Renuka Naikar
Assistant Professor,
Government College of
Nursing, BIMS, Belagavi,
Karnataka, India

Chandrakala Biradar
Assistant Professor,
Government College of
Nursing, BIMS, Belagavi,
Karnataka, India

Effectiveness of structured teaching programme on knowledge regarding hemorrhage in early pregnancy and its management among staff nurses working in selected hospitals, Bangalore

Renuka Naikar and Chandrakala Biradar

Abstract
Reproductive Health is defined as People have the ability to reproduce and regulate their fertility, women are able to go through pregnancy and child birth safely, the outcome of pregnancies is successful in terms of maternal and infant survival and wellbeing and couples are able to have sexual relations free of fear of pregnancy and of contracting diseases.
Objectives of maternal and child health are to reduce maternal, infant and childhood mortality and morbidity, to reduce perinatal and neonatal mortality and morbidity, Promoting satisfying and safe sex life, Regulate fertility so as to have wanted and healthy children when desired, Provide basic maternal and child Health Care to all mothers and children, Promote and protect health of mothers to promote reproductive health and to promote physical and psychological development of children and adolescents within the family.
The study was conducted to evaluate the effectiveness of Structured Teaching Programme regarding Hemorrhage in early pregnancy and its management among staff nurses working in selected hospitals, Bangalore.
Methods: Pre-experimental, one group pre-test post-test design and convenient sampling method was used. Information was collected from 50 staff nurses regarding knowledge on hemorrhage in early pregnancy & its management by using the structured knowledge questionnaire. STP was implemented and post-test was conducted after 7 days to find the effectiveness.
Results: The overall pretest mean knowledge was found to be 52.85% with standard deviation of 2.60 In aspect wise pre-test knowledge of respondents regarding hemorrhage in early pregnancy & its management the highest mean percentage was seen in the aspect of haemorrhage in early pregnancy & its management 54.33%, followed by 54% in General information on pregnancy, pregnancy complications 52% &minor disorder of pregnancy 50.25%. The overall posttest mean knowledge was found to be 82.9% with standard deviation of 2.75. The aspect wise posttest knowledge of respondents regarding hemorrhage in early pregnancy & its management, the highest mean 87.5% was seen in the aspect of haemorrhage in early pregnancy & its management, General information on pregnancy with 82% and minor disorder of pregnancy was found 78.25
Interpretation and Conclusion: Overall findings showed that pre-test knowledge scores regarding deep breathing exercises and incentive spirometry were found to be 52.32% and after STP the posttest knowledge scores of COPD patients was found to be 81.29% which is enhanced by 28.97%. Hence the result has proved that STP was effective in improving the knowledge of COPD patients regarding deep breathing exercises and incentive spirometry. Overall pretest and posttest mean practice score on deep breathing exercise and incentive spirometry with pretest mean 54.67% and posttest mean 88.44%.The enhancement in practice score was 33.77%.

Keywords: Children, promote, pretest and post-test

Introduction

Reproductive Health is defined as People have the ability to reproduce and regulate their fertility, women are able to go through pregnancy and child birth safely, the outcome of pregnancies is successful in terms of maternal and infant survival and wellbeing and couples are able to have sexual relations free of fear of pregnancy and of contracting diseases. Within the family. Objectives of maternal and child health are to reduce maternal, infant and childhood mortality and morbidity, to reduce perinatal and neonatal mortality and morbidity,

Corresponding Author:
Renuka Naikar
Assistant Professor,
Government college of
Nursing, BIMS, Belagavi,
Karnataka, India

Promoting satisfying and safe sex life, Regulate fertility so as to have wanted and healthy children when desired, Provide basic maternal and child Health Care to all mothers and children, Promote and protect health of mothers to promote reproductive health and to promote physical and psychological development of children and adolescents

The main goal of maternal and child health services is the birth of a healthy infant into the family and prevention of diseases in mothers and children. The goals which are included are as follows, to ensure the birth of a healthy infant to every expectant mother, to provide services to promote the healthy growth and development of children up to the age of under- five- years, to identify health problems in mother and children at an early stage and initiate proper treatment, to prevent malnutrition in mothers and children, to promote family planning services to improve the health of mothers and children, to prevent communicable and non-communicable diseases in mothers and children and to educate the mothers on improvement of their own and their children's health.

Malnutrition is a very common problem among women who are discriminated and underprivileged. Pregnant and nursing mother especially prone to the effects of malnutrition. Malnutrition can cause poor resistance, abortion, anemia, miscarriage or premature delivery, low birth weight baby (< 2.5kg), eclampsia, post partumhemorrhage etc. these conditions can cause fatal effects on mothers, unborn and new born babies. Malnutrition in women needs to be prevented and treated by some of the direct measures such as nutrition education, modification and improvement of dietary intake before, during and after pregnancy, supplementation of diet, distribution of iron and folic acid tablets, subsidizing of food items and their fortification and enrichment. Other measures which can help prevent malnutrition include prevention and control of infections by improvement of environmental sanitation, safe water supply, food and personal hygiene, immunization and treatment of minor ailments; regulation of fertility and practice of small family norm, and health education.

Objectives of the Study
1. To assess the existing level of knowledge regarding Hemorrhage in early pregnancy and its management among staff nurses working in selected hospitals, Bangalore.
2. To evaluate the effectiveness of Structured Teaching Programme regarding Hemorrhage in early pregnancy and its management among staff nurses working in selected hospitals, Bangalore.
3. To find out the association between posttest knowledge level regarding Hemorrhage in early pregnancy and its management among staff nurses and their selected socio demographic variables.

Methodology
Research Methodology is a way to systematically solve the research problem. It describes various steps that are generally adopted by the researchers in studying theresearch problem, along with the logic behind them and explain why he / she uses a particular method or technique so that research results are capable of being evaluated by himself / herself or by others.

Research methodology includes research design, approach, setting, population, sample, sampling technique, selection & description of tool, pilot study, and method of data collection and plan for data analysis.

Research Approach
Research approach is systematic controlled empirical & critical investigation of Natural phenomena guided by theory & hypothesis about the presumed relations among the phenomena.

In a view of the nature of the problem under study and accomplish the objective of the Study evaluative approach was found to be appropriate to describe the effectiveness of structured teaching program regarding knowledge on hemorrhage in early pregnancy and its management among staff nurses.

Research Design
The research design is the overall plan for obtaining answers to the question being studied and for handling some of the difficulties encountered during the research process.8

One group pre-test & posttest design judges the effects of the treatment by the differences between the pretest & post test scores without comparing with a control group.

One group pre-test - post-test design was used to evaluate the effectiveness of structured teaching programme on knowledge regarding hemorrhage in early pregnancy and its management among staff nurses working in selected hospital in Bangalore.

The Study design shows that, on the first day, 40 structured knowledge questionnaires was administered to the staff nurses to assess the existing level of knowledge regarding hemorrhage in early pregnancy and its management among staff nurses working in selected hospitals in Bangalore

The structured teaching programme on knowledge regarding hemorrhage in early pregnancy and its management among staff nurses was also administered on the same day following the pretest. After 7 days post test was conducted to evaluate the effectiveness of structured teaching programme on knowledge regarding hemorrhage in early pregnancy and its management by using the same structured knowledge questionnaire. The study design is schematically represented as follows:-

Pre Test → **Treatment (Structured Teaching Program)** → **Post Test = Effectiveness**

(x)   STP   (y) = (y – x)

Research Variables
1. Independent Variables: Structured teaching programme regarding Hemorrhage in early pregnancy and its management.
2. Dependent variables: Knowledge of staff nurses regarding Hemorrhage in early pregnancy and its management.
3. Socio-demographic variables: Age, Gender, General Education, Professional education Religion, Clinical experience and Source of Information.

Setting of the Study
The location for conducting the research is referred as the setting. The setting selected for the study was Fortis hospital, Bangalore.

Population
Population is the entire group of members, objects or events which have at least one Characteristic in common and must be defined specifically and unambiguously. The population selected for this study comprised of staff nurses working in Fortis hospital at Bangalore.

Sample and sample size
Sample refers to a subset of population, selected to participate in the research study. The sample selected for the study consists of 50 staff nurses who meet the inclusion criteria.

Sampling Technique
Sampling technique refers to the process of selecting a portion of population to represent the entire population. Non probability convenient sampling technique was used to select the sample 8.

Sampling criteria
Inclusion criteria
1. Staff nurses who are willing to participate in the study.
2. Staff nurses who are present at the time of data collection.

Exclusion criteria:
1. Staff nurses who are under orientation programme
Selection and development of the tool
The instrument selected in a research must be the vehicle that obtains the best data for

drawing conclusion to the study. To fulfil the objectives of the study, a structured knowledge questionnaire was developed. A careful search of literature such as books and journals are carried out and material was obtained to frame the items in various areas such as general information on pregnancy, minor disorders of pregnancy, pregnancy complications and hemorrhage in early pregnancy and its management.

Preparation of the blue print
A blue print on the knowledge questionnaire was prepared consisting of 4 areas. It depicted the distribution of items to the content areas based on 3 domains namely knowledge, comprehension and application. Knowledge had 21 items (52.50%), Comprehension domain had 12 items (30%) and application domain had 7 items (17.50%) includes the selected aspects of hemorrhage in early pregnancy and its management (Annexure I).

Content validity of the tool:
Content validity refers to be adequacy of the sampling of the domain being studied. The knowledge questions was submitted to 10 experts in the field of Obstritrics and gynaecological nursing along with the blue print, criteria checklist and score key to establish the content validity. Among the experts were doctors, nurse educators. After consulting the guide and statistician the final tool was reframed as per the expert's opinion. (Annexure-E)

Reliability
Reliability of a research instrument is defined as the extent to which the instrument yields the same result on repeated measures. In order to establish the reliability of the tool, the Split Half Technique and Spearman's Brown Prophecy formula was used.

$2r\frac{1}{2}$ r = $1+ r\frac{1}{2}$ Where 'r' is the estimated reliability of the item 'r½' is the correlation coefficient computed on the Split Half method. The reliability coefficient of the tool for knowledge was 0.9402 and for and validity coefficient for knowledge was 0.9696. Since the knowledge reliability co-efficient for scale r > 0.70. It was statistically significant and thus reliable.

Data Collection Procedure
Formal prior permission was obtained from the Director of Fortis hospital, Bangalore to conduct the main study. The study was conducted from 01-04-2018 to 30-01-2018 for a period of 4 weeks. After getting the consent from the samples the pre test (O1) was conducted by using the structured knowledge questionnaire. On the same day structured teaching program was conducted on hemorrhage in early pregnancy and its management. After seven days post test was conducted by using the same structured knowledge questionnaire. (O2)

Plan of data analysis
The data obtained was analyzed in terms of achieving the objective of the study by using descriptive and inferential statistics.
Statistical analysis of data:
- Organization of data in master sheet.
- Frequencies and percentages were used for analysis of demographic data.
- Calculation of mean, standard deviation of pre-test and post-test scores.
- Application of paired 't' test to test the significant difference in the mean knowledge score of pre-test and post-test values.
- Application of "Chi square" test to find the association of selected Socio- demographic variables with post-test knowledge scores.

Results
Analysis and interpretation of data involves the objective material in the possession of the researcher and his subjective reactions and desire to derive from the data the inherent meanings in that relation to the problem. This chapter deals with the analysis and interpretation of data collected to evaluate the effectiveness of Structured Teaching Program regarding knowledge on hemorrhage in early pregnancy & its management among staff nurses working in K. C General Hospital Bangalore.

The analysis and interpretation of data of this study are based on data collected through Structured knowledge questionnaire from staff nurses working in Fortis hospital (N=50). The results were computed using descriptive and inferential statistics based on the following objectives. The level of significance was set at 0.05%.

Presentation of the Data
To begin with, the data was entered in a master sheet, for tabulation and statistical processing. In order to find the relationship the data was tabulated, analyzed and interpreted by using descriptive and inferential statistics. The data is

presented under the following headings.

Section 1: Socio-demographic characteristics of respondents under study.

Section 2: Overall and aspect wise knowledge scores of respondents

Section 3: Analysis of association between Socio-demographic variables and post test Knowledge scores
Section 1
Analysis of socio-demographic characteristics of staff nurses
Analysis of Socio-demographic data of the sample is described in terms of Age in years, Gender, Religion, The above table shows that majority 34% of the respondent's fall between the ages of 36-40 years, 26% of the respondents fall between the ages of 41-45 & below 35

General education, Professional qualification, Experience in years and attended workshop. The findings are presented in tables and figures.

Section 1: Socio-Demographic Characteristics of Respondents

Table 1: Classification of Respondents by Age N=50

Characteristics	Category	Respondents	
		Number	Percent
Age (years)	<= 35	13	26.0%
	36 – 40	17	34.0%
	41 – 45	13	26.0%
	46+	7	14.0%
Total		50	100.0

years, 14% of the respondents fall in the ages of 46+ years. The same is depicted in the figure 3.
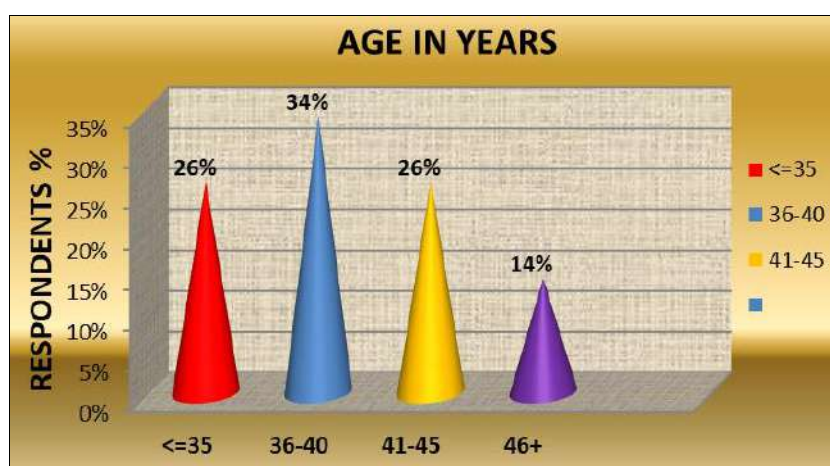

Fig 1: Classification of Respondents by Age

Table 2: Classification of Respondents by Gender N=50

Characteristics	Category	Respondents	
		Number	Percent
Gender	Male	7	14.0%
	Female	43	86.0%
Total		50	100.0

The Data from the above Table No. 2 & Figure 4: shows that majority 86 % of the respondents is female and the
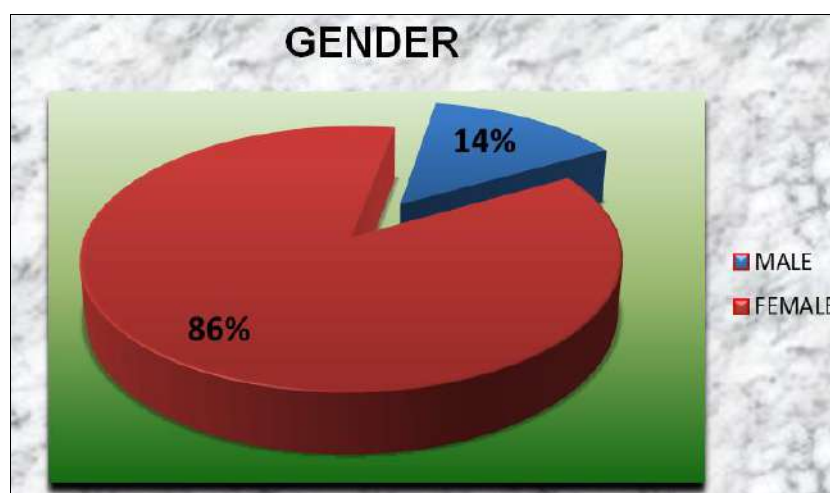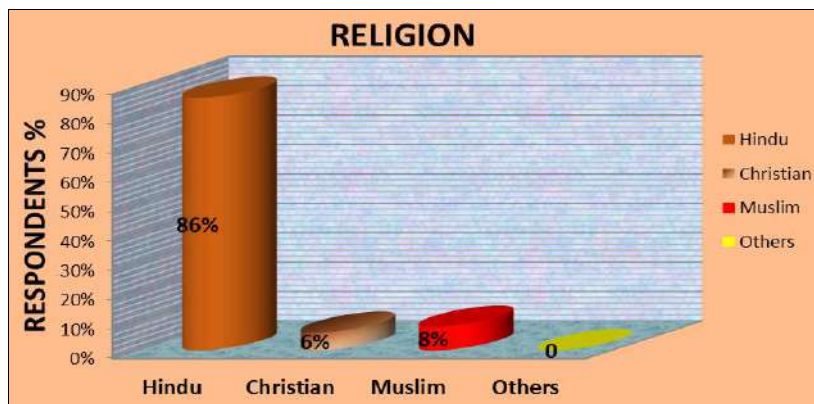
remaining 14 % are male.

Fig 2: Classification of Respondents by Gender

Table 3: Classification of Respondents by Religion N=50

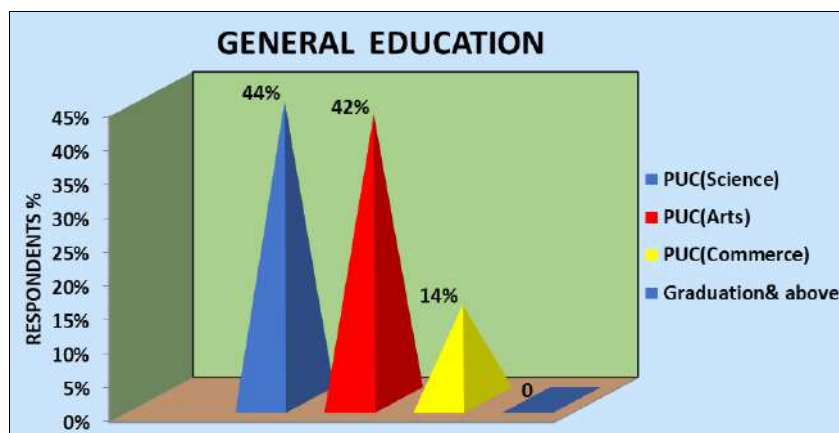| Characteristics	Category	Respondents	
		Number	Percent
Religion	Hindu	43	86%
	Christian	3	6%
	Muslim	4	8%
	Others	0	0%
Total		50	100.0

The Data from the above Table No. 3 & Figure 5: depicts that in religion, majority of the respondents 86% are Hindus, 6 % Christians and 8% Muslims

Fig 3: Classification of Respondents by Religion

Table 4: Classification of Respondents by General education N=50

Characteristics	Category	Respondents	
		Number	Percent
General education	PUC Science	22	44.0%
	PUC Arts	21	42.0%
	PUC Commerce	7	14.0%
	Graduation and above	0	0.0%
Total		50	100.0

The Data from the above Table No. 4 & Figure 6: shows that, the 44% of the respondents had PUC (science), 42% had completed PUC(Arts) & remaining 14% completed their PUC (Commerce) & no one had graduation & above education.

Fig 4: Classification of Respondents by General Qualification

Table 5: Classification of Respondents by Professional Qualification N=50

Characteristics	Category	Respondents	
		Number	Percent
Professional Qualification	Diploma in Nursing	34	68.0%
	Basic Bsc. Nursing	9	18.0%
	Post Basic Bsc Nursing	7	14.0%
	Msc. Nursing	0	0.0%
Total		50	100.0

The Data from the above Table No. 5 & Figure 7: shows that, 68% of the respondents had diploma in nursing, 18% were Basic Bsc. Nursing graduates and remaining 14% have completed their post Bsc. in nursing & no one had Msc. nursing qualification.
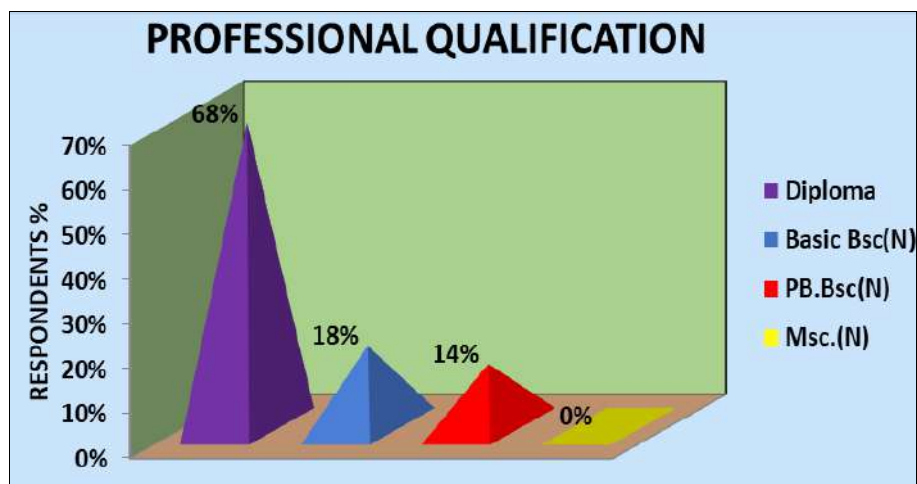

Fig 5: Classification of Respondents by Professional Qualification

Table 6: Classification of Respondents by Experience in years N=50

Characteristics	Category	Respondents	
		Number	Percent
Experience in years	<= 10	14	28.0%
	11 - 20	30	60.0%
	21+	6	12.0%
Total		50	100.0

The Data from the above Table No. 6 & Figure 8: shows that majority 60% of respondents fall between 11-20 years of experience, 28% had below <=10 years and 12% had 21 & above years of experience.
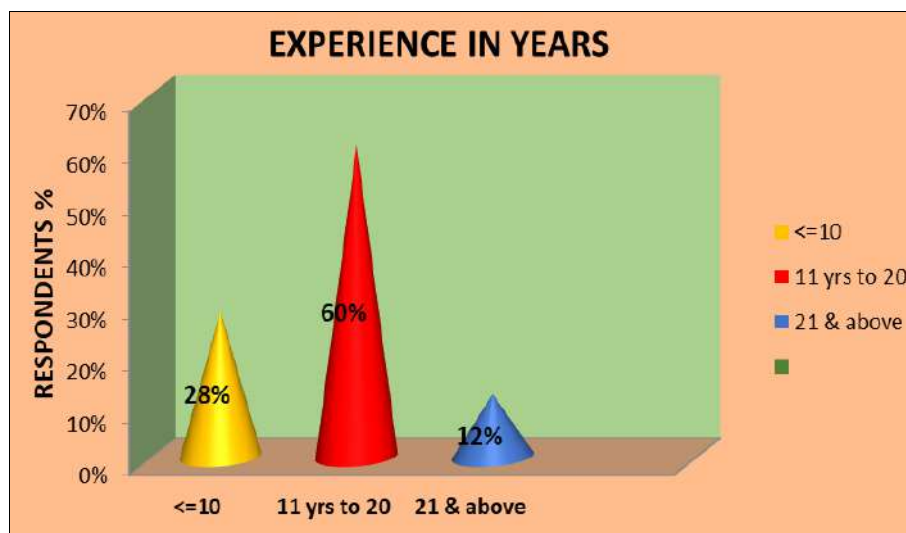

Fig 6: Classification of Respondents by Experience in years

Table 7: Classification of Respondents by work shop attended N=50

Characteristics	Category	Respondents	
		Number	Percent
In-Service Training	Yes	16	32%
	No	34	68%
Total		50	100.0

Table No 7 & figure 9: depicts that majority 68% of subjects had not attended workshop regarding knowledge on hemorrhage in early pregnancy & its management and remaining 32% subjects had attended workshop.

Fig 7: Classification of Respondents by Work shop attended

Section 2: Overall and aspect wise knowledge scores of respondents regarding knowledge on hemorrhage in early pregnancy & its management

Table 8: Classification of respondents on pretest knowledge level N=50

Knowledge Level	Category	Respondents	
		Number	Percent
Inadequate knowledge	≤20 (≤50%) %	16	32
Moderate knowledge	21-29 (50-75%)	34	68
Adequate knowledge	Above 30(75 % Score)	0	0
Total		50	100.0%

This above table 8 & figure.10: displays the classification of respondent's knowledge by Pre-Test Knowledge scores. The results indicate that 32 % had inadequate knowledge, 68% had moderate knowledge and none of them had adequate knowledge.
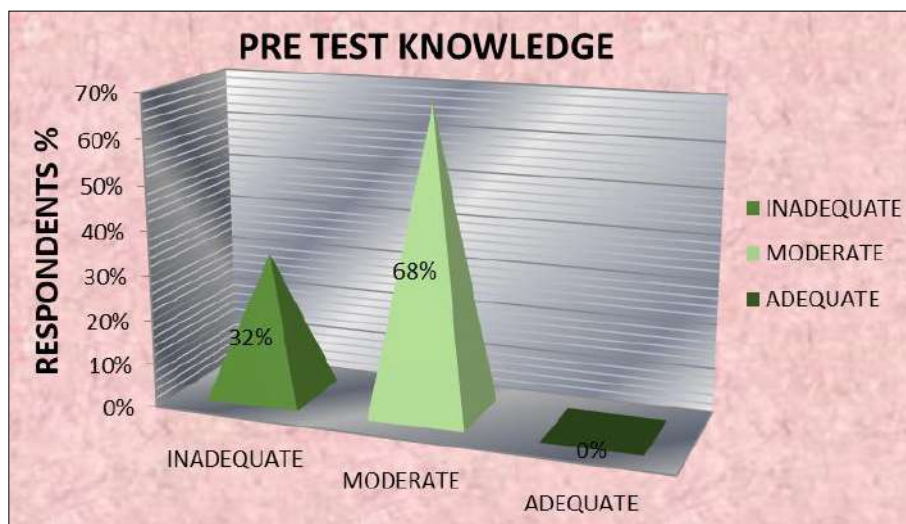

Fig 8: Classification of respondents on pre test knowledge

Table 9: Aspect wise pre test mean knowledge scores of respondents on hemorrhage in early pregnancy & its management N=50

No.	Knowledge Aspects	Statements	Max. Score	Respondents Knowledge		
				Mean	SD	Mean (%)
I	General information on Pregnancy	10	10	5.4000	.96890	54.00
II	Minor disorders of pregnancy	8	8	4.0200	.99980	50.25
III	Pregnancy complications	10	10	5.2000	1.08797	52.00
IV	Hemorrhage in early pregnancy & its management	12	12	6.5200	1.38858	54.33
	Overall knowledge	40	40	21.1400	2.63423	52.85

Table 9 reveals that the highest mean percentage (54.33%) was seen in the aspect regarding Side effects of Hemorrhage in early pregnancy & its management, followed by 54% in General information on pregnancy, 52 % in the aspect of

pregnancy complications, and 50.25% is in the aspect of minor disorders of pregnancy.

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