Effectiveness of Structured Teaching Programme Regarding Selected Yoga Techniques to Relieve Symptoms of Premenstrual Syndrome Among Adolescent Girls of Selected High School at Bangalore

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Abstract:- **Premenstrual syndrome (PMS) is a challenging problem as the psychological changes which occur in adolescent period are much more stressful and complex. Premenstrual syndrome also known as premenstrual tension (PMT) is a collection of emotional symptoms, with or without physical symptoms, related to menstrual cycle of girls. Menstruation is a normal physiological cycle or process in all females of the reproductive age group. However some women, girls feel or affected by menstrual problem. Among those, PMS is one of the disorder and it is mainly due to hormonal imbalance in the body. Yoga which helps to harmonize the mind and breath with the body through various breathing techniques, yoga posture (asanas) and meditation which also helps in relieving pain. Yoga, tailored to chronic low back pain which helps to produce significant reduction in pain and depression. Several yoga poses helps to ease PMS and also help the mind and body to adapt with stress, anxiety and depression making to feel relaxed and calm, as well as enabling us to cope with psychological symptoms of PMS. The study was conducted with the aim to evaluate the effectiveness of structured teaching programme (STP) regarding selected yoga techniques to relieve the symptoms of PMS among adolescent girls. Researcher adopted an evaluatory approach with pre-experimental one group pre-test and post-test design in the study. Self- structured knowledge questionnaire was used to assess the knowledge among adolescent girls regarding selected yoga technique to relieve the symptoms of PMS. Split half method was used to check the Reliability of the Tool and the tool was found reliable (r= 0.88). probability simple random sampling techniques was used to select 100 adolescent girls from 3 high school. Findings revealed that the post-test knowledge score (26.49±2.48) was higher than pre-test knowledge score (10.25±2.46). The calculated 't'value in knowledge (51.34 p<0.05). The study found significant association between knowledge and demographical variables. Study concludes that structured teaching programme was effective in improving the knowledge of adolescent girls regarding Yoga techniques to relieve the symptoms of premenstrual syndrome.**

Keywords:- Effectiveness, Structured teaching programme, Yoga technique, Premenstrual Syndrome, Adolescent girls, Selected Schools.

I. INTRODUCTION

Adolescence is the phase between 10-20 years in that children undergo rapid changes in body size, physiology and psychological and social functioning. All body dimensions, development and maturation are completed during adolescence period. Transition from childhood to adulthood is the final or net result of hormones and social structure. According to UNICEF adolescence start with the onset of puberty. Adolescence has three phases: early adolescence belongs to 10-30 years age, middle adolescence 14-16 year age and late adolescence 17-20 age group.[1]

Premenstrual syndrome is also known as premenstrual tension (PMT) is a combination of emotional symptoms, with or without physical symptoms related to menstrual cycle.[2] Menstruation is a normal physiological cycle or process experienced by all reproductive age group females. However, some women and girls affected by menstrual problem. Premenstrual syndrome is mainly due to hormonal imbalance and PMS is one of the disorder among those. [3]

Premenstrual syndrome is a combination of physical and psychological symptoms which start about 5 to 11 days before monthly menstruation. Many girls and women manifested breast tenderness and abdominal pain. They may also experience bloating and sleeping problem.[2] Physical symptoms which is common are abdominal fullness, bloating of abdomen, headache, less tolerance to noise and lights and clumsiness. The most visible symptoms are irritability tension and dysphoria, breast engorgement and tenderness, abdominal bloating, constipation or diarrhea, headache and migraine, swelling of the hands or feet, weight gain, clumsiness, Nausea and vomiting, muscle and joint ache. [4,5]

Severe form of PMS clearly affects mental health leading to depression or anxiety and this refers as premenstrual dysphoric disorder (PMDD). About 15 out of 20 girls or women who menstruate have symptoms of PMS to some extent every now and again and About 1 out of 20 women have severe symptoms on regular basis that strongly affect their everyday lives.[2] PMDD occurs about 5% of women with PMS. Anxiety, insomnia, irritability, hostility, difficulty concentrating, mood swings although angry outburst towards self or others and some experience positive burst are common symptoms during PMDD(5). PMS symptoms might particularly affects their school activities and social interaction in a negative way especially in young adolescent.[6]

Women or girls of reproductive age group experienced 90%- 95% premenstrual changes. One study reported that about 300 different premenstrual change have been experienced by the reproductive age group women or girls, with the most common symptoms. These change can be manage by pharmacological or non-pharmacological management, Yoga being one of the inseparable aspect.[7]

Yoga is said to be a psychological spiritual discipline helping in achieving union and harmony with our mind, body and soul and eventually union of our individual consciousness with the universal consciousness, which helps to change in mental attitude, diet and practice of specific techniques such as yoga asana (posture), breathing (pranayama), and meditation to accomplish the supreme level of consciousness.[8] Yoga plays an important role in reducing stress, decreasing anxiety levels improving sense of well-being.[9] Yoga helps in alleviating the symptoms of PMS which are difficult to list out and countless. it also helps in transform the body to bring harmony between the body and the soul and feel the mind with satisfaction and joy.[10]

Various yoga poses are evince in ease premenstrual symptoms which also helps the mind and body to adjust with stress, anxiety and depression by relaxing and calming the mind and body, and permit us to cope with psychological symptoms of PMS.[11]

According to the epidemiology of premenstrual syndrome globally, women with premenstrual syndrome usually present both physical and mood symptoms. These are affecting approximately 20% to 30% of menstruating women. The average age at which women with premenstrual syndrome seek treatment is below 30 years.[12]

In context of India the premenstrual syndrome is the second (60.50%) most prevalent syndrome among the women of the reproductive age group after social withdrawal (67.08%). According to a study conducted in TamilNadu, to evaluate the prevalence of menstrual problems especially dysmenorrhea and its severity among 300 female medical students and its association with college absenteeism. The result shows that the prevalence of premenstrual syndrome was 67%, only 9.7% of students consulted a physician and, 22.1% of students with dysmenorrhea reported irritation of daily activities. The study concludes that Dysmenorrhea and PMS is highly prevalent among female medical students, it is related to college/class absenteeism. [13]

An extremely wide range of estimated prevalence rate for premenstrual disorders in adolescence has been reported as low as 14% to as high as 88%. Treatment of an adolescent with premenstrual disorder should begin with education and life style changes including counselling and therapy.[14] A pre-experimental one group pretest posttest study was conducted to access the prevalence and severity of premenstrual symptoms and how effective an educational program is in decreasing the symptom severity among 711 adolescent girls of two rural and two urban secondary school of Pondicherry by using self-administered semi-structured questionnaire. The study results shows that 40.9% of the urban girls and 51.6% of the rural girls were suffering from premenstrual symptoms. Study concludes that health education programs regarding PMS and other menstrual problems must be included in the curriculum of secondary schools to bring down the prevalence of such problems.[15]

The investigator, felt that adolescent is a prime time for health promotion and to encourage them to establish healthy patterns of behavior that will influence their development and health in later years. Premenstrual syndrome symptoms rate is seen very high in adolescent girls and women at some point in their lifetime and this type of symptoms severely affect the adolescent girls. Majority of studies show that, the yoga techniques or therapy helps to relieve the premenstrual syndrome So, Regular yoga can help or reduce the risk of developing premenstrual syndrome symptoms. In addition, yoga can be practiced easily in the adolescent age, which helps them to maintain the flexibility and balance of the body as well as to cope with the health problems of adolescents. Premenstrual syndrome symptoms in adolescents can also be severe enough not only to interfere with, but also to impair functioning in the domains of school work/performance, social activities or interpersonal relationship. So, this study aims to improve the knowledge of adolescent girls regarding the yoga and its benefits which helps to relieve symptoms of Premenstrual syndrome.

II. METHODOLOGY

This research aimed at assessing the effectiveness of structured teaching program regarding selected yoga technique to relieve the symptoms of premenstrual syndrome among adolescent
Girls of selected high school at Bangalore.

➢ *Research approach and design*
An evaluative approach with pre-experimental, i.e., one group pretest posttest design was found to be appropriate to describe the effectiveness of structured teaching program regarding selected yoga technique to

relive symptoms of premenstrual syndrome among adolescent girls.

➤ *Setting*

This study was conducted in 3 high school, sunshine public school Chikabanavara, Pavitra school Chikkabanavara and BET English school Hessarghatta main road Bangalore. This was feasible to conduct study.

➤ *Sampling procedure*

The sample of the study comprises 100 adolescent girls in selected high schools at Bangalore, fulfilling inclusion criteria. Probability Simple random sampling technique was used to select 100 adolescent girls from the selected high schools.

➤ *Ethical Approval*

Ethical clearance was obtained from institutional ethical Research committee of RR College of Nursing.

➤ *Data collection technique*

In this study researcher has prepared structured knowledge questionnaire which consist 30 knowledge items and 10 demographic information has been used to collect data from adolescent girls and same questionnaire was used in pre and post test.

The tool was further divided into two sections.

Section-A: questionnaire to elicit the baseline variables.
Section-B: Consists of 30 knowledge items related to meaning of premenstrual syndrome, Menarche, menstruation, Yoga, Yoga technique. It has 3 parts.
Part-I: Consists of 2 knowledge items related to menarche and menstruation. (item 1-2)
Part-II: Consists of 4 knowledge items related to premenstrual syndrome means, causes, symptoms and general management. (item 3-6)
Part-III: Consists of 24 knowledge items related to yoga, yoga techniques and its benefits. (item 7-30).

The investigator has prepared semi-structured questionnaire after extensive literature review, experts advice. The instrument is prepared in English and distributed to the respondent are requested to respond the questions by putting tick mark to the option given as

accurate as possible. After completion of questionnaire STP was given and yoga poses have shown to adolescent girls on the same pre testing day. Post test was conducted on the 7th day of the pretest.

Each question had a score 1 for correct answer and score 0 for the wrong answer.
The total score was 30.

III. RESULTS

❖ *Organization and Interpretation of the Study Findings*
The substantive summary of the analysis was under the following sections

Section 1 – Description of demographic variables of adolescent girls
- Frequency and percentage distribution of demographic variables of adolescent girls

Section 2 – Assessment of pre-and post-test knowledge regarding selected yoga technique to relieve symptoms of premenstrual syndrome among adolescent girls of selected high school at Bangalore.
- Range, mean, standard deviation and mean percentage of pre-test and post-test knowledge
- Frequency distribution of samples according to pre-test and post-test level of knowledge
- Mean, standard deviation and mean percentage of pre-test and post-test aspect wise knowledge

Section 3 – Effectiveness of structured teaching programme regarding selected yoga technique to relieve symptoms of premenstrual syndrome among adolescent girls of selected high school at Bangalore by comparing pre-test and post-test scores.
- Outcomes of paired t-test analysis on comparison of pre-test and post-test knowledge
- Outcomes of paired t-test analysis on comparison of pre-test and post-test aspect wise knowledge

Section 4 - Association between levels of knowledge with their selected demographic variable
- Association between knowledge and demographic variables

➤ SECTION 1: DISTRIBUTION OF SAMPLES BASED ON FREQUENCY AND PERCENTAGE OF DEMOGRAPHIC CHARACTERISTICS.

Sl no	Demographic variables		frequency	Percentage
1	Age in years	13-14yrs	56	56.0
		15-16yrs	44	44.0
2	Class studying	8th	39	39.0
		9th	27	27.0
		10th	34	34.0
3	Religion	Hindu	74	74.0
		Christian	10	10.0
		Muslim	16	16.0
		Others		
4	Socio-economic status of family	High	6	6.0
		Middle	86	86.0
		Low	8	8.0
5	Age of menarche	9-10yrs	6	6.0
		11-12yrs	47	47.0
		13-14yrs	47	47.0
6	Menstrual cycle	21-28 days	40	40.0
		28-35 days	25	25.0
		Once in 35days	17	17.0
		Irregular	18	18.0
7	Family history of Premenstrual syndrome	Yes	61	61.0
		No	39	39.0
8	Personal history of premenstrual syndrome	Yes	86	86.0
		No	14	14.0
9	If yes, relieved premenstrual syndrome by	Eating healthy food	35	35.0
		Rest and sleep	38	38.0
		Practice yoga	4	4.0
		Medication	9	9.0
		No History	14	14.0
10	Previous source of information	Mass media	52	52.0
		Health personal	16	16.0
		Family members	28	28.0
		Peer group	4	4.0

Table 1:- Distribution of samples based on frequency and percentage of demographic characteristics (n=100)

The table 1 presents the frequency and percentage distribution of menopausal women according to their demographic variables.

According to age, majority of the adolescent girls (56%) were within 13-14years 44% of them were within15-16 years group.

Regarding Class studying in,39% were from 8th standard, 27% were from9th standard, and 34% were from 10th standard.

According to Religion, majority of them (74%) were Hindu,10% were Christian, and 16% were Muslim and none of them was belong to others.

According to socioeconomic status, 86% were belonging to middle class, 8% were belonging to lower class and 6% belonged to higher socioeconomic class.

Regarding age of menarche, 47% each had menarche at 11-12yrs and 13-14yrs and remaining 6% at 9-10yrs of age.

Regarding monthly menstrual cycle, 40% had 21-28 days cycle, 25% had 28-35 days cycle, 17 had once in 35days and 18 had irregular menstruation.

Regarding family history of premenstrual syndrome, 61% had h/o premenstrual syndrome and 39% were not had any family history.

Regarding personal history of premenstrual syndrome, 86% had h/o premenstrual syndrome and 14% were not had any personal history.

Regarding relief of premenstrual syndrome symptoms, 35% were relieved by Eating healthy food, 38% had relief from rest and sleep, 9% had relief from medication and 4% had relief from yoga practice.

Regarding previous source of information, 52% had mass media as previous source of information, 4% had peer group as previous source of information, 16% had health personnel as previous source of information and 28% had family member as previous source of information.

➤ SECTION 2 – ASSESSMENT OF PRE AND POST TEST KNOWLEDGE REGARDING SELECTED YOGA TECHNIQUE TO RELIEVE SYMPTOMS OF PREMENSTRUAL SYNDROME AMONG ADOLESCENT GIRLS

No.	Knowledge Aspects	Statements	Range	Mean	SD	Mean (%)
	Pretest knowledge	30	6-18	10.25	2.46	34.16
	Posttest knowledge	30	19-29	26.49	2.48	88.3

Table 2:- Range, mean, standard deviation and mean percentage of pre-test and post-test knowledge regarding selected yoga technique to relieve symptoms of premenstrual syndrome among adolescent girls (n=100)

The above table 2 shows the pre- test range was 6-18, mean 10.25, standard deviation was 2.46, mean percentage was 34.16% and the post test range was 19-29, Mean was 26.49, standard deviation was 2.48, and mean percentage was 88.3%.

Knowledge Level	Classification of Respondents			
	Pre-test		Post-test	
	Number	Percentage	Number	Percentage
Inadequate Knowledge (<50%), (0-14) or (<15)	87	87	00	00
Moderately adequate knowledge (50-75%) or (15-22)	13	13	14	14
Adequate Knowledge (>75%) or (23-30)	00	00	86	86
Total	**100**	**100**	**100**	**100**

Table 3:- Frequency distribution of samples according to pre-test and post-test level of knowledge (n=100)
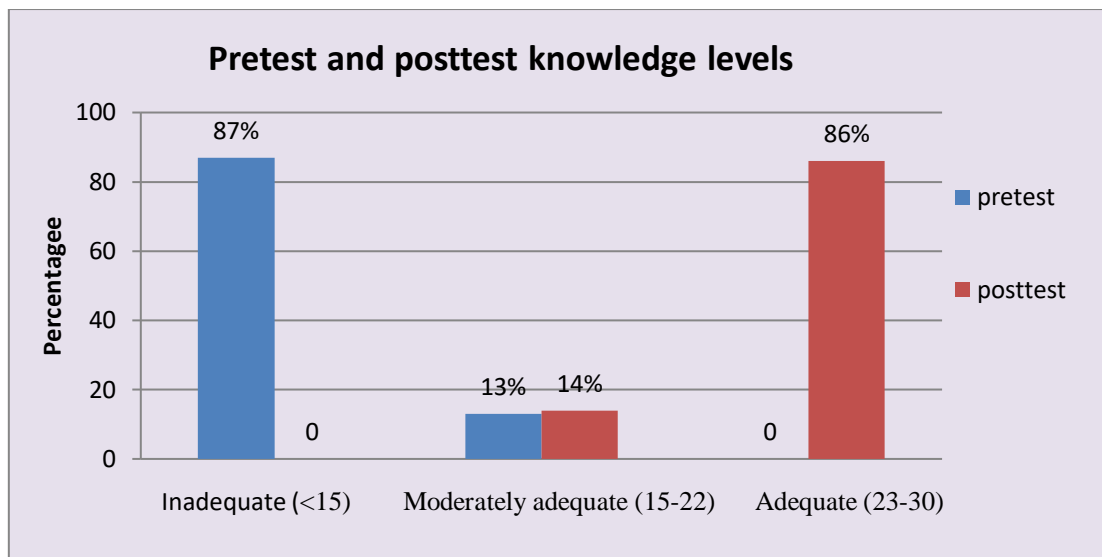
Fig 1:- Diagram showing distribution of samples based on their pre-test and post-test knowledge

The above table 3 shows in the pre-test 87% had inadequate knowledge, 13% were found to be with Moderately adequate knowledge. But, in post-test, majority i.e. 86 (86%) had adequate knowledge and 14 (14%) of them was found to be with moderately adequate knowledge and none of them was found to be with inadequate knowledge. It evidenced that there is an increase in the knowledge.

S No.	Aspects of knowledge	Max score	Pretest			Posttest		
			Mean	SD	Mean %	Mean	SD	Mean %
1	Introduction and Definition	3	1.08	0.825	36	2.73	0.489	91
2	Causes of premenstrual syndrome	1	0.44	0.499	44	0.76	0.429	76
3	Symptoms of premenstrual syndrome	1	0.39	0.490	39	0.81	0.394	81
4	General management of premenstrual syndrome	1	0.49	0.502	49	0.89	0.314	89
5	Definition of yoga	1	0.45	0.500	45	0.89	0.314	89
6	General instructions regarding yoga	3	1.49	0.759	49.66	2.53	0.559	84.33
7	Yoga techniques and its benefits	20	5.91	2.345	29.55	17.91	1.975	89.55
	Overall	**30**	**10.25**	**2.46**	**34.16**	**26.49**	**2.48**	**88.3**

Table 4:- Mean, standard deviation and mean percentage of pre-test and post-test aspect wise knowledge regarding selected yoga technique to relieve symptoms of premenstrual syndrome among adolescent girls (n=100)
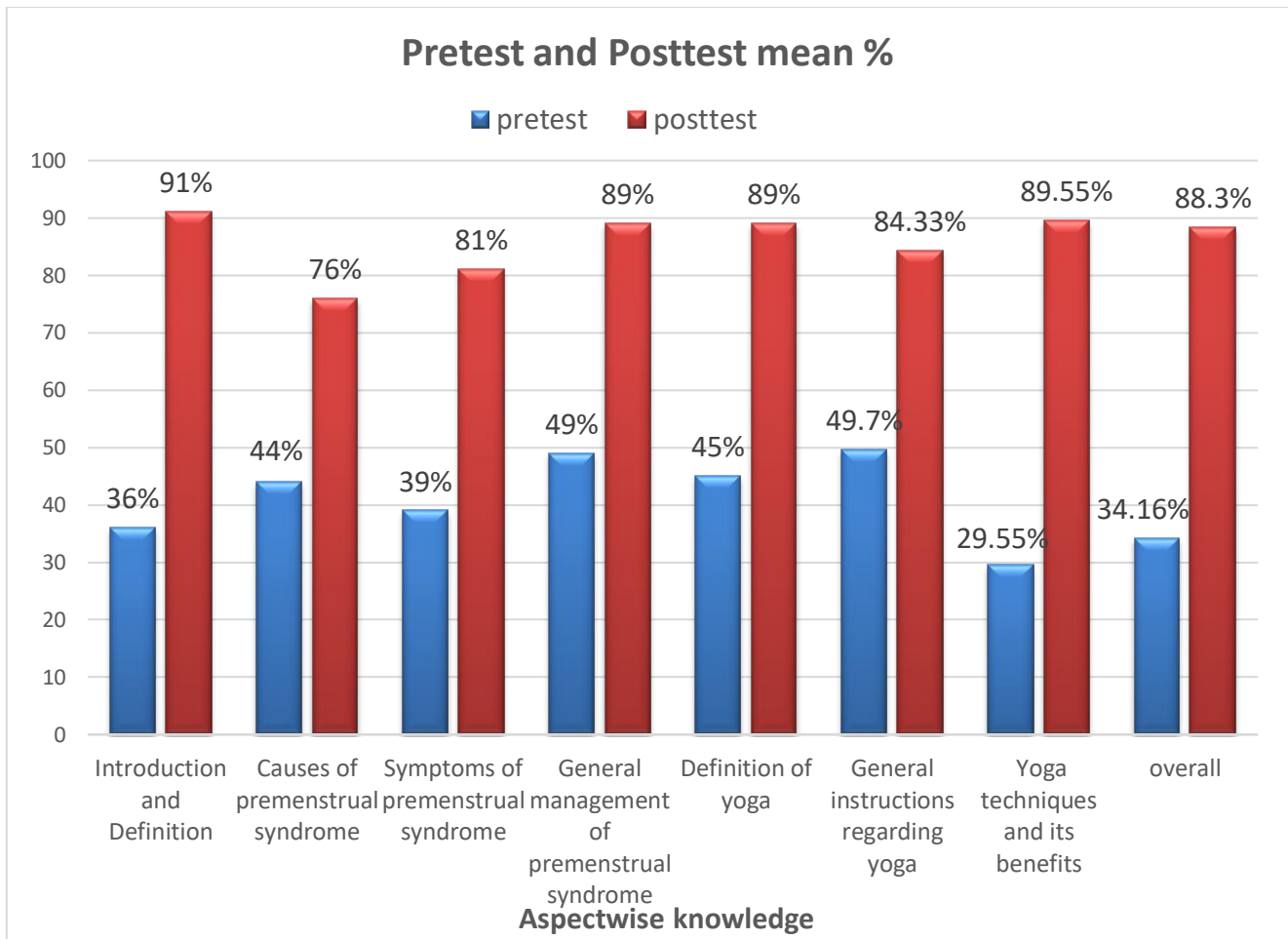
Fig 2:- Diagram showing aspect wise pre-test and post-test knowledge mean percentage

Mean score percent of knowledge in the aspect of knowledge regarding Introduction and definition was 36%, knowledge regarding causes of premenstrual syndrome was 44%, knowledge regarding symptoms was 39%, and knowledge regarding general management was 49%,rearding definition of yoga was 45, General instructions reading yoga was 49.66 and regarding yoga techniques was 29.55 before structured teaching program and after the intervention it was found to be increased to the mean score percent of in the aspect of knowledge regarding Introduction and definition was 91%, knowledge regarding causes of premenstrual syndrome was 76%, knowledge regarding symptoms was 81%, and knowledge regarding general management was 89%,rearding definition of yoga was 89%, General instructions regarding yoga was 84.33 and regarding yoga techniques was 89.55.

➤ SECTION 3 – EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING SELECTED YOGA TECHNIQUE TO RELIEVE SYMPTOMS OF PREMENSTRUAL SYNDROME AMONG ADOLESCENT GIRLS

Aspects	Max. Score	Respondents Knowledge Scores			Mean difference	SE of Mean Diff	Paired 't' Test	Df	P value	Inference
		Mean	SE of Mean	Mean %						
Post-test	30	26.49	2.48	88.3	16.24	0.316	51.34	99	<0.05	HS
Pre-test	30	10.25	2.46	34.16						

Table 5:- Outcomes of Paired t-Test Analysis on Comparison of Pre and Post Test Knowledge (n=100)

The table 5 represents the mean pre-test and post-test knowledge regarding selected yoga technique to relieve symptoms of premenstrual syndrome among adolescent girls. The paired t-test was carried out and it was found invariably significant at $p < 0.05$ level, hence null hypothesis (H_{01}) is rejected and the research hypothesis (H_1) was accepted. It provides the evidence that the structured teaching program was significantly effective in providing knowledge regarding selected yoga technique to relieve symptoms of premenstrual syndrome among adolescent girls.

S. No.	Aspects	Max score	Enhancement					Paired t-test	p-value
			Mean difference	SE of Mean difference	Pretest Mean%	Posttest Mean%	Enhancement in Mean%		
1	Introduction and Definition	3	1.650	0.100	36	91	55	16.52	p<0.05
2	Causes of premenstrual syndrome	1	0.320	0.063	44	76	32	5.04	p<0.05
3	Symptoms of premenstrual syndrome	1	0.420	0.061	39	81	42	6.930	p<0.05
4	General management of premenstrual syndrome	1	0.400	0.060	49	89	40	6.633	p<0.05
5	Definition of yoga	1	0.440	0.062	45	89	44	7.043	p<0.05
6	General instructions regarding yoga	3	1.040	0.094	49.66	84.33	34.66	11.04	p<0.05
7	Yoga techniques and its benefits	20	12	0.284	29.55	89.55	60	42.214	p<0.05
	Overall	30	16.24	0.316	34.16	88.3	54.14	51.34	<0.05

Table 6:- Outcomes of Paired t-Test Analysis on Comparison of Pre and Post Test aspect wise Knowledge (n=100)

Mean score percent of knowledge in the aspect of knowledge regarding Introduction and definition was 36%, knowledge regarding causes of premenstrual syndrome was 44%, knowledge regarding symptoms was 39%, and knowledge regarding general management was 49%,regarding definition of yoga was 45, General instructions reading yoga was 49.66 and regarding yoga techniques was 29.55% before structured teaching program and after the intervention it was found to be increased to the mean score percent of in the aspect of knowledge regarding Introduction and definition was 91%, knowledge regarding causes of premenstrual syndrome was 76%, knowledge regarding symptoms was 81%, and knowledge regarding general management was 89%,rearding definition of yoga

was 89%, General instructions reading yoga was 84.33 and regarding yoga techniques was 89.55.

The table 6 represents the mean pre-test and post-test knowledge regarding selected yoga technique to relieve symptoms of premenstrual syndrome among adolescent girls. The paired t-test was carried out and it was found invariably significant at $p < 0.05$ level, hence null hypothesis (H_{01}) is rejected and the research hypothesis (H_1) was accepted. It provides the evidence that the structured teaching program was significantly effective in providing knowledge regarding selected yoga technique to relieve symptoms of premenstrual syndrome among adolescent girls.

➢ SECTION 4 - ASSOCIATION BETWEEN LEVELS OF KNOWLEDGE WITH THEIR SELECTED DEMOGRAPHIC VARIABLES

Sl no	Demographic variables		Below median	Above median	Total	Chi square value	Df	p value	Inference
1	Age in years	13-14yrs	38	18	56	1.853	1	>0.05	NS
		15-16yrs	24	20	44				
2	Class studying	8th	30	9	39	6.051	2	>0.05	S
		9th	14	13	27				
		10th	18	16	34				
3	Religion	Hindu	41	33	74	5.841	2	>0.05	NS
		Christian	9	1	10				
		Muslim	12	4	16				
4	Socio-economic status of family	High	4	2	6	2.529	2	>0.05	NS
		Middle	51	35	86				
		Low	7	1	8				
5	Age of menarche	9-10yrs	4	2	6	0.059	2	>0.05	NS
		11-12yrs	29	18	47				
		13-14yrs	29	18	47				
6	Menstrual cycle	21-28 days	22	18	40	3.282	3	>0.05	NS
		28-35 days	19	6	25				
		Once in 35days	11	6	17				
		Irregular	10	8	18				
7	Family history of Premenstrual syndrome	Yes	40	21	61	0.848	1	>0.05	NS
		No	22	17	39				
8	Personal history of Premenstrual syndrome	Yes	55	31	86	0.995	1	>0.05	NS
		No	7	7	14				
9	If yes, relieved premenstrual syndrome by	Eating healthy food	20	15	35	3.354	3	>0.05	NS
		Rest and sleep	24	14	38				
		Practice yoga	3	1	4				
		Medication	8	1	9				
10	Previous source of information	Mass Media	30	22	52	1.106	3	<0.05	NS
		Health personal	10	6	16				
		Family members	19	9	28				
		Peer group	3	1	4				

Table 7:- Association between knowledge and demographic variables (n=100)

Note: s-Significant at 95% (P<0.05); NS-Not significant at 95% level (p>0.05)

The above table 7 showed the outcomes of association between knowledge and demographic variables. Out of demographic variables, Class studying (Chi-square value=6.051, df=2) was significantly associated with knowledge. The other variables were not statistically significant at 95% level (p>0.05).

The table 7 presents the association between knowledge with their selected demographic variables The Chi-square test was carried out and it was found statistically significant at p<0.05 level, hence research hypothesis (H_1) is accepted and the null hypothesis (H_0) was rejected. It provides the evidence that there is significant association between knowledge and demographic variables.

- *Inference:*
The study revealed that STP is effective in improving knowledge regarding selected yoga technique to relieve the symptoms of premenstrual syndrome among adolescent girls. It also revealed that there is a significant association between knowledge and demographic variables.

IV. DISCUSSION

❖ *Major findings*
➢ *Findings of demographic Performa*
- Majority 56% of adolescent girls were in the age group between 13-14 years, whereas 44% belongs between 15-16years
- Majority 34% of adolescent girls were studying in 8th class, where as 34% in 10th 27% and in 9th class.
- Majority 74% were Hindu, where as 10% Christian and 16% Muslim.
- Majority 86% were from Middle class family, where as 8% low class family and 6% High class family.
- Majority 47% of adolescent girls were attained menarche at 11-12years and 13-14years, whereas 6% at 9-10years.
- Majority 40% of adolescent girls had 21-28days menstrual cycle, where as 25% had 28-35 days cycle, 17% had once in 35days and 18% had irregular menstruation.
- Majority 61% of adolescent girls were had family history of PMS, whereas 39% had no family history of PMS.
- Majority 86% of adolescent girls were had history of PMS and 14% were had no history of PMS.
- Majority 38% of adolescent girls PMS relieved by rest and sleep, whereas 9% by medication and 4% by Yoga practice
- Majority 52% had previous source of information from mass media , whereas 28% from family member 16% from health personal and 4% from peer group.

➢ *Objectives 1: To assess the existing knowledge regarding selected yoga technique to relieve symptoms of premenstrual syndrome among adolescent girls.*
It shows that, the pre-test knowledge level result shows 87% of the respondents possess inadequate

knowledge, 13% of them were found to be with moderately adequate knowledge and no respondent possessed adequate knowledge.

The mean percentage and standard deviation of knowledge variables of adolescent girls in the pre-test showed that the overall knowledge of adolescent girls was 34.16% with standard deviation 2.46. The highest mean score of subjects is 49.66% with standard deviation 0.759% in general instruction regarding yoga. The lowest mean score of the subject is 29.55% with standard deviation2.345 in knowledge about Yoga techniques and its benefits. This decrease in overall knowledge indicated that adolescent girls need more information regarding general information on yoga technique and its benefits.

In the post test, majority 86% of the subjects had adequate knowledge, 14% of subjects had moderately adequate knowledge and none of them had inadequate knowledge regarding Yoga technique.

The mean percentage and standard deviation of knowledge variables of adolescent girls in the post-test showed that the overall knowledge of adolescent girls was 88.3 % with standard deviation2.48. The highest mean score of subjects is 89.55% with Standard deviation 1.975 in knowledge about yoga technique and its benefits. The lowest mean score of the subject is 76% with standard deviation 0.429 in knowledge about causes of premenstrual syndrome. This indicates that there is a significant increase in the knowledge regarding selected yoga technique among adolescent girls.

The findings of the present study were supported by a study conducted in selected nursing colleges at Madurai on to determine the effect of Yoga therapy on anxiety and Premenstrual syndrome. The findings revealed that, the mean post-test anxiety score was significantly less than the mean pre-test anxiety score of college girls who had yoga therapy (t= 13, p< 0.001). the mean post-test score of premenstrual syndrome was significantly less than the mean pre-severity score of premenstrual syndrome of the college girls who had yoga therapy (t= 15.8, p< 0.001).[60]

➢ *Objective 2: To evaluate the effectiveness of structured teaching programme regarding selected yoga technique to relieve symptoms of premenstrual syndrome among adolescent girls by comparing pre-test and post-test scores.*
Regarding over all knowledge the paired mean difference was 16.24 and SD of difference was 0.316. It was found to be significant (t=**51.34**, df=99) at 5% level (i.e. p<0.05). The paired t-test was also worked out for the different aspects of knowledge regarding selected yoga technique to relieve the symptoms of premenstrual syndrome among adolescent girls and it was found to be invariably significant at 5% (i.e. p<0.05). It evidenced that structured teaching programme was statistically significant in improving knowledge among adolescent girls.

Though there is lack of literature comparing the effectiveness of STP on knowledge regarding selected yoga technique, there have been multiple studies to compare the effectiveness of yoga technique. The study was done on effect of educational programme on premenstrual syndrome among 711 adolescent school girls at Pondicherry to study the prevalence and severity of premenstrual symptoms in adolescent girls and how effective an educational programme is in decreasing the symptoms severity in these girls. The study revealed that, 40.9% of urban girls and 51.6% of the rural girls were suffering from premenstrual symptoms. Researcher noted a significant decrease in the total PMS scores and all the subscale scores of the student three months after the educational program when compared to the scores before the program.[24]

➢ *Objective 3: To associate between post-test knowledge scores with the selected demographic variables.*

The Chi square analysis was carried out to determine the association of knowledge with their selected demographic variables of adolescent girls and it is found to be associated with variables such as Class studying (Chi-square= 6.051, df=2) was significantly associated with knowledge. The other variables were not statistically significant at 95% level (p>0.05). Therefore, the Hypothesis H2 as stated, there is a significant association with post-test knowledge score and socio-demographic variables (i.e Class studying) is accepted. And there is no significant association between the other socio-demographic variables.

V. CONCLUSION

The present study aims at improve the knowledge level and evaluating the STP regarding selected yoga technique to relieve the symptoms of premenstrual syndrome among adolescent girls. A health education programs regarding premenstrual syndrome, menstrual hygiene and menstrual problems must be included in the curriculum of secondary schools by school health nurse which helps in better school performance and decrease school absenteeism of adolescent girls and also to bring down the prevalence of such problems. The study concludes that structured teaching program will be significantly effective method to enhance adolescent girl's knowledge.

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