

## **Premenstrual syndrome and it's effects on role acceptance, coping behavior and quality of life among college students**

**Running Title:** -Premenstrual syndrome and it's effects

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### **Abstract**

Premenstrual Syndrome (PMS) consists of physical and psychological symptoms appear one week before the premenstrual phase of the cycle and resolve completely by the end of Menstruation. The aim of the study was to assess the PMS and its effects On Role Acceptance and Coping Behavior. It is a Cross- sectional design and was carried out on 400 Medical students through Purposive sampling. The participants were taken from SRM University. PMS was assessed using the Premenstrual Symptom Screening Tool (PSST). General Health Questionnaire-28 (GHQ-28) was used to assess the level of psychological distress. Role Acceptance Scale was used to assess level of Role Acceptance and Cope Inventory was used to assess the Coping Behavior of students with PMS. The analysis of data was done employing t-test, Pearson correlation and Chi-square. The results revealed that there was a significant difference between students with and without PMS on Role Acceptance and Coping Behavior. Those who had PMS showed lower Role Acceptance compared to those without PMS. They used Avoidant coping and social support as coping strategies to deal with PMS. There is also significant relationship between Role Acceptances and Coping Behavior; Students having better Role Acceptance used problem focused coping strategies.

**Keywords:** Premenstrual Syndrome, Role Acceptance, Coping Behavior, Quality of Life.

### **INTRODUCTION**

Menarche and menstruation are important aspects of woman's life. In the modern society, among the increasing problems related to life and health of women with PMS, it is considered that menstruation has become an additional source of distress in women. Premenstrual Syndrome is a major clinical entity affecting a large segment of Women population. It is the name given to a group of physical and emotional symptoms that women with PMS experience on regular basis in relation to menstruation. The symptoms occur generally within seven to fourteen days prior to menstruation. Symptoms worsen as menstruation approaches and subside at the onset or after few days of menstruation. Amenorrhea is the absence of menstruation. It may be physiological or pathological. It is categorized as primary and secondary amenorrhea, depending on the onset of menarche. It may be physiological or pathological. It is categorized as primary and secondary amenorrhea, depending on the onset of menarche. Primary amenorrhea is the absence of menstruation by age of 15 years with the poor secondary sexual characteristics. Secondary amenorrhea refers to the absence of menstruation for 3 cycle length in setting of oligomenorrhea; 6 months after establishing regular menses are by 18 months after menarche (Speroff, 2010).

Moghadam et al., (2014), reported in their meta-analysis review study that the collective prevalence of PMS was 47.8 percent worldwide including the data with different in age, physical activity and nutrition. Globally the prevalence of PMS is high and about half of the women with reproductive years' experience symptoms of PMS. The highest prevalence was 98% in Iran, 12% of lowest prevalence reported in France.

In India the *Prevalence of Premenstrual Syndromes* 78.2% in Chandigarh, 42% in Vadodara, and 67% in Chennai with a widely varying *Prevalence* (Laksmi, et al, 2016).

Dysmenorrhea refers to the chronic cyclic pain. The symptoms include cramping lower abdominal pain that radiates to the back and leg. Malaise, gastrointestinal and neurological symptoms may accompany the pain. Dysmenorrhoea itself is not life debilitating, but rather it is found to profoundly affect the day today exercises and may bring about missing work or school in students (Speroff,2010). Primary and secondary dysmenorrhea is a source of recurrent disability for a significant number of women in their early reproductive years. (Beckmann, et al.,2010).

As indicated by the International Classification of Diseases (ICD-10), "PMS is characterized by an accumulation of physical, mood, cognitive, and behavioral manifestations that follow acyclic pattern, beginning between 1 to 2 weeks before monthly cycle (luteal stage) and vanishing on the main days of menstrual stream (follicular stage)". Not all late luteal manifestations are PMS, many are a piece of the ordinary experience of ladies in the reproductive years. Minor cyclical changes that occur in a temporal relationship to the menstrual cycle and are relieved during menstruation,

sometimes referred to as premenstrual molimina, are considered normal.

Physical and psychological symptoms associated with the premenstrual phase are reported by about 80% of women of reproductive age. The spectrum of symptoms may range from mild discomfort to multiple symptoms of moderate to severe intensity, including functional impairment. In the latter case, women may be diagnosed with premenstrual syndrome (PMS) or, in more severe cases with premenstrual dysphoric disorder (PMDD).

By Mitchell & Mitchell, (1998) The study indicated decrease in task-oriented coping and a significant increase in emotion-focused coping in women with moderate to severe PMS during the time of premenstrual phase of the menstrual cycle. Emotion-oriented coping (e.g., self-blame, venting, worry, rumination) tend to be associated with more negative psychological outcomes, including depression, anxiety, and other types of psychological distress. Interestingly, results for task-oriented coping during the inter menstrual phase were not significantly different from the adult normal sample. A study comparing women's ability to use cognitive reappraisal, i.e., situational redefinition as a coping style during different menstrual phases found that women with severe premenstrual symptoms tended to use cognitive reappraisal less during the premenstrual phase compared to the follicular phase, whereas there were no differences in controls based on cycle phase (Fontana & Badawy, 1997). Wu-Holt & Boutte, (1994) have found that using distancing, i.e., the ability to detach oneself and minimize the situation, as a coping style was negatively related to Premenstrual Syndrome symptom severity. The role of perceived stress has also been explored in relation to premenstrual disorders. Beck et al. (1990) found that Severity of symptom of premenstrual syndromes was not significantly related to level of daily psychosocial stress. However, perceptions of stressors may be different. Fontana and Badawy (1997) found that women with Premenstrual Syndrome perceived daily stressors as more stressful during the premenstrual phase.

A limited number of studies have examined the relationship between menstrual attitudes and Premenstrual Syndrome. While Song et al. (2013) stated that individuals having a negative attitude towards menstruation experienced PMS more severely, Guvenc et al. (2012) found that individuals, who considered the menstruation as a debilitating phenomenon and denied the menstrual symptoms, experienced Premenstrual Syndrome much higher.

The way females perceive menstruation has an effect on their own body image, gender identity, self-acceptance, sexual and health behavior (McMaster et al, 1997). Beliefs and approaches about menstruation are usually acquired before puberty. Menstruation is a sign of transition from childhood to womanhood and perceptions of menstruation is affected by sociocultural factors during pre-pubertal period. These perceptions are shaped by personal knowledge and experience, age, myths, traditions, social learning, and cultural beliefs (Chua & Chang, 1999). Menstruation related information of people determines their response to this event. Some studies have shown that, negative physical and psychological changes during menstruation period are associated with the perception of menstruation (Karavus et al, 1997; Houston et al, 2006).

**Need for the Study:** Premenstrual symptoms are common among menstruating women, with approximately 75% reporting some discomfort with their cycles. While, an estimated 10% of women experience Premenstrual Syndrome (PMS), which is characterized by symptoms severe enough to interfere with daily life. While Premenstrual Syndrome can include a devastating impact on the quality of a woman's life and work, this is poorly understood and can be challenging. It seems that physical, emotional or both symptoms are associated with Premenstrual Syndrome and it might negatively affect women's Quality of Life. (Farrokh, 2015). Premenstrual Syndrome has been studied and evaluated extensively in the West and only few research studies have been conducted in Asia, (Thu Myint 2006). Today most of the research studies among adolescent girls have focused on nutritional problems, anemia, obesity, menstrual hygiene and menstruation. Very little information is available on the Role Acceptance of Premenstrual Syndrome and Coping Behavior.

## METHODOLOGY

### Method

The study population for the present study is Medical students of SRM University, located in Potheri village, Kattankulathur Taluk, Kacheepuram district in the Tamil Nadu. The study population for the present study was drawn from first year students of Medical College and Paramedical College. The total number of student's population in medical and paramedical colleges during the academic year 2016-2017 was 3449. A cross sectional research design was adopted for the present study.

### Sample

The size of the sample for the present study was 400 female Medical and Paramedical college students, of which 200 medical college students and 200 paramedical college students. Those Students aged between 17 - 28 years and those who scored less than 4 on General Health Questionnaire-28 and met Premenstrual Syndrome symptoms criteria based on PSSST screening tool and those who gave informed consent to participate in the study were included for the study. Students with any history of treatment for Premenstrual Dysphoric Disorder, history of treatment for psychiatric illness and those who had dysmenorrhoea or amenorrhoea were excluded from the study

## Tools

**Socio Demographic and Clinical Data Sheet:** A specially designed Performa which included various socio-demographic details, such as age, religion, education, occupation, marital status, family type, socioeconomic status, age at menarche, duration of periods, family history, history of amenorrhea and dysmenorrhea, medical illness were taken.

**General health questionnaire (GHQ-28):** The GHQ-28 was developed by David Goldberg in the year of 1978 and it has since been translated into 38 languages. It was developed as a screening tool to detect those likely to have or at risk of developing psychiatric disorders, it is a 28-item measure of emotional distress. The GHQ-28 has four subscales, i.e. somatic symptoms (items 1–7); anxiety/insomnia (items 8–14); social dysfunction (items 15–21), and depression (items 22–28). It takes less than 5 minutes to complete (Goldberg & Hillier, 1979; Sterling, 2011).

Each item is accompanied by four possible responses, *Not at all*, *No more than usual*, *Rather more than usual*, and *Much more than usual*. There are different methods to score the GHQ-28. It can be scored from 0 to 3 for each response with a total possible score ranging from 0 to 84. Using this method, a total score of 23/24 is the threshold for the presence of distress. Using this method any score above 4 indicates the presence of distress or caseness (Sterling, 2011). Test-retest reliability has been reported to be high i.e. 0.78 to 0.9 (Robinson & Price 1982) and interrater and intrarater reliability have both been shown to be excellent i.e. Cronbach's  $\alpha$  0.9–0.95 (Failde & Ramos 2000). High internal consistency has also been reported by Failde & Ramos (2000). The GHQ-28 correlates well with the Hospital Depression and Anxiety Scale (HADS) (Sakakibara *et al.*, 2009) and other measures of depression (Robinson & Price 1982).

**Premenstrual symptoms screening tool (PSST):** Developed by Steiner and Colleagues (2003), in line with DSM-IV criteria into a scale for rating the severity of PMS symptoms. It is a 19-item instrument consisting of two domains. The first domain includes 14 items related to psychological, physical, and behavioral symptoms and the second domain (five items) evaluates the impact of symptoms on women's functioning. Each item is rated on a four-point scale (absence of symptoms=1, mild=2, moderate=3, severe=4). For diagnosis of PMS, the following criteria must be present: (1) at least one of the symptoms 1 to 4 is severe; (2) in addition, at least four of the symptoms 1 to 14 are moderate to severe; and (3) at least one of a, b, c, d, and e is moderate to severe (Steiner, Macdougall & Brown 2003).

The Reliability and validity of the scale, Computing Cronbach's alpha coefficient was found to be 0.89 for the first domain, 0.91 for the second domain, and 0.93 overall; well above the threshold (0.7). Content Validity Ratio (CVR) and Content Validity Index (CVI) were used to establish quantitative content validity. The CVR and CVI were found to be 0.7 and 0.8, respectively, well above selected standards (0.62 for CVR and 0.78 for CVI).

**Cope Inventory:** Developed by Carver in 1989 is available in several languages, it is a self report questionnaire used to assess a number of Coping Behaviors and thoughts a person may have in response to specific situation. It consists of 15 subscales, total 60 items (4 items for each subscale) are rated on frequency of use by the participant with scale of 1 to 4. The original COPE was described by its authors (Carver *et al.*, 1989) as a theoretically-constructed, multidimensional coping scale with 13 subscales each consisting of four items that focused on distinct aspects of coping. Five subscales measured Problem-Focused coping that includes Active Coping, Planning, Suppression of Competing Activities, Restraint Coping, and Seeking Social Support for Instrumental Reasons. A further five subscales measured Emotion-focused coping, that includes seeking of Social Support for Emotional Reasons, Positive Reinterpretation and Growth, Acceptance, Denial, and Turning to Religion. The final 3 subscales, described by Carver *et al.* as less useful were labeled Focus on and Venting of Emotions, Behavioral Disengagement, and Mental Disengagement. Additionally, a single item related to the use of alcohol and drugs to cope was included in the original measure for exploratory reasons. This has since been developed into a four-item scale, and a scale assessing use of humor was also developed since publication of the original validation study in 1989, resulting in a 60-item COPE, with 15 subscales consisting of four items each. The COPE items are scored on a four-point Likert-type scale, with scores ranging from 1 -I don't do this at all to 4 -I do this a great deal for the situational form, and from 1 (I usually don't do this at all) to 4 (I usually do this a great deal) for the dispositional form. Items are summed to produce scale scores, with higher scores reflecting greater use of a particular coping strategy (Litman 2006). Cronbach's alpha for the 15 scales of COPE ranged from .37 to .93. With the exception of mental disengagement, the remainder of the alphas was all above .59, with the majority above .70. The average alpha was .79.

**Role Acceptance scale:** The Role Acceptance scale constructed by Berry Guire (1972) was utilized to measure sex-Role Acceptance of the respondents. It consisted of 41 true-false items, which are divided into 5 subscales namely a) Feminine stereotypes b) Child bearing and rearing c) Body and genitals d) Sex and masturbation e) Menarche and menses. In general these items reflect whether or not a subject like being a woman, feels positive about having and nursing babies, accepts menstruation as a normal routine, accepts the more dominant role of men and has conflicts of sexuality. As the items in subscales c) Body and genitals and d) Sex and masturbation were not suitable for Indian

women, these items were omitted therefore making it total of 24 items. A scoring key was devised according to how the authors judged they would be answered by subjects with high Role Acceptance. Each item was given a score of 'one' which corresponds to the scoring key.

**Procedure**

For the study, the subjects were recruited from the SRM Medical College with the permission of the concerned authorities. The participants of paramedical group included students from the Optometry department, Speech & Audiology department, Physiotherapy department & Occupational therapy department. The participants for the Medical group included M.B.B.S & Dental first year students. Permission from the respective head of the departments was taken. Participants were informed about the purpose and the nature of the study. A brief introduction about Premenstrual Syndrome was given to the participants. Subjects were informed that the participation in the study is confidential and informed consent was taken. The data collected from students of small groups consist of 10-15. Socio demographic details were taken. Following this, fixed set of *Questionnaires* administered to the students. Initially the General Health Questionnaire-28 was administered to the participants to screen for presence of any psychiatric distress. The participants with high score on psychiatric distress were excluded. The GHQ-28 questionnaire was followed by the premenstrual symptoms screening tool, after the PMS Screening tool, the Role Acceptance scale was administered to measure the sex Role Acceptance of women with PMS and without PMS. Following it, the COPE inventory was used to identify the Coping Behaviour during premenstrual phase of both participants with and without PMS. Lastly, the WHOQoL-Bref was administered to measure the life quality of the participants with and without Premenstrual Syndrome. A total of 427 protocols were obtained of which 27 protocols were excluded as they do not meet inclusion criteria. The reasons for exclusions were invalid protocol which was randomly filled without reading the questions properly, left incomplete, high distress value on GHQ (a score above 3 in GHQ) and conditions of Amenorrhea. The included protocols (400) were scored. From the 400 participants, the protocols which qualified for the PMS criteria was considered as the PMS group and the rest of the participants which did not qualify for the PMS criteria were considered as the non-PMS group and the data were analysed accordingly.

Statistics used: The Statistical Package for Social Science (SPSS) 21.0 versions was used for statistical analysis. Descriptive statistics were done for socio demographic data, after checking the data for normality. Parametric test was applied. Inferential statistics, such as unpaired “t” test was used to compare the means of two unrelated groups. Pearson correlation was used to find out the relationship between two continuous variables and Chi-Square was used to find out the association between two categorical variables.

**RESULTS AND DISCUSSIONS**

**Table1: Socio demographic characteristics**

Variables	Frequency	Percent
<b>Age</b>		
17-19	229	57.25
20-22	147	36.75
23-25	18	4.5
26-28	6	1.5
<b>Education</b>		
I <sup>st</sup> Year Medical	200	50
I <sup>st</sup> Year Paramedical	200	50
<b>Marital status</b>		
Unmarried	391	97.75
Married	9	2.25
<b>Place of living</b>		
Urban	357	89.25
Rural	43	10.75

**Table 2: Shows Role Acceptance score between participants with PMS and without PMS**

Role acceptance	With PMS (Mean ± SE)	Without PMS (Mean ± SE)	t test	P value
Feminine stereotypes	5.24 ± 0.15	6.45 ± 0.16	-5.380	0.0001***
Child bearing and Rearing	6.30 ± 0.08	6.44 ± 0.10	-1.108	0.268
Menarche and Menses	2.46 ± 0.08	3.19 ± 0.10	-5.833	0.0001***
Total	14.05 ± 0.21	16.07 ± 0.25	-6.153	0.0001***

\*\*\*Significant at the level of 0.0001 ( $p < 0.0001$ )

Table 2 shows that there is statistically significant difference on Role Acceptance between participants who have Premenstrual Syndrome and those who do not have Premenstrual Syndrome. Significant difference was observed in Feminine stereotypes and Menarche and menses scores. However child bearing there is no difference in the group. Of the three domains, namely Menarche and menses domain had higher difference between the PMS and without PMS groups. Women without PMS had scored higher on feminine stereotype and Menarche and menses.

**Table 3: shows the mean SD and t values of Cope Inventory (Problem Focused) score for participants with PMS and without PMS**

Cope inventory	With PMS (Mean $\pm$ SE)	Without PMS (Mean $\pm$ SE)	t test	P value
Problem focused				
Planning	10.70 $\pm$ 0.19	10.39 $\pm$ 0.22	1.083	0.309
Active coping	10.46 $\pm$ 0.18	10.04 $\pm$ 0.21	1.536	0.125
Suppression of competing activities	9.83 $\pm$ 0.15	9.19 $\pm$ 0.18	2.747	0.006***
Total	30.99 $\pm$ 0.42	29.62 $\pm$ 0.50	2.080	0.038*

\*significant at 0.05 level, \*\*\* significant at 0.001 level

Table 3 shows that there is a statistically significant difference on the Problem Focused domain coping for participant who have PMS and who do not have PMS. Significant difference was observed in relation to suppression of competing activities. However there is no difference in of Planning and Active coping between two groups.

**Table 4: shows Mean SD and t values of Cope Inventory (Avoidant Coping) for participants with PMS and without PMS**

Cope inventory/ avoidant coping	With PMS (Mean $\pm$ SE)	Without PMS (Mean $\pm$ SE)	t test	P value
Behavioral disengagement	8.79 $\pm$ 0.18	7.61 $\pm$ 0.20	4.438	0.0001***
Denial	8.41 $\pm$ 0.18	7.84 $\pm$ 0.22	1.999	0.046
Substance use	4.95 $\pm$ 0.12	4.52 $\pm$ 0.10	2.825	0.005***
Mental disengagement	11.05 $\pm$ 0.17	10.18 $\pm$ 0.21	3.226	0.001***
Total	33.21 $\pm$ 0.42	30.16 $\pm$ 0.47	4.739	0.0001***

\* \*\*\* significant at 0.001

Table 4 shows that there is a statistically significant difference on Coping behavior in relation to Avoidant Coping between participants who have PMS and do not have PMS. Similarly significant difference was observed in all sub-domains such as Behavioral disengagement, Denial, Substance use and mental disengagement.

**Table 5: shows Mean SD and t values of Cope Inventory (Socially supported) for participants with PMS and without PMS**

Cope inventory / Socially supported	With PMS (Mean ± SE)	Without PMS (Mean ± SE)	t test	P value
Use of emotional social support	10.22 ± 0.20	9.61 ± 0.23	1.955	0.051
Use of instrumental social support	10.61 ± 0.18	9.82 ± 0.23	2.755	0.006***
Focus on and venting of emotions	10.79 ± 0.19	9.36 ± 0.23	4.797	0.0001***
Total	31.62 ± 0.44	28.79 ± 0.59	3.925	0.0001***

\*\*\*significant level at 0.0001

Table 5 shows that there is a statistically significant difference in the Coping behaviour (Socially supported domain) between participants who have PMS and who did not have PMS. Similarly, significant difference is observed in the scores of sub domains such as use of instrumental social support and focus on and venting of emotions. Though there is a clinically observed difference in use of emotional social support, but statistically not significant.

**Table 6: shows Mean SD and t values of Cope Inventory (Emotion focused) for participants with PMS and without PMS**

Cope inventory / Emotion focused	With PMS (Mean ± SE)	Without PMS (Mean ± SE)	T test	P value
Restraint	9.93 ± 0.16	9.54 ± 0.20	1.520	0.129
Positive Reinterpretation and growth	11.59 ± 0.18	11.58 ± 0.22	0.004	0.997
Acceptance	10.64 ± 0.17	10.52 ± 0.19	0.474	0.636
Humor	8.88 ± 0.22	8.55 ± 0.25	0.999	0.318
Religious coping	11.01 ± 0.24	11.15 ± 0.27	-0.395	0.693
Total	52.05 ± 0.66	51.34 ± 0.74	0.700	0.484

Table 6 shows that there is no difference observed in the Emotion focused domain between participants who have PMS and who did not have PMS. There is no significant difference in the entire domain between with and without PMS groups.

**Table 7 Shows Mean, SD, Percentile for Problems Focused, Avoidant, Socially Supported and Emotion Focused Coping Behavior for participants with PMS and without PMS.**

Coping behavior	Mean	SD	Percentile
Problems focused	30.991	6.4	59.6
Non PMS	29.620	9.5	41.2
Avoidant coping	33.209	6.48	60.8
Non PMS	30.162	6.11	39.2
Socially supported	31.61	6.77	60.8
Non PMS	28.78	7.55	40.5
Emotion focused	52.04	10.1	58.8
Non PMS	51.34	6.5	40.4

The above table shows nature of coping strategies used by the non PMS groups. The coping used in non PMS group is seen in avoidant coping (60.8%) and socially supported (60.8%) followed by Problem focused coping (59.6%). The least used coping strategy is emotion focused (58.8%).

### Conclusion

The present study was under taken to assess PMS among medical and paramedical students and to find out its impact on Role Acceptance and Coping strategies. The sample of this study population is comparable with previous studies as the

average age of students is  $19.5 \pm 1.8$  years, majority of them are urban resident and unmarried (Tolossa & Bekele., 2014; Pinar et al., 2011, Raval et al., 2016 and Singh, P., 2015). The total sample is 400 students, among this 200 are from medical and 200 are from paramedical courses. A recent study of (Tolossa & Bekele., 2014; Pinar et al., 2011, Raval et al., 2016 and Singh, P., 2015). Assessed coping using interviewing techniques and found that women those who had severe Premenstrual Syndrome, used wide variety of coping strategies to decrease suffering. The coping strategies adapted by them were planning, avoiding stress, being alone, not expressing anger or irritation, seeking social support and took supplements or drugs. Ozturk & Tanrivedi (2011) came up with a finding that the ways of coping varied depends upon the type of premenstrual experience. They found that increased intake of sweets, sleeping more than usual, taking rest, and consuming pain killers were the most frequently used coping strategies. A recent study by Padmavathi, et al. (2014), assessed coping strategy qualitatively and concluded that most of the adolescent girls were using healthy coping strategies. Similar findings were reported by Bhagath & Bhura (2016). A study using qualitative assessment (Pandian, et al. 2016) reported that 57 % of the participants didn't report any coping mechanism for their affective symptoms. However, the remaining participants reported taking rest, chatting with friends, listening to music and also tried aerobic exercises, yoga and meditation. For the somatic symptoms the commonly used coping mechanism was taking rest and using medicine.

In the current study the avoidant coping and socially supported coping, were used by the students who had Premenstrual Syndrome. The premenstrual group commonly used avoidant coping, social support coping and also had feelings of helpless. Mental disengagement, was also more often used by the Premenstrual Syndrome group. They engaged themselves in day dreaming, sleep more than usual and also distracting by engaging in more leisure activity than doing the necessary work. Emotion focused coping was infrequently used by the Premenstrual Syndrome group. They had difficulty to discuss menstruation related issues with friends and family. Hence, they were unable to get adequate emotional support from them. In the current study Premenstrual Syndrome group used social support coping more than those without Premenstrual Syndrome. They ventilated their emotion to friends and family members. They were also in search of obtaining information about Premenstrual Syndrome to deal effectively with it. The least used type of coping style was problem focused coping (59.6%). The participants were less aware of physical and psychological aspects of Premenstrual Syndrome. This could be one of the reasons for not using problem focused coping strategy. Significant differences in using suppression of competing activities were found in participants. They were unable to distract their thoughts of Premenstrual Syndrome related problems and avoided engaging in activities.

In the current study, students resented their menstruation because of feelings of discomfort and inconvenience. They also felt menstruation was annoying in nature. They perceived unlucky to be a female due to menstruation and related discomfort. This finding is in accordance with many other studies where most women disliked their menstrual periods because of menstrual related symptom and inconvenience, (Edelmam et al., 2007; Den tolkelar, Oddens, 1999 & Glasier et al., 2003). Wong and Khoo (2011). They found adolescents had poor perception about menstruation, 82.6% of women disliked menstruation due to the feeling of discomfort, menstrual associated physical symptoms and inconvenience.

In the current study it was found that significant difference was seen between students with Premenstrual Syndrome and without Premenstrual Syndrome on Role Acceptance. The students with Premenstrual Syndrome showed poor Role Acceptance especially on the domains of feminine stereotype, menarche and menses. This shows negative attitude towards menstruation and resulted in low acceptance. Chang, et al (2009) found that girls tend to receive information about menstruation from mixture of sources including parents, school, friends and the media. The students without Premenstrual Syndrome were better on Role Acceptance which indicates that better Role Acceptance helps women to perceive menstruation positively. This enhances their coping. The result is line with the study by Tang, et al (2007).

In the current study there is a moderate positive correlation between Role Acceptance and emotion focused coping in Premenstrual Syndrome group socially supported coping and Role Acceptance among students with Premenstrual Syndrome. There was no correlation between Role Acceptance and avoidant coping and problem coping. Those who had high Role Acceptance were able to accept Premenstrual Syndrome and try to learn from the experience.

There is a moderate positive correlation between Role Acceptance and social support in students with Premenstrual Syndrome. Those who have high Role Acceptance was able to utilize the social support effectively by using social support coping. They are able to utilize emotional social support as well as instrumental social support. They took emotional support from friends and significant family members.

The students without Premenstrual Syndrome have better Role Acceptance and less usage of avoidant Coping Behavior. Which shows that Role Acceptance has an influence to reduce maladaptive coping strategies like avoidant coping. Positive attitude towards menstruation would promote adaptive Coping Behavior in those who have high Role Acceptance. This is in agreement with the findings of Kenneth et al (2016), they concluded that level of symptom intensity moderated the relationship between active coping and acceptance. Thus, problem focused coping is related with better role recognition of being a women and related menstrual process. Women who had a high Role Acceptance used problem focused coping strategies. Whereas women who had poor Role Acceptance they experienced high levels of menstrual discomfort and used avoidant coping.

The result showed a significant difference in Quality of Life and Role Acceptance among students those who have Premenstrual Syndrome and those who do not have Premenstrual Syndrome.

Women with Premenstrual Syndrome predominantly used avoidant coping followed by social support coping as effective coping strategies. During premenstrual phase, women without Premenstrual Syndrome mainly used problem focused coping and least used avoidant coping strategy. They were able to use active coping strategy to deal with menstrual problem.

The lesser the Role Acceptance increases the negative perception of menstrual related issues and it plays a major role in the experience of severe premenstrual symptom in Premenstrual Syndrome group than women without Premenstrual Syndrome

**Limitations:** The selected participants are from medical and paramedical courses, excluded the other students. Hence, it limits the generalizing ability. Study could have been more representative of sample.

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The authors declared no potential conflict of interest with respect to the research, authorship and/or publication of this article.

#### **Authors Contribution**

Both the authors contributed equally to the development, analysis and interpretation of the document.

Shemeena P: She collected and analysed the data

Pangajam P: She interpreted and prepared the manuscript

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