Effectiveness of Activity Based Learning on Knowledge and Attitude Regarding Prevention of Sexually Transmitted Diseases and Teenage Pregnancy Among Adolescents in a Selected School, Coimbatore

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Abstract: A study to assess the effectiveness of activity-based learning on sexual risk reduction program on knowledge and attitude regarding prevention of sexually transmitted diseases and teenage pregnancy among adolescents in a selected School, Coimbatore. *Background of the study:* Sexuality plays a very important role in adolescents' life. Sexual contact is the common mode of transmission of STD's. As it is a serious health problem, education on STD's and teenage pregnancy are very much important to adolescents. *Objective:* The aim is to assess the effectiveness of activity-based learning on knowledge and attitude regarding prevention of sexually transmitted diseases and teenage pregnancy. *Methodology:* Pre-experimental, one group pre-test and post-test design was adopted. 150 adolescents were recruited using purposive sampling technique. Structured questionnaires were used. Activity based learning includes power point presentation, role play and mime show was given for about 60 minutes. *Results:* The results revealed that, overall mean with SD for knowledge and attitude of pre-test (8.07 ± 1.94; 37.5 ± 12.99) and post-test was (22 ± 1.86; 71 ± 4.8) and the calculated value of paired 't' test was 44.1 and 25.3, at $p<001$. *Conclusion:* The study concluded that Activity based learning was effective in improving knowledge and attitude regarding sexually transmitted diseases and teenage pregnancy.

Keywords: Adolescents, sexually transmitted diseases, teenage pregnancy, sexually transmitted infections, sexual health and effectiveness.

1. Introduction

"Youth is the hope of our nation"

- Rizal

Any individual in the age group of 10 to 19 years were called as adolescents. In the countries of the South-East Asia Region, 22% (350 million) of the population were adolescents. The transformation from childhood to adulthood involves all the physical, sexual, psychological social and developmental changes. Adolescents are likely to face lots of health and social challenges. Sexuality plays a very important role in the life of both boys and girls. Youths are more likely to practice unprotected sex, have multiple sexual partners and have Tran's generational sex. Female adolescents and young women are more predisposing to sexually transmitted infections because of the thin cervical lining. Initiation of sexual activity with the lack of adequate knowledge and skills for protection, places adolescents at a higher risk of unwanted pregnancy, unsafe abortion and sexually transmitted infections including HIV/AIDS. (World Health Organization, 2020).

In India, the 2016 National Family and Health Survey (NFHS) - 4 revealed that 27 percent of girls are married before their 18th birthday and further, 31 percent of married Indian women gave birth by the age of 18 years. (IFRI press release, May 15 2019).

According to National AIDS organization, 2018 data, India has the third largest HIV epidemic in the world with 2.1 million people living with HIV. Tamil Nadu is the seventh largest HIV epidemic in India. About 1 in 4 of all new cases of HIV infection is among 13 to 24 years. About 11% of world's teenage pregnancy happens in India. 27% of Indian girls are married before 18 years.

Every year, 3.9 million girls aged between 15 to 19 years undergo unsafe abortion. Approximately, 12 million girls aged between 15 to 19 years and 2.5 million girls under 16 years gives birth to baby each year in developing countries. Complications during pregnancy and child birth are the most common cause of death for adolescents aged between 15 to 19 years globally. Teenage mothers faces higher risk of Eclampsia, Puerperal infections, endometritis and systemic infections than women aged more than 20 years. (World Health Organization, 31st Jan. 2020)

In India it is estimated that 41% of population is under the age group 20 years, and adolescents are the high risk of sexual reproductive health issues. More than 15 million girls aged below 19 years were giving birth to baby. Adolescent girls who

get pregnant before 18 years may be five times more prone to die during delivery process than women aged 20-28 years. Teenage pregnancy in India is high. Hence the education for Indian adolescent girls is more in need. (Firstpost, 2020)

2. Statement of the Problem

A study to assess the effectiveness of Activity based learning on sexual risk reduction programme on knowledge and attitude regarding prevention of sexually transmitted diseases and teenage pregnancy among adolescents in a selected school, Coimbatore.

A. Objectives

- To assess the level of knowledge and attitude regarding the prevention of sexually transmitted diseases and teenage pregnancy.
- To assess the effectiveness of Activity based learning on sexual risk reduction program on knowledge and attitude regarding sexually transmitted disease and teenage pregnancy among adolescents.
- To correlate the posttest level of knowledge with attitude regarding sexually transmitted diseases and teenage pregnancy among adolescents.
- To associate the pretest level of knowledge and attitude on sexually transmitted diseases and teenage pregnancy with selected demographic variables among adolescents.

B. Assumption

Adolescents may have some knowledge and attitude on Sexually transmitted diseases and teenage pregnancy.

C. Hypotheses

H_1 - There will be significant difference between pretest and posttest knowledge and attitude regarding prevention of sexually transmitted diseases and teenage pregnancy among adolescents.

H_2 - There will be significant correlation between the posttest level of knowledge and attitude regarding sexually transmitted diseases and teenage pregnancy among adolescents.

H_3 - There will be significant association between the mean pretest level of knowledge and attitude regarding sexually transmitted diseases and teenage pregnancy with selected demographic variables.

D. Delimitation

The study is delimited to the adolescents with the age group of 13 to 18 years.

3. Research Methodology

The research design selected for this study was pre-experimental one group pretest and posttest research design. It is the simplest form of experimental research design with no control group. Totally 150 adolescents were selected by purposive sampling method. In this study, the investigator needs to assess the effectiveness of activity-based learning on knowledge and attitude regarding the prevention of sexually

transmitted diseases and teenage pregnancy by analysing the pretest and post level of knowledge and attitude scores. Hence quantitative approach was chosen to this study.
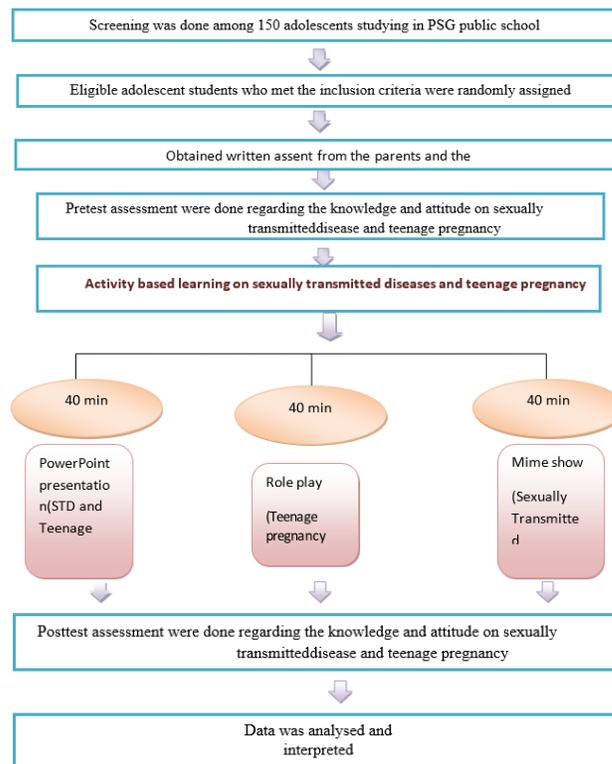

Fig. 1. Data collection procedure

4. Result and Conclusion

A. Frequency and Percentage Distribution of Pretest and Posttest Level of Knowledge Among Adolescents
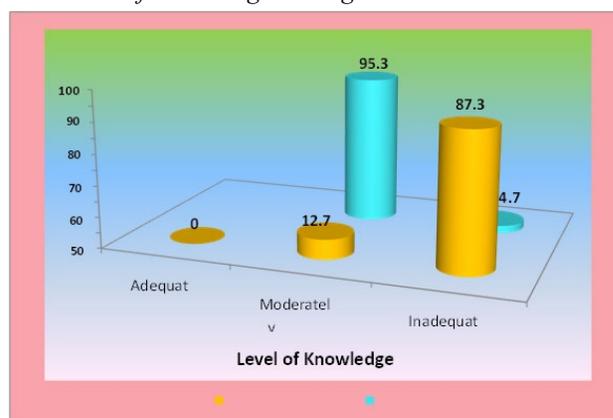
Fig. 2.

In the pretest out of 150 study participants, 131 (87.3%) had inadequate knowledge regarding sexually transmitted diseases and teenage pregnancy whereas, 19 (12.7%) had moderately adequate knowledge. None of them comes under the category of adequate knowledge.

In the posttest 143 (95.3%) study participants had adequate knowledge regarding sexually transmitted diseases and teenage pregnancy whereas, 7 (4.7%) had moderately adequate knowledge. None of them comes under the category of

inadequate knowledge. Hence Activity based learning was effective in improving the knowledge of the study participants towards sexually transmitted diseases and teenage pregnancy.

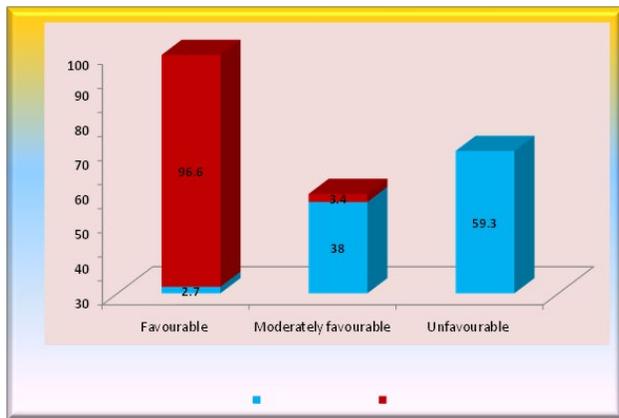### B. Frequency and Percentage Distribution of Pretest and Posttest Level of Attitude Among Adolescents

Fig. 3.

In pretest 89 (59.3%) study participants had unfavorable attitude, 57(38%) had moderately favorable attitude and 4(2.7%) had favorable attitude towards the sexually transmitted diseases and teenage pregnancy.

In posttest 145 (96.6%) study participants had favorable attitude regarding sexually transmitted diseases and teenage pregnancy whereas, 5 (3.4%) had moderately favorable attitude. None of them comes under the category of unfavorable attitude.

Hence, activity-based learning including power point presentation, mime show and role play helps in promoting the favorable attitude towards sexually transmitted diseases and teenage pregnancy of the study participants.

C. Comparison of Pretest and Posttest Level of Attitude Regarding Sexually Transmitted Diseases and Teenage Pregnancy Among Adolescents Using Paired 't' Test.

Table 1 render that, the comparison of pretest and post test level of attitude among study participants using paired 't' test. In pretest the mean and standard deviation was 37.5 ± 12.99 whereas in posttest the mean and standard deviation was 71 ± 4.8. On comparing, the calculated value 25.3 was greater than the table value 1.98 at $p < 0.001$. This showed that there was highly significant improvement in attitude among the study participants. So, the activity-based learning on sexual risk reduction program was effective in promoting positive attitude towards sexually transmitted diseases and teenage pregnancy among adolescents. Hence H_1 was retained.

D. Correlation Between the Posttest Level of Knowledge and Attitude Regarding the Prevention of Sexually Transmitted Diseases and Teenage Pregnancy Among Adolescents

H_2 - There will be significant correlation between the mean posttest level of knowledge and attitude regarding sexually transmitted diseases and teenage pregnancy among adolescents.

According to table 2, the mean and standard deviation of the posttest level of knowledge and attitude towards sexually transmitted diseases and teenage pregnancy was 22 ± 1.86 and 71 ± 4.8 and there was a positive correlation ($r = 0.02$) between posttest level of knowledge and attitude towards sexually transmitted diseases and teenage pregnancy. Hence H_2 was retained.

E. Association Between the Pretest Level of Knowledge and Attitude Regarding Sexually Transmitted Diseases and Teenage Pregnancy with Selected Demographic Variables Among Adolescent's Using Chi Square Test

H_3 - There will be significant association between the mean pre test level of knowledge and attitude regarding sexually transmitted diseases and teenage pregnancy with selected demographic variables

It was observed from the table 3, that the calculated chi square value was higher than the table value for demographic variables like age and previous knowledge whereas, the chi square value lesser than the table value for other demographic variables like gender, religion, educational status of mother and father, occupational status of mother and father, monthly income of family with the pretest level of knowledge at $p < 0.05$. It reveals that there was a significant association with the selected demographic variables. Hence H_3 was retained.

1) Association between the pretest level of attitude regarding sexually transmitted diseases and teenage pregnancy with selected demographic variables using chi square test

It was observed from the table 3 that the calculated chi square value was higher than the table value for the demographic variable previous knowledge whereas, the chi square value was lesser than the table value for other demographic variables like age, gender, religion, educational status of mother and father, occupational status of mother and father, monthly income of family with the pretest level of attitude at $p < 0.05$. It reveals that there was significant association between the selected demographic variables and the pretest level of knowledge regarding sexually transmitted diseases and teenage pregnancy. Hence H_3 was retained.

Table 1

Groups	Mean	Standard deviation	Paired 't' test	Degree of freedom	Table value
Pretest	37.5	12.99	25.3***	149	1.98
Post test	71	4.8			

Note: *** Highly Significant at $p < 0.001$ (N=150)

Table 2

Test	Parameters (Post test)	Mean ± Standard deviation	'r' value
Post test	Knowledge regarding STD"s and teenage pregnancy	22 ± 1.86	0.02*
	Attitude regarding STD's and Teenage Pregnancy	71 ± 4.8	

Note: *** Highly Significant at $p < 0.05$ (N=150)

Table 3

S. No.	Demographic Variables	Level of Knowledge (pretest)						d.f	Calculatedχ2 value	Table value
		Adequate Knowledge		Moderately Adequate Knowledge		Inadequate Knowledge				
		f	%	f	%	f	%			
1.	**Age**									
	a) 13 to 15 years	0	-	1	0.6	37	24.7	2	22.51*	5.991
	b) 16 to 18 years	0	-	18	12	94	62.7			
2.	**Gender**									
	a) Male	0	-	18	12	94	62.7	2	0.68	5.991
	b) Female	0	-	12	8	65	43.3			
3.	**Religion**									
	a) Hindu	0	-	18	12	129	86	6	1.37	12.529
	b) Christian	0	-	0	-	0	-			
	c) Muslim	0	-	1	0.7	2	1.3			
	d) Others	0	-	0	-	0	-			
4.	**Education status of mother**									
	a) Educated	0	-	19	12.7	130	86.6	2	0.008	5.991
	b) Uneducated	0	-	0	-	1	0.7			
	If yes, specify: a) Higher secondary education	0	-	0	-	0	0			
	b) Undergraduate	0	-	9	6	88	59			
	c) Post graduate	0	-	7	4.7	45	30.3			
5	**Education status of father**									
	a) Educated	0	-	19	12.7	131	87.3	2	0.001	5.991
	b) Uneducated	0	-	0	-	0	-			
	If yes, Specify: a) Higher secondary education	0	-	2	1.3	2	1.3			
	b) Undergraduate	0	-	10	6.7	92	61.4			
	c) Post graduate	0	-	7	4.7	37	24.6			
6	**Occupation of mother**									
	a) Employed	0	-	15	10	99	66	2	0.07	5.991
	b) Unemployed	0	-	4	2.6	32	21.3			
7	**Occupation of father**									
	a) Employed	0	-	19	12.7	131	87.3	2	0	5.991
	b) Unemployed	0	-	0	-	0	-			
8	**Type of family**									
	a) Nuclear family	0	-	17	11.3	113	75.3	4	0.05	9.488
	b) Joint family	0	-	2	1.3	13	8.7			
	c) Extended family	0	-	1	0.7	4	2.7			
9.	**Family income**									
	a) <5,000	0	-	0	-	0	-	6	1.371	12.592
	b)5001 to 9999	0	-	0	-	0	-			
	c)10,000 to 14,999	0	-	0	-	9	6			
	d)>15,000	0	-	19	12.7	122	81.3			
10.	**Previous knowledge**									
	a)Yes	0	-	18	12	63	42	2	14.53*	5.991
	b) No	0	-	1	0.7	68	45.3			
	If Yes, Specify:Peer groups	0	-	2	2.5	12	14.8	4	44.83*	9.488
	Books	0	-	2	2.5	24	29.6			
	Mass media	0	-	14	17.3	27	33.3			

Note: * Significant at p < 0.05

Table 4

S. No.	Demographic Variables	Level of Attitude (pretest)						d.f	Calculated $\chi 2$ value	Table value
		Favorable		Moderately Favorable		Unfavorable				
		f	%	f	%	f	%			
1.	**Age**									
	a)13 to 15 years	0	-	11	7.3	27	18	2	3.634	5.991
	b)16 to 18 years	4	2.67	46	30.7	62	41.2			
2.	**Gender**									
	a)Male	1	0.7	28	18.7	44	29.3	2	0.91	5.991
	b)Female	3	2	29	19.3	45	30			
3.	**Religion**									
	a) Hindu	4	2.7	55	36.7	88	58.6			
	b) Christian	0	-	0	-	0	-	6	0.001	12.592
	c) Muslim	0	-	2	1.3	1	0.7			
	d) Others	0	-	0	-	0	-			
4.	**Education status of mother**									
	a) Educated	4	2.7	57	38	88	58.6			
	b) Uneducated	0	-	0	-	1	0.7			
	If yes, specify: a)Higher secondary education	0	-	0	-	0	-	2	0.003	5.991
	b)Undergraduate	3	2	40	26.8	54	36.2			
	c) Post graduate	2	1.3	17	11.4	33	22.1			
5	**Education status of father**									
	a) Educated	4	2.7	57	38	89	59.3			
	b) Uneducated	0	-	0	-	0	-			
	If yes, specify:a)Higher secondary education	0	-	2	1.3	2	1.3	2	0.001	5.991
	b) Undergraduate	2	1.3	42	28	58	38.7			
	c) Post graduate	2	1.3	15	10	27	18			
6	**Occupation of mother**									
	a) Employed	2	1.3	42	28	70	46.7	2	1.92	5.991
	b) Unemployed	2	1.3	15	10	19	12.7			
7	Occupation of father									
	a) Employed	4	2.7	57	38	89	59.3	2	0	5.991
	b) Unemployed	0	-	0	-	0	-			
8	**Type of family**									
	a)Nuclear family	4	2.7	57	38	69	46			
	b)Joint family	0	-	5	3.3	10	6.6	4	2.62	9.488
	c) Extended family	0	-	1	0.7	4	2.7			
9.	**Family income**									
	a)<5,000	0	-	0	-	0	-			
	b)5001 to 9999	0	-	0	-	0	-	6	0.003	12.789
	c)10,000 to 14,999	1	0.7	3	2	5	3.3			
	d)>15,000	3	2	54	36	85	56.6			
10.	**Previous knowledge**									
	a)Yes	2	1.3	18	12	61	40.6	2	7.12*	5.991
	b) No	2	1.3	30	20	37	24.7			
	If Yes, Specify: Peer groups	1	1.25	4	4.9	9	11.1			
	Books	0	- 1.25	14	17.3	12	14.8	6	44.9*	12.789
	Mass media	1		25	30.9	15	18.5			

Note: * Significant at p < 0.05

5. Conclusion

The study research findings concluded that the activity-based learning on sexual risk reduction program was effective in improving the knowledge and attitude regarding sexually transmitted diseases and teenage pregnancy among adolescents.

Limitation:

This study was conducted in only one school in Coimbatore, so it limits the generalizability to other regions.

Suggestions: The same study can be conducted with other age group.

More researchers can be undertaken to compare the knowledge, attitude and practice on sexually transmitted diseases and teenage pregnancy among adolescents who admiring different cultural practices.

Recommendations:

A comparative study can also be done to assess the effectiveness adolescents who has been educated and uneducated regarding the sexually transmitted diseases and teenage pregnancy.

A quantitative study can be done using parents of young adults as study participants.

The study can be done on larger sample of different regions to generalize the effectiveness of activity based learning.

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