

## Effectiveness of structured teaching program in improving knowledge and attitude of school going adolescents on reproductive health

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### Abstract

**Introduction:** Development of knowledge and attitude takes place during the adolescent period, which can have lifelong effects on the individual, family and society. Proper education in this age group is important for prevention of untoward social and health related problems.

**Objective:** To find out the effectiveness of structured teaching program in improving knowledge and attitude of school going adolescents on reproductive health.

**Materials and methods:** An experimental study with pretest – posttest control group design was carried out in four selected schools with similar settings in Dharan town of Nepal. All the subjects were divided into two groups: experimental and control, each comprising of two subgroups of 50 boys and 50 girls. Structured teaching program consisting of information on human reproductive system was used as a tool of investigation for the experimental group, whereas conventional teaching method was used for the control group.

**Results:** A total of 200 Adolescent school students were included in this study. The mean ( $\pm$ SD) pretest score of the experimental group on knowledge of reproductive health was 39.83 ( $\pm$  16.89) and of the control group was 39.47( $\pm$  0.08). The same of experimental group after administration of the structured teaching program (84.60 $\pm$ 10.60) and of the control group with conventional teaching method (43.93 $\pm$ 10.08) was statistically significant ( $p < 0.001$ ). Similarly, the post-test scores of knowledge of the groups 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:** The knowledge of adolescent school students on reproductive health is inadequate. The use of structured teaching program is effective in improving knowledge and attitude of the adolescents on reproductive health.

**Keywords:** reproductive health; adolescents

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Adolescence is a period of transition from childhood to adulthood. One fifth of the world's population is represented by them<sup>1</sup>. Development of knowledge and attitude takes place during this period, which can have lifelong effects on the individual, family and society<sup>2</sup>.

Changes in the pattern of thinking, attitude, relationships, moral standards and abilities take place in this period<sup>3</sup>. Premarital sex resulting in adolescent pregnancy, unwanted pregnancy and induced abortion are not uncommon<sup>4</sup>. Reproductive health is relatively a new concept that includes teenage pregnancy, sexually transmitted diseases (STDS), HIV and AIDS, freedom from risk of sexual diseases, right to regulate one's own fertility and full knowledge of contraceptive choices<sup>5</sup>. According to the Pan American Health Organization and WHO, sexual health is the experience of the ongoing process of physical, psychological and socio-cultural well being related to sexuality<sup>6</sup>. Sexual activities begin

during the adolescent period. Therefore, extensive research has been done in this field in relation to adolescence. Involvement of the adolescents in sexual relationships in which the parties involved take responsibility for their behaviours and consider each others feelings, needs and desires<sup>7</sup> is one of the important factors of healthy adolescent sexual development. Free access to complete and accurate information is necessary for an informed and responsible choice about starting sexual relationships and using appropriate protection<sup>6</sup>.

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It has been indicated in the literature that having more than 2 sexual partners without using a barrier method of contraception is a serious risk factor for sexually transmitted infections<sup>8</sup>.

Inadequate knowledge in this area may lead to serious consequences in the reproductive health. Even though the adolescents become sexually active in younger ages in developed countries<sup>6</sup> than in developing ones, due attention should be given to reproductive health education for healthy sexuality and prevention of many related problems all over the world.

The strategy on education for responsible and healthy sexuality; safe and appropriate contraception; services for sexually transmitted diseases, pregnancy, delivery and abortion is important<sup>9</sup>. Knowledge about reproductive health is important for healthy sexual behaviour of adolescents<sup>10</sup> though it may not be translated into behaviour. It has been proven scientifically that higher levels of sexual knowledge are associated with a later onset of sexual activity<sup>11</sup>. This association underlines the importance of a comprehensive policy on reproductive health education. Effective means of teaching should be identified for improvement in knowledge and attitude of the adolescents. There seems to be a significant gap in the literature emphasizing a particular teaching method in this regard. Present study was carried out to find out the effectiveness of structured teaching program in improving knowledge and attitude of school going adolescents on reproductive health.

### **Materials and Methods**

An experimental study with pre-test – post-test control group design was conducted in four selected schools of Dharan town of Sunsari District in Nepal with similar settings. Convenience sampling technique was used. The subjects included in the study were 200 school going adolescents of both the sexes. All the subjects were divided into two groups: experimental (n=100) and control (n=100) each comprising of two subgroups of 50 boys and 50 girls.

Structured teaching program consisting of information on human reproductive system particularly sexual growth and development during puberty and responsible sexual behaviour was used as the tool of intervention in the experimental group. The same information was delivered to the control group using conventional method without the use of structured teaching program. The outcome measurement was done using pretest and posttest questionnaires. Interpretation of scores for knowledge was done as adequate if it was between 76 – 100%; moderately adequate if it was 51 – 75% and inadequate, if it was less than 50%. Similarly,

interpretation of score for attitude was done as follows: mean was calculated and interpreted as highest if it was more than 106; median if it was between 61 to 105 and lowest for 60. The sampling method and data collection procedure used was cluster-sampling technique. An informed consent from the school authorities and individually from the students was obtained.

### **Instruments used**

For assessing knowledge and attitude a questionnaire on reproductive health was used and for assessing attitude on reproductive health a modified Likert scale (0 – 10 point scale) was used.

The Data were collected in three phases.

#### **Phase I:**

Pretest was carried out in both the groups (experimental and control).

#### **Phase II:**

The structured teaching program was administered for the experimental group, whereas conventional teaching method was used for the control group.

#### **Phase III:**

Post-test was carried out after three days in both the groups.

#### **Data analysis**

Percentage analysis was done and the paired ‘t’ test applied for significance test.

### **Results**

A total of 200 adolescent school students were included in this study from four selected schools of Dharan. These adolescents including both boys and girls had inadequate (50%) knowledge on human reproductive system particularly sexual growth and development during puberty and responsible sexual behaviour. The pretest means ( $\pm$  SD) of scores of the experimental group and control group on knowledge of reproductive health were 39.83( $\pm$ 16.89) and 39.47 ( $\pm$ 12.60) respectively. The same after administration of the structured teaching program in the experimental group was 84.60 $\pm$ 10.60 and with the use of conventional teaching method in the control group was 43.93 $\pm$ 10.08 (Table 1). There was no difference in knowledge on reproductive health of the boys and girls.

The pretest score (mean  $\pm$  SD) of knowledge of the adolescents of the experimental group on responsible sexual behaviour was  $38.78 \pm 9.85$ , whereas the same of the control group was  $41.12 \pm 7.2$ . This difference was not significant ( $p>0.05$ ).

The pre-test and post-test difference in results of the experimental and control groups; and between the groups was statistically significant ( $p<0.001$ ). Similarly,

the post-test scores of knowledge (Table 1) of the experimental group on responsible sexual behaviour and their attitude (Table 2) towards reproductive health were better than those of the pretest ( $p<0.001$ ), whereas the same of the control group was not significantly different ( $p>0.05$ ).

**Table 1:** Knowledge on Reproductive health and responsible sexual behaviour

Knowledge on	Experimental Group			Control Group		
	Pre-test Mean ( $\pm$ SD)	Post-test Mean ( $\pm$ SD)	p-value	Pre-test Mean ( $\pm$ SD)	Post-test Mean ( $\pm$ SD)	p-value
Reproductive health	39.83 $\pm$ 16.89	84.6 $\pm$ 12.6	<0.001	39.47 $\pm$ 10.08	43.93 $\pm$ 10.08	>0.05
Responsible sexual behaviour	38.78 ( $\pm$ 9.85 )	77.00 ( $\pm$ 9.85)	<0.001	41.12 ( $\pm$ 7.2)	44.8 ( $\pm$ 6.37)	>0.05

**Table 2:** Pre-test and post test attitude score difference

	Mean	Range	Median	p-value
Experimental	37.6	(- 13 ) - 137	34	<0.001
Control	3.71	(- 18) - 44	3.75	

## Discussion

This study was carried out with an objective to prove the effectiveness of structured teaching program in improving knowledge and attitude of schooling going adolescents on reproductive health. In this study gross inadequacy of knowledge on reproductive health and responsible sexual behaviour among the school going adolescents was found. Gross inadequacy in knowledge of the students could be because of inadequate educative material related to the reproductive health in the school course. This could also be because of the ineffective teaching method or both. It is true that education on reproductive health is not given due attention to in developing countries. Because of the socio-cultural and economic factors, sexual health is perceived as a biomedical construct rather than an important aspect of complete wellbeing. This finding is consistent with the study by Langille et al in which the adolescents lacked knowledge in important areas of sexual health<sup>12</sup>. The level of knowledge of both the boys and girls was the same in our study. This contradicts the finding of other

studies in which female adolescents were found more knowledgeable than their male counterparts<sup>12</sup>.

This can be explained with the equal exposure to sexuality education in our country. Adolescents having inadequate factual information on reproductive health may face problems due to too little guidance, because of which they get exposed to serious health risks. Several studies have shown that premarital sex, unwanted pregnancies<sup>9,13,14,15</sup> and unsafe abortions are common among the adolescents<sup>16</sup>. Abortions due to unwanted pregnancies are common in adolescents with more than primary level education<sup>16</sup>, which is obviously due to inadequate or inefficient education method. Walker E et al have reported that consensual sexual intercourse is the most prominent mode of transmission of HIV in adolescents<sup>9</sup>. There can be a coerced sexual intercourse among the

adolescents<sup>15</sup> with serious social and health related consequences.

Etuk S J et al and Ozvaris SB et al have emphasized the need of sexuality education and that the education centres can play an important role in meeting sexual and reproductive health needs of the adolescents<sup>14,17</sup>. It is important to realize the problems and take adequate measures to improve the knowledge and attitude of adolescents on reproductive health and responsible sexual behaviour on purpose to prevent the very many serious health problems.

Use of structured teaching program is an innovative idea. Conventional didactic lectures are not effective in teaching adolescents. The structured teaching program creates enthusiasm among the adolescents and helps in presenting the material with interaction among the students. This is, therefore, not a surprise that the structured teaching program was found to be effective. Because significant improvement was found in knowledge and attitude on reproductive health and responsible sexual behaviour after education using structured teaching program, incorporation of such a teaching program into the school curriculum can be recommended.

### Conclusion

The knowledge on reproductive health and responsible sexual behaviour among the school going adolescents is inadequate. Structured teaching program is effective in improving the knowledge and attitude of the adolescents in these issues. Further, the findings of this study can be useful in planning future research and programming.

### Reference

1. Friedman H L Reproductive health in adolescence. *World Health Statistics: Quarterly* 1994; 47:31-35.
2. Francis P T, Gill J S, Chowdhory. Knowledge, beliefs and attitudes regarding AIDS, STDS and human sexuality among senior secondary students in Delhi. *Indian Journal of Community Medicine* 1994; 39:17 – 20.
3. Herman B. Sex education for adolescence. *Lancet* 1995; 34: 86 – 8.
4. Sai F T and Nassim J. The need for a reproductive health approach. *Suppl International Journal of Gynaecology and Obstetrics* 1989; 3: 103 – 113.
5. Nag M. Premarital sex: sexual behaviors and AIDS in India. *Indian Journal of Community Medicine* 1997; 34: 45 – 6.
6. Hansen L, Mann J, McMahon S, Wong T. Sexual health. *BMC Women's health* 2004; 4:524.
7. Blythe MJ, Rosenthal SL. Female adolescent sexuality. Promoting healthy sexual development. *Obstet Gynecol Clin North Am* 2000; 27:125-141.
8. Health Canada: Canadian STD guidelines. Ottawa: Health Canada 1998.
9. Walker E, Mayes B, Ramsay H et al. Socio-demographic and clinical characteristics of Jamaican adolescents with HIV/AIDS. *West Indian Med J* 2004; 53 (5): 332-8.
10. Kirby D. Sex and HIV/AIDS education in schools. *BMJ* 1995;311:403.
11. Rao AR. Abortions among adolescents in rural area. *Journal of Obstetrics and Gynaecology* 1990; 40: 739 – 41.
12. Langille DB, Andreo P, Beazley RP, Delaney ME. Sexual Health knowledge of students at high school in Nova Scotia. *Can J Public Health* 1998; 89: 85-89.
13. Jones RK, Purcell A, Singh S, Finer L B. Adolescents' reports of parental knowledge of adolescents' use of sexual health services and their reactions to mandated parental notification for prescription contraception. *JAMA* 2005; 293 (3) : 340 – 8.
14. Etuk S J, Ihejiamaizu EC, Etuk I S. Female adolescent sexual behaviour in Calabar, Nigeria. *Niger Postgrad Med J* 2004; 11(4):269-73.
15. Koenig MA, Zablotska I, Lutalo T, et al. Coerced first intercourse and reproductive health among adolescent women in Rakai, Uganda. *Int Fam Plan Perspect* 2004; 30(4): 156-63.
16. Kapil A M, van Ginneken J, Razzaque A. Factors associated with adolescent abortion in a rural area of Bangladesh. *Trop Med Int Health* 2005; 10(2):198-205.
17. Ozvaris SB, Akin L, Akin A. The role and influence of stakeholders and donors on reproductive health services in Turkey: a critical review. *Reprod Health Matters* 2004; 12 (24): 116-27.