



A Study to Assess the Effectiveness PF Structured Teaching Programme on Warning Signs Among Primi Mothers In Selected Hospitals At Nellore.

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Abstract

Introduction And Objectives

“Maternal health is Nation’s wealth. There is a chance for the welfare of the world only when the condition of the women improves. It is not possible for a bird to fly on only one wing.” Swamy Vivekananda

Background of the study

Woman is treated as a whole person when she bears a child and becomes a mother. It is of great achievement in any woman’s life irrespective of her nation. Pregnancy and childbirth are celebrated universally, and this promote women to motherhood.

Motherhood is a great responsibility, and it is woman’s highest crown of honor. Maintaining good health during pregnancy is very important especially in the present stressful life. Pregnancy and childbirth place a woman at a higher risk of morbidity and mortality. Though a fair degree of success has been achieved in reducing maternal deaths and improving maternal care, several women continue to suffer from morbidities in the ante partum, intrapartum and postpartum periods due to reasons directly or indirectly attributable to pregnancy.

These may be the life threatening or serious or may incapacitate a woman for varying lengths of time.

Need for the study

Pregnancy and childbirth place a woman at a higher risk of morbidity and mortality. All pregnant women in their pregnant status face some levels of maternal risks. Data suggest that about 40 percent of all pregnant woman have some complications which are potentially life threatening to mothers or infants. In the present days every pregnant woman is considered to be at ‘risk’. It is therefore necessary that all pregnant women must have access to quality obstetric services.

Lifetime risk of maternal deaths is the risk of an individual woman dying from pregnancy or childbirth during her lifetime. A lifetime risk of 1 in 100 represents high risk. Lifetime risk in India is 37. (Maternal Health Around the world & WORLD bank, 2008).

Maternal Mortality and Morbidity (World)
(Source: Mother Care Matters, WHO, 2008)

500 million suffer from Anemia, 6 million died due to pregnancy related complication, 640 million suffered from pregnancy related morbidity.

Percentage Distribution of Maternal Mortality (India)

(Source: Survey of causes of deaths, 2008)

Anemia – 15 percent, Bleeding – 24 percent, Other symptoms – 61 percent, Total maternal deaths – 359 per day

Statement of the Problem

“A study to assess the effectiveness of structured teaching programme on warning signs among Primi Mothers in selected hospitals at Nellore.”

Objectives of the Study

1. To assess the pretest knowledge score on warning signs.
2. To assess the effectiveness of structured teaching program on warning signs through posttest knowledge score.
3. To compare pretest and posttest knowledge score on warning signs among experimental, control group.
4. To find out the association between the pretest and posttest knowledge score and selected demographical variables in experimental and control group.

Operational Definitions

- Effectiveness.
- Structured teaching.
- Warning signs in pregnancy
 - Bleeding from vagina
 - Unusual swelling of face, arms, and legs.
 - Decreased or increased fetal movements.
 - Pallor
 - High fever
 - Pregnancy
 - Primi mother

Hypothesis

All hypotheses will be tested at 0.05 level of significance.

1. There will be a significant relationship between the pre and post test knowledge score on warning sign

among primi in experimental group.

2. There will be a significant relationship between the pre and posttest knowledge score on warning sign among primi in control group.
3. There will be a significant association between the pre and posttest knowledge score and selected demographic variables in experimental and control group.

Conceptual Framework

Conceptual framework deals with the interrelated concepts or abstractions that are assembled together in some rational scheme by virtue of their relevance to common theme (Polit & Hungler, 1976).

The present study is based on **Ludwig Vonbertalaniffy's General System's**

Approach and Nursing Process

A system is defined as a set of elements or units in interaction to achieve a specific goal. System refers to the orderly, logical arrangement of interdependent parts into an interrelated whole to accomplish a given purpose. A system operates to convert or process energy, information or materials into a structured outcome, product or information. It is characterized by:

1. Input – The component which receives, stores r takes in energy in the form of information or material such as time, money, people, equipment effort or information.
2. Through put/process – The processor, converter or assimilating meansof changing the energy received into product or outcome.
3. Output – The outcome, result, or product.
4. Feedback - A regulating mechanism which functions as a monitor, evaluator

Review of Literature

The purpose is to obtain scientific material relevant to the present study. The term literature review refers to the activities involved in identifying and searching for information on a topic and further developing a

comprehensive picture of a topic.

Literature Related to Maternal Mortality and Morbidity

Nayak Arun H. and Dalal Asha R (2005-2010) undertook a retrospective study to determine the most common causes of maternal deaths in Mumbai (Maharashtra). The findings revealed that 39 maternal deaths were from 25,886 deliveries. MMR was 150.6 per 1,00,000 deliveries, 43.3 percent were primipara. Direct causes accounted for 74.35 percent. Among direct causes, haemorrhage was 28.2 percent and Eclampsia was 20.5 percent.

Lal Sunder et al (2009) conducted a study on the problem of mortality in women of Reproductive Age in Rural Area of Haryana. Total female population was 58,961. There were 47 (21.46 percent) maternal deaths. Thus, one out of every five deaths among women in their childbearing age was related to pregnancy. Overall MMR was 475 per 1,00,000 live births. Primi gravida and primi para experienced high mortality- 25.5 percent and 31.9 percent respectively. The major causes of maternal mortality were post-partum haemorrhage (17 percent), puerperal sepsis (17 percent), anaemia (12.8 percent), pre-eclampsia and eclampsia (14.9 percent) and indirect causes were 12.8 percent.

Literature Related to Vaginal Bleeding

Karim SA et al (2008) conducted a study in Karachi on effects of vaginal bleeding during first and second trimester on pregnancy outcomes. They were assessed in a hospital-based population of 268 nondiabetic women. The group of non bleeders comprised 173 females whereas there were 71 females with first and 24 with second trimester bleeding. Fetal loss occurred in 34 percent of first trimester and 25 percent of second trimester bleeders. Low birth weight and preterm deliveries were significantly associated with second

trimester hemorrhage. The results suggest that first and second trimester vaginal bleeding correlates with adverse infant outcomes.

Pawar Pratishka A & Shrotri Aparna (2007) conducted a prospective hospital-based study in Pune, Maharashtra on prevalence of obstetric haemorrhage. The study findings revealed that in 66% of the cases, massive obstetric haemorrhage occurred in late pregnancy; 18% early pregnancy and 16% after delivery. 10 women died following massive haemorrhage, of these 4 women died of antepartum haemorrhage owing to placenta praevia and 2 women died with abruption placenta.

Literature Related to Unusual Swelling of Face, Arms or Legs

Hamlin, Strauss, Bruke undertook a study on the cause and prevention of edema during pregnancy. They found the nutritional deficiencies which may further leads to pre-eclampsia during pregnancy. Dietary management is the conclusion of study.

Pal Bhaskar et al studied on maternal mortality in eclampsia in Mumbai, Maharashtra and found that among total maternal deaths 62.5% cases were primi gravidae. Eclampsia occurred in 8.7% of cases at less than 28 weeks of gestation; 51.2% were antepartum eclampsia cases. Eclampsia related deaths constituted 14% of all maternal deaths.

Literature Related to Loss of or Irregular Fetal Movements

WHO (2000) systematic review and prevalence of irregular or loss of fetal movements. The methodology followed is predefined protocol. A total of 30 studies were included. Designs are mainly cross sectional and 24 were conducted in hospital settings. The prevalence varies between disease-based criteria and organ system based criteria.

Meile Minkauskeine MD (2008), Kaunas university hospital, conducted a systematic literature review to summarize the prevalence/incidence of fetal movements absence or irregularity. This study included the 38 reports which are cross sectional, in which 22 studies presented about complications which leads to absence or irregular fetal movements.

Literature Related to Anaemia (pallor)

Peggy Bently & Anjou Parekh (2008) conducted a survey on perceptions of Anemia and health seeking behavior among women in Indian four states. 100 women in each state were taken as sample. 50% of them didn't percept Anemia properly.

Saluja s, bhandari s (2009, September) conducted a research study to explore the role of prophylactic iron supplementation in pregnancy of 752 women found to be anaemic at booking, 591 received prophylactic iron supplements, while 161 did not. A total of 166 (28.1%) of those with iron supplements were anaemic at delivery whereas 140 (87%) of those who did not receive prophylaxis were anaemic at delivery.

Literature Related to Fever in Pregnancy

Patra, puri, trivedi, (2010) conducted a study on effect of malaria on pregnancy in tribal community. 50 pregnant women were the sample. Mostly the cause of deaths during pregnancy as malaria in the tribal community and the causative organism as plasmodium species was recognized. Denman J, woods. M (2009) conducted a qualitative study on intermittent preventive treatment of malaria during pregnancy. The method used is the interview schedule. It showed that the knowledge of malaria risks during pregnancy was high among pregnant women. It concluded that the successful planning, support and training of health staff will give good results.

Ashwani Kumar, Neena Valecha, Tanu Jain &

Aditya P. Das (2006-2007) conducted a retrospective and prospective view of burden of malaria during pregnancy in India. It revealed that about 2 million confirmed malaria cases and 1000 deaths are reported annually, although 15 million cases and 20,000 deaths are estimated by WHO. India contributes 77% of total in Southeast Asia.

Literature Related to Importance of Teaching

Monjural Hoque, Shahnaj Hoque (1999-2004) conducted a retrospective comparative study in rural hospitals to detect and manage high risk pregnancies. This suggests that further research is needed to find out the causes of higher rate of pregnancies and an increase in quality of antenatal care by good teaching and training which is more important in improving maternal and perinatal health.

Reena P John (2005) conducted a study on the effectiveness of self-instructional module regarding management of pregnancy induced hypertension on knowledge of staff nurses in selected hospitals. In this study, she proved that there is need for teaching the management aspects of PIH.

Literature Related to Effectiveness of structured Teaching to Improve Knowledge

Laila Nawar, Dale Huntington (2008, may) conducted a cross sectional study to assess the knowledge of antenatal services. They successfully proved the effectiveness of structured teaching program on 250 antenatal mothers which helped in improvement of knowledge.

Longjam Anjanbala (2004) conducted a study to assess the effectiveness of structured teaching program on safe labor in Primi gravid women in selected hospitals. It was proved that the teaching program is very effective in primi gravid.

Research Methodology

For any research work the methodology of investigation is of vital importance. Research methodology is a way to solve the problems. It is a systematic procedure in which the researcher starts from initial identification of the problem to final conclusions. The methodology of research indicates the general pattern of organizing the procedure for gathering valid and reliable data for the problem under investigation. This chapter deals with the methodology adopted for the present study. It includes research approach, research design, setting of the study, sample, sampling technique, inclusion criteria, content validity, development and description of tool, pilot study, reliability, data collection procedure and plan for data analysis, presentation of findings.

Research Approach

Research approach is an umbrella that covers the basic procedure for conducting research. Inferential approach is a kind of approach where in the purpose is to form a database from which to infer characteristics or relationships of population. This usually means survey research where a sample of population is studied to determine its characteristics and it is inferred that the population has the same characteristics.

Research Design

A researcher's overall plan for obtaining answers to the research questions or for testing the research hypothesis referred to as the research design (Polit 1999). The research design selected for this study is descriptive design. The research approach adapted is Quasi Experimental, which is felt to be the most appropriate as quasi experiments comprise practicability, feasibility and to a certain extent generalization.

Setting of the Study

The study was conducted in the following maternity hospitals at Nellore, Dr. P.V. Ramchandra Reddy's

People Poly Clinic Hospitals and Lakshmi Fertility Hospital.

Population

The Population for the study consists of primi mothers of gestational age of 18 to 35.

Sampling Technique

The simple random sampling technique was used for the study.

Inclusion Criteria

The study includes the Primi mothers who are:

1. Primi gravida mothers fall in the age of 20-40 years.
2. Willing to participate in the study.
3. Able to understand Telugu.
4. Available at the time of data collection.
5. Primi gravida mothers residing at Nellore.

Exclusion Criteria

The study excludes Primi mothers who are.

1. Fall in the age of <20-30 years.
2. Not willing to participate in the study.
3. Unable to understand Telugu.
4. Not available at the time of data collection.
5. Not residing at Nellore.

Development of the tool

It was developed with the help of literature and consultation with nursing, medical experts in English, Telugu.

Description of the tool

The structured questionnaire consists of two parts:

Part I Demographic characteristics of the sample such as age, religion, type of family, education, occupation, family's monthly income and period of gestation.

Part II Questions to assess the knowledge of Primi mothers on meaning, types and importance of early detection of warning signs in pregnancy; vaginal bleeding; unusual swelling of face, arms or legs; Absence of or irregular foetal movements; Anaemia/pallor and

High fever during pregnancy.

Content Validity of the tool

The tool was assessed for content validity by experts in the field of Nursing, Department of social and preventive medicine and Department of Obstetrics. The tool was modified by incorporating the expert's guidance.

Reliability of the tool

The reliability of the tool (structured questionnaire) was tested by test and retest method with a time gap of one week. The correlation – coefficient was calculated by using Carl Pearson product moment method. The obtained value of 'r' is 0.98 for knowledge scores. It shows that tool is highly reliable. For internal consistency of the tool, the split half method was used and the obtained 'r' value is 1, which shows the high reliability of the tool.

Pilot Study

Performance of knowledge scores of two groups. There was significant difference between control and experimental groups in knowledge score i.e. $P < 0.01$.

The Pilot study was conducted in order to find out the feasibility and practicability of the tool and the results proved that the tool was feasible and practicable.

Data Collection Procedure

Formal permission of the Superintendent of the hospital was obtained and data was collected by interview schedule using structured questionnaire. After explaining the purpose of the study and with their consent, data was collected. Structured teaching on warning signs with the help of structured lesson plan prepared by the investigator and with related audio visual aids was given to the experimental group for about 30 minutes. The post-test was given to all the subjects by interview schedule using structured questionnaire after one week to assess the effectiveness of Structured teaching on warning signs in pregnancy.

Plan for data analysis

Data analysis was done with the help of descriptive and inferential statistics in five parts.

Part - I Frequency and percentage distribution of Primi mothers in experimental and control groups according to demographic data such as age, religion, type of family, education, occupation, family monthly income and period of gestation.

Part - II: Item wise frequency and Percentage distribution of pre-test and post-test knowledge of selected Primi mothers on warning signs in pregnancy in both the experimental and control groups.

Part-III: Formulating pre-test knowledge, scores and percentage distribution of individual Primi mothers in experimental group and control group. Test of significance (Unpaired 't' test) showing the relationship of pre-test knowledge scores in experimental and control groups. Formulating post-test knowledge scores and percentage distribution of individual Primi mothers in experimental group and control group. Test of significance (Unpaired 't' test) showing the relationship of post-test knowledge scores in experimental and control groups.

Part - IV: Formulating pre-test and post-test knowledge scores and percentage distribution of individual Primi mothers in experimental group. Pre-test and post-test mean percentage knowledge scores of Primi mothers in experimental group on warning signs in pregnancy. Test of significance (Paired 't' test) showing the relationship of pretest and post-test knowledge scores of Primi mothers in experimental group on warning signs in pregnancy. -test knowledge scores of Primi mothers in control group on warning signs in pregnancy.

Part-V: Relationship of knowledge scores on warning signs in pregnancy among Primi mothers with selected variables like age, type of family, education, occupation,

family monthly income and period of gestation in both experimental and control groups.

Analysis And Interpretation

This chapter deals with the statistical analysis, which is a method of rendering quantitative information in a meaningful and intelligible manner, statistical procedure of data gathered enables the researcher to organize, interpret and communicate information meaningfully.

The data collected were grouped and analyzed by using descriptive and inferential statistics were used for assessment. Tables and figures are used to explain the result. Analysis is a process of organizing and synthesizing the data in such a way that research question may be answered and hypothesis tested.

The analysis and interpretation of data are based on the data collected through structured interview method in selected Hospitals, Nellore. Organization and presentation of the obtained data were entered into the master sheet for tabulation and statistical processing that results were computed using descriptive and inferential statistics.

Part – 1

Age: Table 1 show that according to age, experimental group consists of 84 percent of primi mothers and Control group consists of 92 percent of primi mothers in the age group of 18 to 23 years. In the age group of 24 to 29 years, Experimental group consists of 16 percent of primi mothers and Control group consists of eight percent of primi mothers. There were no primi mothers in the age groups of 30 to 35 years and 36 yrs & above in both Experimental and Control groups.

Religion: According to religion, in both Experimental group and Control group all Primi mothers were Hindus and none from other religion.

Type of family: According to type of family as shown

In Table 2, Experimental group consists of 44 percent of primi mothers from nuclear family and 56 percent from joint family. Control group consists of 40 percent of primi mothers from nuclear family and 60 percent from joint family.

Education: According to Education as shown in Table 2, in Experimental group 36 percent Were non literates, 32 percent have primary school education and who can be able to read and write; 24 percent have high school education and eight percent were Graduates. There were no primi mothers with Intermediate education in the Experimental group. In the Control group 12 percent were non-literates, 52 percent have primary school education and who can be able to read and write; 16 percent have high school education, 16 percent were intermediate qualified and four percent were Graduates. warning signs in pregnancy with selected variables.

A r of related literature has helped the investigator to gain an insight into the present problem, in depth knowledge of different aspects of warning signs in pregnancy, to develop the conceptual framework for the study, development of the tool and plan for data analysis. Quasi experimental research approach is used to conduct the study. The study was conducted in selected hospitals at Nellore.

The population for the study consists of antenatal primi mothers of gestational age of 16 to 36 weeks registered during the study period those willing to participate in the study at the time of data collection were included. Simple random sampling technique was used for choosing the sample for both Experimental and Control groups. A structured interview schedule was prepared by the investigator to assess the knowledge of Primi mothers regarding warning signs in pregnancy, which includes two parts.

Part I consists of demographic data of the sample such

as age, religion, type of family, education, occupation, family's monthly income and period of gestation.

Part II consists of 40 items that are categorized into six sections based on different aspects of warning signs in pregnancy, starting from 151 item Section I consists of 4 items on meaning, types and importance of early detection of warning signs in pregnancy; Section II consists of next 10 items on vaginal bleeding ; Section III consists of next 5 items on unusual swelling of face , arms or legs; Section IV consists of next 6 items on Loss of or irregular foetal movements; Section V consists of next 8 items on Anaemia/pallor and section VI consists of the remaining 7 items on high fever during pregnancy for the purpose of analysis.

The tool was given for content validity to experts in the field of Nursing, Research, Obstetrics and Gynaecology and Department of social and preventive medicine. The reliability of the tool was checked by test and retest method (Coefficient of correlation by Carl Pearson's formula).

The results indicated that the tool was valid and reliable. Pilot study was conducted on a sample of 10 from February 21, 2004 to February 28,2004 and the results revealed the feasibility and appropriateness of the tool. The main study was conducted from March 01, 2004 to March 13, 2004. The data was analyzed with the help of descriptive and inferential statistics and the findings are interpreted.

Findings of the study

Knowledge regarding warning signs in pregnancy among Primi mothers was assessed by descriptive and inferential statistics.

Knowledge scores were categorized into below average, average and above.

Average in order to classify the subjects and draw conclusions of the findings.

The score between 0 - 33 .3percent regarded as below average.

The score between 33.4 - 66.6percent regarded as average.

The score between 66.7 - 100percent regarded as above average.

The relationship between the knowledge and selected variables in both experimental and control groups was computed by mean and percentage.

The findings revealed that the mean value of overall performance in pre-test of experimental group was 20.680 and that of the control group was 23.880. The calculated 't' test of significance 0.512 is less than the table 't' value 2.01 at 0.05 Level of Significance at 48 df (degrees of freedom) indicating no significant difference. While comparing the knowledge scores section wise in item analysis, both experimental and control groups have scored almost the same mean values. There is no significant difference in section wise knowledge mean scores in pre-test in both experimental and control groups. Hence null hypothesis is accepted.

The mean value of overall performance in post-test by experimental group was 34.84 and by control group was 23.84. The calculated 't' test of significance 11.53 is more than the table 't' value 2.68 at 0.01 Level of Significance at 48 df (degrees of freedom) and clearly indicates the significant difference ($p < 0.01$).

A comparison of the knowledge scores section wise in item analysis indicates that, experimental group post-test scores are higher than control group scores. There is a significant difference in mean scores of sections wise knowledge in post-test among experimental and control groups. This significant difference is attributed to the effect of structured teaching for the experimental group. Hence null hypothesis is rejected.

The individual overall knowledge scores of each Primi

mother in experimental group ranged from 13 to 31 in pre-test and 29 to 39 in posttest. This reveals the effectiveness of structured teaching on warning signs in pregnancy.

The mean value of overall performance scored by experimental group is 20.68 in pretest and 34 .84 in post-test. The obtained 't' value 29 .51 is greater than the table 't' value 2.80 at 0.01 LOS (Level of Significance) at 24df. There is a significant difference ($p < 0.01$) in pre-test and post-test knowledge scores in the experimental group which is attributed to structured, teaching.

A comparison of the knowledge scores section wise in item analysis reveals that the post-test scores are higher than the pre-test scores in experimental group, thus showing the significant difference due to effectiveness of structured teaching. Hence null hypothesis is rejected. The individual overall knowledge scores of each Primi mother in control group ranged from 17 to 33 in pre-test and 18 to 34 in posttest. There is no improvement in knowledge scores because structured teaching was not imparted to the control group.

The mean value of overall performance scored by control group is 23.880 in pre-test and 23.840 in post-test. The obtained 't' value 0.310 is less than the table 't' value 2.80 at 0.01 LOS (Level of Significance) at 24df. This shows that there is no significant difference ($p > 0.01$) in pre-test and post-test knowledge scores in control group. The knowledge scores section wise in item analysis, in both pre-test and post-test are same in control group. Null hypothesis is accepted as there was no significant difference. Relationship between the knowledge and selected variables in both Experimental and control groups was assessed in pretest and post-test. According to age, in experimental group there is no significant difference in pretest knowledge

means with different age groups There is a significant increase in post-test knowledge means with different age groups in both experimental and Control groups.

The knowledge scores increased with higher educational status in both pre and Post-test in experimental and control group. This indicates the relationship between knowledge and education.

Unskilled workers (Housewives) in both Experimental and Control groups

Shows increase between pretest and post-test knowledge means.

There is no significant relationship in both Experimental and Control groups with different income levels.

There is no significant relationship in Primi mothers of both Experimental and Control groups with different periods of gestation.

The findings of the study revealed that in the pre-test of the experimental group, 12 percent scored above average, 84 percent scored average and 4 percent below average by the experimental group in pretest. The control group scored 20 percent above average and 80 percent average in pre-test.

After planned teaching, experimental group scored 100 percent above average in post-test reflecting the effectiveness of structured teaching. Control group was not imparted structured teaching which scored 84 percent average and 16percent above average in post-test. This shows that there is no improvement of knowledge scores in post-test by members of the control group.

The formulated null hypothesis that "there will be no significant difference in the pre-test and post-test knowledge scores" is therefore rejected for experimental group and accepted for control group. In the study

conducted by Judith Noronha, the post-test knowledge scores were significantly higher in individual areas of knowledge on warning signs in pregnancy. This indicated that the information booklet was effective regarding warning signs in pregnancy. Similarly, it is evident in the present study that structured teaching is effective in improving the knowledge of Primi mothers regarding warning signs.

Summary

The focus of this study was to assess the effectiveness of structured teaching programme on warning signs among Primi Mothers in selected hospitals at Nellore. The design of the study was descriptive in nature.

Objectives of the study

1. Assess the knowledge of Primi mothers on warning signs In pregnancy by pre-test to both the experimental and control groups.
2. Formulate and conduct structured teaching on warning signs in pregnancy to the experimental group of Primi mothers.
3. Assess and compare the knowledge of Primi mothers on warning signs in pregnancy by post-test in both the experimental and control groups.
4. Assess the relationship of both pre-test and post-test knowledge of Primi mothers on warning signs in pregnancy with selected variables.

Assumptions

It is assumed that Primi mothers will.

1. Have some knowledge about warning signs in pregnancy.
2. Show greater desire and curiosity to learn about warning signs in pregnancy
3. Honestly participate and cooperate in the study.

The conceptual model adapted to this study is the Ludwig Vonbertalaniffy's

General System's Approach and Nursing Process.

The study was conducted in selected hospitals at Nellore. The samples were fifty Primi mothers. The duration of data collection was 2 weeks and convenient sampling technique was used to collect samples. The tool used for data collection was a structured interview schedule.

Description of the tool

The structured questionnaire consists of two parts:

Part I: Demographic characteristics of the sample such as age, religion, type of family, education, occupation, family's monthly income and period of gestation.

Part II: Questions to assess the knowledge of Primi mothers on meaning, types and importance of early detection of warning signs in pregnancy; vaginal bleeding; unusual swelling of face, arms or legs; Absence of or irregular foetal movements; Anemia/pallor and High fever during pregnancy.

Section	Warning signs in pregnancy	Scores
1	Meaning, types and importance of early detection of warning signs	4
2	Vaginal bleeding	10
3	Unusual swelling of face, arms or legs	5
4	Loss of or Irregular foetal movements	6
5	Anemia or pallor	8
6	High fever	7
	Total score	40

Discussion with experts and reviewing the literature guided to the construction of the tool, the validity, pretesting and reliability of the tool were established.

Pilot study The Pilot study was conducted in selected hospitals of Nellore, taking five subjects in each experimental as well as control groups. After a pre-test, the structured teaching with the help of structured lesson plan prepared by the investigator and with related audio-visual aids was administered only to the experimental group. Post-test was conducted to both experimental and control groups. Statistical analysis was done with the help of 't' test to see if there is any significant difference in the performance of knowledge scores of two groups.

There was significant difference between control and experimental groups in knowledge score i.e., $P < 0.01$. The Pilot study was conducted in order to find out the feasibility and practicability of the tool and the results proved that the tool was feasible and practicable.

Findings of the study

Knowledge regarding warning signs in pregnancy among primi mothers was assessed by descriptive and inferential statistics.

Knowledge scores were categorized into below average, average and above.

Average in order to classify the subjects and draw conclusions of title findings.

- The score between 0 - 33.3 percent regarded as below average.
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The relationship between the knowledge and selected variables in both experimental and control groups was computed by mean and percentage.

The findings revealed that the mean value of overall performance in pre-test of experimental group was 20.680 and that of the control group was 23.880. The calculated 't' test of significance 0.512 is less than the table 't' value 2.01 at 0.05 Level of Significance at 48 df (degrees of freedom) indicating no significant difference. While comparing the knowledge scores section wise in item analysis, both experimental and control groups have scored almost the same mean values.

There is no significant difference in section wise knowledge mean scores in pre-test in both experimental and control groups. Hence null hypothesis is accepted.

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The individual overall knowledge scores of each primi mother in control group ranged from 17 to 33 in pre-test and 18 to 34 in posttest. There is no improvement in knowledge scores because structured teaching was not imparted to the control group.

The mean value of overall performance scored by

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Relationship between the knowledge and selected variables in both experimental and control groups was assessed in pretest and post-test. According to age, in experimental group there is no significant difference in pretest knowledge means with different age groups. There is a significant increase in post-test knowledge means with different age groups in both experimental and Control groups.

The knowledge scores increased with higher educational status in both pre and post-test in experimental and control group. This indicates the relationship between knowledge and education. nskilled workers (Housewives) in both Experimental and Control groups shows increase between pretest and post-test knowledge means. There is no significant relationship in both Experimental and Control groups with different income levels. There is no significant relationship in primi mothers of both Experimental and Control groups with different periods of gestation. This study provided an enriching experience for the investigator as to conduct a research project. It also made the investigator to realize the need for knowledge of warning signs during pregnancy in primi mothers. Therefore, there is an urgent need to teach the primi mothers in order to protect themselves from potential hazards. Government has to take initiation to provide health education programs and periodical medical examinations to the

primi mothers as majority of them had no formal education. The experience gained during this study will help the investigator to take up other research studies in the future.

Conclusion

The present study was undertaken to assess the effectiveness of structured teaching programme on warning signs among Primi Mothers in selected hospitals at Nellore.

The following are the conclusions drawn from the study.

1. There is no significant difference between pre-test knowledge scores of experimental and control groups.
2. There is a significant difference in post-test knowledge scores. In experimental group and control group. Higher knowledge scores of experimental groups obtained were due to exposure to structured teaching on warning signs in pregnancy.
3. There is a significant difference between pre-test and post-test knowledge scores in experimental group. Increase in post-test scores is attributed to structured teaching.
4. As there was no structured teaching, there is no significant difference between pretest and post-test knowledge scores in control group indicating a need for structured teaching program on warning signs in pregnancy.
5. Factors like education, occupation had influence on knowledge of Primi mothers. Hence manipulations of these variables lead to cause improvement in knowledge when structured teaching is given.

Limitations

1. The study is limited to primi mothers between the periods of, gestation of 19 to 35 weeks, Telugu or English speaking, who were attending for the first time at the time of data collection?

2. The study results are limited to primi mothers attending at the time of data collection.
3. The knowledge and practices of other primi mothers regarding warning signs in pregnancy could not be assessed due to limitation of time.

Implications

The findings of this study have some contribution to the knowledge used in practice of Nursing in both Hospital and Community Setting. The results of the study proved that structured teaching on warning signs in pregnancy for primi mothers has been effective in improving their knowledge and thereby function a~ channels of teaching to other Primi mothers.

Nursing Practice

Staff nurses help the mothers in Maternity hospitals to build awareness about the warning signs in pregnancy to extend the continuing education. Nurses can help the mothers in antenatal wards to know the benefits of early recognition of warning signs in pregnancy.

Community Health setting

School and College of Nursing can play a significant role in creating awareness among antenatal mothers regarding warning signs in pregnancy. Nursing students can spread the information among the mothers during their community experience by undertaking educational programs in group discussions with antenatal mothers.

Knowledge of health workers, dais, and community health visitors with regard to warning signs in pregnancy should be upgraded by conducting workshops and educational programs as key promoters.

Nursing Administration

Nursing administrators need to encourage and plan staff development programs in hospital and community on warning signs in pregnancy. Thus the staff can be advantageous which can help in educating the antenatal mothers, family and community.

Nursing Research

Research provides nurses to take decisions with regard to needs of mothers in relation to take care of themselves during pregnancy.

Recommendations

1. A similar study can be conducted for a larger population.
2. A similar study can be conducted on mothers in rural and tribal areas.
3. A comparative study can be undertaken on effectiveness of structured teaching regarding warning signs in pregnancy.

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