded that there may be a positive relationship between morning sickness and preconceptional body mass index, such that women that are underweight was experience less severe symptoms of morning sickness compared with women with normal preconceptional body mass index's.

A community based cross-sectional study conducted showed that about half of the study subjects knew at least one obstetric danger sign. Descriptive cross- sectional study carried out among antenatal care clients showed that 27.9% of the study respondents were not informed about danger signs in pregnancy. According to this study, Hemorrhage was the most known danger sign in pregnancy mentioned by 64.2% of the respondents, followed by reduced fetal movement which was mentioned by 20.6% of the respondents. Another descriptive survey conducted in reveals that, about half of the respondents (51.9%) considered bleeding; about a third considered convulsions (37.8%) and loss of consciousness (33.2%) as danger signs in pregnancy. The percentage of women who knew at least one danger sign related to pregnancy was 26%, in relation to delivery was 23%, and to the period after delivery was 40%. Therefore, this study was undertaken to explore the level of knowledge about obstetric danger signs among antenatal mothers.

A clinical research was conducted in their study on the predictors of vaginal bleeding during the first two trimesters of pregnancy. The findings revealed that the maternal age, race, cigarette smoking, prior spontaneous abortion, prior induced abortion and prior preterm birth were in relation to vaginal bleeding during the first two trimesters of pregnancy.

A research conducted on Detection and management of decreased fetal movements. Aim of the study was to identify current practices and views of obstetricians in Australia and New Zealand regarding decreased fetal movements. A postal survey method was used. The result of the study is of the 1700 surveys distributed, 1066 (63%) were returned, of these, 805 (76% of responders) were currently practicing and included in the analysis. Sixty percent reported maternal perception of decreased fetal movement and 77% decreased fetal movement for 24h.

Review of literature for structured teaching programme regarding warning signs of pregnancy

A descriptive cross sectional study was conducted to assess the knowledge of primigravida women on warning signs of pregnancy at Coimbatore. The sample of the study included 100 primigravida mothers. The data were collected by using structured interview schedule after testing the validity and reliability. Most of the mothers (66%) were in the age group of 21-25 years. Among them about (74%) mothers were belongs to joint family. About 36% of mother had secondary education, where as 31% had graduates and illiterates were 2%.About 76% of the mothers were housewives. The result of study showed that mean knowledge score was highest (3.94 ±1.46) on the area of definition, duration, signs and symptoms of pregnancy and definition of warning signs during pregnancy. Most or less similar percentage was obtained in the area of maternal weight gain, fetal movement and signs and symptoms of PIH

(3.7 ± 1.31) and management of edema, preterm labor and signs and symptoms of anemia (3.5 ± 1.53). Lowest mean score was obtained in the area of warning signs during pregnancy (2.78 ± 2.0) and normal value of Hb, causes and effect of anemia and effect of warning signs and its prevention (2.73 ± 1.31). So the study revealed that mothers had poor knowledge on warning signs during pregnancy.

A study was conducted to assess women's awareness of danger signs of obstetric complications and to identify associated factors. The study sample consisted of 1118 women who had been pregnant in the past two years and they were interviewed. The result of the study showed that more than 98% of the women attended antenatal care at least once. Half of women knew at least one obstetric danger sign. The percentage of women who knew at least one danger sign during pregnancy was 26%, during delivery 23% and after delivery 40%. Few women knew three or more danger signs. The likelihood of having more awareness was increased significantly by increasing age of the mother, increasing education, number of deliveries, number of antenatal visits, whether the delivery took place at an institution and whether the mother was informed of having a risks or complications during antenatal care. So the study concluded that women had low awareness of danger signs of obstetric complications.

A study was conducted to evaluate the effectiveness of a set of information, education, and communication (IEC) strategies designed to increase the awareness of danger signs in pregnancy, delivery, or the postpartum period among pregnant or recently pregnant women and three IEC programs were implemented in 4 regions of South-Western Guatemala between April 1997 and May 1998 and three surveys were conducted. In 1999, 638 pregnant and postpartum women were interviewed. The result of the study showed that among women using health clinics, the likelihood of having heard of danger signs nearly tripled between 1997 and 1998, when the clinic interventions were fully implemented. In 1999, those who had heard radio messages or participated in women's groups were, respectively, 3 times and 5 times more likely to have heard of danger signs in pregnancy. The study that safe motherhood programs can effectively increase knowledge of danger signs through clinic and community based educational strategies.

Material and method:

In present study, researcher adopted a pre-experimental One-group pre-test-post-test design. The study carried out 100 samples. A Non-probability Purposive Sampling Technique was used. Data analysis was done mainly using chi-square and co-relation co-efficient

Description of Tool:

A semi-structured questionnaire was developed to assess the effectiveness of structured teaching programme regarding warning signs of pregnancy. It consists of two sections i.e. Section I and section II.

SECTION I: Demographic data like age, gender, education, previous knowledge about warning signs of pregnancy, if yes source of information, occupation and bad habits.

SECTION II: Consists of structured questionnaire on knowledge about identification of warning signs of pregnancy.

Plan for Data Analysis

Data analysis was done by using descriptive and inferential statistics based on objectives of study.

Chi-square and co-relation co-efficient was used for the effectiveness.

RESULT AND DISCUSSION

Analysis and interpretation of the data are based on data collected from 100 samples through structured questionnaire tool.

Section I

Frequency & Percentage distribution according to age

Table 1: Description of samples based on their personal characteristics

n=100

Sr.	DEMOGRAPHIC VARIABLE	FREQUENCY (F)	PRACENATGE (%)
1	Age		
	20-25	9	9.0
	26-30	22	22.0
	31-35	40	40.0
	36-40	29	29.0
2	Educational qualification		
	Primary	20	20.0

	Secondary	50	50.0
	Higher secondary	22	22.0
	Graduation & above	8	8.0
3	Occupation		
	Service	11	11.0
	Housewife	80	80.0
	Business	9	9.0
4	Previous knowledge about warning signs of pregnancy		
	Yes	88	88.0
	No	12	12.0
5	Source of information		
	Mass media	17	17.0
	Literature	10	10.0
	Health worker	46	46.0
	Friends	15	15.0
	No	12	12.0
6	Type of bad habits		
	Yes	0	0.0
	No	100	100.0

Table no 1 is showing description of samples based on their personal characteristics that majority (40%) of the mothers from age group of 31-35 years. majority (50%) of the mothers had secondary education. majority (80%) them was house wife, 88% of them had previous knowledge about warning signs, 46% of them had acquired knowledge from healthcare workers and none of single mother having any kind of bad.

Section II

Data on pretest knowledge scores of antenatal mothers on warning signs of pregnancy.

Table 2: Classification of respondent pre-test knowledge level on warning signs of pregnancy

n=100

Knowledge Level	Category	Respondents	
		Number	Percent
Inadequate	≤ 50 % Score	62	62.0
Moderate	51-75 % Score	38	38.0
Adequate	> 75 % Score	0	0.0
Total		40	100.0

In the data 62(62%) of Antenatal mothers were having inadequate knowledge and 38(38%) of Antenatal mothers were having moderate knowledge.

It was inferred that majority of the Antenatal mothers were having inadequate knowledge in pretest.

Section III

Overall post-test knowledge scores and levels of respondents on identification of warning signs of pregnancy

Table 3: Classification of respondents of post-test knowledge level on identification of warning signs of pregnancy

n=100

Knowledge Level	Category	Respondents	
		Number	Percent
Inadequate	≤ 50 % Score	0	0.0
Moderate	51-75 % Score	41	41.0
Adequate	> 75 % Score	59	59.0
Total		40	100.0

In the data 41(41%) of antenatal mothers were moderate knowledge and 59(59%) of antenatal mothers were having adequate knowledge. It was inferred that majority of the antenatal mothers were having adequate knowledge in post- test. Section IV

Data on comparison of pre-test and post-test knowledge scores on identification of warning signs of pregnancy

Mean, standard deviation and t value regarding over all Pre-test and Post-test knowledge on warning signs of pregnancy

n=100

Aspects	Max. Score	Respondents knowledge				Paired t Test
		Mean	SD	Mean (%)	SD (%)	
Pre test	20	9.40	2.1	47.0	10.5	25.12*
Post test	20	15.78	1.5	78.9	7.7	
Enhancement	20	6.38	2.5	31.9	12.7	

* Significant at 5% level

t (0.05,59df) = 1.96

The data presented shows that overall mean percentage of posttest knowledge score was 15.78(78.9%) with 1.5(7.7%) SD significantly higher than overall mean of pretest knowledge score was 9.40(47.0%) with 2.1(10.5%) SD. There was an enhancement of 6.38(31.9%) mean with 2.5(12.7%) SD. „t“ value computed between pre-test and post-test knowledge score is statistically significant (t (Cal) = 25.12, table value t (39) = 1.96, p <0.05). The calculated „t“ value was greater than table value. Hence research hypothesis was accepted. There was significant difference between the mean pre-test and post-test knowledge score of Antenatal mothers regarding warning signs of pregnancy. However, the findings reveal that the structured teaching programme on identification of warning signs of pregnancy was effective teaching strategy as revealed by statistical results.

Section IV

Association between demographic variables and post-test knowledge level on identification of warning signs of pregnancy

Demographic Variables	Category	Sample	Knowledge Level				χ^2 Value	P Value
			Moderate		Adequate			
			N	%	N	%		
Age group (years)	20-25	9	1	11.1	8	88.9	9.02*	P<0.05 (7.815)
	26-30	22	5	22.7	17	77.3		
	31-35	40	19	47.5	21	52.5		
	36-40	29	16	55.2	13	44.8		
Educational status	Primary	20	8	40.0	12	60.0	0.30 NS	P>0.05 (7.815)
	Secondary	50	20	40.0	30	60.0		
	Higher secondary	22	9	40.9	13	59.1		
	Graduation & above	8	4	50.0	4	50.0		
Previous knowledge about warning signs of pregnancy	Yes	88	40	45.5	48	54.5	6.02*	P<0.05 (3.841)
	No	12	1	8.3	11	91.7		
Source of information	Mass media	17	4	23.5	13	76.5	14.62 *	P<0.05 (9.488)
	Literature	10	8	80.0	2	20.0		
	Health worker	46	22	47.8	24	52.2		
	Friends	15	6	40.0	9	60.0		
	No	12	1	8.3	11	91.7		
Occupation	Service	11	8	72.7	3	27.3	7.93*	P<0.05 (5.991)
	Housewife	80	32	40.0	48	60.0		
	Business	9	1	11.1	8	88.9		
Combined		100	41	40.0	59	59.0		

* Significant at 5% Level,

S: Significant

NS: Non-significant

The obtained χ^2 Value regarding age of antenatal mothers $\chi^2=9.02$ ($P=7.815$), previous knowledge $\chi^2=6.02$ ($P=3.841$), source of information $\chi^2=14.62$ (9.488) and occupation $\chi^2=7.93$ ($P=5.991$) were found significant hence hypothesis (H_1) accepted. Regarding educational status $\chi^2=0.30$ ($P=7.815$) association found not significant, hypothesis rejected. It shows that the knowledge was influenced by age, previous knowledge, source of information and occupation. Hence hypotheses of the study were accepted.

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 mothers.

Discussion

Most mothers enter pregnancy with the expectation that their pregnancy and delivery will involve nothing but happiness. When severe complications occur, patients often feel scared, angry and happiness. The best approach is to discuss all issues with patients. Empower the patient by involving her in the decision making process. Pregnancy is a normal physiological process and not a disease, but it is associated with certain risks to the health and survival of both of the women and for the infant she bears. Globally, every minute, at least one woman dies from complications related to pregnancy or childbirth- that means 529 000 women a year. Most maternal deaths are avoidable as the health care solutions to prevent or manage the complications are well known. This includes well-functioning health system that provides accessible and high quality care from house hold to hospital level. Women's awareness of potential obstetric danger signs is expected to influence their decisions regarding when to decide to seek medical care. Accordingly, awareness of obstetric danger signs is expected to help women to faster decision to seek medical care which makes a difference between life and death if all such are well known. This makes it very important to women to be aware of all obstetric danger signs.

CONCLUSION:

The significantly brought teaching programme brought improvement in the knowledge of antenatal women regarding warning signs of pregnancy. Analysis of the data showed that there was significant difference between pre-test and post-test scores.

IMPLICATIONS:

Once the researcher has drawn conclusion about the credibility, meaning and importance and generalizability of the results. Researcher should consider the implication or application of the study with respect to further research, theory development and nursing practice. How to do the results contribute to a base of evidence to improve nursing specific suggestions for implanting the result of the study in real nursing context are extremely valuable in the utilization process.

The findings of the study have implication in nursing practice, nursing education, nursing administration.

Nursing practice:

Pregnancy is a period of expectant waiting and that all women aspire to experience at least once in her lifetime. As she sets her foot on the path that transmits, one from women in to a mother, several responsibilities and concerns become her alone. Giving life is powerful. It is vital, therefore, that she prepares her body to become a suitable environment for the baby to grow in, while staying happy and healthy, emotionally and mentally as well. Each week of pregnancy brings with it new changes and feelings that may require some explanations and support, especially to the primigravida women.

Educational programs regarding warning signs during pregnancy and its prevention and treatment can be planned by the nursing personnel. To prevent the complications of warning signs during pregnancy, nurse can advise suitable coping strategies and the preventive measures during antenatal period of the women.

Midwifery can identify the signs and symptoms of warning signs and symptoms of warning signs during pregnancy and educate the antenatal mothers to prevent it. The nurse can focus more on the causes, sign and symptoms, prevention which includes diet, life style modifications, exercise etc. and treatment for the warning signs. A community health nurse can play very important role in imparting health education regarding warning signs during pregnancy. Information booklet, posters, charts, self-instructional module and pamphlets on warning signs during pregnancy and its prevention and treatment can be constructed at colleges, hospitals and maternal health centers.

Nursing education:

Safe motherhood ensures that all women have access to the information and services they need to go safely through pregnancy and childbirth which include education on safe motherhood, prenatal care and counseling with focus on high risk pregnancies, promotion of maternal nutrition, adequate delivery assistance in all cases, provision for obstetric emergencies including referral services for pregnancy, childbirth and abortion complications and postnatal care.

The study implies that health personnel have to be properly trained on how to teach the antenatal women regarding warning signs of pregnancy and how to reduce the risk of complications. Every student nurse and staff should be encouraged to teach the antenatal women regarding warning signs during pregnancy, its prevention and its effects on mother and fetus. It will improve the quality of life of the women as well as prevent complications and avoid economic loss. Nursing students also should acquire the skill and knowledge to assess the needs of the patient and to plan out teaching programme in the hospital as well as in maternal health centers. The nursing curriculum also should provide opportunity to plan and conduct health education. It is time now to motivate the women to come for regular follow up to have awareness regarding the warning signs of pregnancy so as to avoid complications in present as well as future pregnancy that she also feels confident and gets satisfaction and becomes independent and minimizes the risk of complications. A regular health education programme could be planned by the nurse educator along with the students with an emphasis to aware the antenatal women regarding the warning signs of pregnancy.

Structured teaching programme on warning signs of pregnancy and its prevention and treatment should be done often. Informal health education also should be incorporated in the day -to -day activities of nursing educators and students. Effective teaching material, audiovisual aids and demonstrations should be used to express the content area clearly.

Nursing administration:

Nursing administration should make arrangement for providing education programmes to the patients and their relatives (bystanders) during their stay in the hospital and also for the patients in the OPD. A separate health education cell with sufficient staff, materials and facilities should be organized or arranged by the administrator and it is better a staff conduct teaching programmes in the maternal health centers. During home visits the women should be encouraged to screen for complications.

With technological advances and ever and ever growing challenges of health means, the administrators have the responsibility to provide nurse with the sustaining continuing education opportunities. The nurse administrator should take the initiative to implement health care services.

Nursing research:

One of the most important aims of nursing research is to contribute knowledge to the body of nursing and to contribute knowledge to the body of nursing and to expand or broaden the scope of nursing. This is only possible if nurses take initiative to conduct research studies to increase the knowledge regarding warning signs of pregnancy to improve the health status of mother as well as of fetus and reduce complications.

By conducting research and formulating new theories, researchers can improve the knowledge, skill and attitude of nurses and ultimately can improve the status and standard of the nursing profession.

LIMITATION:

- The limitations recognized in the study.
- The study size of the sample was small which imposes limitations on generalizations.
- The study is limited to antenatal women.

RECOMMENDATIONS

1. A similar study can be replicated on a larger sample.
2. An evaluative study may be conducted to investigate the effect of warning signs on mother and fetus.
3. A large study can be carried out to assess the knowledge of mothers on all the warning signs separately.
4. A comparative study can be carried out on primi-gravida and multi-gravida.

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