

# A Comparative Study to Find out An Impact of Educational Interventional Program on Knowledge Regarding Reproductive Health among Rural Adolescent Girls - A Report of Pilot Study

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## ABSTRACT

**Background-** Good reproductive health is a state of complete physical, mental and social well-being in all matters relating to the reproductive system. Human beings are beings, it means human beings are capable to reproduce and able to maintain reproductive health.

**Objective-** Total seven objectives were been formed and discussed in detail below.

**Material and Methods-** A study was conducted to assess the effectiveness of educational interventional program (constructive teaching program and self-instructional module) on knowledge regarding reproductive health among 60 adolescent girls of selected rural PU colleges of Dharwad district, who were divided into two groups (group I with constructive teaching program & group II with self-instructional module). The research design used for the study was quasi-experimental; two group concurrent pre-test, post-test design. The demographic Performa were collected from the rural adolescent girls by using structured knowledge questionnaire.

**Results-** Revealed that in Group-I: The pretest knowledge scores of rural girls were 23.34% with good knowledge, 50% of them had an average knowledge and 26.6% of them had poor knowledge. Where as in posttest, the knowledge scores were 100% with excellent awareness and none of them belonged to the category of average or poor. In Group-II: The pretest knowledge scores of rural girls were 26.6% with good knowledge, 50% of them had an average knowledge and 23.4% of them had below

average knowledge. As compared to posttest knowledge scores, 94% of them had good knowledge, 6% of them had an average knowledge and none of them had poor. The paired 't' value was 27.5\* which was more than that of value of tabulated. One way ANOVA reports 21, which proved that overall in due respect of comparison.

**Conclusion-** Therefore, the study concluded that both the educational methods were excellent. Among those two strategies, constructive teaching program was more effective than the self-instructional module for rural adolescent girls to increase and update their knowledge regarding reproductive health.

**Key Words:** Reproductive health, knowledge, rural adolescent girls, constructive teaching program, self-instructional module.

## INTRODUCTION

*"Throw away all weakness, Tell your body that it is strong, Tell your mind it is strong and have unbounded faith and hope in yourself"*.

-Swami Vivekananda

Adolescence is an age of opportunity. An adolescent is defined as an individual aged between 10-19 years by the UN. Adolescent period is unique period where there is physiological, psychological, social, emotional, adaptation. Adolescents are considered as demographic force. More than 22% of India's population is in the

adolescent age group of 10–19 years; 12% are in the 10–14 year age group and 10% in the 15–19 year age group.

Adolescents are adjusting to new body image, starting the process of separating from their parents and recognizing that they have a separate identity. The adolescents thinking and behavior are strongly affected by peers and these thinking and behavior patterns will lead to high risk behavior among adolescent girls which have adverse effect on the overall development and wellbeing of youth, or that might hinder their future success and development. The high risk behavior includes both immediate physical injury as well as behavior with cumulative negative effects these includes having antisocial romantic partners, becoming pregnant and giving birth as teen, anxiety, depression, eating disorder, drug use, delinquency, and violence which have serious effects on their reproductive health. They lack knowledge in taking care of their reproductive health.

Good reproductive health is a state of complete physical, mental and social well-being in all matters relating to the reproductive system. Human beings are beings, it means human beings are capable to reproduce and able to maintain reproductive health.

### **Objectives of the study**

1. To assess the existing knowledge regarding reproductive health among rural adolescent girls in both the groups by giving pre-test.
2. To implement an educational interventional program i.e. constructive teaching program (CTP) & self-instructional module (SIM).
3. To evaluate the effectiveness of constructive teaching program regarding reproductive health among group-I by giving posttest.
4. To evaluate the effectiveness of self-instructional module regarding reproductive health among group-II by giving posttest.
5. To compare the posttest scores of rural adolescent girls regarding reproductive health among group-I and -II who have exposed to constructive teaching program (CTP) & self-instructional module (SIM) respectively.
6. To find out an association between pre-test knowledge scores of rural adolescent girls regarding reproductive health of group I with their selected demographic variables.
7. To find out an association between pre-test knowledge scores of rural adolescent girls regarding reproductive health of group II with their selected demographic variables.

### **Hypotheses**

H<sub>1</sub>: The mean post-test knowledge scores of rural adolescent girls of selected Pre University colleges regarding reproductive health who will be exposed to CTP will be significantly higher than the mean pre-test knowledge scores at 0.05 level of significance.

H<sub>2</sub>: The mean post-test knowledge scores of rural adolescent girls of selected Pre University colleges regarding reproductive health who will be exposed to SIM will be significantly higher than the mean pre-test knowledge scores at 0.05 level of significance.

H<sub>3</sub>: The mean post-test knowledge scores of rural adolescent girls regarding reproductive health who have undergone CTP will be significantly higher than the mean post-test knowledge scores of rural adolescent girls regarding reproductive health who have undergone self-instructional module at 0.05 level of significance.

H<sub>01</sub>: There will be no statistical association between pre-test knowledge scores of rural adolescent girls regarding reproductive health of group-I with their selected demographic variables at 0.05 level of significance.

H<sub>02</sub>: There will be no statistical association between pre-test knowledge scores of rural adolescent girls regarding reproductive health of group-II with their selected

demographic variables at 0.05 level of significance.

### Review of Literature;

1. Literature reviews related to knowledge concerning with Reproductive Health.
2. Literature reviews related to knowledge concerning Menstrual Health and Hygiene.
3. Literature reviews related to knowledge concerning Anticipation of High Risk Behavior.
4. Literature reviews related to knowledge concerning Anticipation of STD's and RTI's.
5. Literature reviews related to knowledge concerning conception/pregnancy.
6. Literature reviews related to importance of nutrition.
7. Literature reviews related to efficacy of Constructive teaching program.
8. Review of literatures related to efficiency of self instructional module.
9. Review of Literature related to comparison between both the teaching programs.

### RESEARCH METHODOLOGY/ MATERIALS AND METHODS

- ❖ **Research approach:** Evaluative research approach.
- ❖ **Research design:** Quasi-experimental; two group concurrent pretest posttest.
- ❖ **Variables under study:**
  - **Independent Variable:** Constructive Teaching Program and self instructional module on reproductive health.
  - **Dependent Variable:** Knowledge of rural adolescent girls regarding reproductive health.
- ❖ **Research setting:** Rural PU colleges from Dharwad district. Those are Government Pre-University College, Byahatti and Government Pre-University College, Kundagol.
- ❖ **Research population:** The target population of the study was rural adolescent girls from rural PU colleges

❖ **Sample:** rural adolescent girls from rural PU colleges of Dharwad district were selected.

❖ **Sample size:** Sixty (60) [ $n_1=30$  &  $n_2=30$ ] rural adolescent girls from rural PU colleges.

❖ **Sampling technique:** probability: Stratified random sampling technique

### Criteria for selection of samples:

The criteria for selection of samples in this study involves:-

### Inclusion criteria:

- Studying in rural Pre-University colleges of Dharwad district.
- Present during the time of data collection.
- Willing and interested to participate
- Who knows English and Kannada language

### Exclusion criteria:

- Rural adolescent girls who were sick during the time of data collection.
- Who were not at all co-operative during the research data collection.

### Description of the tool:

**Section- I :** Socio- Demographic Data

**Section- II:** Structured Knowledge Questionnaire which contains totally 48 items, and those were in turn divided under the following parts:-

Part A: 04 items constructed based on introduction to adolescent

Part B: 05 items were on anatomy and physiology of female reproductive system

Part C: 10 items prepared on menstrual health and hygiene

Part D: 06 items were plotted based on high risk sexual behaviors.

Part E: 10 items were prepared on Sexually Transmitted Diseases (STDs and Reproductive Tract Infections (RTIs).

Part F: 09 items were constructed on the bases of pregnancy /conception.

Part G: 04 items were prepared as regards with importance of Nutrition.

Results

The data presented under the following sections:

Section-I: Distribution of sample characteristics according to demographic variables of respondents.

Section-II: Analysis and interpretation of knowledge scores of subjects regarding Reproductive health.

Section- III: Testing hypotheses.

### Section I: Distribution of sample characteristics according to demographic variables of respondents.

**Table 1: Frequency and percentage distribution of rural adolescent girls according to their socio-demographic variables among group-I.** n<sub>1</sub>=30

SL.No	Demographic Variables	Frequency (f)	Percentage (%)
1	Age (In Year)		
	a. 17 years	11	36.66
	b. 18 years	13	43.34
2	Course of the study		
	a. P.U.C I Year	13	43.44
	b. P.U.C II Year	17	56.66
3	Religion		
	a. Hindu	23	76.66
	b. Muslim	06	20
	c. Christian	01	3.34
4	Educational Status of the Mother		
	a. No formal education	10	33.34
	b. Primary education	06	20
	c. Secondary education	07	23.33
	d. Pre-University	03	10
5	Educational Status of the Father		
	a. No formal education	03	10
	b. Primary education	08	26.66
	c. Secondary education	11	36.66
	d. Pre-University	04	13.34
6	Occupation of Mother		
	a. House-wife	17	56.66
	b. Coolie	05	16.66
7	Occupation of Father		
	a. Own Business	13	43.34
	b. Coolie/Farmer	08	26.66
8	Age at Menarche		
	a. 1-13 years	12	40
	b. 14-16 years	18	60
9	Source of Information		
	a. Print media	03	10
	b. Electronic media	07	23.34
	c. New age group media	10	33.34
	d. Peer group	09	30
e. Health Professional	01	3.33	

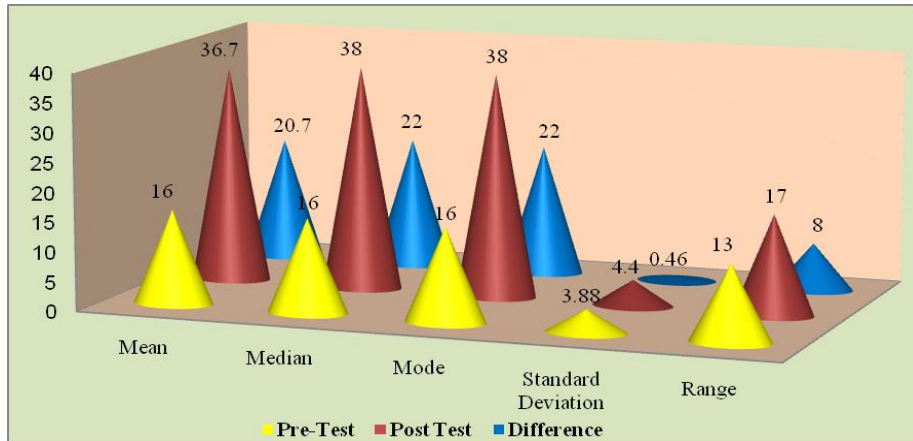
**Table 2: Frequency and percentage distribution of rural adolescent girls according to their socio-demographic variables among group-II.** n<sub>2</sub>=30

SL NO	Demographic Variables	Frequency (f)	Percentage (%)
1	Age (In Year)		
	a. 17 years	07	23.34
	b. 18 years	15	50
2	Course of the study		
	a. P.U.C I <sup>st</sup> Year	10	33.34
	b. P.U.C II <sup>nd</sup> Year	20	66.66
3	Religion		
	a. Hindu	19	63.33
	b. Muslim	07	23.34
	c. Christian	04	13.33
4	Educational Status of the Mother		
	a. No formal education	08	26.66
	b. Primary education	11	36.67
	c. Secondary education	01	3.34
	d. Pre-University	02	6.67
5	Educational Status of the Father		
	a. No formal education	04	13.33
	b. Primary education	04	13.33
	c. Secondary education	13	43.33
	d. Pre-University	05	16.67
6	Occupation of Mother		
	a. House-wife	13	43.33
	b. Coolie	10	33.34
7	Occupation of Father		
	a. Own Business	19	63.33
	b. Coolie/Farmer	07	23.34
8	Age at Menarche		
	a. 11-13 years	13	43.34
	b. 14-16 years	17	56.66
9	Source of Information		
	a. Print media	02	6.66
	b. Electronic media	11	36.66
	c. New age group media	10	33.34
	d. Peer group	04	13.34
e. Health Professional	03	10	

### Section II: Analysis and interpretation of knowledge scores of subjects who have exposed to Constructive Teaching Program regarding reproductive health.

**Table 3: Mean, Median, Mode, Standard Deviation and Range of knowledge score of subjects regarding Reproductive health among Group-I** n<sub>1</sub>=30

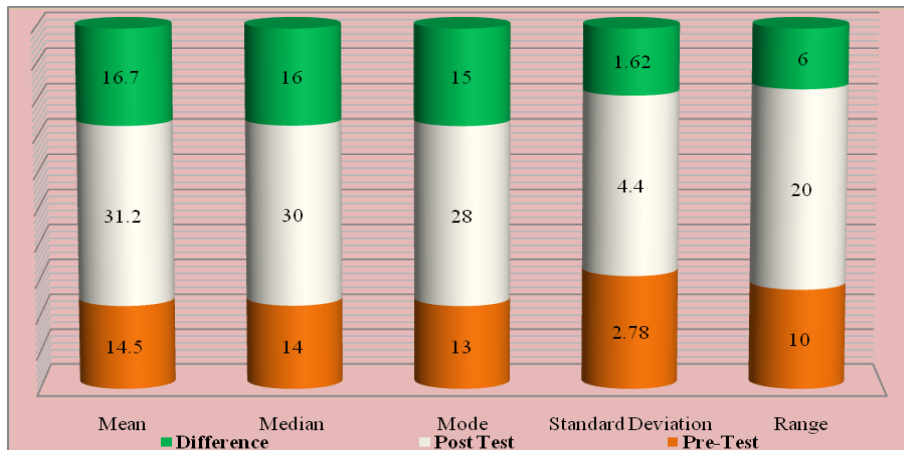
Area of Analysis	Mean	Median	Mode	Standard Deviation	Range (H-L)
Pre-test	16	16	16	3.88	13
Post-test	36.7	38	38	4.34	17
Difference	20.7	22	22	0.46	04



Graph 1: Multiple Cone graph showing Mean, Median, Mode, Standard deviation and Range of rural adolescent girls in group-I.

Table 4: Mean, Median, Mode, Standard Deviation and Range of knowledge score of Subjects regarding Reproductive health among Group-II  
n<sub>2</sub>=30

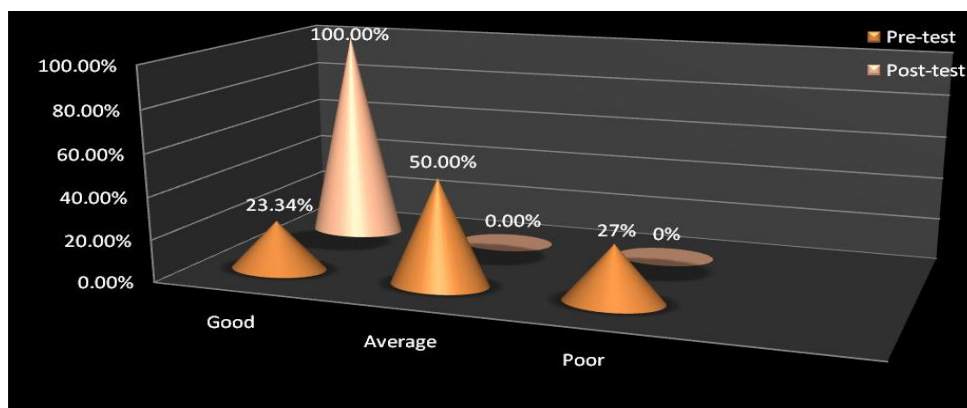
Area of Analysis	Mean	Median	Mode	Standard Deviation	Range (H-L)
Pre-test	14.5	14	13	2.78	10
Post-test	31.2	30	28	4.40	20
Difference	16.7	16	15	1.62	10



Graph 2: Column dividend graph showing Mean, Median, Mode, Standard deviation and Range of rural adolescent girls of Group-II.

Table 5: Frequency and percentage distribution of knowledge scores of subjects regarding Reproductive health among Group-I  
n<sub>1</sub>=30

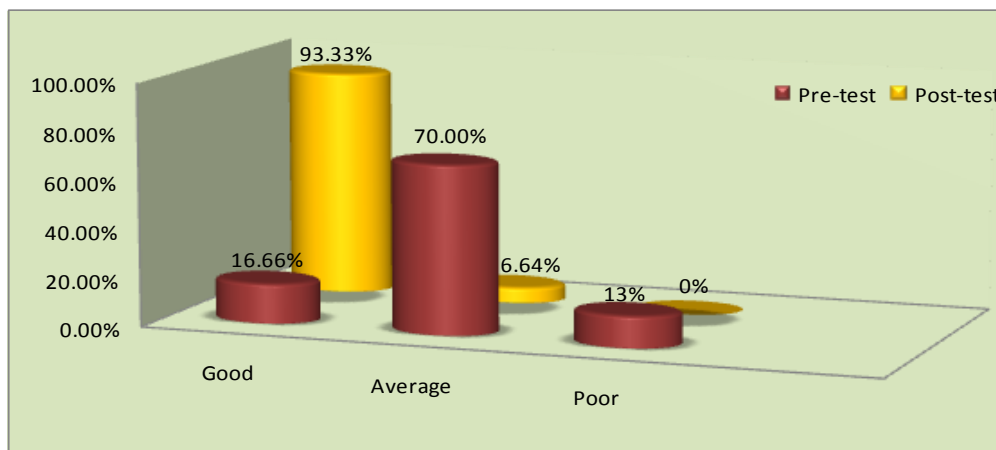
Knowledge scores	Pre-test		Post test	
	Frequency (f)	Percentage (%)	Frequency(f)	Percentage (%)
Good	07	23.34	30	100
Average	15	50	00	00
Poor	08	26.66	00	00



Graph 3: The cone diagram represents the distribution of the subjects according to their level of knowledge scores in group-I.

**Table 6: Frequency and percentage distribution of knowledge scores of subjects regarding Reproductive health among Group-II.**

Knowledge scores	Pre-test		Post test	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Good	05	16.66	28	93.33
Average	21	70	02	6.66
Poor	04	13.33	00	00



**Graph 4: The cylindrical diagram represents the distribution of the subjects according to their level of knowledge scores in group-II.**

### Section III: Testing of hypotheses.

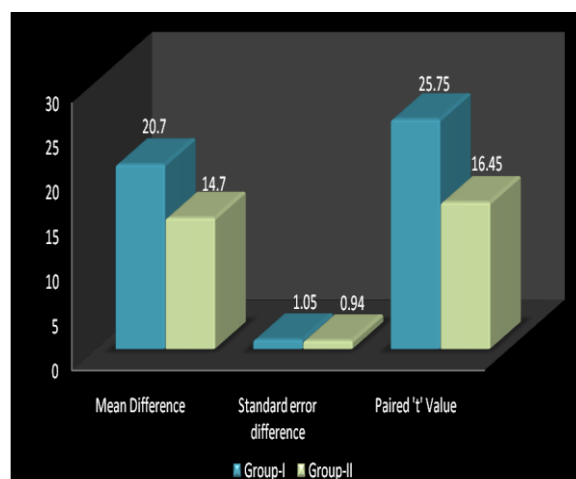
H<sub>1</sub>:The mean post-test knowledge scores of rural adolescent girls of selected Pre University colleges regarding reproductive health who will be exposed to CTP will be significantly higher than the mean pre-test knowledge scores at 0.05 level of significance.

H<sub>2</sub>:The mean post-test knowledge scores of rural adolescent girls of selected Pre University colleges regarding reproductive health who will be exposed to SIM will be significantly higher than the mean pre-test knowledge scores at 0.05 level of significance.

**Table 7: Mean difference (d), standard error of difference and paired 't' values of knowledge scores of subjects regarding Reproductive health among both the Groups.**

Groups	Mean difference (d)	Standard error of difference	Paired 't' Values	
			Cal value	Tab value
Group-I	20.7	1.05	25.75	2.056
Group-II	14.7	0.94	16.45	2.12

\* Significant at 5% level



**Graph 5: The Bar diagram represents the effectiveness of educational interventional programs regarding Reproductive health among both the Groups.**

H<sub>3</sub>: The mean post-test knowledge scores of rural adolescent girls regarding reproductive health who have undergone CTP will be significantly higher than the mean post-test knowledge scores of rural adolescent girls regarding reproductive health who have undergone self-instructional module at 0.05 level of significance.

**Table No 8: One way Analysis Of Variance (ANOVA) between Group -I and Group- II** n<sub>1</sub>+n<sub>2</sub>=60

Source of Variance	Sum of Squares	Degrees of freedom	Mean of sum of Squares	F-ratio	
				Cal value	Tab value
Between the Groups	459.05	1	459.05	23.36	4.03
Within the group	113.9.8	58	19.65		

\*Significant at 5% level

H<sub>01</sub>: There will be no statistical association between pre-test knowledge scores of rural adolescent girls regarding reproductive health of group I with their selected demographic variables at 0.05 level of significance.

The calculated chi-square values were lesser than the table value in these variables i.e., age, Course of the study, Religion, Educational Status of the Mother, Educational Status of the Father, Occupation of Mother and Source of Information. Hence there was no association between these variables. Hence H<sub>01</sub> was accepted in these variables. Where as in two variables, i.e., occupation of father and age at menarche, the calculated chi-square values were greater than the table value. Hence in these variables H<sub>01</sub> was rejected.

H<sub>02</sub>: There will be no statistical association between pre-test knowledge scores of rural adolescent girls regarding reproductive health of group II with their selected demographic variables at 0.05 level of significance.

The calculated chi-square values were lesser than the table value in these variables i.e., age, , Religion, Educational Status of the Mother, Occupation of Mother ,age at menarche and Source of Information. Hence there was no association between these variables. Hence H<sub>02</sub> was accepted in these variables. Where as in two variables, i.e., Course of the study, Educational Status of the Father, and occupation of father, the calculated chi-square values were greater than the table value. Hence in these variables H<sub>02</sub> was rejected.

## DISCUSSION

The overall pretest knowledge scores of rural adolescent girls revealed that in group-I, majority of subjects 15(50%) had an average knowledge, 08 (26.66%) had poor knowledge and 7(23.34%) had good knowledge in pre-test, where as in post-test all 30(100%) of them had good knowledge regarding reproductive health. In group-II, majority of subjects 21(70%) had an average knowledge, 04 (13.33%) had poor

knowledge and 5(16.66%) had good knowledge. The facts analyzed were found matched with to the findings of the research under taken by Dasgupta A, Sarkar M, who observed that most of the adolescent girls 81(84.4%) had poor knowledge, 15 (15.6%) had average knowledge and none of them had good knowledge regarding reproductive health in pretest, where as in posttest, majority 89 (92.7%) of the students had awesome grasping power, 6 (6.25%) held with a mainstream insight and 1(1.04%) had poor knowledge.

## Recommendations

On the basis of study findings the following recommendations have laid;

- A same kind of quest can be carried out for huge study representatives for a lengthier period of time; hence broader generalizations would be done.
- A similar audit study would be replicated in different settings.
- A similar study can be conducted on attitude of rural adolescent girls towards selected aspects of reproductive health.
- A comparative study can be done between rural High school and PUC girls.
- A comparative study can be done between urban High school and PUC girls.
- A comparative study can be done between urban PUC girls and rural PUC girls
- A study can be conducted to observe the actual practices of rural adolescent girls regarding reproductive health care.

## CONCLUSION

*Based on the findings of the study, the following conclusions were drawn:*

1. The overall general pre-test knowledge level regarding reproductive health was an average among the rural adolescent girls of both the groups (Group-I and Group-II).
2. The consciousness scores of girls showed symbolically greater likewise that of scores of pre-test among both the groups.

3. The post-test knowledge scores of girls of group-I who were exposed to constructive teaching program showed significantly improvement in the level of knowledge than of group-II girls who were exposed to self-instructional module regarding reproductive health.
4. The overall information from the study suggested that constructive teaching program was more effective than that of self-instructional module

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