"Effectiveness of Video Assisted Teaching Programme On Knowledge Regarding Premenstrual Syndrome Among Adolescent Girls Studying at Akkamahadevi Women's Arts, Science and Commerce College at Bagalkot.

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Abstracts: Background: Adolescent stage is very important in the life of a girl, because in this stage physical, sexual and psychological maturity takes place. The major landmark of puberty for females is menarche, the onset of menstruation, which occurs on an average between ages 12 and 13. The start of menstruation is usually a mixture of excitement and anxiety. Aims: To assess the effectiveness of video assisted teaching programme on knowledge regarding premenstrual syndrome among adolescent girls studying at akkamahadevi women's arts, science and commerce college at Bagalkot.Settings and Design: This Experimental study included a sample of 100 adolescent girls. 50 adolescent girls for experimental group had received Video assisted teaching programme at akkamahadevi women's arts, science and commerce college at Bagalkot.Methods and Material: Data were collected using Structured Interview schedule method. Tools used for data collection were; socio-demographic questionnaire and Structured knowledge questionnaire.Results: Result depicts that an administration of Video assisted teaching programme to the experimental group has increased (16.55 %) their knowledge regarding Premenstrual syndrome as compared with control group.Result showed that there is a statistically significant difference between pre-test and post –test knowledge scores regarding premenstrual syndrome among adolescent girls of both experimental (t=-15.13 (tab, p< 0.0001) and control group (t=-2.187, p< 0.05) adolescent girls.A statistically significant difference was found between post- test knowledge scores regarding premenstrual syndrome of experimental group and control group adolescent girls [t=10.166, p<0.0001].There was no significant association was found between knowledge scores regarding premenstrual syndrome among adolescent girls of experimental group with any of their selected socio-demographic variables. There is a significant association between area of residence (χ^{2}=4.675, P<0.05) between knowledge scores regarding premenstrual syndrome and there was no significant association found between knowledge scores regarding premenstrual syndrome among adolescent girls of control group with any of their remained selected socio-demographic variables.

Keywords: Knowledge, Premenstrual Syndrome, Adolescent Girls, Video Assisted Teaching Programme.

1. INTRODUCTION

Adolescent is a transitional stage of physical and mental human development generally occurring between puberty and legal adulthood, but largely characterized as beginning and ending with the teenage stage. Adolescent is a person between the ages of 13 and 19. Puberty has been heavily associated with teenagers and the onset of adolescent development.[1]

Adolescence comes from the Latin word 'adolescence' which means 'to come to maturity'. It is a period of dramatic growth and development. A process of transition from childhood to adulthood.[2]

Adolescent stage is very important in the life of a girl, because in this stage physical, sexual and psychological maturity takes place. The major landmark of puberty for females is menarche, the onset of menstruation, which occurs on an average between ages 12 and 13. The start of menstruation is usually a mixture of excitement and anxiety.[3]

The term Premenstrual syndrome was first coined by Greene and Dalton in 1953. It has been defined as "the cyclic recurrence in the luteal phase of the menstrual cycle of a combination of distressing physical, psychological, and behavioral changes of sufficient severity to result in deterioration of interpersonal relationships and or interference with normal activities.[4]

Menstruation is a normal physiological phenomenon in a woman's reproductive life. Among the gynecological problems, menstrual problems are said to be the major one especially among adolescent females.[5]

Premenstrual syndrome (PMS) refers to physical and emotional symptoms that occur in the one to two weeks before a woman's period Symptoms often vary between women and resolve around the start of bleeding. Common symptoms include acne, tender breasts, bloating, feeling tired, irritability, and mood changes. Often symptoms are present for around six days. A woman's pattern of symptoms may change over time. Symptoms do not occur during pregnancy or following menopause.[6]

In India a range of 14.3% - 74.4% is the reported prevalence estimate of PMS. [7]

An educational program was conducted in two rural and two urban secondary schools of Pondicherry in girls suffering from premenstrual symptoms. 40.9% of the urban girls and 51.6% of the rural girls were suffering from premenstrual symptoms. We noted a significant decrease in the total PMS scores and all the subscale scores (PMS - A, C, D, H and others) of the students three months after the educational program when compared to the scores before the program.[8]

The Study conducted at Ilam shows the proportion of PMDD cases decreased by 7% in the intervention group and increased by 3% in the control group. Considering that the intervention group received the health education program, it can be concluded that the health education provided in this study has led to a reduction in cases of PMDD.[9]

2. METHOD

It was Pre- test and post- test control group design with an aim to assess the effectiveness of Video assisted teaching programme on knowledge regarding Premenstrual syndrome among adolescent girls studying at akkamahadevi women's arts, science and commerce college at Bagalkot with sample size is 100, out of which 50 subjects in experimental group and 50 subjects in control group. Simple random sampling method was used where lottery method was used to select the subjects. Structured Interview schedule method will be used to collect the data.

2.1. Study Participants

Adolescent girls studying at akkamahadevi women's arts, science and commerce college at Bagalkot.

2.2. Sample Size

Sample size was 100, out of which 50 subjects in experimental group and 50 subjects in control group.

2.3. Setting of Study

The setting for the present study was Akkamahadevi women's arts, science and commerce college at Bagalkot.

2.4. Data collection Instrument

A questionnaire was used to collect the demographic variables and structured knowledge questionnaire was used to collect the knowledge regarding premenstrual syndrome among adolescent girls.

2.5. Content Validity and Reliability of Data Collection Instrument

Content validity of the tool was established by obtaining the suggestions from experts. The tool was validated by 4 experts. Reliability for the tool in the present study was established by Test-retest method and split-half method. In Test-retest method, the 7 days gap was given between the tests and correlation between the scores was calculated by using Cronbach's alpha value (0.923). Internal consistency was established by using split-half method, since there are 18 items in the tool, 'Spearman-Brown r' for equal length was calculated (0.919).

2.6. Data Collection Procedure

Formal permission was taken from the Principal, Shri B V V S Institute of Nursing Sciences, Bagalkot and Akkamahadevi women's arts, science and Commerce College at Bagalkot. Subjects were screened based on set inclusion and exclusion criteria and eligible subjects were invited to participate in the study. Written Informed consent was taken from the subjects. A structured questionnaire was administered to collect the data from both experimental group and control group. For the study group the investigator provided video assisted teaching programme for two hours and control on routine activity. It is followed by post assessment of knowledge score from both experimental group and control group.

2.7. Data analysis

Collected data was managed using MS-Excel 2007. Numerical data obtained from the sample was organized and summarized with the help of descriptive statistics like frequency, percentage, mean, standard deviation and mean percentage. Inferential statistics like T test and Chi square test was used. Statistical analysis was done using SPSS Ver. 25.

Ethical clearance: Ethical clearance was obtained by ethical clearance committee, BVVS Sajjalashree Institute of Nursing Sciences, Bagalkot. Written informed consent was obtained from participants. (BVVS/SIONS/IEC/2022-23/199- 09/05/2022)

3. RESULTS

In experimental group the mean age of the sample was 18.08 ± 0.75 years. Mean family monthly income of the sample was 10240 ± 3684.27. Mean age at menarche of the sample was 14.3 ± 1.199. Majority of the adolescent girls (76%) were Christians. According to their year of education 70% of the adolescent girls were studying in PUC II year, 46% of adolescent girl's father's had primary education. 46% of adolescent girl's mother's had not received any formal education, most of the adolescent girls fathers (38%) were doing agriculture, majority of the adolescent girls fathers (66%) were house wives, most of the adolescent girls (74%) had their family monthly income is ranging between10,001-15,000. 88 % of adolescent girls were residing in nuclear family. Most of the adolescent girls (90%) were residing in rural area. 88% the adolescent girls were regular with their menstrual cycle. Most of the adolescent girls (76%) were having 29-31 days menstrual cycle, 82% adolescent girls were having 3-5 days of menstrual flow, and most of the adolescent girls (36%) attained menarche at 15 years.

In control group the mean age of the sample was 17.9 ± 0.78years. Mean family monthly income of the sample was 9570 ± 3867.7. Mean age at menarche of the sample was 13.8± 1.29.

Majority of the adolescent girls (94%) were Hindu. According to their year of education 62% of the adolescent girls were studying in PUC I year, 28% of adolescent girl's father's had secondary/PUC. 34% of adolescent girl's mother's had secondary education, most of the adolescent girls fathers (40%) were doing agriculture, majority of the adolescent girls mothers (46%) were house wives, most of the adolescent girls (48%) had their family monthly income is <10000. 84 % of adolescent girls were residing in nuclear family. most of the adolescent girls (78%) were residing in rural area. 90% the adolescent girls were regular with their menstrual cycle. Most of the adolescent girls (64%) were having 29-31 days menstrual cycle, 78% adolescent girls were having 3-5 days of menstrual flow, and most of the adolescent girls (28%) attained menarche at 14 years.

Table: 1 -Level of knowledge regarding premenstrual syndrome among adolescent girls in pre test.

n= (50+50) =100

KNOWLEDGE REGARDING PREMENSTRUAL SYNDROME		EXPERIMENTAL GROUP		CONTROL GROUP	
	Range of Score	Frequency	Percentage	Frequency	Percentage
Poor knowledge regarding premenstrual syndrome.	0-6	0	0	0	0
Good knowledge regarding premenstrual syndrome.	7-12	36	72%	45	90%
Very good knowledge regarding premenstrual syndrome.	13-18	14	28%	5	10%

Findings related to assessment of levels of knowledge regarding premenstrual syndrome among adolescent girls of experimental group shows that, 72% of adolescent's had good knowledge regarding premenstrual syndrome another 28% of them were having very good knowledge regarding premenstrual syndrome.

Assessment of level of knowledge regarding premenstrual syndrome among adolescent girls of control group shows that, 90% of adolescent's had good knowledge regarding premenstrual syndrome another 10% of them were having very good knowledge regarding premenstrual syndrome.

Table: 2- Comparison of knowledge scores regarding Premenstrual syndrome of adolescent girls in pre-test & post-test of both experimental and control group.

Knowledge regarding Premenstrual syndrome	Max. Score	Pre-test (O_1)		Post-test (O_2)		Effectiveness (O_2 -O_1)	
		Mean± SD	Mean%	Mean± SD	Mean%	Mean±SD	Mean%
Experimental group	18	11.7±1.373	65 %	14.7±1.19	81.66 %	2.98±1.39	16.55%
Control group	18	11.44±1.021	63.55 %	12±1.159	66.66 %	0.72±0.72	4%

Findings related to comparison of mean percentage of the knowledge scores regarding Premenstrual syndrome among adolescent girls of experimental group in pre-test and post-test reveals a increase of 16.55 % in the mean knowledge scores regarding Premenstrual syndrome among adolescent girls after implementation of Video assisted teaching programme.

Whereas, comparison of mean percentage of the knowledge scores regarding Premenstrual syndrome among adolescent girls of control group in pre-test and post-test reveals increase of 4 percent in the mean knowledge scores regarding Premenstrual syndrome among adolescent girls.

Hence as per the above results it is clear that, administration of Video assisted teaching programme to the experimental group has increased more their knowledge regarding Premenstrual syndrome as compared with control group.

Table 3- Significance of the difference between the pre-test and post-test knowledge scores regarding premenstrual syndrome among adolescent girls of both experimental and control groups.

n= 50+50=100

Groups	Variables	Mean difference	Differential SD	't' value	P value
Experimental Group	Knowledge scores regarding premenstrual syndrome	2.98	1.39	-15.13	0.0001**
Control group		0.72	0.7295	-2.187	0.05*

Where, ***=$p<0.001$, **=$p<0.01$,   *=$p<0.05$

Findings related to the significance of the difference between the pre-test and post-test knowledge scores regarding premenstrual syndrome among adolescent girls shows that difference between mean pre-test [2.98±1.39] and post-test [10.06±5.004] knowledge scores regarding premenstrual syndrome among adolescent girls of experimental group found to be statistically significant at 0.05 level of significance [t=-15.13 (tab, p< 0.0001].

Whereas in control group, difference between mean pre-test [11.44±1.021] and post-test [12±1.159] knowledge scores regarding premenstrual syndrome among adolescent girls of control group found to be statistically significant at 0.05 level of significance [t=-2.187, p< 0.05]. Hence, as per the above stated findings it is clear that, there is a statistically significant difference between pre-test and post –test knowledge scores regarding premenstrual syndrome among adolescent girls of both experimental and control group adolescent girls. Hence 'H$_1$' stated is accepted.

Table: 4 -Significance of the difference in post-test scores of knowledge scores regarding premenstrual syndrome among adolescent girls of experimental and control group.

n= 50+50=100

Variables	Group	SD of post-test scores	't' value (unpaired)	'p' value
knowledge regarding premenstrual syndrome	Experimental group	1.19	10.166	0.000****
	Control group	1.159		

Where,   ***=p<0.0001

Findings related to significance of difference between post-test knowledge scores regarding premenstrual syndrome between experimental group and control group subjects revealed that, a statistically significant difference was found between post- test knowledge scores regarding premenstrual syndrome of experimental group and control group adolescent girls [t=10.166, p<0.0001].

Hence it is concluded that Video assisted teaching programme is an effective tool to increase knowledge regarding premenstrual syndrome among adolescent girls. Hence H$_2$ stated are accepted.

Table 5: Association between the pre-test knowledge scores regarding premenstrual syndrome among adolescent girls and their socio-demographic variables of experimental group.

n=50

Sl.no	Socio-demographic variables	DF	Chi square value (χ^2)	'P' value
1	Age	2	4.701	0.0914
2	Religion	1	1.405	0.5237
3	Year of study	1	0.036	0.8487
4	Education status of father	4	5.26	0.9216
5	Education status of mother	4	1.816	0.7695
6	Occupation of father	3	2.395	0.4945
7	Occupation of mother	4	0.854	0.93106
8	Family monthly income	3	1.233	0.636
9	Type of family	1	0.063	0.8017
10	Area of residence	1	0.764	0.2830
11	Regularity of menstrual cycle	1	0.417	0.5185
12	Length of menstrual cycle	3	0.449	0.9299
13	Duration of menstrual flow	1	1.4358	0.2328
14	Age at menarche	4	8.702	0.15369

DF- Degree of Freedom

Findings related to the association between post-test knowledge scores regarding premenstrual syndrome among adolescent girls of experimental group with their selected socio-demographic variables reveals that, there was no significant association was found between knowledge scores regarding premenstrual syndrome among adolescent girls of experimental group with any of their selected socio-demographic variables. Hence '**H$_3$**'stated is rejected.

Section B: Association between the post-test knowledge scores regarding premenstrual syndrome among adolescent girls of control group with their socio-demographic variables of adolescent girls.

To find out the association between post-test knowledge scores regarding premenstrual syndrome among adolescent girls of control group with their socio-demographic variables of adolescent girls with their socio-demographic variables, a research hypothesis was formulated.

Hypothesis was tested using Chi-square test.

Table 6: Association between the pre-test knowledge scores regarding premenstrual syndrome among adolescent girls and their socio-demographic variables of control group.

n=50

Sl.no	Socio-demographic variables	DF	Chi square value (χ^2)	'P' value
1	Age	2	3.532	0.1709
2	Religion	1	1.795	0.6327
3	Year of study	1	0.496	0.4813
4	Education status of father	4	5.822	0.2128
5	Education status of mother	4	02489	0.6466
6	Occupation of father	3	4.644	0.1997
7	Occupation of mother	4	6.196	0.2158
8	Family monthly income	3	1.863	0.536
9	Type of family	1	0.009	0.9231
10	Area of residence	1	4.675	0.0306*
11	Regularity of menstrual cycle	1	0.39	0.6102
12	Length of menstrual cycle	3	4.563	0.2067
13	Duration of menstrual flow	1	0.008	0.977
14	Age at menarche	5	11.534	0.073

DF- Degree of Freedom

Findings related to the association between post-test knowledge scores regarding premenstrual syndrome among adolescent girls of control group with their selected socio-demographic variables reveals that, there is a significant association between area of residence (χ^2=4.675, P<0.05) between knowledge scores regarding premenstrual syndrome and there was no significant association found between knowledge scores regarding premenstrual syndrome among adolescent girls of control group with any of their remained selected socio-demographic variables.

4. DISCUSSION

The present study was conducted to find out the Effectiveness of Video assisted teaching programme on knowledge regarding Premenstrual syndrome among adolescent girls studying at Akkamahadevi women's arts, science and commerce college at Bagalkot.

The findings are discussed below:

Percentagewise distribution of adolescent girls according to their duration of menstrual flow reveals that most of the adolescent girls (82%) in experimental group were having 3-5 days of menstrual flow, 18% of adolescent girls having more than 5 days of menstrual flow and less than 3 days of menstrual flow.

Where as in control group, most of the adolescent girls (78%) were having 3-5 days of menstrual flow, 22% were having more than 5 days of menstrual flow and no one had less than 3 days of menstrual flow.

This is consistent and supported with the study conducted by **Tsegaye D, Getachew Y at Ethiopia.** Result shows that majority (52.4%) of participants reported average length of menstrual period of 4–5 days of bleeding per one cycle.[10]

Most of the adolescent girls (90%) were residing in rural area in experimental group where as in control group 84 % of adolescent girls were residing in rural area.

This is consistent and supported with the study conducted by **Abu Alwafa R, Badrasawi M, Haj Hamad R at Palestine** . Result shows that majority (54%) of adolescent girls were residing in rural area. [11]

Percentagewise distribution of adolescent girls according to their age of attainment of menarche reveals that most of the adolescent girls (36%) in experimental group attained menarche at 15 years, 26% attained menarche at 13 years, 16% of adolescent girls attained menarche at 14 years, 16% of adolescent girls attained menarche at 16 years and remaining 6% attained menarche at 12 years.

Where as in control group, most of the adolescent girls (28%) attained menarche at 13 years, 26 % attained menarche at 14 years, 18 % attained menarche at 15 years, 14 % attained menarche at 12 years, 12 % attained menarche at 16 years and remaining 2% attained menarche at 11 years.

Most (30%) of adolescent girls attained their menarche at the age of 14. This is consistent and supported with the study conducted by **Tsegaye, D., Getachew, Y at Ethiopia.** Result shows that majority (55.5%) of adolescent girls attained their menarche at the age of 13-15. [10]

Findings related to assessment of levels of knowledge regarding premenstrual syndrome among adolescent girls of experimental group shows that, 72% of adolescent's had good knowledge regarding premenstrual syndrome another 28% of them were having very good knowledge regarding premenstrual syndrome.

Assessment of level of knowledge regarding premenstrual syndrome among adolescent girls of experimental group shows that, 90% of adolescent's had good knowledge regarding premenstrual syndrome another 10% of them were having very good knowledge regarding premenstrual syndrome. This is consistent and supported with the study conducted by **Suaidi M T, Wong P K, Mohd Tahir N A, Chua E W at Malaysia.** Result shows that majority (76 %) had good knowledge regarding premenstrual syndrome. [12]

Findings related to comparison of mean percentage of the knowledge scores regarding Premenstrual syndrome among adolescent girls of experimental group in pre-test and post-test reveals a increase of 16.55 % in the mean knowledge scores regarding Premenstrual syndrome among adolescent girls after implementation of VATP.

Whereas, in control group reveals increase of 4 percent in the mean knowledge scores regarding Premenstrual syndrome among adolescent girls.

Hence as per the above results it is clear that, administration of VATP to the experimental group has increased more their knowledge regarding Premenstrual syndrome as compared with control group. This is consistent and supported with the study conducted by **Kaur J at Punjab.** Result shows that planned teaching programme was effective in improving the knowledge of the adolescent girls regarding life style changes in the prevention of premenstrual syndrome during adolescence period.[13]

There was no significant association was found between knowledge scores regarding premenstrual syndrome among adolescent girls of experimental group with any of their selected socio-demographic variables

Findings related to the association between post-test knowledge scores regarding premenstrual syndrome among adolescent girls of control group with their selected socio-demographic variables reveals that, there is a significant association between area of residence (χ^2=4.675, P<0.05) between knowledge scores regarding premenstrual syndrome and there was no significant association found between knowledge scores regarding premenstrual syndrome among adolescent girls of control group with any of their remained selected socio-demographic variables.

This is consistent and supported with the study conducted by **Patil K at Bagalkot.** Result depicts that no significant association found between premenstrual tension syndrome and Religion. [14]

CONCLUSION AND RECOMMENDATION

This study showed that premenstrual syndrome is a common health problem in adolescent girls of Bagalkot. Video assisted teaching programme was strongly linked with increasing the knowledge about premenstrual syndrome among adolescent girls. The observation of this study has grave practical importance from the Indian perspective. The result of the present study urges that in planning health promotion interventions for adolescent girls in their curriculum, more attention be paid to self-efficacy in identifying and managing premenstrual syndrome related manifestations among adolescent girls.

Based on the findings of the study the following recommendations are stated; A similar study can be undertaken with a large stratified sample including adolescent girls from different sections of society to generalize the findings. A study can be conducted to find out the prevalence of anxiety and symptoms of premenstrual syndrome among adolescent girls. A study can be carried out to evaluate the efficiency of various teaching strategies like SIM, pamphlets and computer-assisted instruction on anxiety and symptoms of premenstrual syndrome among adolescent girls.

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