



“A STUDY TO EVALUATE THE EFFECTIVENESS OF SELF-INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING MATERNAL HEALTH BENEFITS AMONG ANTENATAL MOTHERS IN SELECTED RURAL AREAS, TUMKUR.”

Nursing

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ABSTRACT

Introduction: Maternal and child health refers to the promotive, preventive and curative and rehabilitative care of mothers and children. Antenatal care is the care of women during pregnancy the main aim of care is to achieve at the end if a pregnancy healthy mother and healthy baby.¹ Most of the Antenatal mothers don't know about the Different maternal health benefits scheme. Providing knowledge about the maternal health benefits scheme helps to live a better-quality life. The aim of the study was to find the effectiveness of Self-Instructional Module (SIM) on the knowledge regarding Maternal health benefit schemes among antenatal mothers. Methods: An evaluative approach with pre-experimental one group pre-test post-test design was used with purposive sampling technique to select the sample (N=50). A structured knowledge questionnaire was used to assess the Knowledge and SIM was administered to find its effectiveness. The collected data was analyzed by using Descriptive statistics like mean, median and standard deviation, and inferential statistics like paired and independent 't' test was included to test the hypothesis and Chi-square test was included to test the association of knowledge scores with demographic variables. Results: The mean percentage of post-test knowledge score (79.1 %) was higher than the mean percentage of pre-test knowledge score (46.5%). The calculated 't' value [t (49) = 52.39] is greater than the table value (0.05, 49df) = 1.96. It showed a significant difference between mean pre- and post- test knowledge scores. The calculated χ^2 values for age group, type of family, educational status, family income per month, Gravida of the mother were more than the table value and calculated χ^2 values were less than the table values for Source of information with their post-test knowledge scores. **Interpretation & Conclusion:** The findings of the study showed that there was a deficit in knowledge of Antenatal mothers before administration of SIM. The results indicated that the SIM is effective in increasing the knowledge of Antenatal mothers on Maternal health benefit schemes.

KEYWORDS

Effectiveness, SIM, Knowledge, Maternal health benefits schemes, Antenatal mothers.

I. OBJECTIVES OF THE STUDY

1. To assess the existing knowledge regarding maternal health benefit schemes among antenatal mothers.
2. To evaluate the effectiveness of Self-Instructional Module on knowledge regarding maternal health benefit schemes among antenatal mothers.
3. To find the association between the post-test knowledge scores and selected demographic variables of antenatal mothers with their selected demographic variables.

II. METHODOLOGY

Methodology of research organizes all the components of study in a way that is most likely to lead to valid answers to the problems to have been posed

Research approach:

The research approach employed in the present study is Quantitative Evaluative Research approach.

Research Design:

The design employed for the present study is a One group pre and posttest pre-experimental Research Design.

GROUP	PRETEST	INTERVENTION	POST TEST
Antenatal Mothers	Knowledge regarding Maternal Health Benefits	Self-Instructional Module	Knowledge regarding Maternal Health Benefits
	O1	X	O2

Key:

O1 = Assessment of pre-test scores

X = Structured Teaching Program

O2 = Assessment of post-test scores

Variables under study:

A concept which can take on different qualitative values is called a variable

Independent Variable

In the present study, independent variable was Self Instructional

Module regarding the Maternal health benefit schemes.

Dependent Variable

In this study, the dependent variable was knowledge of regarding Maternal health benefit schemes.

Population:

In this study population comprise of Antenatal mothers staying at Bellavi village, Tumkur district.

Sample and sample size:

Sample- Sample is a subset of a population selected to participate in a research study. It is a position of the population which represents the entire population.

In this study samples were antenatal mothers.

Sample size- 50 Antenatal mothers who met the inclusion criteria formed the sample for the study.

Sampling technique:

Sampling technique is a process of selecting subjects who are representative of the population being studied. A purposive Sampling technique was used for the present study.

Selection and development of tool:

The instrument selected in research must be the vehicle that obtains the best data for drawing conclusions to the study. The tool act as an instrument to assess and collect the data from the respondents of the study.

Keeping in mind a self-instructional module was selected and developed. The main purpose behind developing this tool was need of the hour to educate the antenatal mothers. The tool was developed based on,

- Past clinical experience of the student investigator.
- Related review of literature (Books, Journals, Periodicals, and

articles published and unpublished research studies) was reviewed and used to develop the tool.

- Based on the concept of the study.
- Based on the opinions of the subject experts.
- Based on the objectives of the study, the blue print was prepared under 3 main areas namely knowledge, comprehension and application. The prepared items were subjected to content validation, pre-testing and estimation of reliability.

III. RESULTS

Presentation of 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 I: Analysis of demographic characteristics of respondents under study.

Section II: Analysis of pre-test and post-test knowledge scores of respondents and effectiveness of Self-Instructional Module.

- Analysis of pre-test knowledge scores.
- Analysis of post-test knowledge scores.
- Effectiveness of Self-Instructional Module on knowledge scores of whole tests.
- Effectiveness of Self-Instructional Module on area wise knowledge scores.

Section III: Analysis of association between demographic variables with post-test knowledge scores.

Section-1

Analysis of demographic characteristics of respondents under study.

Table 1: Distribution of patient according to socio demographic variables by frequency and percentage

TABLE 1: Classification of Respondents by demographic characteristics N=50

Characteristics	Category	Respondents	
		Number	Percent
Age group (years)	Below 20	23	46.0
	21-30	20	40.0
	31-40	7	14.0
Religion	Hindu	50	100.0
	Muslim	0	0.0
Type of family	Nuclear	40	80.0
	Joint	10	20.0
Educational status	SSLC	18	36.0
	PUC	15	30.0
	Degree	13	26.0
	Post graduate	4	8.0
Family income/ month	Below Rs.5,000	5	10.0
	Rs.5,001-10,000	17	34.0
	Rs.10,001-20,000	17	34.0
	Above Rs.20,000	11	22.0
Gravida of the mother	Primi gravida	11	22.0
	Multi gravida	39	78.0
Source of information	Family members/Friends	10	20.0
	Mass media	40	80.0
Total		50	100.0

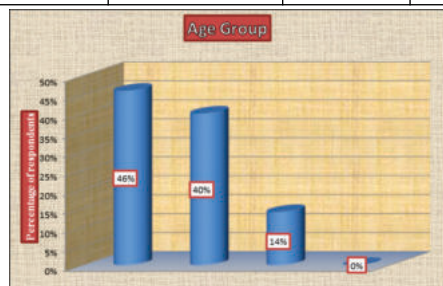


Figure 3: Classification of respondents according to age group (years)

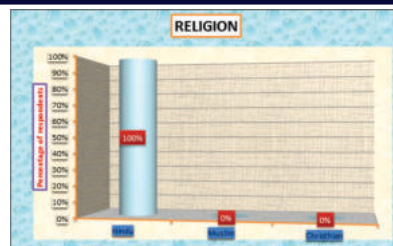


Figure 4: Classification of respondents according to Religion.

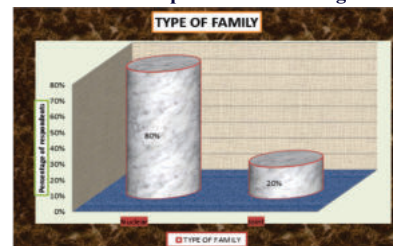


Figure 5: Classification of respondents according to type of family.

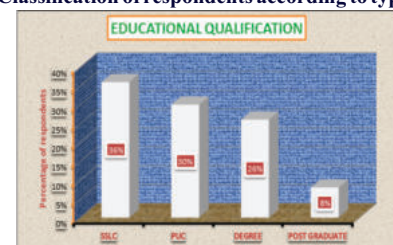


Figure 6: Classification of respondents according to educational qualification.

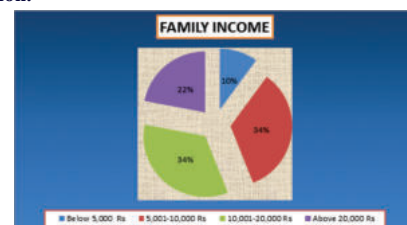


Figure 7: Classification of respondents according to family monthly income.



Figure 8: Classification of respondents according to Gravida of mother.



Figure 9: Classification of respondents according source of information.

Section II:

Analysis of pre-test and post-test knowledge scores of respondents and effectiveness of Self-Instructional Module.

a) Analysis of pre-test knowledge level

Table 2: Classification Of Respondent Pretest Knowledge Level On Maternal Health Benefits Schemes.

Knowledge Level	Category	Respondents	
		Number	Percent
Inadequate	≤ 50 % Score	37	74.0
Moderate	51-75 % Score	13	26.0
Adequate	> 75 % Score	0	0.0
Total		50	100.0

The Table 2 & Figure 10 shows the classification of respondent's knowledge according to their knowledge level in the pre-test. The data showed that, majority of the respondent's (74%) had inadequate knowledge, 26% had Moderate knowledge and none of them had the adequate knowledge.

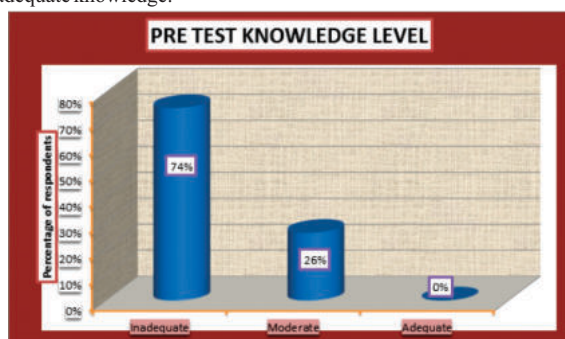


Figure.10: Classification of Respondents on Pretest Knowledge level on Maternal health benefits schemes

Table 3: Aspect wise Pretest Mean Knowledge scores of Respondents on Maternal health benefits schemes

No.	Knowledge Aspects	Statements	Max. Score	Respondents Knowledge			
				Mean	SD	Mean (%)	SD (%)
I	General information about antenatal period	3	3	1.64	0.52	54.7	17.3
II	General information about schemes	3	3	1.40	0.57	46.7	18.9
III	Maternal health benefits schemes	14	14	5.98	1.01	42.7	7.2
IV	Advantages of maternal health benefits schemes	10	10	4.94	1.07	49.4	10.7
	Combined	30	30	13.96	1.81	46.5	6.0

Table.3 reveals that the aspect wise mean percentage of pre-test knowledge scores of respondents in different aspects studied. The highest mean percentage $54.7 \pm 17.3\%$ of knowledge scores of respondents was found to be in the aspect of General information about antenatal period, followed by $49.4 \pm 10.7\%$ in the aspect of Advantages of maternal health benefits schemes; $46.7 \pm 18.9\%$ in the aspect of General information about schemes, and least knowledge score of $42.7 \pm 7.2\%$ was found to be in Maternal health benefits schemes. The overall mean percentage of pre-test knowledge score of respondents was $46.5 \pm 6.0\%$.

b) Analysis of post-test knowledge scores.

TABLE 4: Classification of Respondents of Posttest Knowledge level on Maternal health benefits schemes

Knowledge Level	Category	Respondents	
		Number	Percent
Inadequate	≤ 50 % Score	0	0.0
Moderate	51-75 % Score	17	34.0
Adequate	> 75 % Score	33	66.0
Total		50	100.0

The Table 4 & Figure 11 shows the classification of respondent's knowledge according to their knowledge level in the post-test. The data showed that, majority of the respondent's (66%) had adequate knowledge, 34% had Moderate knowledge and none of them had the inadequate knowledge.

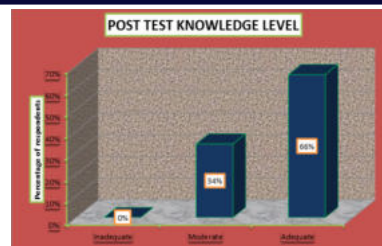


Figure 11: Classification of Respondents on Posttest Knowledge level on Maternal health benefits schemes

TABLE 5: Aspect wise Posttest Mean Knowledge scores of Respondents on Maternal health benefits scheme N=50

No.	Knowledge Aspects	Statements	Max. Score	Respondents Knowledge			
				Mean	SD	Mean (%)	SD (%)
I	General information about antenatal period	3	3	2.52	0.57	84.0	19.1
II	General information about schemes	3	3	2.42	0.57	80.7	19.0
III	Maternal health benefits schemes	14	14	11.06	0.95	79.0	6.8
IV	Advantages of maternal health benefits schemes	10	10	7.74	0.80	77.4	8.0
	Combined	30	30	23.74	1.60	79.1	5.3

Table.5 shows that the aspect wise mean percentage of post-test knowledge scores of respondents in different aspects of knowledge questionnaire. The highest mean percentage $84.0 \pm 19.1\%$ of knowledge scores of respondents was found to be in the aspect of General information about antenatal period; followed by $80.7 \pm 19.0\%$ in the aspect of General information about schemes; $79.0 \pm 6.8\%$ in the aspect of Maternal health benefits schemes; and least knowledge score of $77.4 \pm 8.0\%$ was found to be in the aspect of Advantages of maternal health benefits schemes. The overall mean percentage of post-test score of respondents was $79.1 \pm 5.3\%$.

c. Effectiveness of Self-Instructional Module on Knowledge Scores of Whole test

Table 6: Over all Pretest and Posttest Mean Knowledge on Maternal health benefits schemes

Aspects	Max. Score	Respondents Knowledge				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)	
Pre test	30	13.96	1.81	46.5	6.0	52.39*
Post test	30	23.74	1.60	79.1	5.3	
Enhancement	30	9.78	1.32	32.6	4.4	

* Significant at 5% level,
t (0.05,49df) = 1.9

Table.6 depicts the overall pre-test mean of knowledge score of respondents on Maternal health benefit schemes $46.5 \pm 6.0\%$ and post-test mean was $79.1 \pm 5.3\%$ with an enhancement $32.6 \pm 4.4\%$. The calculated paired't' test value of ($t = 52.39^*$) is greater than the table value at 0.05 level of significance which indicates that there is a significance between pre-test and post-test knowledge scores of whole test of respondents. Hence the stated research hypothesis H1 is accepted. It was concluded that the Self-Instructional Module was effective in increasing the knowledge of antenatal mothers regarding maternal health benefit schemes. (Fig.12)

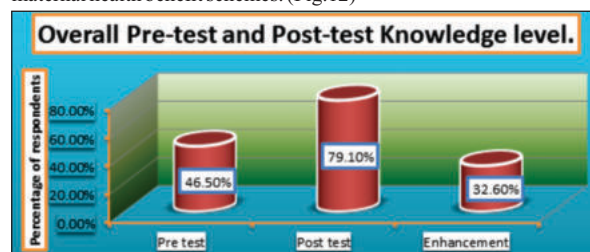


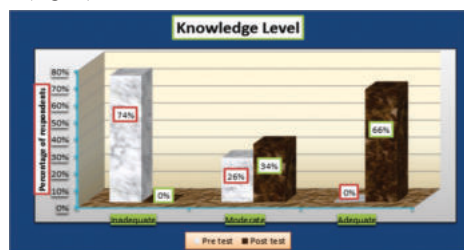
Figure 12: Overall Pre-test and Post-test Knowledge level Maternal health benefits schemes

Table 7: Classification of Respondents on Knowledge level on Maternal health benefits schemes

Knowledge Level	Category	Classification of Respondents				χ^2 Value
		Pre test		Post test		
		Number	Percent	Number	Percent	
Inadequate	≤ 50 % Score	37	74.0	0	0.0	70.53*
Moderate	51-75 % Score	13	26.0	17	34.0	
Adequate	> 75 % Score	0	0.0	33	66.0	
Total		50	100.0	50	100.0	

* Significant at 5% level, $\chi^2(0.05, 2df) = 5.991$

Table.7 depicts that in pretest 74.0% of them had inadequate knowledge, 26.0% of them had moderate knowledge and none of them had adequate knowledge. In posttest none of them had inadequate knowledge, 34.0% had moderate knowledge and 66.0% had adequate knowledge. With chi square value of ($\chi^2 = 70.53^*$) and significant at 5% level. (Fig.13)

**Figure. 13: Classification of Respondents on Knowledge level on Maternal health benefits schemes.**

d. Effectiveness of Self-instructional module on Aspect wise knowledge scores

Table 8: Aspect wise Mean Pretest and Posttest Knowledge on Maternal health benefit schemes. N = 50

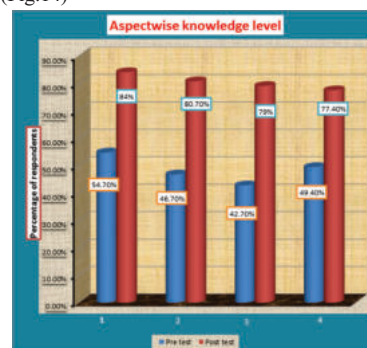
No.	Knowledge Aspects	Respondents Knowledge (%)						Paired 't' Test
		Pre test		Post test		Enhancement		
		Mean	SD	Mean	SD	Mean	SD	
I	General information about antenatal period	54.7	17.3	84.0	19.1	29.3	21.7	9.55*
II	General information about schemes	46.7	18.9	80.7	19.0	34.0	22.6	10.64*
III	Maternal health benefits schemes	42.7	7.2	79.0	6.8	36.3	8.9	28.84*
IV	Advantages of maternal health benefits schemes	49.4	10.7	77.4	8.0	28.0	11.7	16.92*
	Combined	46.5	6.0	79.1	5.3	32.6	4.4	52.39*

* Significant at 5% level,

$t(0.05, 49df) = 1.96$

Table.8 reveals the highest mean percentage in the aspect of General information about antenatal period, mean pretest was found to be $54.7 \pm 17.3\%$ and mean post test score was $84.0 \pm 19.1\%$ with the enhancement of $29.3 \pm 21.7\%$ and significant ($t=9.55^*$) at 0.05 level. In the aspect of General information about schemes, mean pretest was found to be $46.7 \pm 18.9\%$ and post test score was $80.7 \pm 19.0\%$ with the enhancement of $34.0 \pm 22.6\%$ and significant ($t=10.64^*$) at 0.05 level. In the aspect of Maternal health benefits schemes, mean pretest was found to be $42.7 \pm 7.2\%$ and mean post test score was $79.0 \pm 6.8\%$ with the enhancement of $36.3 \pm 8.9\%$ and significant ($t=28.84^*$) at 0.05 level and in the aspect of Advantages of maternal health benefits schemes, mean pretest was found to be $49.4 \pm 10.7\%$, and mean post test score was $77.4 \pm 8.0\%$ with the enhancement of $28.0 \pm 11.7\%$ and significant ($t=16.92^*$) at 0.05 level. The overall mean percentage in pretest was $46.5 \pm 6.0\%$, posttest was $79.1 \pm 5.3\%$ with the enhancement of $32.6 \pm 4.4\%$ and significant ($t= 52.39^*$) at 0.05 level. The calculated paired't' test values based on pre-test and post-test knowledge scores of all the aspects were more than the table value at 0.05 level of significance with 49 degrees of freedom. It indicates that mean differences between mean pre-test and

post-test knowledge scores are significant at 0.05 level for all the aspects. Hence the stated research hypothesis H1 was accepted for all aspects of knowledge. (Fig.14)

**Figure 14: Aspect wise Mean Pretest and Posttest Knowledge scores on Maternal health benefits schemes.**

Section III:

Analysis of association between demographic variables with post-test knowledge scores.

TABLE 9: Association between Demographic variables and Posttest Knowledge level on Maternal health benefits schemes

Demographic Variables	Category	Knowledge Level				χ^2 Value	P Value
		Moderate		Adequate			
		N	%	N	%		
Age group (years)	Below 20	3	13.0	20	87.0	9.95*	P>0.05
	21-30	9	45.0	11	55.0		
	31-40	5	71.4	2	28.6		
Type of family	Nuclear	10	25.0	30	75.0	7.22*	P>0.05
	Joint	7	70.0	3	30.0		
Educational status	SSLC	10	55.6	8	44.4	7.90*	P>0.05
	PUC	5	33.3	10	66.7		
	Degree	2	15.4	11	84.6		
	Post graduate	0	0.0	4	100.0		
Family income/month	Below Rs.5,000	4	80.0	1	20.0	12.50*	P>.05
	Rs.5,001-10,000	3	17.7	14	82.3		
	Rs.10,001-20,000	9	52.9	8	47.1		
	Above Rs.20,000	1	9.1	10	90.9		
Gravida of the mother	Primi gravida	7	63.6	4	36.4	5.52*	P>0.05
	Multi gravida	10	25.6	29	74.4		
Source of information	Family members/Friends	3	30.0	7	70.0	0.09 NS	P<0.05
	Mass media	14	35.0	26	65.0		
Combined		17	34.0	33	66.0		

* Significant at 5% Level,

NS: Non-significant

The association between age group and posttest knowledge level of respondents on Maternal health benefits schemes. In the age group of below 30 years, 13% of the respondents had moderate knowledge and 87% of the respondents had adequate knowledge. In the age group of 31-40 years, 45% of the respondents had moderate knowledge and 55.0% of respondents had adequate knowledge. In the age group of 41-50 years, 71.40% of the respondents had moderate knowledge and 28.6% had adequate knowledge. The post-test knowledge scores of respondents by age group are subjected to χ^2 test. There exists a significant association in ($\chi^2=9.95$), between age group and post test knowledge level of respondents (Fig.15).

Association between educational status and post test knowledge level of respondents, in SSLC respondents 55.6% had moderate knowledge and

44.4% of the respondents had adequate knowledge. In PUC respondents 33.3% of respondents had moderate knowledge and 66.7% of the respondents had adequate knowledge. In Degree respondents 15.4% of the respondents had moderate knowledge and 84.6% of the respondents had adequate knowledge. Among Postgraduate respondents, all of them had adequate knowledge. The post-test knowledge scores of respondents by educational status are subjected to χ^2 test. There exists a significant association ($\chi^2=7.90$) between educational status and knowledge level of respondents (Fig.16).

Association between Gravida of the mother and posttest knowledge level of respondents, Among Primi gravida respondents 63.6% of the respondents had moderate knowledge and 36.4% of the respondents had adequate knowledge. In Multi gravida respondents, 25.6% of the respondents had moderate knowledge and 74.4% of the respondents had adequate knowledge. There exists a significant association ($\chi^2=5.52$) between educational status and knowledge level of respondents (Fig.17).

Association between type family and posttest knowledge level of respondents, in nuclear family respondents 25.0% of the respondents had moderate knowledge and 75.0% of the respondents had adequate knowledge. In joint family respondents, 70.0% of the respondents had moderate knowledge and 30.0% of the respondents had adequate knowledge. There exists a significant association ($\chi^2=7.22$) between educational status and knowledge level of respondents (Fig.18).

Association between family income and posttest knowledge level of respondents, in the group of family income below 5,000 Rs, 80.0% of the respondents had moderate knowledge and 20.0% of the respondents had adequate knowledge. In the group of family income in between 5,001-10,000 Rs 17.7% of the respondents had moderate knowledge and 82.3% of the respondents had adequate knowledge. In the group of family income in between 10,001-20,000 Rs, 52.9% of the respondents had moderate knowledge and 47.1% of the respondents had adequate knowledge. In the group of family income in between above 20,001 Rs, 9.1% of the respondents had moderate knowledge and 90.9% of the respondents had adequate knowledge. There exists a significant association ($\chi^2=12.50$) between educational status and knowledge level of respondents (Fig.19). Were more than the table values at 0.05 level of significance, hence the stated research hypothesis H₂ is accepted with regard to above mentioned demographic variables but the calculated χ^2 values with regard to source of information ($\chi^2=0.09$, $P>0.05$); were less than the table values at 0.05 level of significance, hence the stated research hypothesis H₃ is rejected.

V. CONCLUSION

This study has given a broad area of personal and professional experience for student researcher in applying steps of research process and in overcoming difficulties and problems faced during the study. There was good co-operation from Antenatal mothers, District Health Officer and village members. The respondents were satisfied and happy with the information they received. The study reveals that SIM could be used as an effective teaching strategy.

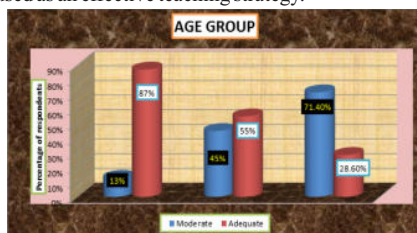


Figure 15: Association between Age group and Posttest Knowledge level on Maternal health benefits schemes.

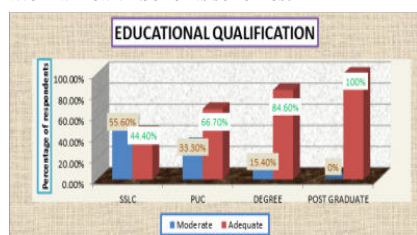


Figure 16: Association between Educational Qualification and Posttest Knowledge level on Maternal health benefits schemes.

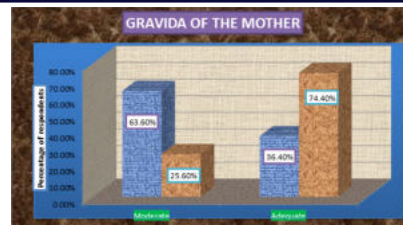


Figure 17: Association between Gravida of the motherland Posttest Knowledge level on Maternal health benefits schemes

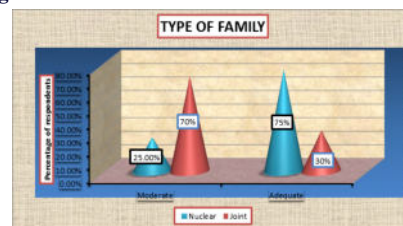


Figure 18: Association between Type of Family and Posttest Knowledge level on Maternal health benefits schemes.



Figure 19: Association between Family Income and Posttest Knowledge level on Maternal health benefits schemes

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