



## **IMPACT OF ACTIVITY BASED ADOLESCENCE EDUCATION ON ATTITUDE OF SECONDARY SCHOOL STUDENTS RELATED TO ADOLESCENT REPRODUCTIVE HEALTH**

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### **Abstract**

*This study was undertaken to study the impact of activity based adolescence education on attitude of secondary school students mainly boys and girls as well as rural and urban regarding adolescent reproductive health (ARH). The data was collected by self made standardized attitude scale based on ARH which hold forty items with five points Likert Scale. Experimental pretest-posttest equivalent group design was used and out of 204 students 102 were selected in control and 102 in experimental group from two different schools. Pre-test was administered in both the groups followed by intervention through different kind of activities to experimental group whereas control group was taught in conventional way. After the intervention, post-test was administered in both the groups. Pre-test and post-test scores were calculated and analysed by mean, standard deviation and t-test. Result revealed that there was significant difference between mean gain scores of experimental and control group on attitude and no significant difference between boys and girls as well as rural and urban adolescents with regard to the level of attitude on adolescent reproductive health when taught through activity based teaching method.*

**Keywords:** Activity based method, Adolescence education, Adolescent reproductive health, Attitude.



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## **1. INTRODUCTION**

Adolescence is a period of storm and stress characterized by moodiness, inner turmoil and rebellion, which acts as a bridge between childhood and adulthood for some children usually begins between 11 and 13 years and continues to about 19 years. This period is a turbulent one because the child is moving from childhood to adulthood. Adolescents are the citizens and working force of tomorrow. They are marked by rapid physical, psychological and social maturation, a need to extend relationships beyond the immediate family, a sense of idealism, curiosity and adventure as well as willingness to take greater risks and experiment. In India

there are more than 243 million adolescents in whom every fifth person is an adolescent belongs to 10-19 years and every third a young person belongs to 10-24 years (*Census, 2011*). This huge number itself is a big challenge to address the problems and issues of all adolescents. Adolescence is a challenging and dynamic period due to hormonal, physical, emotional, cognitive and social changes. In India adolescents face dilemmas due to lack of right kind of information's regarding their own physical, emotional, sexual development as well as risky situations like Sexually Transmitted Infections (STIs), Reproductive Tract Infections (RTIs), Human Immunodeficiency Virus (HIV) or Acquired Immune Deficiency Syndrome (AIDS), teenage pregnancy, unsafe abortions, drug and substance abuse. Because of many misconceptions, ignorance and social taboos about sex, sexuality, conception and contraception; along with their peculiar developmental stage, adolescents form a vulnerable group. The habits formed during this period tend to last for lifetime. Therefore, there is a need to address the ignorance through health education programme by health professionals.

Adolescent Reproductive Health (ARH) is a major area of concern as the adolescents do not have adequate knowledge and awareness about these which influences on attitude. Now a day's different teaching methodologies are being discovered. Teachers need to decide the most effective methodology for their students. Therefore, for that affair activity based teaching is more effective than other methodologies for ARH. This teaching method describes a range of pedagogical approaches for teaching. Its core premises include the requirement that learning should be based on doing some hands on experiments and activities. In activity based teaching, the student becomes more actively involved in the learning process through acts of doing, being and critically reflecting than in traditional, didactic education that is more centred around the passive act of knowing (McGrath & MacEwan, 2011). By means of using these activities the learning becomes joyful and long lasting (Thakur, 2016).

Activities here can be in the form of group discussions, cooperative learning, exhibition, debate, Quiz contest, role play, question box and report making to teach ARH. The National Curriculum Framework (2005) which advocates that at the secondary stage, students should be engaged in learning science as a composite discipline, in working with hands and tools to design more advanced technological modules than at the upper primary stage, and in activities and analyses on issues concerning the environment and health, including reproductive and sexual health.

### **1.1. Rationale of the study**

Reproductive health was a serious concern for male and female adolescents towards the formation of positive attitude. Prevention of adolescents' health problems required to have a multidimensional approach. Comprehensive reproductive healths including mental health through psychosocial competence in adolescents were the goal to empower the adolescent. Using content like ARH by the route of activities played productive task for the adolescent learners in which teachers proceed as a facilitator. In the present study researcher made a scientific attempt to intervene through activity based teaching on ARH among the adolescent learners regarding attitude. Many studies on this had been taken up and in the West Bengal context an effort was made to find out the impact of activity based adolescence education on attitude related to adolescent reproductive health of students at secondary level.

## **1.2. Statement of the Problem**

The present study was stated as  
“Impact of activity based adolescence education on attitude of secondary school students related to adolescent reproductive health”.

## **1.3. Conceptual framework**

### **1.3.1. Adolescence education**

Adolescence education is an educational response to the needs, concerns and realities of adolescents. It empower young people with accurate, age appropriate and culturally relevant information, promote healthy attitudes and develop skills to enable them to respond to real life situations in positive and responsible ways.

### **1.3.2. Activity based teaching**

Activity based teaching describes a range of pedagogical approaches adopted by a teacher in which the students participate thoroughly and bring about efficient learning experiences through different activities.

### **1.3.3. Adolescent reproductive health**

Adolescent reproductive health is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system of people between the ages of 10 and 19.

## **1.4. Objectives**

1. To study the impact of activity based adolescence education on attitude of secondary school students regarding adolescent reproductive health.
2. To find out the impact of activity based adolescence education on attitude of boys and girls related to adolescent reproductive health.

3. To study the impact of activity based adolescence education on attitude of urban and rural school students regarding adolescent reproductive health.

### **1.5. Hypotheses**

1. Activity based adolescence education would have positive impact on attitude of secondary school students regarding adolescent reproductive health.
2. The impact of activity based adolescence education on attitude of boys would be more than girls regarding adolescent reproductive health.
3. The impact of activity based adolescence education on attitude of urban students would be more than rural regarding adolescent reproductive health.

### **1.6. Delimitations of the study**

The study was delimited to 204 students of class IX from two schools one from urban (Malda Railway High School) and another from rural (Santa Debya High School) belong to West Bengal Board of Secondary Education (WBBSE) at Malda in West Bengal. Following topics had also been undertaken based on ARH, such as process of growing up, physical growth and development, socio cultural development and gender roles, drug abuse, basic information, prevention as well as control about HIV/ AIDS/ STD.

## **2. REVIEW OF RELATED LITERATURE**

The mainstreams of pupils in schools are incapable to make influences between what they are learning and how that knowledge will be used to transform into sound attitude. Owing to the activity based teaching method students are engaged in the learning processes in which activities deal real life experience. It helps learners to transform knowledge or information into their personal knowledge which they can apply in different situations to shape their attitude. Khan et al. (2012) revealed in their study that the activity based teaching was more effective for the development of higher order skills among the students. Paul, Roy, and Gangopadhyay (2013) found that activity based teaching method was more effective than chalk and talk method to teach Life Science in the class room situation. Similarly Shah, and Rahat (2014) found that the activity based teaching was much effective than the lecture method for teaching of science, furthermore there was significant difference between the performance of the experimental group as compared to the control group with reference to knowledge, comprehension, application skill. Subsequently Das, Pal, and Pal (2010) found in their study that the participants had poor knowledge and negative attitude regarding adolescent health, before the health education intervention. Significant improvement in Knowledge and Positive Attitude between pre- and post-test results was observed. Several studies (Jaicy & Vathsala, 2015; Parmawati, Emilia & Nisman, 2015; Sheoran, Rani, Kumar

& Singh, 2016) revealed significant difference in the pretest and posttest scores of reproductive health attitudes in the intervention group, but not in the control group. There was a significant difference in the mean score improvement of reproductive health attitudes between the intervention and control groups.

Several studies (Madeni, Horiuchi & Iida, 2011; Nair et al., 2012; Vijay, Mangulikar & Mulaje, 2014) found that in the pre intervention period majority of adolescents were poorly informed about reproductive sexual health matters. As compared to boys, girls had much poorer knowledge and attitude about these and after intervention; there was a statistically significant increase in the knowledge in both boys and girls that increased their positive attitude on that. Furthermore Deshmukh, Kulkarni, and Apte (2014) revealed that both knowledge and attitude scores improved significantly after intervention. They also found significant improvement in the attitude about personal sexual needs, socioculture correlates, sexual abuse, media, sexuality within friendship and sexuality education but did not observe significant change in attitude towards one's own sexuality. Subsequently they also observed significant difference in attitude of boys and girls toward sociocultural correlates, sexuality within friendship, others' sexuality and sexuality education. Whereas, there were no significant difference in attitude of boys and girls towards sexual abuse, media, personal sexual needs, concept of beauty and one's own sexuality. Most of the boys showed positive attitude towards sexual abuse, sexuality within friendship, others' sexuality and sexuality education than the girls. In the study by Hatami, Kazemi, and Mehrabi (2015) found that the mean score of knowledge and attitude of girls toward all sexual health dimensions during puberty in the intervention group was significantly higher after the intervention. Study also goes with the findings of Sheoran, Rani, Kumar, and Singh (2016) who revealed that unpaired *t* value of post-test knowledge and attitude scores of pre-adolescent boys were 14.25 vs.10.98 respectively in experimental and comparison/control/control group were found significant at 0.05 level of significance.

The result of this study goes with the findings of Obi, and Ozumba (2007) who found significant gain in correct knowledge following the health education through intervention in rural area. The rural students in the study group showed a positive and permissive attitude towards reproductive health education and there was a drop in risky sexual behaviour following the intervention. Subsequently Malleshappa, Krishna, and Nandini (2011) found that reproductive health education intervention programme improved the knowledge and attitude among rural adolescent girls regarding reproductive health. Finding also goes along with the finding of Susanto, Rahmawati, and Wantiyah (2016) who found that the adolescents

in rural and urban areas showed differences in their ARH attitudes before the intervention, but did not show such differences after the intervention. The adolescents in the rural area also showed greater improvements in their ARH attitudes than those in the urban area.

### **3. METHODOLOGY**

The present research was a true experimental type study in which pretest-posttest equivalent group design was used.

#### **3.1. Sampling**

The present study, 204 students randomly selected from two different schools and out of 204 students 102 were selected in control and 102 in experimental group.

#### **3.2. Tool**

The tool used for this study was self made attitude scale related to adolescent reproductive health. It included 40 items with five points scale based on the topics related to ARH. The items were standardized by establishing content validity and test-retest reliability co-efficient (0.81) as well as split half reliability co-efficient (0.86). For scoring Likert Scale pattern viz. strongly agree, agree, undecided, disagree and strongly disagree was followed. Wherein 21 positive items, score ranging from five (strongly agree) to one (strongly disagree) and 19 negative items vice versa. Thus a maximum 200 and minimum 40 scores were obtained by an individual sample.

#### **3.3. Procedure of data collection**

For collection of data pretest-posttest equivalent group design was used followed by one-to-one matching procedure in which students' school achievement scores of Biology had been undertaken.

#### **3.4. Pre-test**

In the beginning, the attitude scale related to ARH was administered on both the experimental and control group as pre-tests.

#### **3.5. Treatment**

The experimental group was exposed to the activity based classroom environment related to the topics of adolescent reproductive health. In one month treatment period, researcher used various kinds of activities. It included working in groups, hands-on-experience, group discussions cooperative and collaborative learning, exhibition, debate, quiz contest, role play, question box and report making. After completion the tasks the students of experimental group were put forth with some questions leading to discussion with others students and the researcher. The control group was taught the same topics by conventional method of teaching.

### 3.6. Post-test

After the transaction of 20 lessons, attitude scale was again administered on both the groups as the post test.

### 3.7. Statistical Techniques Used

The responses of the students for the pre-tests and post-tests were scored by the standardized procedure of researcher and the results of the experimental and control group were computed and analysed through application of required statistical techniques i.e. mean, standard deviation and *t* test.

## 4. ANALYSIS AND INTERPRETATION

### *Hypothesis 1*

In order to test hypothesis, gain scores of attitude regarding ARH between the pre-test and post-test of experimental and control group were calculated by subtracting pre-test scores from post-test scores for each student.

**TABLE 1: Mean standard deviation and *t* value of gain scores on attitude of experimental and control group.**

Experimental Group			Control Group			<i>t</i> value
$M_1$	$N_1$	$SD_1$	$M_2$	$N_2$	$SD_2$	
59.74	102	11.22	4.49	102	4.14	49.20

Table 1 shows that the mean gain score of experimental group is extremely higher than control group. The obtained *t* value confirms 49 which is greater than the table *t* value 2.60 for 202 degrees of freedom at 0.01 level of significance. Hence, the hypothesis is accepted. This indicates that there is significant difference between mean gain scores of experimental and control group on attitude related to ARH. It is thus concluded that activity based teaching strategy helped in improving level of attitude towards adolescent reproductive health.

### *Hypothesis 2*

In order to test this hypothesis, gain scores of boys and girls on attitude regarding ARH between the pre-test and post-test of experimental group were calculated by subtracting pre-test scores from post-test scores for each student.

**TABLE 2: Mean, standard deviation and *t* value of gain scores on attitude of boys and girls of experimental group.**

Experimental Group						t value
Boys			Girls			
$M_1$	$N_1$	$SD_1$	$M_2$	$N_2$	$SD_2$	
59.34	56	11.15	60.22	46	11.40	0.39

Table 2 shows that the mean gain score of girls is slightly higher than the boys and the obtained  $t$  value shows 0.39 which is less than the table  $t$  value of 1.98 for 100 degrees of freedom at 0.05 level of significance. Hence, the hypothesis is rejected. Therefore, there is no significant difference between boys and girls with regard to attitude on ARH when taught through activity based teaching method.

**Hypothesis 3**

In order to test this hypothesis, gain scores of urban and rural students on attitude regarding ARH of both experimental groups were calculated by subtracting post-test scores of urban with post-test scores of rural for each student.

**TABLE 3: Mean, standard deviation and  $t$  value of gain scores on level on attitude of urban and rural adolescents of experimental group.**

Experimental Group						t value
Urban			Rural			
$M_1$	$N_1$	$SD_1$	$M_2$	$N_2$	$SD_2$	
59.38	55	12.17	60.15	47	10.11	0.34

Table 3 shows that the mean gain score of rural students is slightly higher than the urban and the obtained  $t$  value shows 0.34 which is less than the table  $t$  value of 1.98 for 100 degrees of freedom at 0.05 level of significance. Hence, the hypothesis is rejected. Therefore, there is no significant difference between urban and rural students with regard to level of attitude on ARH when taught through activity based teaching method.

**5. MAJOR FINDINGS**

- Activity based adolescence education had positive impact on attitude of students regarding ARH. This indicated that there was significant difference between mean gain scores of experimental and control group on attitude test related to ARH.
- The impact of activity based adolescence education did not show any major differences on attitude of boys and girls regarding ARH. There was no significant difference between



boys and girls with regard to attitude on ARH when taught through activity based teaching method.

- The impact of activity based adolescence education on attitude of urban students was comparable with rural students regarding ARH. There was no significant difference between urban and rural students with regard to level of attitude on ARH.

## **6. EDUCATIONAL IMPLICATIONS**

- By adopting activity based classroom environment strategy, the teacher can develop a better method of attaining scientific concepts which is the basic to content mastery.
- In the activity based teaching, more interaction and better relationships can be established between students and teachers.
- Activity based teaching learning can be implemented in schools for all subjects to improve school effectiveness.
- School administration has to encourage and promote the teachers to use child-centered approaches of learning in the classroom i.e. providing opportunities and appropriate resources for activity based teaching.

## **7. CONCLUSION**

Traditional methods of teaching could never expand sketch valuable foundation for decisive thinking and understanding for the students. They could learn more when learning became personal and it was only possible by means of activity based classroom environment. Through activity based classroom environment the learners would be able to construct their own concept and find their own solutions to their problems. In school curriculum there are some topics such as Reproduction in animals and human, and Reaching the age of adolescence, students feel hesitation to ask their queries but owing to application of activity based classroom environment strategy this type of situation could be controlled better.

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