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Saraswati M Naragunda
M.Sc. (N), KLES' Institute of
Nursing Sciences Hubballi,
Karnataka, India

Asha H Bhatakhande
Associate Professor and HOD,
Department of Obstetrics and
Gynaecological, KLES'
Institute of Nursing Sciences
Hubballi, Karnataka, India

Corresponding Author:
Saraswati M Naragunda
M.Sc. (N), KLES' Institute of
Nursing Sciences Hubballi,
Karnataka, India

A study to evaluate the effectiveness of planned teaching programme (PTP) on knowledge regarding antenatal care (ANC) among antenatal mothers at selected area, Hubballi

Saraswati M Naragunda and Asha H Bhatakhande

Abstract

Birth is a miracle and baby life's perfect creation. Pregnancy is often a time of hope for the future. Process of pregnancy and child birth are very much a personal journey. Each woman experiences the beauty of creating and giving birth to a child. Gaining weight is a positive and healthy sign that is giving to baby what it needs to develop. Providing knowledge to mother about antenatal care and assess the knowledge of mothers.

Keywords: Antenatal care (ANC), planned teaching programme (PTP), and antenatal mothers

Introduction

Women are the basic foundation of a society and its wealth. So it is very important to take care of a woman's health. If we will train a man, we train an individual, if we train a woman, we can build a nation. The women contribute further to health, where she seeks guidance throughout the reproductive life and follows the advice of experienced personnel to overcome or prevent the health problems [1].

A woman's reproductive system is a delicate and complex system in the body. The reproductive system includes the primary necessary organs for reproduction: ovaries, uterus, vagina and breasts [2].

Pregnancy and Child birth are special events in a woman's life and indeed in the lives of their families. This can be a time of great hope and joyful anticipation.³ Pregnancy involves all the family members. Conception is not only growing of a foetus but also of the family in a new form, with an additional member with changed relationship [4].

Physiological Changes during Pregnancy is a state in which the body undergoes deep physiological and anatomical changes that start soon after fertilization. Changes in the uterus are phenomenal. By the time the pregnancy has reached term, the uterus will have increased size and expansion of the uterus due to the foetus is growing inside [5].

Birth is a miracle and so each baby is life's perfect creation [6]. Every woman during her life span aspires to be a mother but the child birth process is not free of complication. Several complications may arise in different stages of her motherhood i.e. in pregnancy, intranatal and postnatal period. These complications increase the risk of maternal mortality and morbidity. Mothers play a vital role in the family. Maternal deaths have negative effects on their family and increase the risk to the survival of their children too [7]. Mothers and children comprise approximately 71.14% of the population of the developing countries. In India, women of child bearing age group (15-44 years) constitute 22.2% [8].

It was reported that the MMR among Indian women is 174 deaths per 100,000 live births which in itself is very high compared to the international scenario [9].

It has been estimated that 25% of maternal deaths occur during pregnancy, with variability between countries depending on the prevalence of unsafe abortion, violence and disease in the area. Between a third and a half of maternal deaths are due to causes such as hypertension (pre-eclampsia and eclampsia) and antepartum haemorrhage, which are directly related to inadequate care during pregnancy [10].

The World Health Organization (WHO) estimates that worldwide more than 5,29,000 women die every year from complications of pregnancy, childbirth and abortion. Out of which 99% of these deaths were from the developing countries. Less than 1% of these deaths occur in more developed countries making maternal mortality, the health indicator with the greatest disparity between developing countries [10].

India being developing country's 26% global burden maternal mortality rate with nearly 1360 women dying annually as per UNICEF. Every 7 minutes 1 women die due to complication in pregnancy or child birth in India. Antenatal care is a type of preventive health care with the goal providing regular antenatal check-up that allow doctor or midwife to treat and prevent potential health problems throughout the pregnancy while promoting healthy styles that benefits for mother and baby ^[10].

Antenatal check-up is one part of the antenatal care. Antenatal check-up defines that antenatal testing or diagnostics procedure performed before the birth of the baby. Ideally expectant mother to visit the antenatal clinic is called as antenatal check-up ^[11].

ANC visits provide opportunities to promote lasting health, offering benefits that continue beyond the pregnancy period. This includes birth preparedness, but also extends to cover health information and counselling for pregnant women, their families and communities. Relevant information, education and advice regarding appropriate nutrition and rest, promotion of early and exclusive breastfeeding and feeding options for HIV- positive women, smoking cessation, avoidance of alcohol and drugs and parenting skills should be made available to the women and family. Guidance on family planning and pregnancy spacing, seeking necessary care and caring for new-born baby are also important components of antenatal care ^[12].

The WHO recommends that pregnant women should receive all 4 antenatal visits to spot and treat problem and give immunizations. Although antenatal check-up is important for improving the health of mother and baby, many women do not receive four visits. Antenatal diagnoses are aspects of antenatal care focuses on detecting anatomic and physiologic problems with the zygote, embryo or foetus before it's born. Common diagnostic testing procedure includes blood sample, sugar, urine and haemoglobin), amniocentesis, chorionic villus sampling, foetal blood sampling, and ultrasonography includes nuchal translucency, serum, serum biomarker testing or genetic testing in developing countries, pregnancy and childbirth are one of the leading cause of death for women of reproductive age ^[13].

Mother and child is one unit ^[14]. It is because during the antenatal period, the fetus is a part of the mother. The period of development of foetus in mother is about 280 days. During this period the foetus takes all the building materials through oxygen from the mother's blood. A healthy mother brings forth a healthy baby. Child health is exclusive related to mother's health. They have a less chance for pre-mature birth, stillbirth or abortion. The mental and social development of the child is also dependent upon the mother. The health of the mother affects the overall growth and development of the child. The safe motherhood initiatives, a worldwide effort were launched by the World Health Organization which aimed to reduce the number of deaths associated with pregnancy and childbirth ^[15].

The primary aim of antenatal care is to achieve, at the end of pregnancy, a healthy mother and healthy baby. The quality of care is more important than the quantity. Pregnancy requires specialized care generally agreed to preventive activity ^[13]. appropriate antenatal care (ANC) is one of the pillars of this initiative. Antenatal care is considered as a backbone of obstetrical services of health of pregnant women and is the way in which maternal and foetal

complications are detected and managed. It highlights the care of antenatal mothers as an important element in maternal health care, as appropriate care will lead to successfully pregnancy outcome and healthy babies. To achieve this, mother's knowledge has to be upgraded ^[8].

The study reports that 73.33% mothers had poor knowledge, 22.23% of mothers had average knowledge and 4.43 had very poor knowledge. The study concluded that the mother's knowledge should be enhanced by educating the mother regarding antenatal care, which will motivate them; ultimately the goal for safe motherhood can be achieved ^[10].

Government has introduced many facilities to antenatal mothers in order to reduce maternal mortality rate in India such as, provision of antenatal care, including at least four antenatal care visits, iron prophylaxis for pregnant and lactating mothers, two doses of tetanus toxoid vaccine, detection and treatment of anaemia in mothers, referral of high-risk pregnancies, encouragement of institutional deliveries. The Prime Minister of India has announced maternity benefits of Rs 6,000 to pregnant and lactating mothers, the cabinet has approved the implementation of the maternity benefits programme (MBP) – a scheme that will likely exclude a large majority of women in the country and to meet nutritional needs of pregnant and lactating mothers in rural areas the State Government of Karnataka has launched "Mathru Poorna", a scheme meant to meet the nutritional needs of pregnant and lactating women in rural areas, under the programme, pregnant and lactating women in rural areas will get one nutritious meal daily for 25 days in a month ^[16].

Some of the issues that form part of the consultation during ANC visits include making a plan for transportation to a health facility during labor, recognizing the danger signs of serious health problems during pregnancy, childbirth or soon after, and identifying and making arrangements for a blood donor if needed. It is important to reiterate these points during ANC visits to enable pregnant women to recognize obstetric complications when they occur and seek care from skilled providers, without delay ^[17].

Effective antenatal care can improve the health of the mother and give her a chance to deliver a healthy baby. Regular monitoring during pregnancy can help to detect the complication at an early stage before they become life – threatening emergency. However, one must realize that even the most effective scanning tools currently available; one cannot predict which will develop pregnancy related complication ^[18].

Objectives of the study

1. To assess the knowledge regarding antenatal care among antenatal mothers.
2. To evaluate the effectiveness of planned teaching programme (PTP) on knowledge regarding antenatal care (ANC) among antenatal mothers in terms of gain in their knowledge scores.
3. To find out an association between pre-test knowledge scores with their demographic variables.

Hypotheses

H1: The mean post-test knowledge scores of antenatal mothers regarding antenatal care Who have exposed to planned teaching programme (PTP) will be significantly higher than the mean pre-test knowledge scores at 0.05 level of significance.

H2: There will be statistical association between pre-test knowledge scores of antenatal Mothers and their selected demographic variables at 0.05 level of significance.

Conceptual Framework

Conceptual framework is interrelated concepts or abstractions that are assembled together in some rational scheme by virtue of relevance to common thing. The device that helps to stimulate research and the extension of providing both direction and impetus.

The present study aims at evaluate the knowledge regarding antenatal care among antenatal mothers at Byhatti village, Hubali, Karnataka.

The conceptual framework of the present study is based on

modified Ludwig Von Bertalanffy's General System Theory. According to the general system theory, a system consists of a set of interacting components within a boundary that filter the type and rate of exchange with the environment. A system depends on the quality and quantity of input, output and feedback [27].

A system can be open or closed. All living systems are open, in that, there is continuous exchange of matter, energy or information. Open systems have varying degree of interaction with environment from receives input and gives output in the form of matter, energy or information. The system returns output to the environment in an altered stage affecting the environment. The feedback is the environment responses of the system. The systems may be positive, negative or neutral [27].

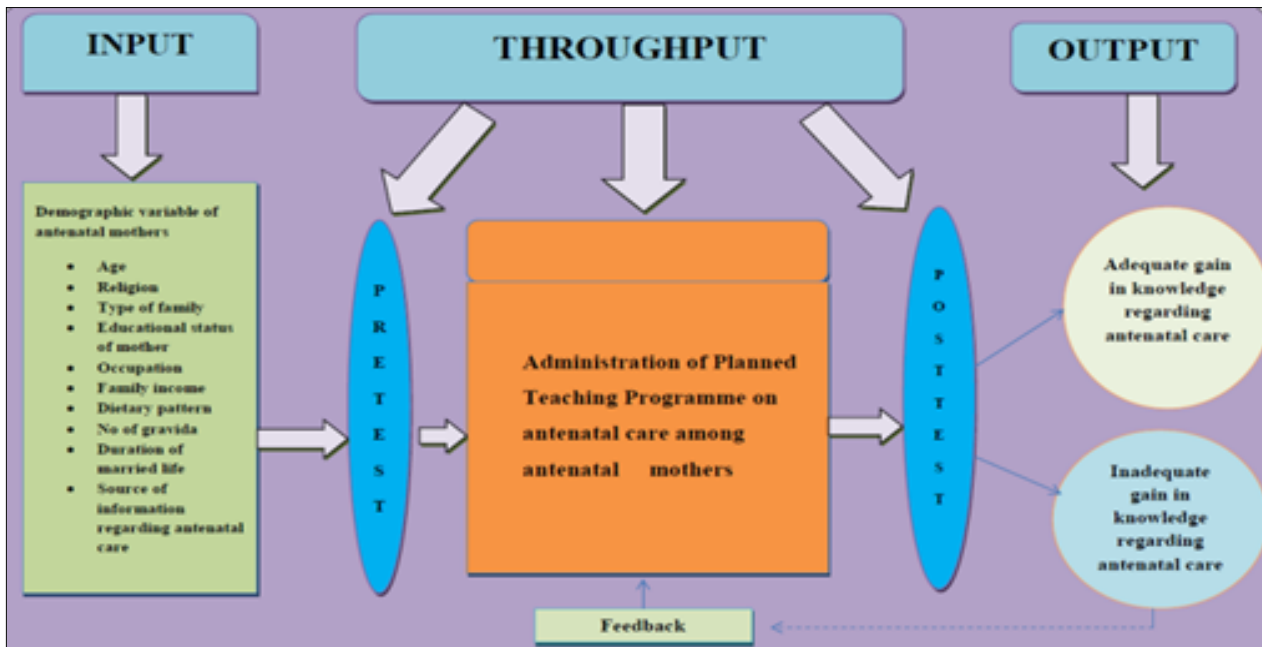


Fig 1: Conceptual framework based on modified Ludwig von Bertalanffy's general system theory

Materials and Methods

Research methodology refers to the master plan specifying the methods and procedure for collecting and analyzing the needed information in a research study.

Research approach: The research approach helps the researcher to understand the method of collecting data analyzing it. It also suggest the possible conclusions to be drawn from the data.

Research design: The research design is a blueprint for conducting the study that maximizes control over factors that can interfere with the validity of the findings. It is an overall plan investigator used to obtain valid answers to research questions [21].

Variable

Independent variable: Planned Teaching Programme.

Dependant variable: Knowledge of antenatal mothers regarding antenatal care.

Attributive factors: Socio-demographic variables such as Age, religion, type of family, education, number of children's, Occupation, family income, trimester and source of information.

Research setting: Setting refers to the area or physical location where the study is being conducted. The present study was conducted in Byahatti village, Hubballi.

Population: Population refers to the aggregation of all the units in which a researcher is interested. In others words, population is a set of people or entities to which the results of a research can be generalized.

Target population: It refers to the population that the researcher wishes to study and make generalizations. In the current research study, the target population comprises antenatal mothers of Byahatti village, Hubballi.

Sample: A subset of population selected to participate in a research study is known as sample. In the present study, the sample consists of antenatal mothers of Byahatti village, Hubballi.

Sample size: The sample size selected for the present study 40 antenatal mothers.

Sampling technique: The researcher in the present study selected target population through Non- probability – Convenient sampling technique.

Reliability of the tool: The reliability of the tool was computed using split half method and applying Karl Pearson’s Correlation Coefficient formula. The reliability coefficient of knowledge questionnaire was $r=0.87$. Hence the tool was found to be reliable.

Result: The results are presented under the following sections.

Sections I: Distribution of sample characteristics according to socio demographic Variables.

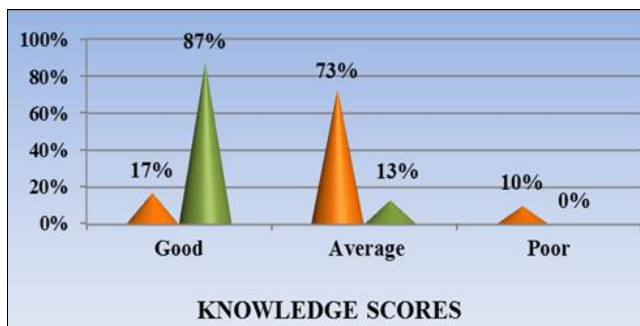
- Maximum number of the pregnant woman 11 (27%) were in the age group of 21 years and 22 years respectively and 9(23%) were in age group of 23 years and 24 years respectively.
- The maximum number of pregnant women 33 (83%) were Hindu, 5(12%) were Muslim and 2(5%) were Christian.
- Maximum of the pregnant women 26 (65%) were from joint family and 14(35%) women were from nuclear

- family.
- Maximum of the pregnant women educational status was 8 (20 %) primary education, 13 (32%) high school, 18 (45 %) pre university and 1(3 %) graduate
- Majority of the occupation of pregnant women 25 (63 %), were home maker and 15(37%) were labourer.
- Maximum pregnant women 33 (82 %) were from mixed diet, 7(18%) were vegetarian.
- Maximum pregnant women 27 (68%) were primi gravid, 13(32%) were multi gravida.
- Maximum number of women 27 (68%) married life was 1-2 years and 13(32%) between 3-4 years.
- For maximum pregnant women were the source of information regarding antenatal care was obtained by 28 (70%) health personnel and 12(30%) were by family members.

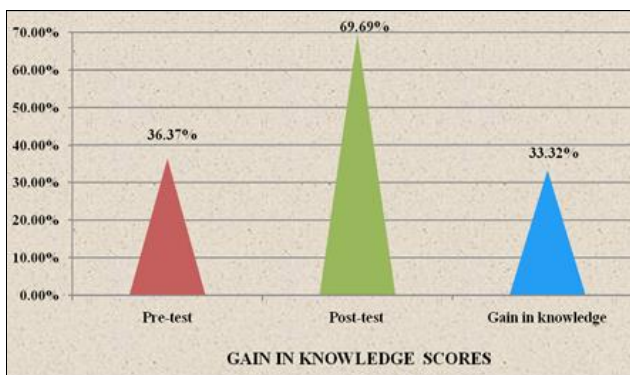
Sections II: Analysis and interpretation of knowledge scores of antenatal mothers who have undergone Planned Teaching programme (PTP) regarding antenatal care.

Table 1: Mean, Median, Mode, Standard deviation and range of knowledge Scores of Subjects regarding antenatal care n=40.

Area of analysis	Mean	Median	Mode	Standard deviation	Range (H-L)
Pre test	15.77	15.5	11	3.23	25
Post test	29.97	31	31	5.64	14
Difference	14.2	15.5	20	2.41	11



Graph 1: The pyramid graph represents the percentage distribution of Subjects according to their level of Knowledge scores.



Graph 2: The cone graph represents the mean percentage gain in knowledge of the subjects according to their level of knowledge scores

Sections III: Testing of hypotheses

H₁: The mean post- test knowledge scores regarding antenatal care among antenatal mothers who have exposed to planned teaching programme (PTP) will be significantly higher than the mean pre-test knowledge scores as measured by Structured knowledge

Questionnaire at 0.05 level of significance.

Table 2: Mean Difference (d), Standard Error (SEd) and paired 't' values of knowledge scores of antenatal mothers. Saraswati M Naragunda

Mean difference (\bar{d})	Standard Error of Difference (SEd)	Paired 't' test	
		Calculated	Tabulated
14.2	2.391	2.051*	1.685

H₂: There will be statistical association between pre-test knowledge scores of antenatal mothers and their selected demographic variable at 0.05 level of significance.

- The calculated chi-square value for age was 3.29, less than tabulated chi-square value 12.59. Hence $H_{2,1}$ was rejected.
- The calculated chi-square value for religion was 1.44, less than tabulated chi-square value 9.49. Hence $H_{2,2}$ was rejected.
- The calculated chi-square value for type of family was 1.88, less than tabulated chi-square value 5.99. Hence $H_{2,3}$ was rejected.
- The calculated chi-square value for educational status of mother was 6.60, less than tabulated chi-square value 12.59. Hence $H_{2,5}$ was rejected.
- The calculated chi-square value for occupation of mother was 0.355, less than tabulated chi-square value 5.99. Hence $H_{2,6}$ was rejected.
- The calculated chi-square value for family income was 4.26, less than tabulated chi-square values 9.49. Hence $H_{2,7}$ was rejected.
- The calculated chi-square value for dietary pattern was 0.207, less than tabulated chi-square value 5.99. Hence $H_{2,8}$ was rejected.
- The calculated chi-square value for status of gravida was 3.66 less than tabulated value 5.99. Hence $H_{4,8}$ was rejected
- The calculated chi-square value for years of married life

was 0.473, less than tabulated value. 5.99. Hence $H_{2,9}$ was rejected.

- The calculated chi-square value for source of information was 0.679, less than tabulated value 5.99. Hence $H_{2,10}$ was rejected.

Recommendations

1. Keeping in view the findings of the present study, the following recommendations were made: A similar study that can be done on large and wider sample size and for a longer period of time would be more pertinent in making broad generalizations.
2. A comparative study may be carried out to evaluate the effects of antenatal care on mothers who are at high risk mothers and who are at low risk mothers during pregnancy.
3. A descriptive study can be conducted to assess the knowledge, attitude and practice regarding antenatal care (ANC).
4. An experimental study regarding antenatal care can be undertaken among the antenatal mothers (ANC).
5. A comparative study can be conducted regarding Planned Teaching Programme (PTP) and self-instructional module (SIM) on antenatal care (ANC) among antenatal mothers.

Conclusion

Based on the findings of the study, the following conclusions were drawn.

1. The overall pre-test knowledge scores of the antenatal mothers were average.
2. The post-test knowledge scores of the antenatal mothers after administration of the Planned Teaching Programme were significantly higher than the pre-test knowledge scores.
3. Post-test knowledge results showed that gain in knowledge scores of antenatal mothers were statistically significant at 0.05.

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