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A Study to Assess the Effectiveness of Structured Information Modules (SIM) on Integrated Vector Management Among Cpmmunity Health Workers in a Selected Community Area at Bangalorwe

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ABSTRACT

Back ground of the study

Anemia is the most prevalent micronutrient deficiency reported round the globe. It is significant among primi mother. Iron deficiency anemia is a decrease in the number of red cells in the blood caused by too little iron. Iron is a key part of hemoglobin, the oxygen-carrying protein in the blood. Body normally gets iron through diet and by recycling iron from old red blood cells. Without iron, the blood cannot carry oxygen effectively. Oxygen is needed for every cell in the body to function normally.Iron deficiency and anemia are associated with impaired cognitive functioning, lower school achievement and most likely lower physical work capacity.

OBJECTIVES OF THE STUDY: (1) To determine the knowledge of primi mother about iron deficiency anemia and its prevention before the intervention. **(2)** To evaluate the primi mother's knowledge regarding iron deficiency anemia and its prevention after the intervention. **(3)** To associate post-test knowledge score of primi mother's with selected socio demographic variables.

DESIGN: Quasi-experimental one group pre-test post-test design was selected for the study.

SUBJECT: 60 primi-mothers were selected for the study.

SAMPLING METHOD: Simple random sampling technique was used for the study.

DATA COLLECTION: Structured knowledge questionnaire was used to collect the data from the samples

DATA ANALYSIS: The obtained data was analyzed by descriptive and inferential statistics and interpreted in terms of objectives and hypothesis of the study. The level of significance was set at P≤0.05 level.

RESULTS: In pre-test, 45(75%) of them had inadequate level of knowledge, 15(25%) of them had moderate level of knowledge and none of them had adequate level of knowledge regarding prevention of anemia among primi mothers in post-test, 49(81.67%) of them had adequate level of knowledge, 11(18.33%) of them had moderate level of knowledge and none of them had inadequate level of knowledge regarding prevention of anemia. It was observed that, with regards to knowledge on general aspects on prevention of anemia, the mean scores in pre-test and post test were 6.27±1.73 and 10.95±1.05 respectively, obtained t value was 9.64. In area of prevention ofanemia, mean scores in pre-test was 11.41±2.59 and post-test score was 19.76±1.24 and obtained t value was 13.54. the overall t value was 26.15 which was above the table value 2.7 at p≤0.05 level of significance. This indicates that the Structured teaching program was effective in improving the knowledge of primi mothers regarding prevention of anemia. The obtained chi square value for educational status, occupational status were higher values (32.98,19.64) when compared to the table value at P≤0.05 level of significance. This indicates that there was an association between pre-test level of knowledge of primi mothers and their selected socio demographic variables.

CONCLUSION: the findings of the study concluded that the structured teaching program was found to be effective in improving the knowledge of primi mothers regarding prevention of anemia.

Keywords: Assess, effectiveness, primi mothers, structured teaching program, rural area, socio-demographic variables.

INTRODUCTION

Only through a healthy population, a healthy nation could be achieved. Anemia is a common problem throughout the world and iron deficiency is the most prevalent nutritional deficiency in the world. It affects mainly the poorest segment of the population. All age groups are vulnerable to anemia particularly Iron Deficiency Anemia. The World Health Organization estimates that anemia affects over 2 billion people worldwide. Regarding dietary causes of anemia, the most common kind of anemia includes Iron Deficiency Anemia, however, deficiencies of folic acid,

B12, and Vitamin C can also lead to low levels of hemoglobin. World Health Organization estimates that 50% are caused by Iron Deficiency Anemia and lists it as one of the 'Top Ten Risk Factors Contributing to Death. The United Nations Children's Fund's goal to "reduce the prevalence of anemia, including iron deficiency by one third by 2010" emphasizes this global problem.[1]

Anemia is the most prevalent micronutrient deficiency reported round the globe. It is significant among primi mother. Iron deficiency anemia is a decrease in the number of red cells in the blood caused by too little iron. Iron is a key part of hemoglobin, the oxygen-carrying protein in the blood. Body normally gets iron through diet and by recycling iron from old red blood cells. Without iron, the blood cannot carry oxygen effectively. Oxygen is needed for every cell in the body to function normally. Iron deficiency and anemia are associated with impaired cognitive functioning, lower school achievement and most likely lower physical work capacity. Prim-mother with chronic illness, heavy menstrual blood loss, or who are underweight or malnourished are at increased risk for Anemia and should be screened during health supervision or specialty clinic visits. Anemia is a ice berg disease commonly seen in pregnant women, children, adolescent and old age. Anemia is the commonest hematological disorder that may occur in pregnancy. According to the standard laid down by World Health Organisation, anemia in pregnancy is when the hemoglobin concentration in the peripheral blood is 11gm per100ml or less. During pregnancy plasma volume expands maximum around 32 weeks of gestation resulting in hemoglobin dilution for this reason, hemoglobin level below 10 gm/dl at any time during pregnancy is considered anemia is stated by World Health Organization 1913. Hemoglobin level at or below 9gm/dl requires detailed investigation and appropriate treatment. Adopting this lower level, the incidence of anemia in Primi–mother ranges widely from 40-80 % in the tropics compared to 10-20% in the developed countries.[2]

NEED FOR THE STUDY; -

Anemia is a major factor in women's health, especially reproductive health in developing countries. Severe anemia during first time pregnancy is an important contributor to maternal mortality,as well as to the low birth weight which is in turn an important risk factor for infant mortality. Even moderate anemia makes women less able to work and care for their children. The causes of anemia are multi-factorial, including diet, infection and genetics, and for

some of the commonest causes of anemia there is good evidence of the effectiveness of simple interventions for example, iron supplementation, long-lasting insecticide nets and intermittent preventive treatment for malaria.Hookworm infection has long been recognized among the major causes of anemia in poor communities, but understanding of the benefits of the management of hookworm infection in pregnancy has lagged behind the other major causes of maternal anemia.[3]

In India, Anemia is more common, up to 88% of pregnant and 74% of non-pregnant women are affected. Throughout Africa, about 50% of pregnant and 40% of non-pregnant women are anemic. West Africa is the most affected, and southern Africa the least. In Latin America and the Caribbean, prevalence of anemia in pregnant and non-pregnant women are about 40% and 30% respectively. The highest levels are in the Caribbean, reaching 60% in pregnant women on some islands.[4]

Anemia remains one of the most severe and important nutritional deficiencies in the world today. Every age group is vulnerable. During primi – mother period, it is associated with multiple adverse outcomes for both mother and infant, including an increased risk of hemorrhage, sepsis, maternal mortality, perinatal mortality, and low birth weight. It is estimated that nearly all women are to some degree iron deficient, and that more than half of the pregnant women in developing countries suffer from anemia. Even in industrialized countries, the iron stores of most pregnant women are considered to be deficient. Iron deficiency affects a significant part, and often a majority, of the population in nearly every country in the world. Programmes for the prevention of iron deficiency, particularly iron supplementation for pregnant women, are under way in 90 of 112 countries that reported to World Health Organization in 1992. [5]

Anemia in childbearing women or primi – mother's increases maternal mortality, prenatal and perinatal infant loss, and prematurity. Forty percent of all maternal perinatal deaths are linked to anemia. Favorable pregnancy outcomes occur 30-45% less often in anemic mothers, and their infants have less than one-half of normal iron reserves. Such infants require more iron than is supplied by breast milk, at an earlier age, than do infants of normal birth weight.[6]

A total amount of about 700-850 mg of iron is needed to meet the iron requirements of a mother and fetus during pregnancy, at delivery, and during the perinatal period. Iron needs during the first trimester are lower than pre-pregnancy needs; they increase the most during the second half of the pregnancy and especially during the last trimester. For unknown reasons,

dietary iron absorption in iron-sufficient women is reduced during the first trimester and increased in the second half of pregnancy. The average woman of reproductive-age needs about 350-500 mg additional iron to maintain iron balance during pregnancy.[7]

Anemia is one of the leading causes of maternal mortality in developing countries like India and contributes to 20% of maternal deaths. If all maternal deaths are analyzed, 64% have associated anemia irrespective of the primary cause. Commonest cause of anemia in pregnancy is still iron deficiency alone or in combination with folic acid deficiency. In spite of government of India's iron supplementation's programme, prevalence is as high as 62.3%. This could be due to reduced bioavailability of iron because of dietary habits, iron deficiency anemia antedating pregnancy, lack of iron intake due to lack of antenatal supervision and advice. Preexisting anemia is due to poor spacing between pregnancies, parasitic infestations such as hookworm etc. In pregnancy, treatment of anemia includes confirmation of the type of anemia, ascertaining the etiology and instituting appropriate therapeutic measures. Management of anemia complicating pregnancy would depend on severity and gestation at diagnosis. Prevention of anemia would depend on creating awareness amongst women regarding importance of iron supplementation and achieving an effective programme of screening for anemia as well as correction at the primary health care facility.[8]

Anemia is a major cause for maternal morbidity and mortality in India. if anemia is diagnosed earlier future complication can be prevented in mothers and child. Always prevention is better than cure. Illiteracy, poverty, negligence and low socioeconomic status need more effort to prevent it but it is better to help the women to understand why anemia in pregnancy occurs and who to prevented by maintaining personal hygiene and regular follow up to ANC clinic. Hence researcher felt the needs of impose knowledge on prevention of Anemia among primi mother based on the need related the topic.

OBJECTIVES

This chapter deals with statement of the problem, objectives of the study, assumptions, hypothesis, operational definition of terms, delimitations of the study and conceptual framework which provides a frame of reference.

STATEMENT OF THE PROBLEM

"A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM REGARDING PREVENTION OF ANEMIA AMONG PRIMI–MOTHER IN A SLECTED COMMUNITY AREA AT BANGLORE**"**

OBJECTIVES OF THE STUDY

- To determine the knowledge of primi-mother about iron deficiency anemia and its prevention before the intervention.
- To evaluate the primi-mother's knowledge regarding iron deficiency anemia and its prevention after the intervention
- To associate post-test knowledge score of primi mother's with selected socio demographic variables.

HYPOTHESIS

H1= There will be significant difference between pre-test and post Test knowledge score among primi mother's regarding anemia and its prevention.

H2=There will be significant association between the post-test knowledge score ofprimi mother's with selected socio demographical variables.

OPERATIONAL DEFINITION

Assess: - Determination of knowledge among primi mother's regarding anemia and its prevention.

Effectiveness: -It refers to a significant change in the level of knowledge regarding anemia and it's prevention among primimother's after the structured teaching program.

Structured teaching program: -It is a planned instruction which will be given to educate the primi mother's regarding anemia and its prevention.

Knowledge: -The relevant information given to the primi mother's regarding anemia and its prevention.

Anemia: - anemia is a common nutritional disorder. It is a decrease in the number of red cells in the blood caused by too little iron and is associated with impaired cognitive functioning, lower

school achievement and most likely lower physical work capacity

PRIMI MOTHER -a woman in her first pregnancy

ASSUMPTIONS

- The primi mother's may have some knowledge regarding anemia and its prevention.
- The primi mother's will be interested to participate in teaching program to enhance their knowledge regarding anemia and its prevention.
- Structured teaching program will be an effective method of imparting knowledge of primi mother's regarding anemia and its prevention

DELIMITATION

This study is delimited to: -

- Only for primi- mothers.
- Sample are selected only community area at Bangalore.
- Prescribed data collection is 4-6 weeks

CONCEPTUAL FRAME WORK

Conceptual framework is a group of concepts and set of proportion that spells out the relationship between them. Conceptual framework, conceptual model, or conceptual scheme deals with abstractions that are assembled by virtue of their relatives to a common theme. Conceptual framework plays several inter related roles in the progress of science. It serves as a spring board for the generation of research hypothesis and can provide an important concept for scientific research. The conceptual framework facilities communications and provides systematic approach to nursing research, education and administration.

The present study aims at assessing the effectiveness of structured teaching programme on prevention of anemia among primi- mothers. In this study, **Imogene M. King's** goal attainment theory adopted for this study. The theory assumes that humans are open systems and are having constant interaction with their environment. The major concepts in this theory of goal attainment are interaction, perceptions, communication, transaction, role, stress, growth and development, time and space.

1. **Interaction:** according to Imogene M. King, each individual brings to an interaction with different set of values, ideas, attitude and reception to exchange. In this study, both the

investigator and the primi-mothers come together for a purpose of improving knowledge regarding prevention of anemia among primi-mothers.

2. **Perception:** according to Imogene M. King, it is the primary features of the personal system because it influences all the other behavior, refers to a person's representation of reality. In this study, it means that the primi-mothers are consistent with different demographic variables such as age, gender, religion, type of family, educational status, occupational status, and source of information.

3. **Communication:** According to Imogene M. King, a person provides information directly or indirectly to another person. The person receives the information and processes it. In this study, the investigation provides information regarding prevention of anemia among primi-mothers with the help of structured teaching programme to the receiver.

4. **Transaction:** according to Imogene M. King, two individuals mutually identify goals and the means to achieve it, they reach an agreement about how to attain these goals and then set about to realize them. In this study, the investigator will get the consent sign from the participants by explaining the goals and pre-test will be conducted to identify the goals by means of knowledge questionnaire regarding prevention of anemia among primi-mothers.

5. **Role:** According to Imogene M. King, each person occupies in a social system that has specific rules and obligations. In this study, it means investigator occupies health educator role and primi- mothers occupy recipient's role.

6. **Mutual goal setting:** The investigator and the primi-mother have to make a mutual goal to improve the knowledge of primi-mothers regarding prevention of anemia.

7. **Reaction:** in this study the reaction means effectiveness of structured teaching programme regarding prevention of anemia among primi-mothers. The structured teaching programme will help improve the knowledge of primi-mothers to some exten

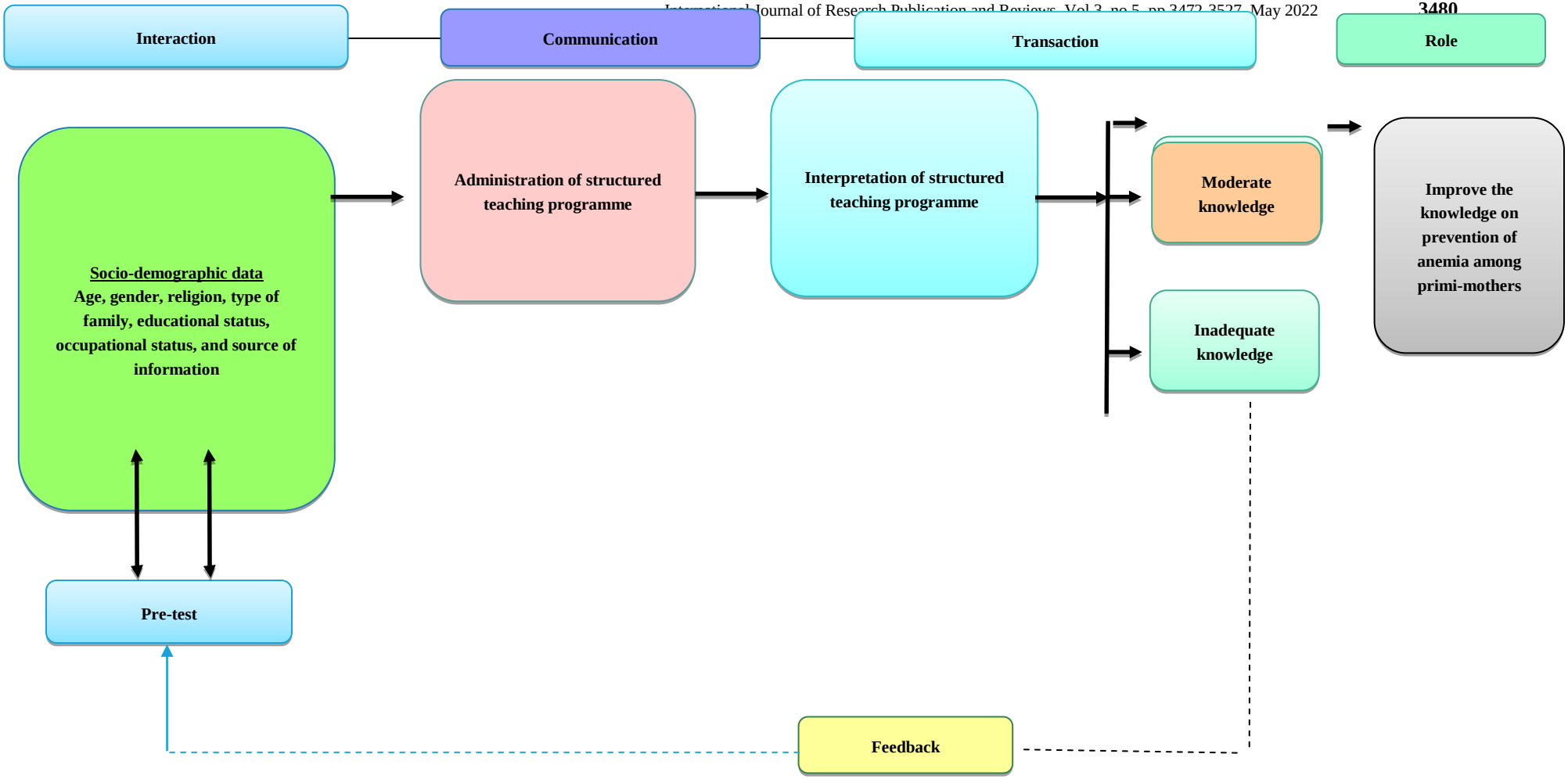

Fig.1: Schematic representation of the conceptual framework- Application of modified King's Goal attainment theory

METHODOLOGY

Research methodology is a way to solve problem systematically. It is a procedure in which the researcher starts from initial identification of the problem to conclusion. Methodology of research organizes all the component of the study in a way that is most likely to lead to valid answer to the problems that have been posed.

This chapter deals with the methodology adopted for the present study such as research approach, research design, setting, variables, population, and sample, sampling technique, sampling criteria, development of tool, content validity, reliability, pilot study, and method of data collection, and plan for data analysis. The present study is aimed to assess the effectiveness of structured teaching programme regarding prevention of Anemia among primi-mothers at selected community area, Bangalore.

RESEARCH APPROACH

The research explains the researcher regarding the data collection that is, what to collect, how to collect, and how to analyze. It also suggests possible conclusions to be drawn from the available data. The investigators used apre-experimental approach to conduct the study.

RESEACH DESIGN

The research design refers to the researcher's overall plan for obtaining answer to the research questions and it spells out strategies that the researcher adopted to develop information that is accurate, objective and interpretable. The research design provides an overall or blue print to carry out the study.

In the view of the nature of the problem and to accomplish the objectives of the study quasi experimental one group pre-test and post-test design was used to evaluate the effectiveness of structured teaching programme on prevention of Anemia among primi-mothers in selected community area in Bangalore.

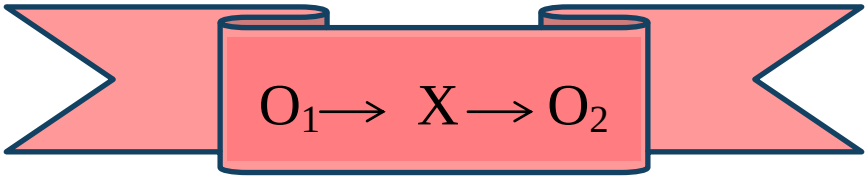

Fig.2. schematic representation of Research Design

KEYS

O_1 (pre-test) – Pre-test knowledge regarding prevention of Anemia among primi-mothers

X- Intervention (structured Teaching Programme)

O_2 (Post-test) - assess the effectiveness of structured teaching programme on prevention of anemia among primi-mothers.

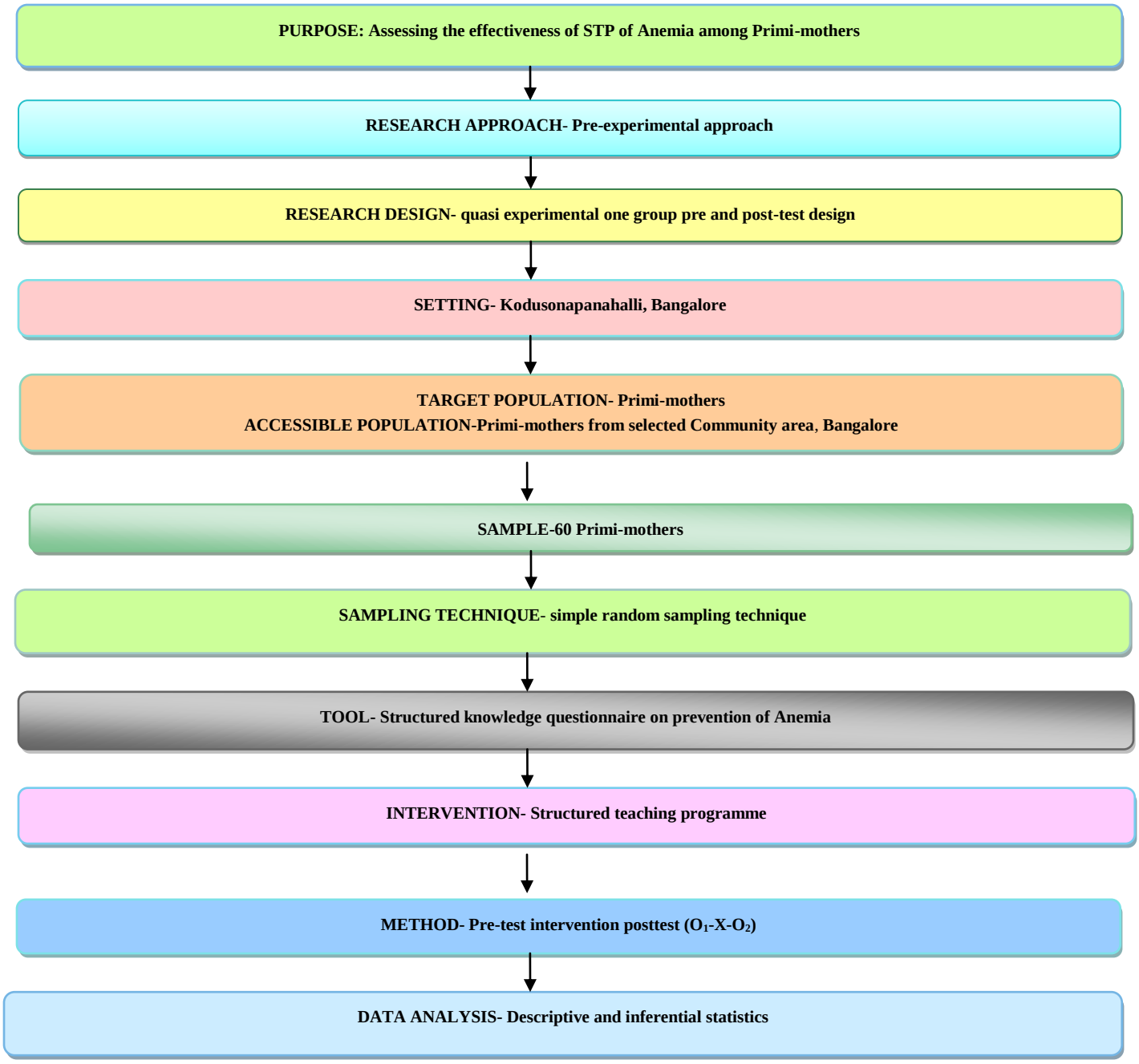

Fig.3. Schematic representation of research methodology

VARIABLES UNDERSTUDY

Variables are concepts at various levels of abstraction that are measures manipulated or controlled in the study. The variable mainly included in this study is independent variable, dependent variable and attribute variables.

Independent variable

An independent variable is that which is that which is believed to cause or influence the dependent variable, in pre-experimental research by the manipulated (treatment) variable.

In the present study the independent variable refers to Structured teaching programme on prevention of Anemia among primi-mothers.

Dependent Variable

Dependent variable is a response, behavior or outcome that the researcher wants to predict. Changes in the dependent variable are presumed to be caused by the independent variable. It is otherwise called as effect variable or a criterion measure

In the present study it refers to knowledge gained by primi-mothers regarding prevention of Anemia.

Attribute variable

An uncontrolled variable that greatly influences the result of the study is called as attributed variable.

The attribute variables in this study were selected socio demographic variables such as age, religion, type of family, educational status, occupational status, and source of information on prevention of Anemia.

SETTING OF THE STUDY

Setting refers to the area where the study is conducted. It is the physical location and condition in which data collection takes place in a study. Based on the geographical proximity, feasibility and familiarity with the setting, the investigator selected Kadusonapanahalli, Bangalore.

POPULATION

The population referred to as the target population, which represents then entire group or all elements like individuals or objects that meet certain criteria for inclusion in the study. The target population of the present study compromises of primi-mothers. The accessible population represents primi-mothers from selected community area, Bangalore.

SAMPLE

Sample refers to the subset of a population that is selected to participate in a study. The sampling size of the present study was 60 primi-mothers from selected community areas, Bangalore.

SAMPLING TECHNIQUE

Sampling technique refers to the process of selecting a group of people or other elements with which to conduct study. Simple random sampling techniques were adopted to select the samples for the present study based on inclusion criteria.

SAMPLING CRITERIA

Inclusion criteria

The study includes those who were:

- Primi women's staying in selected community area.
- Between the age group of 18 – 30
- Present at the time of study.

Exclusion criteria

Those who were:

- Not present at the time of the study
- Not willing to participate in this study.

DESCRIPTION OF THE TOOL AND SELF-INSTTRUCTIONAL MODULE TOOL FOR DATA COLLECTION

The tool used to collect the data was structured knowledge questionnaire in order to assess the knowledge level of primi-mothers regarding prevention of Anemia. It consists of two parts. Part I and Part II.

Part-I- Socio demographic data

Part-II- Structured knowledge questionnaire to assess the knowledge level of primi-mothers regarding prevention of Anemia.

Part I

It consists of demographic variables of primi-mothers such as age, religion, type of family, educational status, occupational status, and source of information.

Part II

It consists of items on knowledge related to prevention of dengue fever, it consists of 36 multi choice questions having 3 responses with one right answer in the following rural area.

- General information on prevention of Anemia
- Prevention and complications during delivery

SCORING AND INTERPRETATION

The knowledge regarding prevention of Anemia among primi-mothers was measured in terms of knowledge score. Structured knowledge questionnaire was prepared to assess on knowledge consisted of three responses each with one right answer. Each correct answer is given a score of 'l' and wrong answer, score of'0'. The total attainable score in the knowledge questionnaire was 36.

The total score was converted in to percentage and the resulting score was ranged as follows

Level of knowledge	**Scores**	**Percentage (%)**
Inadequate	0-18	<50
Moderate	19-27	51-75
Adequate	28-36	76-100

PREPARATION OF STRUCTURED TEACHING PROGRAMME

The process of developing structured teaching programme include following steps

- Review of literature regarding prevention of Anemia
- Preparation and organization of the content of structured teaching programme
- Preparation of final draft of structured teaching programme
- Editing the structured teaching programme

VALIDITY OF THE TOOL AND STRUCTURED TEACHING PROGRAMME

It refers to the degree to which an instrument measures what it is intended to measure. The prepared content (structured teaching programme) and the tool along with the problem statement, objectives, blue print and criteria check list were submitted to 1Pediatric Medicine doctor, 1 Statistician and the 7 experts from the field of pediatric health nursing for establishing content

validity. After validation from experts' corrections were made.

9 experts validated the tool used for the study. The tool was evaluated for appropriateness, adequacy, relevance, and completeness. Comments and suggestions were invited, and appropriate modifications were made accordingly. The tool was refined and finalized after establishing the validity.

The structured teaching programme regarding positive family interactionwith children was assessed by experts for its appropriateness, organization of content and language. The final draft of the tool contained 6 socio demographic characteristics and 36 knowledge questions on prevention of Anemia among primi-mothers.

RELIABILITY

Reliability of the research instrument is defined as the extent to which the instrument yields the same results on repeated measures. It is them concerned with consistency, accuracy, precision, stability, equivalence and homogeneity.

The reliability of the tool was elicited by split half method. The tool was administrated to 6 primi-mothers who fulfilled the inclusive criteria. These samples were excluded from the main study. The interval between two tests was 7 days. The Karl Pearson's coefficient of correlation was computed, and the reliability was found to be r=0.93, for knowledge questionnaire which was highly and positively correlated. The tool was found to be reliable.

DEVELOPMENT OF STRUCTURED TEACHING PROGRAMME

A structured teaching programme was developed on prevention of Anemia among primi-mothers. The content was prepared by the investigator on the basis of review of literature and with guidance of the experts in the field of pediatric nursing. The structured teaching programme includes a brief introduction, definition, pregnancy, die.[

u.,t during pregnancy, management and prevention of complications during pregnancy.

PILOT STUDY

The pilot study is a smaller version of the proposed study conducted to refine the methodology. It is developed similar to the proposed study, using similar subjects, setting treatment, method of data collection and analysis technique as it would be used in the main study. Pilot study was done to check the clarity of items in tool and the feasibility in conducting the study.

Pilot study was conducted among 6primi-mothers at BK halli, Bangalore after obtaining formal permission from the authorities.

After obtaining permission, 6 samples that fulfilled the inclusion criteria were selected by systematic random sampling technique. The investigator gave self-introduction, explained the purpose of the study, the respondent's willingness to participate in the study was ascertained. The respondents were assured anonymity and confidentially of the information provided by them and written consent was obtained from them. A pre-test was conducted using the structured knowledge questionnaire followed by delivery of structured teaching programme. After 7^{th} day of delivery of structured teaching programme, post test was conducted using the same tool. The pilot study samples were excluded from the main study.

The collected data were analyzed by using descriptive and inferential statistics. The significance of difference between pre-test and post-test scores were found by paired 't' test. The difference was found to be significant at $p \leq 0.05$ level.

The objectives of the study pilot study were to

1. Find out the requirement time for completing the structured knowledge questionnaire
2. Identify the ambiguity in the wording of the questionnaire
3. Find out the feasibility of the study
4. Identify any major flaws in the study design

The following were the findings of the pilot study

- The finding of the study showed that among 6 primi-mothers, majority, 5(83.33%) of them were above 27-30years of age, 6(100%) of them were Hindus, 6(100%) of them belonged to nuclear family, 3(50%) of them were undergraduate, 5(83.33%) of them were private employees, and 5(83.33%) of them got information from mass media regarding prevention of Anemia.
- The overall pre-test knowledge scores on prevention of Anemia among primi-mothers, 6(100%) of them had inadequate level of knowledge regarding prevention of Anemia and none of them had adequate level of knowledge whereas in post-test, among 6 primi-mothers majority, 5(83.33%) of them had adequate level of knowledge regarding prevention of Anemia
- Paired 't' test was done to assess the effectiveness of structured of structured teaching programme on prevention of Anemia. It was observed that, in pre-test, the mean score was 16.64±5.29 whereas the mean post-test score was 31.71±3.54. the obtained overall 't' value was 15.91, which was higher than the table value, so it is highly significant at $P \leq 0.05$ level.

Hence the structured teaching programme was effective in enhancing the knowledge of primi-mothers regarding prevention of Anemia. Hence H_1 is accepted for pilot study.

DATA COLLECTION PROCEDURE

The data was collected from primi-mothersin Kadusonapanahalli community area, Bangalore. Written permission was sought and obtained from the authorities concerned. The period of data collection was 6 weeks. 60 primi-mothers were selected as per the above-mentioned criteria with prior informed verbal consent to participate in the study. Initially good rapport was maintained with primi-mothers and the purpose of the study was explained to them. Primi-mothers were made comfortable and the privacy was provided. Instructions to answer the questionnaire were given. Pre-test was conducted through structured questionnaire to assess the knowledge of primi-mothers knowledge level on prevention of Anemia. Then the structured teaching programme were distributed to the primi-mothers. After 7 days of structured teaching programme, post-test was conducted for the primi-mothers with the same knowledge questionnaire to assess their knowledge. All the subjects were very cooperative, and investigator expressed her gratitude for their cooperation.

PLAN FOR DATA ANALYSIS

The data analysis is the systematic organization and synthesis of research data and the testing of research hypothesis. It involves the translation of information in the interpretable and managing form. The data obtained was analyzed by using both descriptive and inferential statistics on the basis of objectives and hypothesis of the study.

- Socio demographic data containing sample characteristics will be analyzed using frequencies and percentage.
- The knowledge scores before and after the administration of structured teaching programme will be calculated by using mean and standard deviation.
- The significant difference between the mean pre-test and post-test score would be analyzed by paired ‘t’ test
- Associations between pre-test knowledge scores of primi-mothers regarding prevention of Anemia with their selected socio demographic variables would be analyzed by using chi square (X^2) test.

- The level of significance will be set at $p \leq 0.05$ levels.

RESULTS

Statistical analysis is a method of rendering quantitative information meaningfully and intelligently. Statistical procedures enable the researcher to reduce, summarize, organize, evaluate, interpret and communicate the obtained data into numeric information.

This chapter deals with analysis and interpretation of data collector from 60 primi-mothers from selected community areas, Bangalore. The data was collected from the respondents before and after the administration of structured teaching programme. The collected information was organized, tabulated, analyzed, and interpreted using descriptive and inferential statistics. Analysis was done based on the objectives and hypothesis of the study.

OBJECTIVES OF THE STUDY

- To determine the knowledge of primi mother about iron deficiency anemia and its prevention before the intervention.
- To evaluate the primi mother's knowledge regarding iron deficiency anemia and its prevention after the intervention.
- To associate post-test knowledge score of primi mother's with selected socio demographic variables.

HYPOTHESIS

H1= There will be significant difference between pre-test and post Test knowledge score among primi mother's regarding anemia and its prevention.

H2=There will be significant association between the post-test knowledge score of primi mother's with selected socio demographical variables

PART I

Description of socio demographic profile of the sample

This section deals with distribution of participants according to the socio demographic characteristics. The obtained data on socio demographic profile are described under the following sub heading which are age, sex, religion, type of family, educational status, occupational status and source of information.

SOCIO-DEMOGRAPHIC PROFILE OF SAMPLES

Table 1: Classification of sample by socio- demographic characteristics

N=60

Characteristics	**Category**	**Respondents**	
		N	**%**
Age	18-20yrs	13	21.67
	21-23yrs	9	15
	24-26yrs	27	45
	27-30yrs	11	18.33
Religion	Hindu	42	70
	Muslim	4	6.67
	Christian	14	23.33
	Others	0	0
Type of family	Nuclear	38	63.33
	Joint	16	26.67
	Extended	6	10
Educational status	Primary education	31	51.67
	Secondary education	8	13.33
	Undergraduate	14	23.33
	Postgraduate and above	7	11.67
Occupational status	Private employee	23	38.33
	Government employee	8	13.33
	Self-employee	7	11.67
	Daily wages	13	21.67
	Nil	9	15
Source of information	Mass media	17	28.33
	Health personnel	27	45
	Friends or relatives	11	18.33
	Nil	5	8.33

Table 1 shows that, among 60 primi-mothers, 27(45%) of them were between 24-26yrs of age, 13(21.67%) of them were 18-20years of age, 11(18.33%) of them were 27-30yrsor above age and 9(15%) of them were between 21-23 years of age.

In the area of religion, 42(70%) of primi-mothers were Hindus, 14(23.33%) of them were Christians and 4(6.67%) of them were Muslims.

In concern to the type of family of primi-mothers, 38(63.33%) belong to nuclear family, 16(26.67%) of them belong to joint family and rest of them 6(10%) belong to extended family.

It was observed that in educational status of adults, 31(51.67%) of primi-motherscompleted primary education, 14(23.33%) of them were undergraduate, 8(13.33%) of them had secondary education and 7(11.67%) of them had completed post graduate or above.

In relation to occupational status of primi-mothers, 23(38.33%) of them were doing private job, 13(21.67%) of them were daily wages, 8(3.33%) of them were Government employees, 7(11.67%) of them were self-employees and 9(15%) of them had no job.

The socio demographic history of source of information shows that among 60 primi-mothers, 27(45%) of them got information from health personnel, 17(28.33%) of them accessed information from mass media, 11 (18.33%) of them got information from friends and relatives and 5(8.33%) of them did not get any information regarding prevention of Anemia.

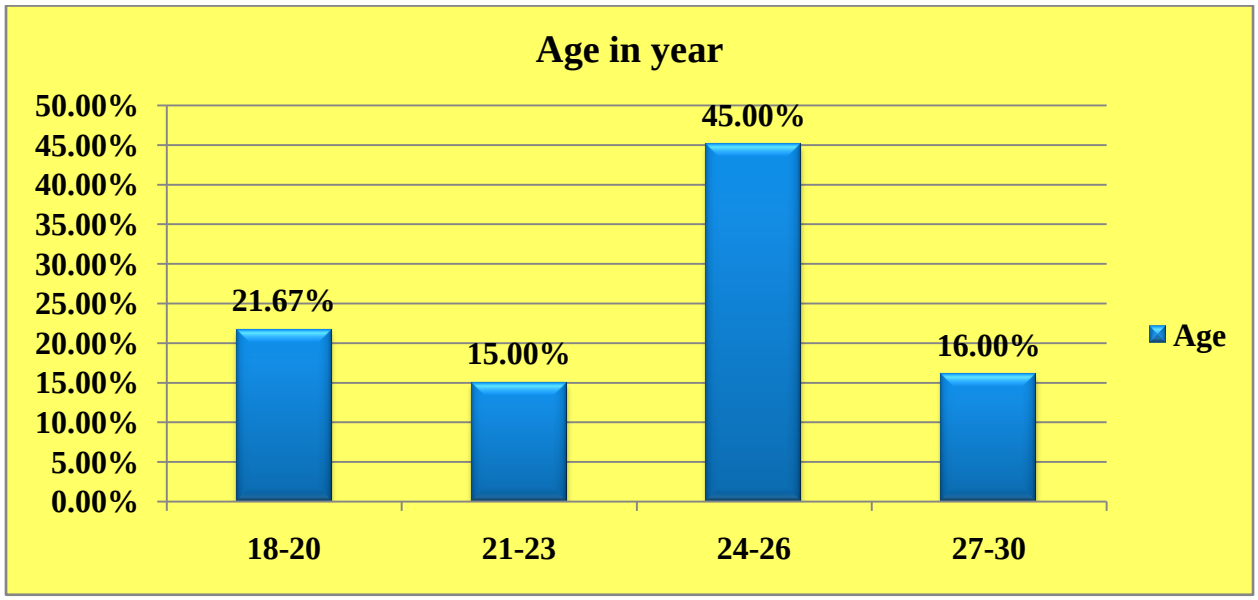

Fig.4: Classification of samples by age

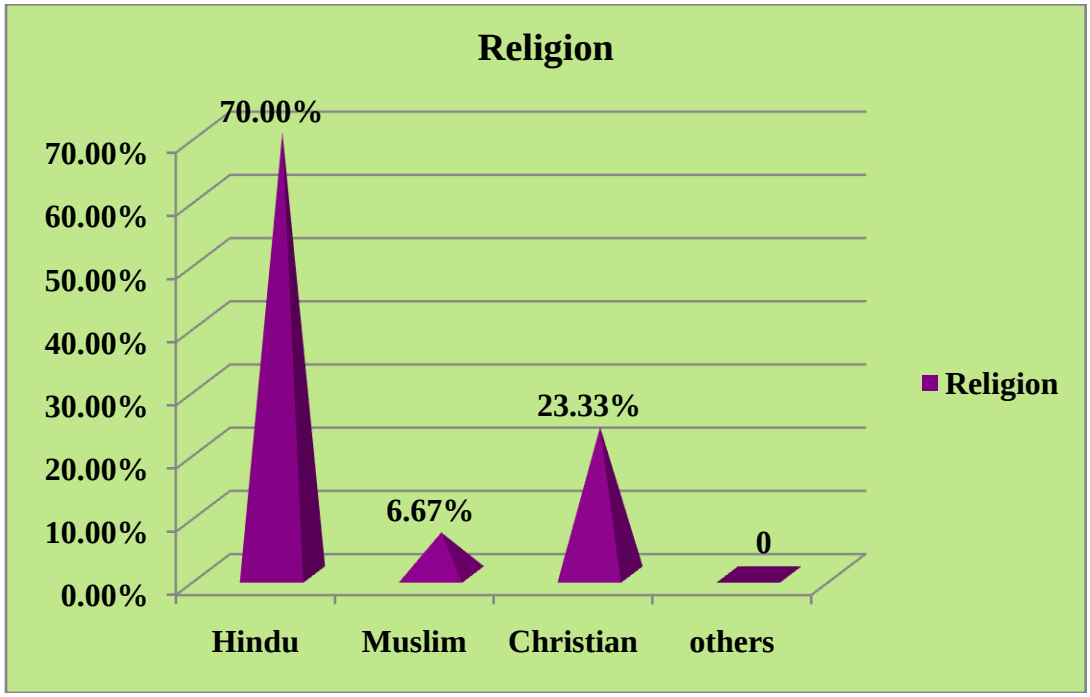

Fig.5: Classification of samples by religion

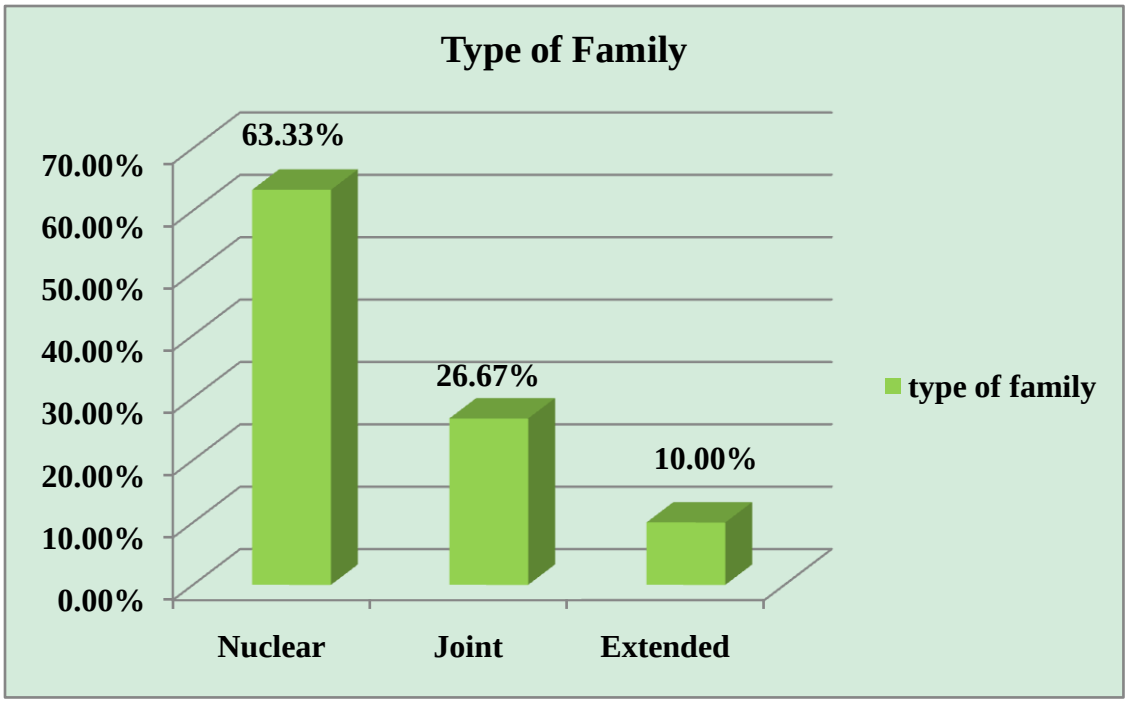

Fig.6: Classification of samples by type of family

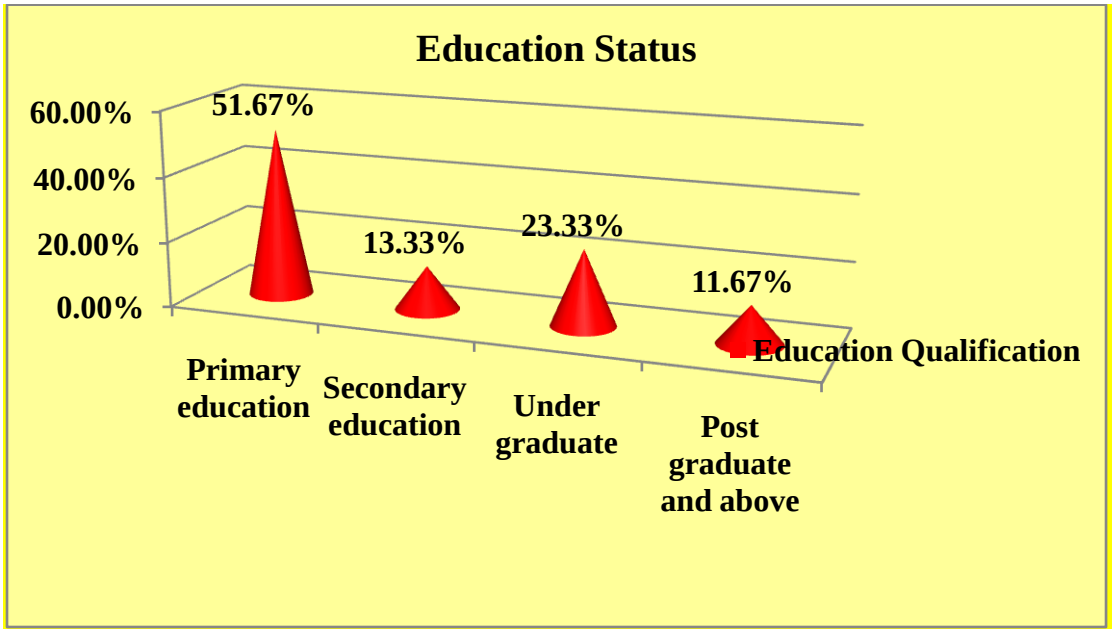

Fig.7: Classification of samples by educational status

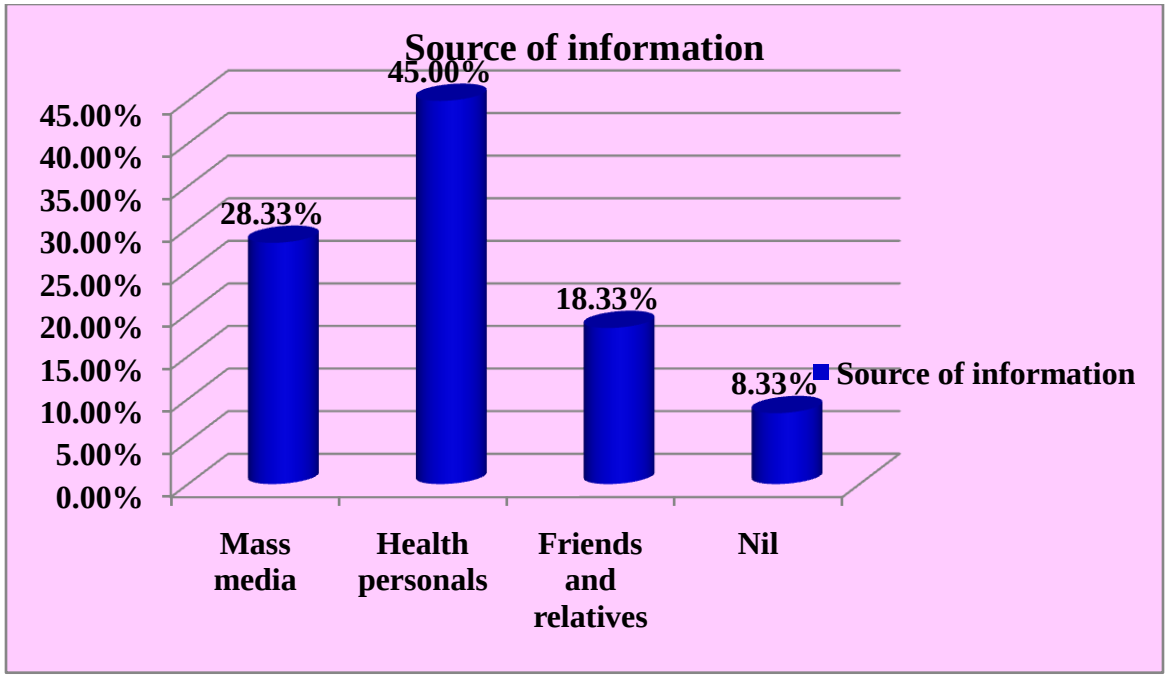

Fig.9: Classification of samples by source of information

PART II(A)

OVERALL AND ASPECT WISE KNOWLEDGE LEVEL ON PREVENTION OF ANEMIA AMONG PRIMI-MOTHERS

Table-2: Classification of pre-test knowledge scores on prevention of anemia among primi-mothers

N=60

Level of knowledge	Score	No of Respondents (%)	
		No	%
Inadequate	<50%	45	75
Moderate	51-75%	15	25
Adequate	>76%	0	0.0
Total		60	100

The above Table-2 shows the classification of primi-mothers on pre-test level ofknowledge on prevention of anemia. Among 60 primi-mothers, 45(75%) of them had inadequate level of knowledge, 15(25%) of them had moderate level of knowledge and none of them had adequate level of knowledge regarding prevention of Anemia.

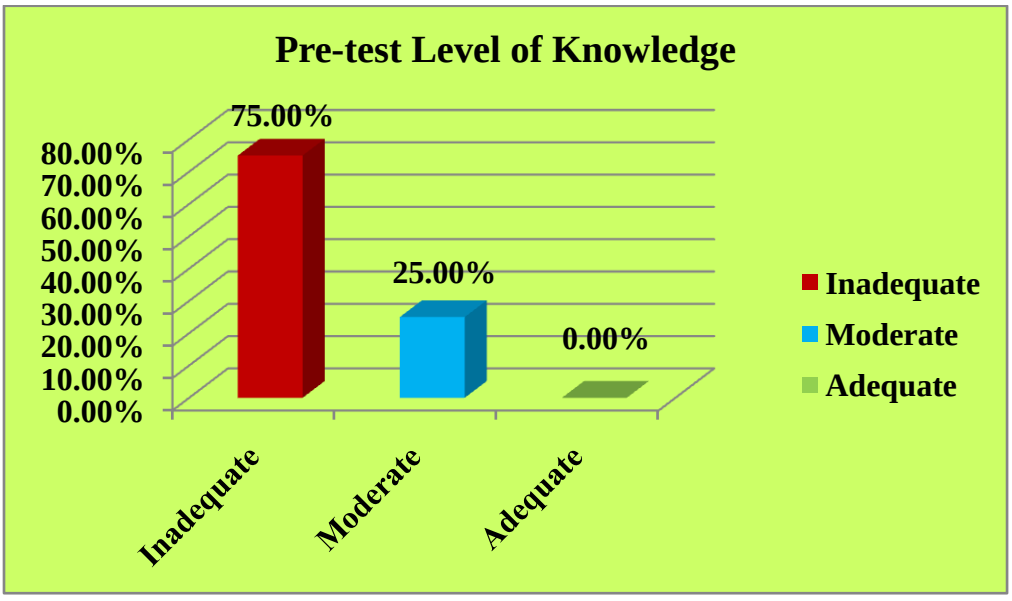

Fig.10: Classification of samples on pre-test level of knowledge

Table 3: Aspect wise pre-test mean knowledge scores of primi-mothers on prevention of Anemia

N=60

Aspects wise knowledge	Max statement	Max score	Range	Mean	SD
General Information on prevention of Anemia	12	12	4-8	6.27	1.73
Management and prevention of complications	24	24	7-14	11.41	2.59
Overall	36	36	11-22	17.68	4.32

The above table 3 shows, aspect wise pre-test mean knowledge scores of primi-mothers regarding prevention of Anemia. In general information on prevention of anemia, the mean knowledge score was 6.27±1.73. In the area of management and prevention of complications, the mean knowledge score was 11.41±2.59. the overall mean knowledge in pre-test was 17.68±4.32.

Table 4: Classification of post-test level of knowledge on prevention of anemia among primi-mothers

Level of knowledge	score	No of respondents (%)	
		No	%
Inadequate	<50%	0	0.0
Moderate	51-75%	11	18.67
Adequate	>76%	49	81.67
Total		**60**	**100**

The above table-4 shows the classification of post-test level of knowledge on prevention of anemia among primi-mothers. Among 60 primi-mothers, 49(81.67%) of them had adequate level of knowledge, 11(18.33%) of them had moderate level of knowledge and none of them had inadequate knowledge regarding prevention of anemia.

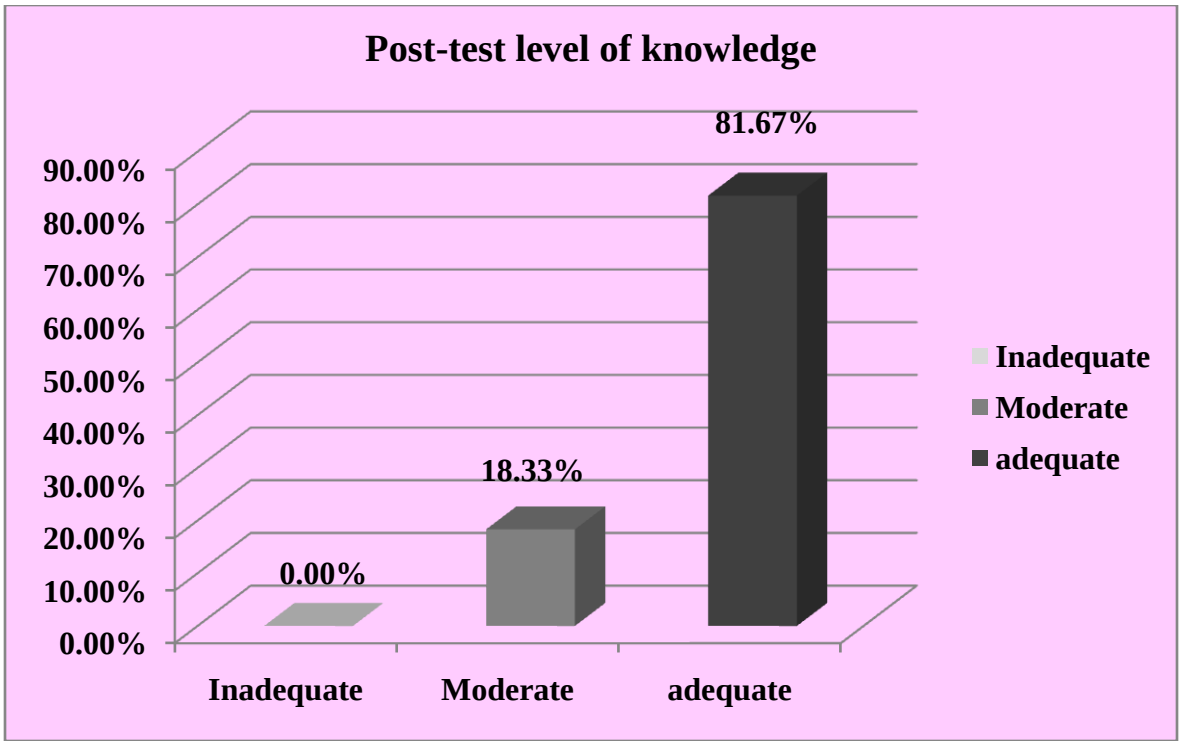

Fig.11: Classification of samples on post-test level of knowledge

Table 5: Aspect wise posttest mean knowledge scores of primi-mothers regarding prevention of Anemia

N=60

Aspects wise knowledge	Max statement	Max score	Range	Mean	SD
General Information of Anemia	12	12	8-12	10.95	1.05
Management and prevention of complications	24	24	15-21	19.76	1.24
Overall	36	36	23-33	30.71	2.29

The above table-5 shows aspect wise post-test mean knowledge scores of primi-mothers regarding prevention of anemia. In general information, the mean knowledge score was 10.95±1.05. In the area of management and prevention of complications, the mean knowledge score was 19.76±1.24. The overall mean knowledge score in pre-test score was 30.71±2.29.

PART II (B)
Comparison of mean pre-test and post-test knowledge scores to assess the effectiveness of structured teaching programme

Table-6: Overall mean pre-test and post-test knowledge on prevention of anemia among primi-mothers

Aspect	Maximum score	Knowledge of Respondents		Paired 't' Test
		Mean	SD	
Pre-test	36	17.68	4.32	**26.15****
Post test	36	30.71	2.29	
Enhancement	36	13.03	2.03	

***significant at P<0.05 level, df 59, table value 2.7*

Table 6 depicts the difference of pre-test and posttest knowledge scores of primi-mothers regarding prevention of anemia. In the pre-test, the mean score was 17.68±4.32 whereas the mean post-test score was 30.03±2.03. The obtained 't' value was 26.15, which was higher than the table value 2.7 so it is highly significant at P≤0.05 level.

Inference

The above table shows that, the mean post-test knowledge scores were significantly higher than the mean pre-test knowledge scores at P≤0.05 level of significance. Hence the research hypothesis H_1 is accepted.

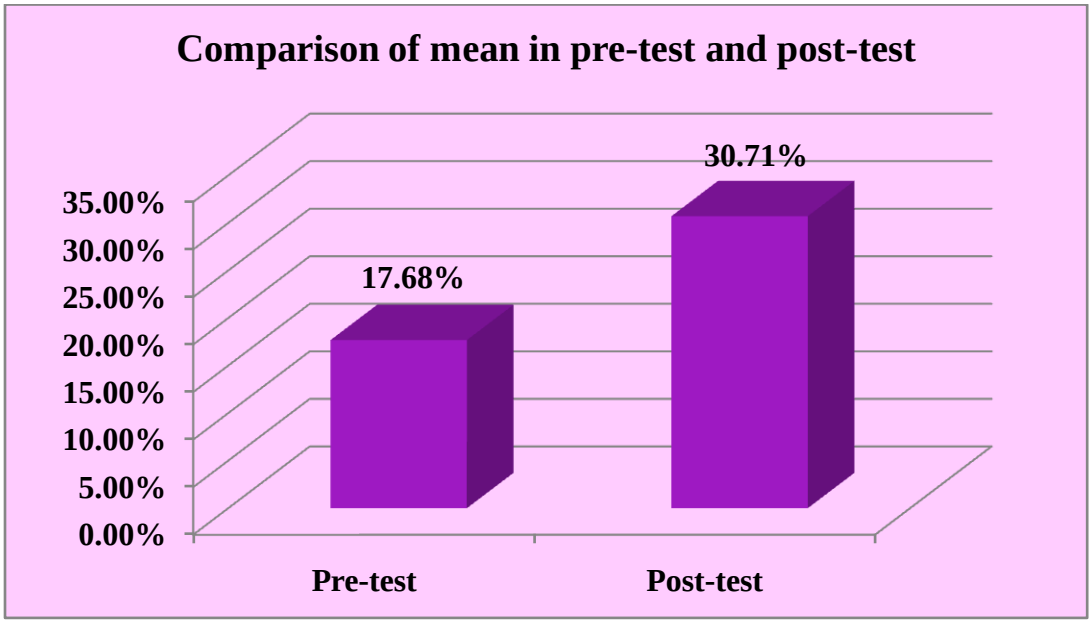

Fig.12: Overall mean pre-test and post-test knowledge scores of primi-mothers

Table 7: Aspect wise mean pre-test and post-test knowledge scores on prevention of anemia among primi-mothers

N=60

Sl no	Aspects wise knowledge	Max statement	Max score	Range	Mean	SD
I	General Information of anemia	6.27	1.73	10.95	1.05	**9.64****
III	Management and prevention of complications	11.41	2.59	19.76	1.24	**13.54****
	Overall	17.68	4.32	30.71	2.29	**26.15****

***significant at P<0.05 level, df 59, table value 2.7*

The above table-7 shows that, the aspect wise mean pre-test and post-test knowledge scores on prevention of anemia among primi-mothers with regards to knowledge on general information, the mean scores in pre-test and posttest were 6.27±1.73 and 10.95±1.05 respectively, obtained t value was 9.64. in area of management and prevention of complications, mean scores in pre-test was11.41±2.59 and in post-test was 19.76±1.24 and obtained t value was 13.54. The overall t value was 26.15 which was above the table value 2.7 at P≤0.05 level of significance.

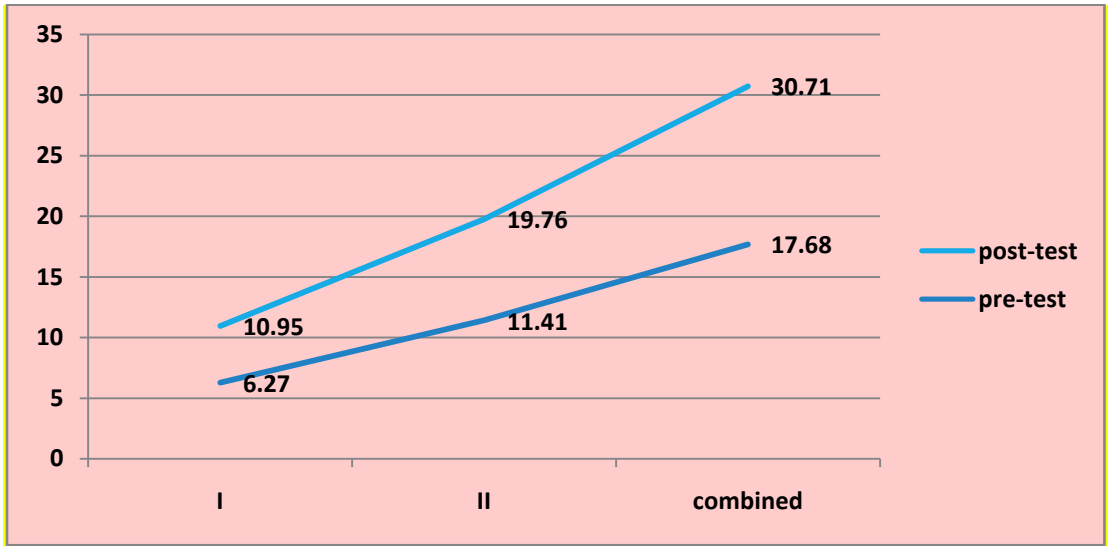

Fig.13. Aspect wise mean pre-test and post-test knowledge scores on prevention of Anemia among primi-mothers

PART III (B)

Table 8: Association between pre-test level of knowledge on primi-mothers and their selected socio demographic variables.

N=60

Characteristics	**Category**	**N**	**Level of knowledge**		**Chi square**
			Inadequate knowledge	**Moderate knowledge**	
Age	18-20yrs	13	11	2	**2.63 NS**
	21-23yrs	9	8	1	
	24-26yrs	27	19	8	
	27-30yrs	11	7	4	
Religion	Hindu	42	29	13	**2.98 NS**
	Muslim	4	4	0	
	Christian	14	12	2	
	Others	0	0	0	
Type of family	Nuclear	38	29	9	**3.37 NS**
	Joint	16	10	6	
	Extended	6	6	0	
Educational status	Primary education	31	28	3	**32.98 S***
	Secondary education	15	2	6	
	Undergraduate	14	14	0	
	Postgraduate and above	7	1	6	
Occupational status	Private employee	23	18	5	**19.64 S***
	Government employee	8	5	3	
	Self-employee	7	1	6	
	Daily wages	13	12	1	
	Jobless	9	9	0	
Source of information	Mass media	17	11	6	**3.09NS**
	Health personnel	27	23	4	
	Friends or relatives	11	8	3	
	Nil	5	3	2	

***Significant at P≤0.05 level, S; Significant, NS: Non significant*

The above table 8 depicts the association of pre-test level of knowledge primi-mothers with their selected socio demographic variables. The obtained chi square values for educational status, occupational status were higher values (32.98, 19.64 respectively) when compared to the table value at P≤0.05 level of significance. There was no significant association between demographic variables of primi-mothers such as age, religion, type of family, family status and source of information (2.63, 1.15, 3.37, 0.64 and 3.09 respectively) with pre-test level of knowledge regarding prevention of anemia among primi-mothers.

Inference

In this study the obtained chi square value for education status, was higher when compared to the table value at P≤0.05 level of significance hence the research hypothesis H_2 is accepted.

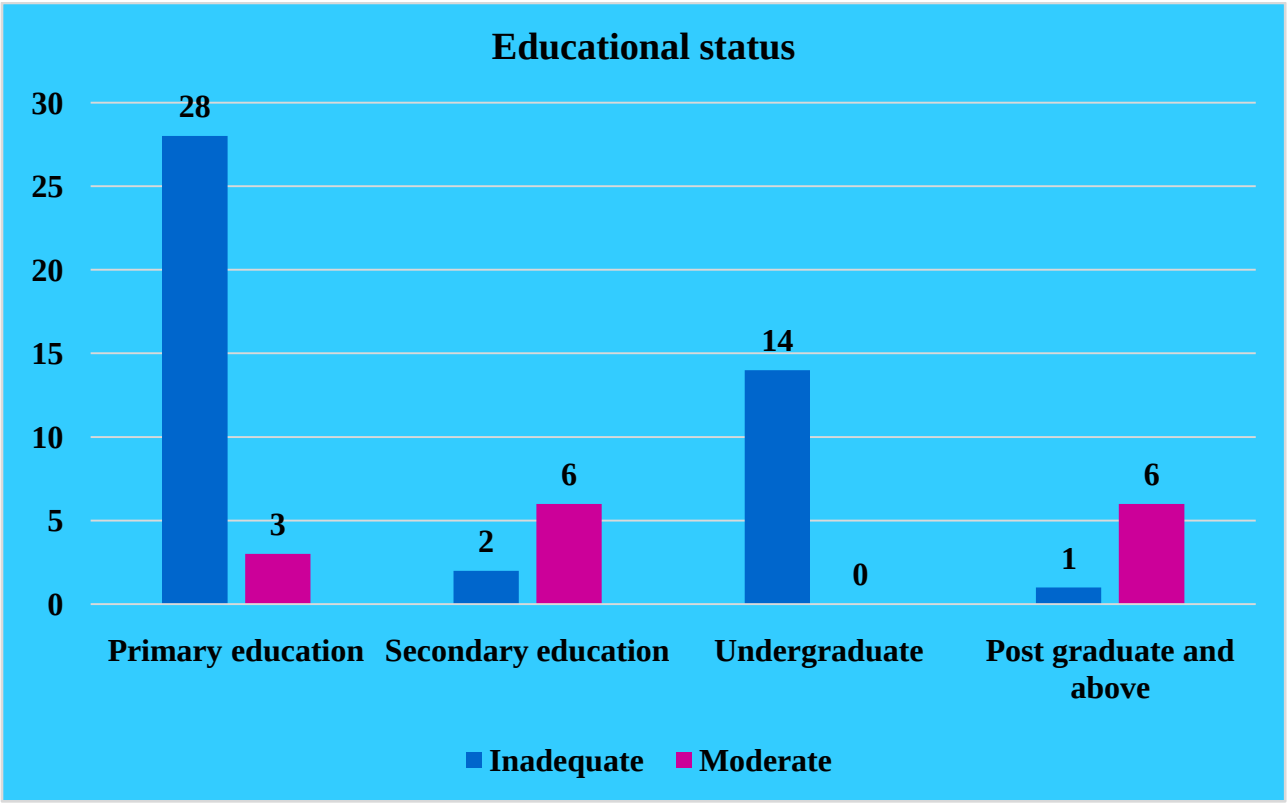

Fig.14: Association between pre-test knowledge score and educational status

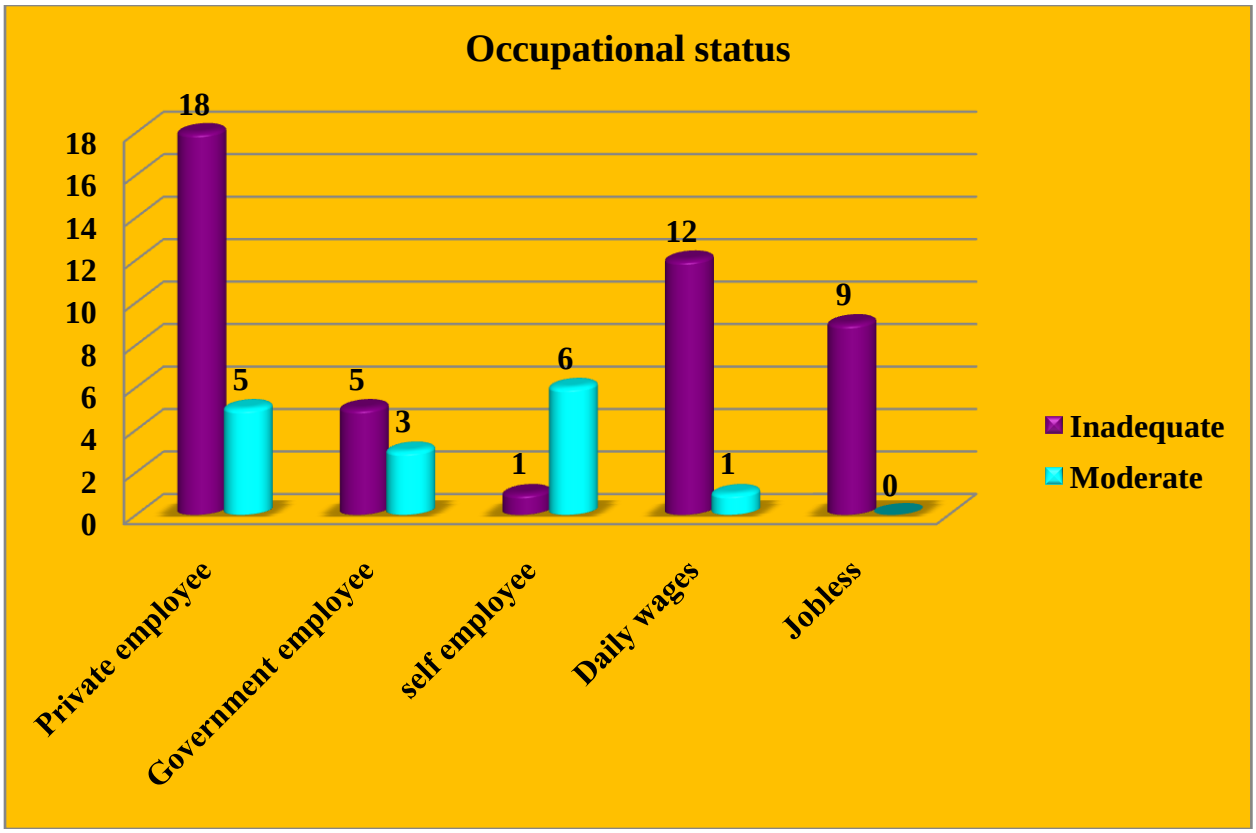

Fig. 15. Association between pre-test knowledge score and Occupational status

DICUSSION

Anemia is a major factor in women's health, especially reproductive health in developing countries. Severe anemia during first time pregnancy is an important contributor to maternal mortality, as well as to the low birth weight which is in turn an important risk factor for infant mortality. Even moderate anemia makes women less able to work and care for their children. The causes of anemia are multi-factorial, including diet, infection and genetics, and for some of the commonest causes of anemia there is good evidence of the effectiveness of simple interventions for example, iron supplementation, long-lasting insecticide nets and intermittent preventive treatment for malaria. Hookworm infection has long been recognized among the major causes of anemia in poor communities but understanding of the benefits of the management of hookworm infection in pregnancy has lagged the other major causes of maternal anemia.

Therefore, the present study was undertaken to evaluate the effectiveness of structured teaching

programme on knowledge regarding prevention of Anemia among primi-mothers at selected community areas in Bangalore. In order to achieve the objectives of the study, simple random sampling technique was used to select the samples and data was collected from 60 primi-mothers from selected community areas, Bangalore. The structured knowledge questionnaire (pre-test) was administrated, followed by the administration of structured teaching programme. The post-test was conducted after seven days with same questionnaire to the same group.

The finding of the study was discussed according to the objectives and hypothesis.

1. Socio demographic characteristics of samples

- Among 60 primi-mothers, 27(45%) of them were between 24-26 years of age
- In the area of religion, 42(70%) of primi-mothers were Hindus
- In concern to the type of family, among 60 primi-mothers
- It was recorded that in educational status, 31(15.67%) of primi-mothers were completed primary education
- In relation to occupational status of primi-mothers, 23(38.33%) of them were doing private job
- The socio demographic history of source of information showed that, among 60 primi-mothers, 27(45%) of them got information from health personnel

2. Overall and aspect wise knowledge score prevention of anemia among primi-mothers

With regard to overall pre-test knowledge on prevention of anemia among primi-mothers, 45(75%) of them had inadequate level of knowledge, 15(25%) of them had moderate level of knowledge and none of them had adequate level of knowledge regarding prevention of anemia in post-test, 49(81.67%) of them had adequate level of knowledge, 11(18.33%) of them had moderate level of knowledge and none of them had inadequate level of knowledge regarding prevention of anemia.

Above finding of the present study was supported by a descriptive study was conducted to assess the knowledge of primi-mothers regarding prevention of anemia. A descriptive study design was used for this study. Structured questionnaire was used to collect the information from the primi-mothers. Around 180 primi-mothers were enrolled for the study. Result showed that, majority 68.8%(124) of primi-mothers had poor knowledge regarding prevention of anemia with mean

score of 25±2.1. Thus, the study concluded that, primi-mothers had poor knowledge about the prevention of anemia, so there is a need for education of this group to prevent further complications.

3. Comparison of pre-test and post-test mean knowledge score of primi-mothers in order to assess the effectiveness of structured teaching programme on prevention of anemia.

In this study a comparison was done between the pre-test mean scores and post-test mean scores in order to assess the effectiveness of structured teaching programme on prevention of anemia among primi-mothers. It was observed that, with regard to knowledge on general information, the mean score in pre-test and post-test was 6.27±1.73 and 10.95±1.05 respectively, obtained t value was 9.64. in area management and prevention of complications, mean scores in pre-test was11.41±2.59 and in post-test was 19.76±1.24 and obtained t value was 13.54. The overall t value was 26.15 which were above the table value 2.7 at P≤0.05 level of significance. Hence the research hypothesis H_1 is accepted.

Above finding of the present study was supported by a study on the effectiveness of structured teaching programme administered to primi-mothers on knowledge regarding prevention of anemia. An evaluative research approach was pre-experimental one group pre-test and post-test design was used to achieve the objectives of the study. Using non-probability convenient sampling technique was used and 85 samples were selected. The major finding of the study showed that the overall knowledge score obtained by the primi-mothers in the pre-test was 12.69 and 26.14 in the post test. The overall improvement in the mean score was 13.35 with 't' value 17.21 at P≤0.001 level. The findings of the study concluded that the knowledge of the primi-mothers regarding prevention of anemia increased with the help of structured teaching programme.

4. Association between mean pre-test level of knowledge of primi-mothers and their socio demographic variables.

The association between mean pre-test level of knowledge of primi-mothers and their selected socio demographic variables were analyzed by chi square test. In this study, obtained chi square value for educational status, occupational status were higher values (32.98, 19.64 respectively) when compared to the table value at P≤0.05 level of significance. Hence the research hypothesis H_2 is accepted.

Above findings of the present study was supported by a study conducted on knowledge on primi-mothers regarding prevention of anemia. Descriptive study design was used. Around 120 primi-mothers were included in the study. Structured knowledge questionnaire was used for collecting data from the samples. Results showed that majority of primi-mothers 83(69.1%) were showed poor knowledge and remaining 37(30.9%) of them had average level of knowledge regarding prevention of anemia. There is also significant association between knowledge of primi-mothers and socio demographic variables of educational status and economic status of primi-mothers at $P \leq 0.001$ level of significance. Thus the study concluded that there is a need for educating primi-mothers to improve their knowledge regarding prevention of anemia.

CONCLUSION

This chapter deals with the findings of the study and their nursing implication. This study was conducted to assess the effectiveness of structured teaching programme on prevention of Anemia among primi-mothers in selected community areas, Bangalore. In the present study 60 primi-mothers were selected by using systematic random sampling technique.

The research approach adopted for this study was pre experimental approach with quasi experimental one group pre-test post-test research design with a view to measure the pre-test knowledge level and the effectiveness associated with the post-test knowledge level following administration of structured teaching programme on prevention of Anemia among primi-mothers. A structured knowledge questionnaire was used to assess the knowledge of primi-mothers. The data was interpreted by using appropriate statistical methods.

The following findings were drawn from the study:

- Among 60 primi-mothers, 27(45%) of them were between 24-26 years of age.
- In the area of religion, 42(70%) of primi-mothers were Hindus.
- In concern to type of family, 38(63.33) of primi-mothers belong to Nuclear family.
- It was recorded that in educational status, 31(52.67%) of primi-mothers were completed primary education.
- In relation to occupational status of primi-mothers, 23(38.33%) of them were doing private job.
- The socio demographic history of source of information shows that among 60 primi-mothers, 27(45%) of them got information from health personnel

- With regard to overall pre-test knowledge scores on prevention of Anemia among primi-mothers, 45(75%) of them had inadequate level of knowledge, ,15(25%) of them had moderate level of knowledge and none of them had adequate level of knowledge regarding prevention of Anemia whereas in post-test, majority, 49(81.67%) of them had adequate level of knowledge, 11(18.33%) of them had moderate level of knowledge and none of them had inadequate knowledge regarding prevention of Anemia.
- In the pre-test, the mean score was 17.68±4.32 whereas the mean post-test score was 30.71±2.29. The enhancements mean score was 13.03±2.03. The obtained 't' value was 26.15, which was higher than the table value 2.7 so it is highly significant at P≤0.05 level. Hence H_1 is accepted.
- The obtained chi square values for educational status, occupational status were higher values (32.98, 19.64 respectively) when compared to the table value at P≤0.05 level of significance. Hence the research hypothesis H_2 was accepted.

NURSING IMPLICATION

The implication of the findings had been discussed in relation to nursing service, nursing education, nursing administration and nursing research.

Implications of study in nursing service

- Nurse have great responsibility for giving information regarding prevention of Anemia to primi-mothers and public for preventing the occurrence of complications during labor.
- Nursing personnel must know regarding importance of prevention of anemia during pregnancy.
- The nursing personal should demonstrate behavioral modification of prevention of Anemia among primi-mothers

Implications of study in nursing education

- Nursing personnel working in various health setting should be given in service education to update their knowledge.
- There should be more emphasis on the nursing curriculum about current concepts and trends regarding prevention of maternal complications.
- The nursing students may be motivated to give health education at pediatriclevel in aspects on prevention of Anemia among primi-mothers
- This study will encourage nurse administrators to arrange for conference and seminars

related to preventive of Anemia to primi-mothers in community area.

- Pamphlets, handouts and booklets should be kept in the ward and outpatient's department regarding preventive of Anemia among primi-mothers.

Implications of the study in nursing administration

Nurse administrator can organize staff development programme for nurses to update their knowledge. The concept of extended role of nurse offers many opportunities for a nurse administrator to improve the quality of life of the public. Nurse as administrators are in key position to organize in service education programme, refresher courses and workshops for nurses and encourage them to participate in these activities.

Implications of nursing research

- This study will be valuable reference and pathway to further researchers
- The findings of the study would help to expand the scientific body of professional knowledge upon which further researchers can be conducted.
- The learning module developed by the researcher can be used as a blue print for further investigations to develop more effective instructional materials like CD cassettes, and handouts among learning packages.
- Extensive research can be conducted to create awareness to the nurses regarding preventive of Anemia among primi-mothers.

Limitation of the study

The limitations of the present study were follows:

- The assessment of knowledge will be based only as the correct responses given to the items in the knowledge questionnaire
- Collection of data is only from Primi- mothers from selected community areas of Bangalore.

Suggestions

The finding of the study suggests

- The nurse educator should give importance for giving information to people in the pediatric about prevention of anemia among primi-mothers
- Pediatric health programme could be initiated as to impart knowledgeon prevention of Anemia among primi mothers.
- Adequate knowledge of primi-mothers regarding prevention of Anemia to prevent the

occurrence of maternal complications.

Recommendations for further studies

The light of the finding of the present study, the researcher puts forward the following recommendation for conducting further research.

- A study can be done on a larger scale in different setting
- Similar study can be replicated Gynae Hospital setting
- A cross sectional study can be conducted on knowledge, practice and attitude on prevention of Anemia among Primi-mothers
- A comparative study can be done to assess the knowledge level on prevention of Anemia among primi-mothers in urban and rural areas.

SUMMARY

This chapter provides the process employed in this study. The primary aim of the study was to assess the effectiveness of structured teaching programme on knowledge regarding prevention of Anemia among primi-mothers and to find association between the knowledge of primi- mothers with their selected socio demographic variables.

OBJECTIVES OF THE STUDY

- To determine the knowledge of primi mother about iron deficiency anemia and its prevention before the intervention.
- To evaluate the primi mother's knowledge regarding iron deficiency anemia and its prevention after the intervention.
- To associate post-test knowledge score of primi-mothers with selected socio demographic variables.

HYPOTHESIS

H1= There will be significant difference between pre-test and post Test knowledge score among primi mother's regarding anemia and its prevention.

H2=There will be significant association between the post-test knowledge score of primi mother's with selected socio demographical variables.

The present study aims at assessing the effectiveness of structured teaching programme on prevention of Anemia among primi-mothers. In this study, Imogene M. King's goal attainment theory adopted for this study. The theory assumes that humans are open systems and are having

constant interaction with their environment.

A review of literature enables the investigator to develop the conceptual frame work, methodology for the study and to plan for the data analysis in the most effective and efficient way.

The research approach used for this study was pre experimental research approach and research design was quasi experimental one group pretest and post-test design.

The setting for the study was Kodusonapanahalli, community area, Bangalore.

The sampling consists of 60 primi-mothers in selected community area, Bangalore. Each sample is selected by using systematic random sampling technique

The variables in the study are as follows:

a) Independent variable: structured teaching programme regarding prevention of Anemia.

b) Dependent variables: Knowledge of primi-mothers regarding prevention of Anemia.

c) Demographic variables: Characteristics of primi-mothers such as age, religion,type of family, educational status, occupational status, and source of information.

The tool used for the study was structured knowledge questionnaire for assessing knowledge level of primi mothers regarding prevention of anemia.

Level of knowledge was assessed in to 3 levels inadequate, Moderate and adequate.

Structured teaching progaramme was developed, which covered the knowledge on all aspects on prevention of Anemia among primi-mothers

The tool and structured teaching programmewere validated by experts and their suggestions were incorporated.

Pilot study was conducted among 6 primi-mothers and the pilot study was feasible

The split half method was used for determining the reliability of the tool. The reliability coefficient (r) was 0.93 for structured knowledge questionnaire, which was highly positive hence the tool of 4 weeks.

The collected data was analyzed and interpreted by using descriptive and inferential statistical method.

Major finding of the study

Finding was presented under the following sections:

Section A: Analysis of socio demographic variables of samples

Section B: Overall and aspects wise knowledge level of primi-mothers regarding prevention of

anemia

Section C: Comparison of pre-test and post-test mean knowledge score of samples in order to assess the effectiveness of structured teaching programme on prevention of Anemia

Section D: Association between mean pre-test level of knowledge of primi-mothers and their socio demographic variables.

Section A: Analysis of socio demographic variables of samples

The finding of the study showed that among 60 primi-mothers. 27(45%) of them were between 24-26 years of age, 42(70%) of primi-mothers were Hindus, 38(63.33%) belong to nuclear family, 31(51.67%) of primi-motherscompleted primary education, 23(38.33%) of them were doing private job, and 27(45%) of them got information from health personnel.

Section B: Overall and aspects wise knowledge scores on prevention of Anemia among primi-mothers

The overall pre-test knowledge on prevention of anemia among primi-mothers, 45(75%) of them had inadequate level of knowledge, 15(25%) of them had moderate level of knowledge and none of them had adequate level of knowledge regarding prevention of anemia whereas in post-test, 49(81.67%) of them had adequate level of knowledge, 11(18.33%) of them had moderate level of knowledge and none of them had inadequate level of knowledge regarding prevention of anemia.

Section C: Comparison of pre-test and post-test mean knowledge scores on prevention of anemia among primi-mothers in order to assess the effectiveness of structured teaching programme on prevention of anemia

Paired t test was done to evaluate the effectiveness of structured teaching programme on prevention of anemia among primi-mothers. It was observed that, in pre-test, the mean score was 17.68±4.32 whereas the mean post-test score was 30.71±2.29. The enhancement mean score was 13.03±2.03. the obtained 't' value was 26.15, which was higher than the table value 2.7 so it is highly significant at P≤0.05 level. Hence the structuredteaching programme was effective in enhancing the knowledge of primi-mothers regarding prevention of anemia.

Section D: Association between mean pre-test level of knowledge of high school children and their socio demographic variables.

The association between mean pre-test level of knowledge of primi-mothers and their selected socio demographic variables were analyzed by chi square test. In this study, obtained chi square

value for educational status, occupational status were higher values (32.98, 19.64 respectively) when compared to the table value at $P \leq 0.05$ level of significance. Hence the research hypothesis H_2 is accepted.

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SECTION A

SOCIO DEMOGRAPHIC DATA

INSTRUCTIONS

Kindly go through each item and give your responses against the box provided against each item. Please make sure that you answer all the items.

1. Age in years
   a. 18-20 years ( )
   b. 21-23 years ( )
   c. 24-26 years ( )
   d. 27-30 years ( )

2. Religion
   a. Hindu ( )
   b. Muslim ( )
   c. Christian ( )
   d. Others ( )

3. Type of family
   a. Nuclear ( )
   b. Joint ( )
   c. Extended ( )

4. Educational status
   a. Primary education ( )
   b. Secondary education ( )
   c. Under graduate ( )
   d. Post graduate and above ( )

5. Occupation

a. Private employee ( )
b. Government employee ( )
c. Self-employee ( )
d. Daily wages ( )
e. Nil ( )

6. Source of information
   a. Mass media ( )
   b. Health Personnel ( )
   c. Friends and relatives ( )
   d. Nil ( )

SECTION B

STRUCTURED KNOWLEDGE QUESTIONNAIRE

I. Structured knowledge questionnaire on General information on Anemia

1. Anemia means Hemoglobin having
   a. Less red blood cells ( )
   b. Moderate blood cells ( )
   c. More red blood cells ( )

2. Normal Hemoglobin for pregnant mother
   a. 10g/dl ( )
   b. 11g/dl ( )
   c. 12g/dl ( )

3. Rich source of Iron is
   a. Heart, beans, crab ( )
   b. Kidney, egg, milk ( )

c. Liver, meat, fish ( )

4. Each gram of Hemoglobin contains
   a. 3-4grams of Iron ( )
   b. 4-5grams of Iron ( )
   c. 5-6grams of Iron ( )

5. Major routes of Iron loss are
   a. Menstruation, childbirth ( )
   b. Physical activity, cycling ( )
   c. Medical problems, exercise ( )

6. IUD(intrauterine device) in the family planning is the additional cause of Iron loss
   a. Yes ( )
   b. No ( )
   c. Don't know ( )

7. Major cause of anemia is
   a. Moderate nutrition ( )
   b. Malnutrition ( )
   c. Good nutrition ( )

8. Requirement of Iron is greater during
   a. Pregnancy ( )
   b. Adult ( )
   c. Old age ( )

9. Average hemoglobin daily need for pregnant women is
   a. 4.80 mg ( )
   b. 80 mg ( )

c. 80 mg ( )

10. Iron rich vegetables are

a. Green leafy vegetables( )
b. Pulses ( )
c. Cereals ( )

11. The end results of Iron deficiency is

a. Goiter ( )
b. Nutritional anaemia ( )
c. Xeropthalmia ( )

12. Deficiency of Hemoglobin, the blood is called

a. Tuberculosis ( )
b. Anemia ( )
c. Diabetes mellites ( )

II. Structured knowledge questionnaire on management and prevention of complications in anemia

13. One of the symptoms of anemia is

a. Sneezing ( )
b. Coughing ( )
c. Palpitation ( )

14. In severe anemia, there may be a sign of

a. Techy cardiac ( )
b. Polyopia ( )
c. Poly Dipsea ( )

15. Pica is the sign of

a. Thyroid ( )

b. Thalassemia ( )

c. Anemia ( )

16. Need of Iron during pregnancy is

a. 25 mg/day( )

b. 26 mg/day ( )

c. 27 mg/day( )

17. Anemia untreated during pregnancy leads to

a. Premature death ( )

b. Normal fetes ( )

c. Abnormal fetes ( )

18. Anemia associated other symptoms are

a. Hypothyroidism, cancer ( )

b. Kidney disease, diabetes ( )

c. Above all ( )

19. Hemolytic anemia means

a. Rapture of red blood cells ( )

b. Mature of red blood cells ( )

c. Immature red blood cells( )

20. Blood test for anemia is

a. Culture test ( )

b. Liver function test ( )

c. Complete blood count ( )

21. Treatment for mild anemia is

a. Iron rich diet ( )

b. Carbohydrate rich diet ( )

c. Protein rich diet ( )

22. Side effect due to Iron suplement

a. Dysentery ( )
b. Constipation ( )
c. Vomiting ( )

23. Symptoms of anemia are

a. Fatigue, dizziness, fast heart beat ( )
b. Active, healthy, Normal ( )
c. None of the above ( )

24. Anemia caused by

a. Sweat loss ( )
b. Blood loss ( )
c. Urine loss( )

25. Conditions associated with the cause of anemia

a. Sickle cell anemia ( )
b. Iron deficiency anemia ( )
c. All the above ( )

26. Two vitamins needed to make red blood cells are

a. Vitamin B_{12} and folate ( )
b. Vitamin C and D ( )
c. Vitamin A D and K ( )

27. Excess Iron intake causes

a. Heart disease ( )

b. Liver disease ( )
c. Kidney disease ( )

28. Anemia can be prevented by eating
    a. A balanced diet ( )
    b. Vitamins( )
    c. Minerals ( )

29. Major cause of anemia will be
    a. sweating ( )
    b. blood loss ( )
    c. Excess urination ( )

30. Untreated anemia causes
    a) Heart damage ( )
    b) Eye damage ( )
    c) Ear damage ( )

31. Pregnant women can prevent anemia by using
    a. B.P pills ( )
    b. Iron pills ( )
    c. Diabetic pills ( )

32. When anemia results from abnormal break down of RBC is
    a. Sickle cell anemia ( )
    b. Hemolytic anemia ( )
    c. A plastic anemia ( )

33. Iron deficiency anemia in children impaired
    a. Neurological development ( )

b. Psychological development ( )

c. Social development ( )

34. Treatment of anemia during pregnancy is

a. Vitamin tablets ( )

b. Iron and folic acid tablet ( )

c. Antibiotics ( )

35. Major symptoms of iron deficiency anemia during pregnancy is

d. Fatigue, weakness ( )

e. Chest pain, Headache ( )

f. Above all ( )

36. How anemia can be prevented during pregnancy

a. By meditation ( )

b. By eating healthy balanced diet ( )

c. By doing yoga ( )

SCORE KEY

Question Number	Answer	Question Number	Answer
1	A	21	A
2	B	22	B
3	C	23	A
4	A	24	B
5	A	25	C
6	A	26	A
7	B	27	C
8	A	28	A
9	C	29	B
10	A	30	A
11	B	31	B
12	B	32	B
13	C	33	
14	A	34	B
15	C	35	C
19	A	36	B
20	C		

LESSON PLAN

Name :PRABHAVATHY.K

Name of the topic :Prevention of Anemia among Primi-mothers

Group :Primi-mothers

Number : 60

Time : 10:00am to 4:00pm

Date : Jan/Feb2022

Venue :BK halli, Bangalore

Teaching method : Lecture cum discussion

AV- Aids :Flash Cards

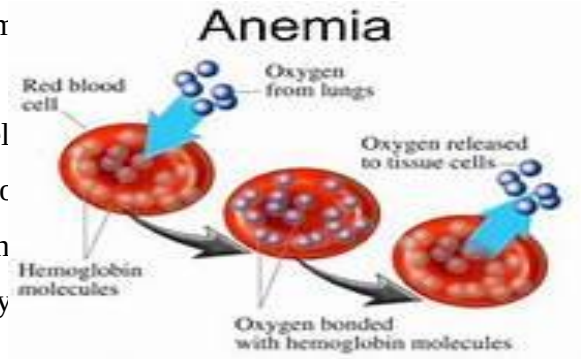
GENERAL OBJECTIVES

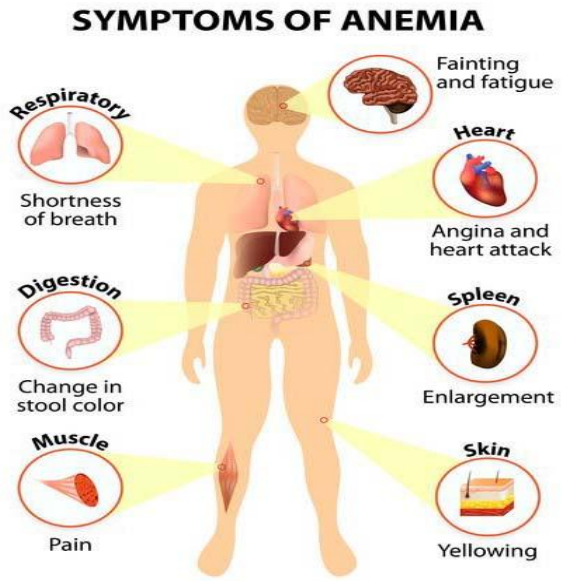
After the completion of the class, the primi-mothers will be able to acquire knowledge regarding prevention of Anemia and apply this knowledge in their future life

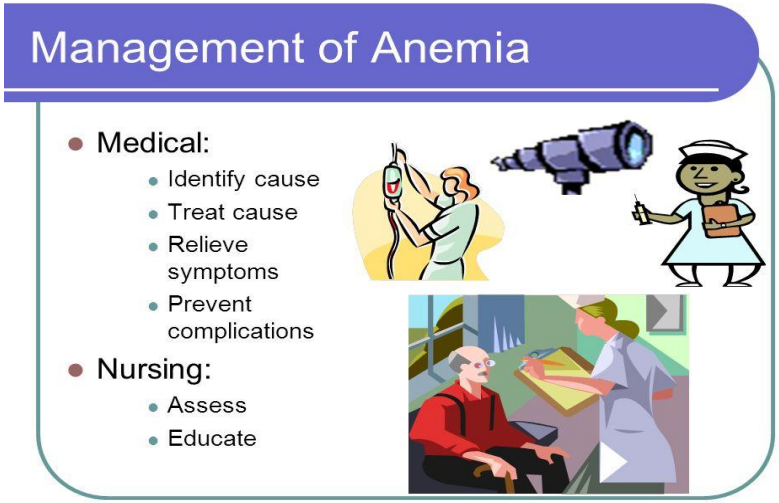
SPECIFIC OBJECTIVES

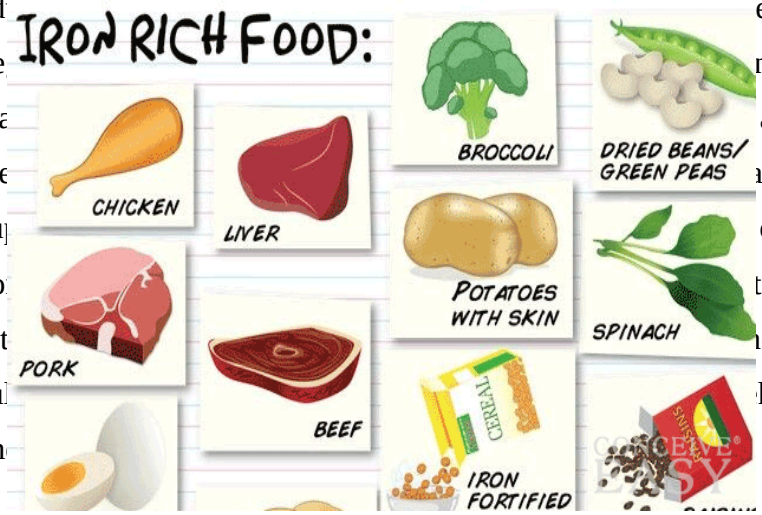
After the class the high school students will be able to:

- Define Anemia
- Explain Causes of Anemia
- Describe Management of Anemia during pregnancy
- Explain Prevention of anemia during pregnancy
- Explain Prevention of complications

TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHING AND LEARNING ACTIVITY	AUDIO VISUAL AIDS	EVALUATION
5min	Define Anemia	**Definition** The tern  oxygen-carrying ating red blood cel tration of haemoglc ult of a reduction loss of erythrocy **Causes** One of the most common types of anemia during pregnancy is iron deficiency anemia. This usually occurs when your body lacks the iron to producesufficient hemoglobin levels during pregnancy.	Educator defined Anemia	Flash cards	Primi-mothers were able to define Anemia
10min	List down causes of Anemia	Hemoglobin is a protein that is present in red blood cells. This protein helps red blood cells carry oxygen from your lungs to other parts of your body. Here are several symptoms you'll experience if you have iron-deficiency anemia during your pregnancy. Below are the symptoms you need to keep a lookout for	Educator explained causes of Anemia	Flash cards	Primi-mothers explained causes of Anemia

		Irregularheartbeat, Shortness of breath Dizziness, Fatigue, Cold hands and feet, Chest pain Headache, Pale or yellowish skin  			
15min	Explain management of anemia	**Management** It is of utmost importance to establish the cause of anemia prior to definitive management. However, features of decompensation, very severe anemia and acute blood loss require immediate red cell transfusion as soon as the required samples have been collected. The only caveat is that we must	Educator explained the management of anemia	Flash cards	Primi-mothers explained management of anemia

10min	Prevention of Anemia during pregnancy	ensure that all necessary samples have been collected before transfusion. The goal of treatment of anemia in pregnancy is therefore to maintain wellbeing, identify and correct the underlying cause(s) and correct anemia within shortest time possible and improve patient quality of life and survival.  Approximately 1g of iron is required during a normal pregnancy. Up to 600mg of iron is required for the increase in maternal red cell mass, and a further 300mg for the foetus. These requirements exceed the iron storage of most young women and often cannot be met by the diet. Therefore, few women avoid depletion of iron reserves by the end of pregnancy. Folate requirements are increased approximately	Educator explained the prevention of Anemia during pregnancy	Flash cards	Primi-mothers explained prevention of anemia

		twofold in pregnancy (800ug/day vs 400ug/day because of transfer of folate to the growing fetus and if diet is insufficient, may exceed the body's stores of folate(5-10mg). To prevent anaemia in pregnancy the following are necessary. Routine screening for anaemia in adolescence, nutritional ed … en ve … nd lea … as we … ate su … of co … ty, int … e- su … ks an … 			
10min	Mention the treatment of anemia	While many types of anemia cannot be prevented, eating healthy foods can help you avoid both iron-and vitamin-deficiency anemia. Foods to include in your diet include those with high levels of iron (beef, dark green leafy vegetables, dried fruits, and nuts), vitamin B-12 (meat and dairy), and folic acid (citrus juices, dark green leafy vegetables, legumes, and	Educator mentioned treatment for dengue fever	Flash cards	Primi-mothers described treatment of anemia

		fortified cereals). A daily multivitamin will also help prevent nutritional anemias; however, older adults should not take iron supplements for iron-deficiency anemia unless instructed by their physicians Avoid excessive dieting or over exercising, which can trigger symp Ane d to seric ding. Cons oods and ping and