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A Study to Assess the Effect of Video Assisted Teaching Programme on Knowledge Regarding Pubertal Changes among School Children in a Selected School, Thrissur

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ABSTRACT

The present study aims at assessing the effectiveness video assisted teaching programme on the knowledge regarding pubertal changes among school children in a selected school Thrissur; with the objectives. To assess the level of knowledge of school children regarding pubertal changes; To evaluate the effectiveness of video assisted teaching programme regarding pubertal changes, To associate level of knowledge of school children regarding pubertal changes with selected demographic variables. A quasiexperimental evaluative study was conducted using one group pre-test, post-test research design. Random sampling technique was used to select 80 samples from Chaldean Syrian Higher Secondary School, Thrissur. Data was collected by using a structured knowledge questionnaire during the months of June 2017.On the first day of data collection pre-test knowledge was assessed and administered video assisted teaching programme on pubertal changes. Post-test knowledge was assessed on seventh day of teaching programme. The statistical analysis of data shows that the video assisted teaching programme was effective in improving knowledge regarding pubertal changes as the 't' value is 12.13 which is greater than table value at 0.05 level of significance, chisquare test revealed that there was an association between the level ofpretest knowledge with selected demographic variables such as age, education, father's work, place of residence,menarche attained. The study concluded that the video assisted teaching programme was effective in improving knowledge regarding pubertal changes.

KEYWORDS

Effectiveness, Video Assisted Teaching Programme Knowledge, Pubertal Changes

INTRODUCTION

"Once you get over that peak of puberty, you hit a nice stride"

-Clarie Danes

Back ground

Adolescence is a time of unevenness and paradoxes marked by extensive personal changes. Adolescence which literally means "*To grow into maturity*". It is defined by WHO, The adolescence those between the ages of 10 and 14.The most dramatic changes related to adolescence are the physical changes that occur as a part of pubertal process.Puberty can be defined as the period of important biological changes through which the children go through as they move towards becoming an adults. These changes typically occur earlier in girls at the time of premenstrual period. Puberty refers to the process of physical changes by which a child's body becomes an adult body capable of reproduction and it usually happens in the second decade of life.

Puberty includes maturational hormonal growth process that ocurrs when the reproductive organs begin to function and the secondary sex characteristics develops. During puberty growth is disorganized confusing and rapid compare to the relatively stable earlier period of

childhood. Pubertant children are not informed of the changes that take place at puberty,It is traumatic to undergo this changes and may develop unfavourable attitudes towards these changes.

Adolescence is a time of great change and transition for teens and parents alike; it is the period when an individual first begins to let got of childish ways in an effort to embrace adult behavior. It can be period of great stress and anxiety as teenagers face many questions about their own identity and where they fit in their world. For parents if can a difficult period, as their teen is no longer they once knew, but a rapidly developing individual wall preparing for life outside the immediate home.

Adolescence represents a window of opportunity to prepare for healthy adult life and puberty is that stage in development during which maturation of the sexual apparatus occurs and reproductive capacity is attained. It is accompanied by changes in somatic growth and psychological perspective. These changes bring about of sex apprehension and fear in the person, which is compounded by the situation of extreme social inhibition prevalent in the society. It is a time of adjustive to a strange and an unfamiliar body of new relationship with members of the opposite sex and becoming aware of emerging intellectual powers.

NEED FOR THE STUDY

According to the WHO expert committee, adolescence is defined as the period between 10-19 years. Puberty is the period in life during which the reproductive organs undergo a surge in development and reach maturity. Puberty culminates in the onset of menstruation, the first period being called the menarche. Puberty involves radical changes that occur at such a pace that an adolescent mind finds them difficult to comprehend and deal with.

A cross sectional study was conducted to assess the awareness of pubertal changes among 100 adolescent girls in Nainthal. The sample consist of both schooling and non-schooling going girls. Results showed that most girls including those who attended school had not been exposed to any form of education concerning pubertal changes. Non school going girls 72%, were unaware of the physiology of menstruation, indicating the need for educating the girls on scientific aspects of pubertal changes and the myths associated with the menstruation.

A study to assess the knowledge and attitude about reproductive health in rural adolescent girls in Kuppam,Mandal. The study was carried out over a period of eight

months between 14-19 years. Total 65 girls are randomly selected from 3 high schools (class X) and 3 intermediate colleges (class XI and XII) in Kuppam, Mandal, Chitoor district, Andra Pradesh. Structured questionnaire was used to assess the knowledge of participants about reproductive health before and after the education session. A significant increase in reproductive health after intervention.

A study to determine the knowledge and attitude about growing up changes and to determine effectiveness of a health education intervention programme in adolescents girls between 14-15 years in urban area of Pune. Total 103 adolescents were enrolled out of which 92 completed the study. A structured questionnaire was used to test the knowledge and attitude of all participants about the growing up changes before and after the educational intervention. The result shows that they have poor baseline knowledge and attitude of growing up changes in pre test. Pre test attitude score mean was 109.86 and post test mean was 130.59. They concluded that adolescents have poor base line knowledge about growing up changes and a health education intervention programme improved the knowledge and attitude among adolescents.

The National population policy(2000) WHO has recognized adolescents as an under-served vulnerable group that need to be served specially by providing reproductive health information and service. So the investigation feel that planned education will improve the knowledge on pubertal changes among pre adolescents.

Adolescents is one of the most fascinating and complex transitions in the life span. It's breathtaking pace of growth and change is second only to that of infancy. Pubertal maturation is controlled largely by complex interactions among the brain and the pituitary gland. A relatively new area of research related to puberty is that of brain development. Evidence now suggests that brain growth continues in to adolescents including the proliferation of the support cells, which nourish the neurons processing. These changes in the brain are likely to stimulate cognitive growth and development including the capacity for abstract reasoning.

As different level and periods of growth in adolescents is very important and out standing because the changes that occur in adolescents affect the family as well as the society. Puberty is a most important stage in child's life, it cause changes in physical, mental, physiological and psychosocial aspects. The adolescents cannot understand about the changes occurring at puberty and it's importance. So we have the

responsibility to make aware the children as they are the future of the society.

The adolescent girls have poor knowledge regarding the pubertal changes a study conducted in Turkish school of Istanbul on determining the level of knowledge and the source of information about normal puberty and menstrual patterns. This study shows that they have insufficient knowledge on normal puberty. So education programmes should be conducted on pubertal changes and its importantce.

Problem statement

A study to assess the effect of video assisted teaching programme on knowledge regarding pubertal changes among school children in a selected School,Thrissur

Objectives

- To assess the level of knowledge of school children regarding pubertal changes.
- To evaluate the effect of video assisted teaching programme on knowledge of school children regarding pubertal changes.
- To associate the level of knowledge of school children regarding pubertal changes with their selected demographic variables.

Operational definition

EFFECT

In this study effect refers to the change in knowledge level of school children regarding pubertal changes after video assisted teaching programme measured by comparing pretest and post test score.

VIDEO ASSISTED TEACHING PROGRAMME

In this study video assisted teaching programme refers to a systemically organized and planned video assisted teaching provided to school children regarding pubertal changes

SCHOOL CHILDREN

School children refers to children studying in the fifth, sixth, seventh and eighth standard with the ageof 9-12 years in a selected school, Thrissur.

KNOWLEDGE

Knowledge refers to total score obtained by the school children on a structured knowledge questionnaire regarding pubertal changes.

PUBERTAL CHANGES

In this study pubertal changes refers to

1) The change in body size and proportion

2) Primarily sexual characteristics include breast development, pubic and axillary hair growth.

Assumption

- School children may have some knowledge on pubertal changes.

- Knowledge of school children on pubertal changes may be influence of selected demographic variables

Hypothesis

All hypothesis will be tested at 0.05 level of significance

H1: There is a significant difference in the knowledge of school children regarding pubertal changes

H2: There is a significant association between knowledge of school children regarding pubertal changes with their selected demographic variables.

Delimitation

- The study is limited to school children with the age group of 9-11 years old
- Sample size is limited to eighty only.

Research methodology

Research approach

The research design in this study is quantitative in nature. Since the study was aimed to assess the effect of video assisted teaching programme regarding knowledge on pubertal changes among school children.

Research design

The research design adopted for the quasi experimental randomized design

Variables

Dependent variable - Knowledge regarding pubertal changes among school children

Independent variable – video assisted teaching programme

Setting of study

The setting of study is Chaldean Syrian Higher Secondary School, 7km away from the college

Population of study

Population includes school children between the age of 9-12 years in Thrissur district.

Sample

Sample consists of selected 80 students in age group of 9 -12 from Chaldean Syrian higher secondary school selected through simple random sampling

Criteria for sample selection

Inclusion criteria

- Girls who are in the age group of 9 – 12in Chaldean Syrian higher secondary school, Thrissur
- School children who are present on the day of data collection
- School children those who are willing to participate.

Exclusion criteria

- School children who are not able to follow the instruction due to any physical or cognitive problem
- School children who are not present on the day of data collection
- School children those who are not willing to participate

Sample size

The sample size of the study compromised of school children in Chaldean Syrian higher secondary school, Thrissur.

Sampling technique

In this type of sampling design every population member has a similar chance of simple random sampling.

Development of tool for data collection

This instrument was prepared by reviewing journal, internet, books, literature and consulting the experts of paediatric and community department. This tool consists of demographic data and questionnaire to assess the level of knowledge.

Validity of tool

The tool in this study was adopted by the investigator, was established by submitting the tool to experts of in this field of HOD of child health nursing, and community health nursing and also in the field of nursing research based on their suggestion. The tool was modified by the study

Reliability

Reliability of tool was established by using split half method. Reliability coefficient was 0.72.

Description of tool

The tool for present study is prepared based on extensive literature and in its guidance of experts in this field. I consist of two sections.

Section A – Demographic profile of selected school children

Section B – Structural knowledge questionnaire on pubertal changes

Section - A

Demographic variable include age, Gender, Education, Religion, Type of family, Parent's occupation, Source of information, previous knowledge and menarche attained.

Section – B

It includes 27 questions on pubertal changes and menstrual hygiene.

The content are included

- Anatomy of reproductive system
- Psychological, physiological and sociological changes during pubertal changes.
- Myths
- Menstrual hygiene

Score Interpretation

Good – 1 – 9

Average – 10 – 16

Poor – 17 - 27

Procedure for data collection

A formal permission was obtained from the headmistress of Chaldean Syrian higher secondary school to conduct study on 9/6/17 between the time 11:00 AM – 12:00PM. We have take 80 samples from 5 – 8 standards through simple random sampling. Ascent obtained from students and confidentiality of their response not sheured. Present knowledge was conducted on 9/6/17 on the same day video assisted

teaching programme given to students on the 7th day[16/6/17] of pretest, post knowledge was conducted.

Plan for data analysis

The collected data are analyzed by using descriptive and inferential statistics

- Baseline variable are using frequency and %age
- Pretest and test knowledge were assessed by using frequency, mean and SD
- Effect and video assisted teaching programme was assessed by using paired 't' test
- Chi square test was used to determine the association of pretest knowledge, with selected baseline data.

RESULTS AND DISCUSSION

This chapter deals with the discussion, summary, conclusion, limitation and recommendation of study.

Discussion

The present study produced on the effect of video assisted teaching programme on knowledge regarding pubertal changes among school children in selected school, Thrissur.

Objective 1: To assess the pretest knowledge of school children regarding pubertal changes.

In depth analysis of study findings reveals regarding the knowledge about pubertal changes among 80 school children in that nobody have adequate knowledge, whereas 32(40%)children have moderate knowledge and 48(60%)have poor knowledge regarding pubertal changes.

These findings are consistent with the study finding of Kumar R(2009)on effectiveness of teaching programme on pubertal changes and menarche. The finding revealed that 60% of students had average knowledge, and no one had good knowledge.

Objective 2: To assess the effectiveness of video assisted teaching programme on pubertal changes.

The mean pretest score on knowledge regarding pubertal changes was 9.13 and after rendering video assisted teaching programme on knowledge regarding pubertal changes it has been raised to 14.2. To assess the significance of video assisted teaching programme on knowledge regarding pubertal changes among school children, The paired't' test was applied. The calculated 't' value for knowledge about pubertal changes was found to be 12.13 which is significant at 0.05 level.

The present study finding is similar with an interventional study undertaken to assess effectiveness of structured teaching programme on knowledge regarding pubertal changes among pre adolescent girls. In that the mean pre test score is 20.1 and post test score was raised to 29.8 and

calculated‘t’ test value is 7.95 is significant at 0.05 level and shows that the structured teaching programme was effective.

Objective 3: To associate the knowledge of preschool children with their selected demographic variable.

The findings of the study showed that there was an association between the pretest knowledge scores of school children with their age(X^2=91.56), education (X^2=49.25), fathers work(X^2=9.797) their place of residence (X^2=4.4)and menarche attained(Y^2=7.56)at 0.05 level of significance.

The study is consistent with a study conducted in preadolescent girls in selected school Hyderabad, on effectiveness of power point assisted teaching programme on pubertal changes among preadolescent in that chi-squire analysis is carried to determine the association and is associated with knowledge scores with age(X^2=91.56), education (X^2=49.25),type of family and previous knowledge at 0.05 level of significance. However, variables like religion, was found to be not significant

Result

The present study was undertaken to assess the effect of video assisted teaching programme on knowledge regarding pubertal changes among school children in selected school Thrissur. The following objectives were formulated.

As this was an experimental study, the sample size was 80 school children from Chaldean Syrian Higher Secondary School. The samples were selected through simple random technique. Quantitative approach was used for the study the study design used.

The tool used in the study was structured knowledge questionnaire on pubertal changes. Content validity of the tool was done by subject experts. Reliability of the tool was tested and it was reliable. The children participate in study was very much interested in learning new topics and to watch the video demonstration. The‘t’ test was computed between the mean pretest knowledge and posttest knowledge scores indicates the significant gain in knowledge of pubertal changes among school children. Thus it is summarized that video assisted teaching programme on pubertal changes was effective, some of the demographic variables have association with pretest knowledge scores, like age, education, place of residency, menarche attained and father’s occupation. Thus it can be summarized that video assisted teaching programme is collectively effective in school children.

CONCLUSION

Adolescent girls are the future mothers. Going through puberty can be challenging time for any girl. Although it may occur at different age for all girls; Adolescent girl hood is always a critical time; identity formation and a period of transition from childhood to women hood due to lack of providence of knowledge regarding puberty adolescent girls go through the physiological and emotional stresses malpractices.

In view to this concept, the present study was aimed to assess effect of video assisted teaching programme on knowledge regarding pubertal changes among school girls. This study reveals that there is significant increase in level of knowledge among school girls regarding pubertal changes after structured video assisted teaching programme.

Section a

Description of demographic variables of school children N =80

Table 1 Distribution of demographic variables of school children

Sl.No.	Demographic Variables	Frequency	%age
1	**Father's Education**		
▪	Primary	12	15%
▪	High school	39	48.75%
▪	Higher secondary	16	18.75%
▪	Graduate	12	15%
▪	Post Graduate	1	1.25%
2	**Mother's education**		
▪	Primary	2	2.5%
▪	High school	33	41.25%
▪	Higher secondary	24	30%
▪	Graduate	18	22.5%
▪	Post Graduate	3	3.75%

Table 1 consists of Father's education and Mother's education. Regarding father's education 39(48.75%) have high school education, only 1(1.25%) have post graduate. About Mother's education 33(41.25%) have high school education, only 3(3.75%) have post graduate.

Table 2 Distribution of demographic variables of school children (Continue)

Sl.No.	Demographic Variables	Frequency	%age
3	**Father's Occupation**		
	▪ Business	9	11.25%
	▪ Private	38	47.5%
	▪ Government	5	6.25%
	▪ Coolie	22	27.5%
	▪ None	6	7.5%

4	**Mother's Occupation**		
	▪ Business	0	0%
	▪ Private	22	27.5%
	▪ Government	6	7.5%
	▪ Coolie	6	7.5%
	▪ House Wife	46	57.5%

In table 2 consist of father's and mother's occupation. Regarding fathers occupation 38(47.5%) have private job only 5(6.25%) have government job. About the mothers occupation most of the mothers 46(57.5%) are house wives, whereas no mothers are involve in business.

Table 3 Distribution of demographic variables of school children (Continue)

Sl.No.	Demographic Variables	Frequency	%age
5	**Source of Information**		
	Media	0	0%
	Family Members	34	42.5%
	Teachers	40	50%
	Health Worker	2	2.5%
	Peer Group	4	5%

In table 3 regarding source of information, 40(15%) are attain knowledge from teachers, only 2(2.5%) are dependent up on the health worker.

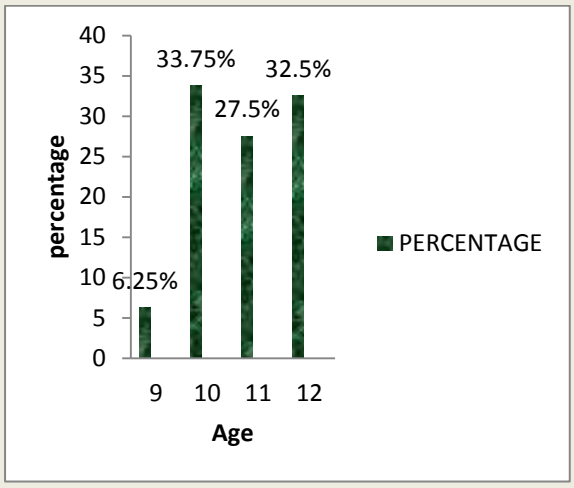

Figure 1 %age distribution of school children according to their age

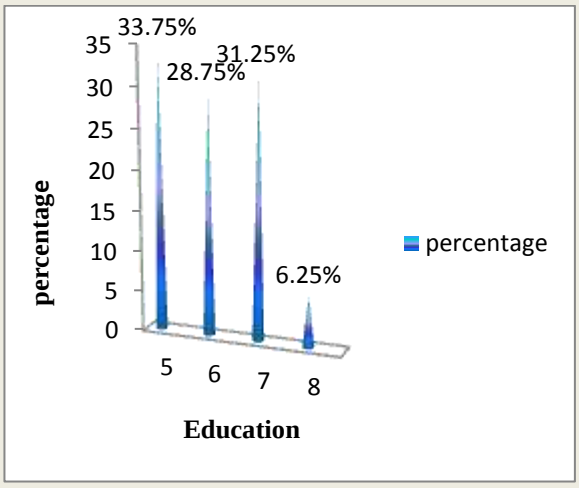

Figure 2 %age distribution of school children according to their education.

The figure 1 shows that out of 80 school children most of the students 27 (33.75%) belongs to age group of 10 years, whereas only (6.25%) are in the age group of 9 years.

The figure 2 shows that out of 80 school children most of the students 27 (33.75%) are 5^{th} standard students, while only 5(6.25%) are from 8^{th} standard.

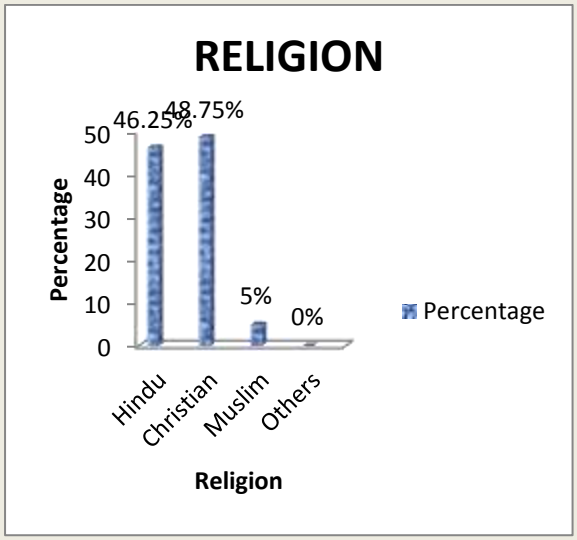

Figure 3 %age distribution of school children according to their religion

The figure 3 shows that out of 80 school children 39(48.75%) are Christian religion and 37(46.25%) students are from Hindu religion, where as only 4(5%) are from Muslim religion.

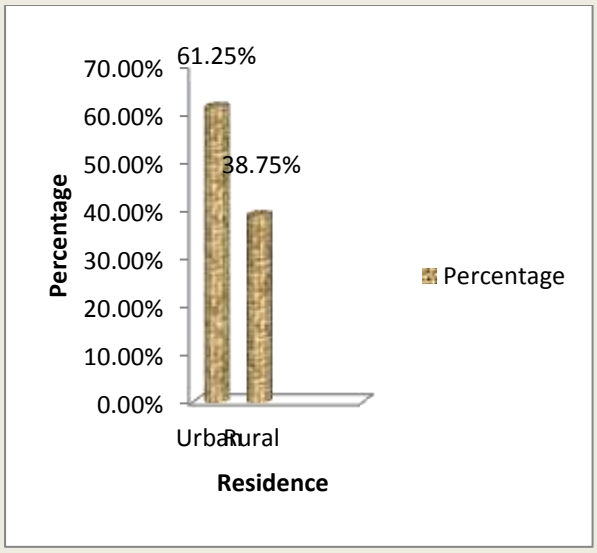

Figure 4 %age distribution of school children according to their residence

The figure 4 shows that out of 80 school children most of the students 49(61.25%) are from urban area where as 31(38.75%) are from rural area.

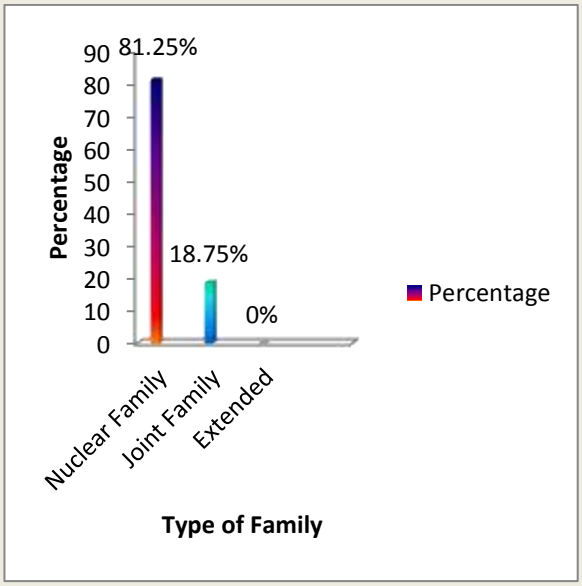

Figure 5 %age distribution of school children according to their type of family

The figure 5 shows that out of 80 school children 65(81.25%) students are from nuclear family,where as 15(18.75 %%) are from joint family.

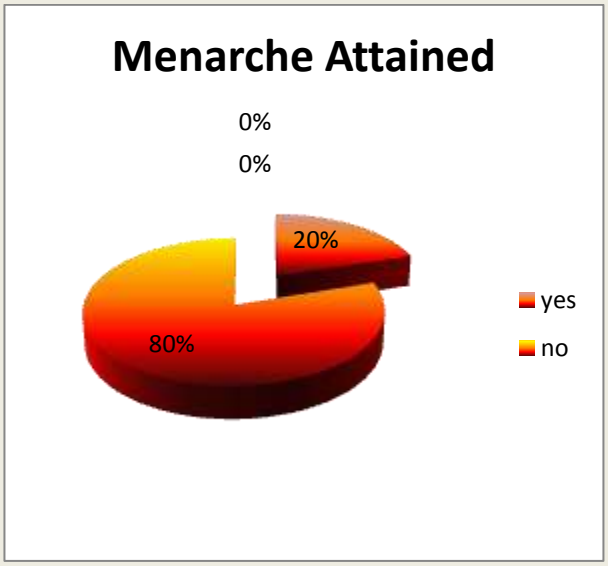

Figure 6 %age distribution of school children according to menarche attained

The figure 5 shows that out of 80 school children 16(20%) students are attained menarche, where as majority 64(80%) are not attained.

Section- b

Table 4 Distribution of sample based on level of pre test knowledge on school children regarding pubertal changes. **N= 30**

Sl no	Level of knowledge	frequency	%age
1	Adequate	0	0%
2	Moderate	32	40%
3	Inadequate	48	60%

As it is observed from the above table out of 80 samples, nobody have adequate knowledge. 40 % (32) having moderate knowledge and 60 % (48) having poor knowledge.

Section- c

Table 5 Distribution of sample based on level of post test knowledge of school children regarding pubertal changes **N= 30**

Sl No	Level of knowledge	Frequency	%age
1	Adequate	11	13.75%
2	Moderate	59	73.75%
3	Inadequate	10	12.50%

As it is observed from the above table out of 80 sample, 11(13.75%) have adequate knowledge, 59(73.75%) have moderate knowledge and 10(12.50%) have poor knowledge.

Section- d

Table 6 Effectiveness of video assisted teaching programme
Differences of pre test and post test knowledge scores of school children regarding pubertal changes **N=80**

	n	Mean	Slandered deviation	df	't' value
Pre test		9.13	8.70		
	80			79	C.V=12.13* T.V=1.98
Post test		14.2	16.14		

***Significant at 0.05 level**

The table shows that the obtained' value was 12.13 at df (79) which is highly significant at 0.05 level, indicates that there is a difference between pre and post test knowledge score. Hence we accept H2 research hypothesis. So the video assisted teaching programme was effective.

Section- e

Association between pre test knowledge score of the school children with their demographic variables.

Table 7 Association between the level of knowledge regarding puberty and age

Demographic variable	**Level of knowledge**		**df**	**χ^2 value**
Age	**Average**	**Inadequate**		
9	0	5	3	
10	1	26		

11	9	13	91.56*
12	21	5	

***significant at 0.05 level**

Regarding the age of children the obtained χ^2 value (91.56) is greater than the table value (7.82) at df 3. So the H2 research hypothesis is accepted. This implies that age has an influence on the pre test knowledge of school children regarding puberty.

Table 8 Association between level of knowledge regarding puberty and education

Demographic variable	Level of knowledge		df	χ^2 value
Education	**Average**	**Inadequate**		
5	0	27		
6	5	18	3	49.25*
7	21	4		
8	5	0		

***Significant at 0.05** Table value=7.82

Regarding the education of children regarding the obtained χ^2 value (49.25) is greater than table vale (7.82) at df 3. So the test is significant at 0.05 level. The H2 research hypothesis is accepted. This implies that education has an influence on the pre test knowledge of school children regarding puberty.

Table 9 Association between level of knowledge regarding pubertal changes and father' occupation

Demographic variable	Level of knowledge		df	χ^2 value
Fathers occupation	**Average**	**Inadequate**		
Business	4	5		
Private	11	27	4	9.797*
Government	2	3		
Coolly	11	11		
None	3	3		

***Significant at 0.05 level**
Table value: 9.49

Regarding the father's occupation of children regarding the obtained χ^2 value (9.790) is greater than table vale (9.47) at df 4. So the test is significant at 0.05 level. The H2 research hypothesis is accepted. This implies that father's occupation has an influence on the pre test knowledge of school children regarding puberty.

Table 10 Association between level of knowledge regarding puberty and place of residence

Demographic variable	Level of knowledge		df	χ^2 value
Place of Residence	**Average**	**Inadequate**		
Urban	23	27	1	4.4*
Rural	8	23		

***significant at 0.05**
Table value: 3.84

Regarding the place of residence of children regarding the obtained χ^2value (4.4) is greater than table vale (3.84) at df 1. So the test is significant at 0.05 level. The H2 research hypothesis is accepted. This implies that place of residence has an influence on the pre test knowledge of school children regarding puberty.

Table 11 Association between level of knowledge and menarche attained

Demographic variable	Level of knowledge		df	χ^2 value
Menarche attained	**Average**	**Inadequate**		
Yes	11	5	1	
No	20	44		7.56*

*significant at 0.05 level
Table value: 3.84

Regarding the menarche attained of children regarding the obtained χ^2value (7.56) is greater than table vale (3.84) at df 1. So the test is significant at 0.05 level. The H2 research hypothesis is accepted. This implies that menarche attained has an influence on the pre test knowledge of school children regarding puberty.

Conclusion

Adolescent girls are the future mothers. Going through puberty can be challenging time for any girl. Although it may occur at different age for all girls; Adolescent girl hood is always a critical time; identity formation and a period of transition from childhood to women hood due to lack of providence of knowledge regarding puberty adolescent girls go through the physiological and emotional stresses malpractices.

In view to this concept, Thepresent study was aimed to assess effect of video assisted teaching programme on knowledge regarding pubertal changes among school girls. This study reveals that there is significant increase in level of knowledge among school girls regarding pubertal changes after structured video assisted teaching programme.

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