



EFFECT OF NURSE-LED TEACHER DELIVERED ADOLESCENT REPRODUCTIVE HEALTH EDUCATION PROGRAMME ON KNOWLEDGE AND ATTITUDE OF SCHOOL GOING ADOLESCENT GIRLS IN KOTTAYAM DISTRICT, KERALA.

Nursing

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ABSTRACT

Introduction: Adolescent girls are in a period of dynamic transition which necessitates guidance and support as they face more dispute and abuses than boys. Here teachers can play a vital role to empower them as they attend school. **Aim:** to assess the effect of nurse-led teacher delivered adolescent reproductive health education programme (ARHEP) on knowledge and attitude among school going adolescent girls in Kottayam district, Kerala. **Methodology:** A quantitative approach and experimental design with pretest and posttests control experimental groups were used. Using multistage random sampling 60 high school teachers and 600 adolescent girls studying in 8th and 9th standards were selected. The seven girls' high schools under 5 educational sub districts were randomly assigned to experimental and control group and from the selected schools' equal number of subjects were selected randomly. Ethical clearance from IRB, administrative permission form head of the institutions, consent from teacher and assent from adolescent girls were obtained. Pretest conducted with validated questionnaire to adolescent girls in both groups, followed by 6 hours of training to teachers in each school under experimental group by the investigator and the trained teachers implemented the 5 hours of education programme to adolescent girls within two weeks. Control group didn't receive any intervention. After the intervention the post test was done on day 15th and 90th. Data was analyzed on SPSS vs20. **Results:** Independent 't' test revealed no significant difference between experimental group and control group in terms of their existing knowledge ($t = 1.87, p = 0.062$) and attitude ($t = 1.11, p = 0.266$) towards ARH. After the intervention independent 't' test showed significant difference in mean knowledge scores of adolescent girls between the experimental and control group on 15th ($t = 49.32, p < 0.001$) and 90th days ($t = 41.33, p < 0.001$) of intervention. Similarly, a significant difference was found in mean attitude scores of adolescent girls between both groups on 15th ($t = 47.28, p < 0.001$) and 90th days ($t = 39.58, p < 0.001$) after ARHEP. **Conclusion:** Implementation of ARHEP to adolescents in schools by trained school teachers is an effective means to empower them with reproductive health awareness.

KEYWORDS

Nurse-led teacher delivered ARHEP, Adolescent Reproductive Health, Knowledge Attitude

INTRODUCTION

Adolescence is a period between the ages of 10-19 years and is characterized by rapid physical changes including sexual and reproductive maturation. During the last five decades, the adolescent population in India has increased from 85 million in 1961 to 253 million in 2011. Adolescents residing in Kerala constitute about 16.3% of the total population. They are large in number and are in varying situations of risk, status and environment.

The diverse culture of the modern world and the dynamic nature of adolescents put them at a risk of developing life threatening conditions and behaviors. Globally an estimated 1.3 million (60%) adolescent girls and 8, 70,000 (40%) adolescent boys are living with HIV. National Aids Control Organization in 2012-13 reported that 86% of the HIV infected people in India are in the age-group of 15-49 years. The Joint Secretary for the Ministry of Health in India in 2014 reported that India has 1.8 million adolescent pregnancies every year. About 50 abortion related deaths account for 1.6% of all deaths to 15-19-year-old girls. Around 18.9% of young women reported engaging in pre-marital sex experienced a pre-marital pregnancy. According to the third National Family Health Survey of India (NFHS 3), a higher percentage of girls (11%) than boys (5%) had sex before the age of 15 yrs. The data revealed that compared to adolescent boys, adolescent girls are at a greater risk of various reproductive health problems because of the lack of skills and experience in avoiding the grave risks that confront them. So it is urgent to empower them to safeguard their lives.

Here, the school-based programmes has a logical choice for sexual and reproductive health education as most adolescents obtain at least some education. The teachers can play a more critical role of being a source of accurate information and an instrument in imparting knowledge and skills to young people. But in order to deal with delicate issues of reproductive health matters comfortably, the teachers should be trained. The most important component for a successful human reproductive health education programme may not be the material, but the class teacher. So the teacher should be educated and empowered to implement the adolescent reproductive

health education programme successfully.

STATEMENT OF THE PROBLEM

A study to assess the effect of nurse-led teacher delivered adolescent reproductive health education programme on knowledge and attitude regarding adolescent reproductive health among school going adolescent girls in Kottayam district, Kerala.

OBJECTIVES

1. Assess and compare the mean pretest and posttests knowledge scores regarding adolescent reproductive health among school going adolescent girls in experimental and control group
2. Assess and compare the mean pretest and posttests attitude scores regarding adolescent reproductive health among school going adolescent girls in experimental and control group

HYPOTHESES

H₁ There is a significant improvement in knowledge scores regarding adolescent reproductive health among school going adolescent girls in experimental group as compared to control group.

H₂ There is a significant improvement in attitude scores regarding adolescent reproductive health among adolescent girls in experimental group as compared to control group.

METHODOLOGY

Experimental study with pre-test post-test control and experimental groups by quantitative approach was designed. Study was conducted in seven Government aided girls' high schools with state syllabus, under the corporate educational agency of Pala in Kottayam district of Kerala. These schools were under five educational sub districts. Multistage random sampling was done to select 60 high school teachers and 600 adolescent girls of 8th and 9th standards and who were randomly assigned equally to experimental and control group. The tool consisted of a pretested validated questionnaire for knowledge and attitude besides the Adolescent Reproductive Health Education Programme (ARHEP) for intervention. The CVI was 0.94 and Cronbach's Alpha was 0.749 for knowledge questionnaire; while for attitude scale, it was 0.95 and 0.765 respectively. ARHEP contained information regarding concepts of adolescents, puberty and sexuality,

physical, mental and emotional changes during adolescence, anatomy and physiology of reproductive system, menstruation and menstrual hygiene, process of conception, consequences of early sexual behaviour, addressing myths and misconceptions, consequences of early sexual behaviour, life skills and responsible sexual behaviour.

Data collection

The seven girls' high schools under 5 educational sub districts were randomly assigned to experimental and control group and from the selected schools' appropriate numbers of 8th and 9th divisions were randomly selected. From each selected division, 25 adolescent girls who fulfilled the inclusion criteria were chosen by the lottery method and clustered them into groups of 50. Teachers who fulfilled the inclusion criteria were also selected by a simple random technique and randomly assigned to groups of five. Then each group of 5 teachers was randomly assigned to a group of 50 students, so that one teacher can take only one-hour teaching session during intervention, since the intervention had only 5 sessions. Ethical clearance from IRB, administrative permission form head of the institutions, consent from teachers and assent from adolescent girls were obtained prior to study.

Phase 1: Pretest was given to adolescent girls in both the experimental and control groups.

Phase 2: In the experimental group, the investigator trained the selected school teachers in three sessions and each session lasted for two hours. Teaching materials were provided to teachers and were trained to use.

Phase 3: Investigator ensured that the trained teachers provided the education to adolescent girls regarding adolescent reproductive health within two weeks. Intervention had five sessions and each session lasted for one hour.

Phase 4: Post test was conducted to adolescent girls in both groups at two weeks and three months of intervention. The data was subjected to statistical analysis using SPSS vs20.

RESULTS

Results revealed that both groups were almost homogenous in most of the socio-demographic variables like age, religion, educational status, types of family and position of child in the family ($p>0.05$). An Independent 't' test revealed no significant difference between experimental group (E) and control group (C) in terms of their existing knowledge ($t=1.87$, $p=0.062$) and attitude ($t=1.11$, $p=0.266$) towards ARH.

Table 1: Comparison of pre and posttests mean knowledge scores of school going adolescent girls regarding ARH

(N= 600)

Knowledge	Experimental group (n = 300)		Control Group (n =300)		't' value	'p' value
	Mean	SD	Mean	SD		
Pre test	16.0	5.1	16.8	5.6	1.87	0.062
Posttest 1	33.0	2.9	16.4	5.0	49.32***	0.000
Posttest 2	30.1	3.2	16.2	4.9	41.33***	0.000

*** $p<0.001$

Table showed a significant increase in mean knowledge scores of adolescent girls regarding ARH in experimental group as compared to control group after 15 and 90 days of intervention ($p<0.001$) whereas the pretest showed no significant difference ($p>0.05$) between the experimental and control group. Hence it can be inferred that the ARHEP was effective in improving the knowledge of adolescent girls (Tab.1).

Table 2: Comparison of the pre and posttests mean scores of attitude of the school going adolescent girls regarding ARH

(N=600)

Attitude	Experimental Group (n = 300)		Control Group (n = 300)		't' value	'p' value
	Mean	SD	Mean	SD		
Pre test	29.9	5.5	29.4	6.3	1.11	0.266
Posttest 1	51.3	5.5	29.9	5.5	47.28	0.000***
Posttest 2	46.6	4.8	30.1	5.4	39.58	0.000***

*** $p<0.001$

The mean attitude scores of adolescent girls in terms of favorable attitude increased significantly in the experimental group than in the control group on days 15 and 90 after intervention ($p<0.001$). Whereas the pretest showed no significant difference ($p>0.05$) between the experimental and control group. Hence it can be inferred that the ARHEP was effective in bringing a favorable attitude among adolescent girls (Tab.2).

Table 3: Comparison of knowledge scores of school going adolescent girls regarding ARH at different periods of time in the experimental group

(N=300)

Stage	Mean	SD	F#	'P' value	Pair	Mean Diff.	p \$
Pre (S1)	16.0	5.1	2839.8	0.000***	S1 & S2	17.0	$p<0.05$
Posttest 1 (S2)	33.0	2.9			S1 & S3	14.1	$p<0.05$
Posttest 2 (S3)	30.1	3.2			S2 & S3	2.9	$p<0.05$

*** $p<0.001$

In one way repeated measures ANOVA test the 'F' value (2839.8) showed highly significant ($p<0.001$) variation in scores at different interval of time. Post hoc test with Bonferroni corrections revealed the differences in knowledge scores at pretest and on 15th and 90th days after the intervention were significant ($p<0.05$) (Tab.3).

Table 4: Comparison of attitude scores of school going adolescent girls regarding ARH at different periods of time in the experimental group

(N=300)

Stage	Mean	SD	F#	'P' value	Pair	Mean Diff.	p \$
Pre (S1)	29.9	5.5	1824.55	0.000***	S1 & S2	21.4	$p<0.05$
Posttest 1 (S2)	51.3	5.5			S1 & S3	16.6	$p<0.05$
Posttest 2 (S3)	46.6	4.8			S2 & S3	4.8	$p<0.05$

*** $p<0.001$

In one-way repeated measures ANOVA test the 'F' value (1824.55) showed highly significant ($p<0.001$) variation in scores at different interval of time. Post hoc test with Bonferroni corrections revealed the differences in attitude scores at pretest and on days 15 and 90 after the intervention were significant ($p<0.05$) (Tab.4).

DISCUSSION

Aiming to eradicate illiteracy in sexual and reproductive health education, the Government of Kerala and UNICEF jointly recommended educating the teachers first. Studies done in different settings showed that, the teachers' lack training and competence in providing reproductive health education to their students. So the present study was aimed to train the school teachers to educate their adolescent girls. This study revealed a highly significant ($p<0.001$) improvement in knowledge and attitude scores regarding ARH among the school going adolescent girls in experimental group as compared to control group. Hence, research hypothesis 1 (H_1) and hypothesis 2 (H_2) were accepted.

The findings of the present study is congruent with findings of a study done to evaluate the impact of health education sessions over the period of one year regarding reproductive health among ninth standard school students of a slum area in Mumbai in 2012. The study findings showed a statistically significant gain in knowledge in immediate post intervention test as compared to pre test. The increase in knowledge was maintained throughout the year ($p<0.01$) in questions pertaining to physical changes in boys and girls, female anatomy and the role of the female in sex determination.

The findings of the present study also go with the findings of a study done in 2011 on knowledge about reproductive health among rural adolescent girls in Kuppam Mandal, Andhra Pradesh. Findings showed a significant increase in overall knowledge regarding menstrual cycle, ovulation, fertilization and pregnancy by 44.5% (95%, CI=42.5, 46.5, $p<0.001$) and knowledge regarding contraception improved remarkably from 33.7% to 97.4% ($p<0.0001$). A study done in 2005 to determine the effectiveness of a structured teaching program in improving the knowledge and attitude of school going adolescents about ARH in Dharan town of Nepal also congruent with present study findings. A total of 200 adolescent school

students were included in the study. The mean (+/-SD) pretest score of the experimental group on knowledge of reproductive health was 39.83 (+/- 16.89) and of the control group was 39.47(+/- 0.08). The mean post test scores of experimental group on knowledge after intervention was 84.60(+/-10.60) and of the control group with conventional teaching method was 43.93(+/-10.08) and it was statistically significant ($p<0.001$). The post test knowledge scores on responsible sexual behaviour and their attitude towards reproductive health were better in the experimental group than in the control group ($p<0.001$).

CONCLUSION

Adolescent education programme is the need of the hour. Trained teacher can be the source of information regarding ARH. In school she may be the mentor of the adolescent girls who can mould the future generation with competence and confidence. This will have an enduring effect on adolescents, their family and society as a whole.

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