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A DESCRIPTIVE STUDY TO EXAMINE PERCEIVED STRESS AND SEVERITY OF PERI MENSTRUAL SYMPTOMS AMONG WOMEN IN SELECTED AREAS, BANGALORE

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ABSTRACT

Background and Objectives: Menstruation is typically a universal event during a woman's reproductive life, and up to 87 percent of the women in India perceive stress. Perceived Stress may influence the subsequent menstrual cycles and causes severity of peri menstrual Symptoms. Early detection and effective stress reduction measures may reduce the severity of peri menstrual symptoms. The Study was conducted to examine perceived stress among women, to examine severity of peri menstrual symptoms among women, to find out the relationship between perceived stress and severity of peri menstrual symptoms among women, to find out an association between perceived stress and severity of peri menstrual symptoms among women with the selected demographic variables, to prepare information pamphlet regarding stress reduction measures among Women in selected areas, Bangalore. **Methods:** An exploratory approach with non-experimental descriptive research design was used for this study. Modified Lenz's Model of Unpleasant Symptoms was used as the conceptual framework of the study. 100 women with regular menstrual cycle, present in St.Teresa's D. Ed college and Willington English Medium School, Chamrajpet, Bangalore, were chosen by purposive sampling technique. The data was collected from the women with regular menstrual cycle during three phases i.e. after menstruation, during ovulation and before menstruation in the month of August 2013. Background variables, perceived stress scale and peri menstrual symptoms were assessed by using structured questionnaire, standardized Sheldon Cohen's stress scale and standardized Audra L. Gollenberg's perimenstrual symptoms check list. **Results:** The data was analyzed by descriptive and inferential statistics. Among the 100 respondents, 93 percent had moderate acuity and 2 percent had high acuity after menstruation, where as 78 percent had moderate acuity and 4 percent had high acuity during ovulation and 81 percent had moderate acuity and 4 percent had high acuity before menstruation. 35 percent had moderate symptoms and 10 percent had severe symptoms after menstruation, where as 25 percent had moderate symptoms and 16 percent had severe symptoms during ovulation and 39 percent had moderate symptoms and 16 percent had severe symptoms before menstruation. The result shows there is a positive relation between perceived stress and severity of peri menstrual symptoms (r=0.2664 at 0.05 level of significance) and there is significant association between perceived stress and background variable of the women like BMI. A significant association was also there between severity of peri menstrual symptoms and background variables like occupation of the women. **Conclusion:** This study shows that the women with moderate to high stress experiences moderate to severe peri menstrual symptoms and necessary interventions must be taken to reduce stress and to manage symptoms.

KEYWORDS: Perceived stress, Peri menstrual symptoms, after menstruation, during ovulation, before menstruation, Body mass index.

INTRODUCTION AND BACKGROUND

In females, the onset of puberty is marked by the beginning of the menstrual cycle, typically between the ages of 10 and 16. On average, a woman has her period every 28 days. From puberty until menopause, a women's biochemistry waxes and wanes to her own unique monthly rhythm, known as the menstrual cycle.

However, most women experience a shorter or longer amount of time between periods each month. This disparity can be attributed to many factors. Included in this is the effect that stress has on the menstrual cycle. A study suggested that the effects of stress on menstruation are twofold. Not only can stress affect the actual blood flow and its onset, in some cases, it can exacerbate symptoms of premenstrual syndrome.

For many sufferers, higher stress levels lead to more severe premenstrual syndrome.[2] The term peri-menstrual symptoms or syndromes to indicate symptoms linked to either or both the premenstrual and menstrual phases and to recognize the likely existence of several syndromes with different bio psychosocial etiologies. Peri-menstrual describes a collection of physical, psychological and emotional symptoms related to a woman's menstrual cycle.

In recent years there has been a significant increase in research, non psycho logic and physiologic changes associated with the menstrual cycle. This interest is fueled by a renewed concern about women's health and a trend toward the explicit consideration of issues once considered taboo. Evidence linking peri-menstrual symptoms to depression, accidents, suicidal, and violent behavior has emphasized their significance as a health issue.[4] Stress, whether it is caused by a dangerous situation, relationship problems, difficult work or other external factors, can wreak havoc on the menstrual system.

The main aim, therefore, was to examine the relationship between perceived stress in the previous month and risk of perimenstrual symptoms, using a descriptive design among healthy women with regular menstrual cycle. Therefore, it's important to keep stress levels low in order to help the body return to normal functioning.[17]

Nurses have an important role in educating the women regarding stress reduction measures. Informal inquiries of the investigator revealed that many of the women are undergoing stress in their life. Knowledge about stress reduction measures and management of peri-menstrual symptoms improves the general health status of the women. Hence the investigator felt a need to identify perceived stress and severity of peri-menstrual symptoms among women.

The Objectives of the Study

1. To examine perceived stress among women.
2. To examine severity of peri menstrual symptoms among women.
3. To find out the relationship between perceived stress and severity of peri menstrual symptoms among women.
4. To find out an association between perceived stress and severity of peri menstrual symptoms among women with the selected demographic variables.
5. To prepare information pamphlet regarding stress reduction measures among women.

Hypotheses

H_1: There is a significant relationship between perceived stress and severity of perimenstrual symptoms among women.

H_2: There is an association between perceived stress and severity of perimenstrual symptoms with selected demographic variables.

Assumptions

Stress will influence the severity of peri menstrual symptoms among women.

Variables of the Study

1. **Research variable:** In this study it refers the perceived stress and severity of peri menstrual symptoms among women.
2. **Demographic variable** In this study demographic variable refers to age, religion, educational status, occupation, family monthly income, marital status, dietary pattern, place of living,BMI, average length of menstrual cycle and number of days of bleeding.

Limitations of the study

Purposive sampling adopted in the study may limit the generalization of the study findings. Checklists provided may limit the explanation of the particular factors influencing the preference of the respondents.

Conceptual Framework

The conceptual framework selected for the study is based on modified Lenz's Model of Unpleasant symptoms theory. The review of related research and non research literature helped the investigator to develop the conceptual framework; rating scale and checklist and to plan for analysis of data.

Methodology

Research approach and design

The explorative approach and descriptive research design was adopted and the sample selected for the study was 100 women with regular menstrual cycle who were working and studying in St. Teresa's D. Ed college and who were working in Willington English medium school, Chamrajpet, Bangalore. The respondents were selected using purposive sampling.

Criteria for Selection of Samples

Inclusion criteria

- Women with self-reported cycle length between 21 and 35 days.
- Women with the age group of 18-44 years.
- Women with body mass index between 18 and 35 kg/m^2.
- Women, who know to read, write and speak Kannada and English.

Exclusion criteria

- Women who are not available at the time of data collection.
- Women with chronic health conditions or psychiatric conditions.
- Women who are in current use of oral contraceptives or exogenous hormones.

Tool used for the Study

The tools used for the present study were structured questionnaire, rating scale and check list and the techniques used were self-administered method. After a

thorough search of literature and consultation with experts the investigator developed structured questionnaire and back ground data, standardized Cohen's perceived stress scale and standardized Audra L. Gollenberg's checklist for perimenstrual symptoms were used.

The tool consist of three parts, Part-I, Part-II and Part-III

Part-I: It deals with structured questionnaire on background data

Back ground data: It consists of 14 items used to collect sample characteristics which comprises of age, religion, educational status, marital status, occupation, family monthly income, dietary pattern, BMI, place of living, average length of menstrual cycle, number of days of bleeding, date of last menstrual period, number of pads using per day and women sought medical care for perimenstrual symptoms or not.

Part-II: It consists of standardized Sheldon Cohen's perceived stress scale.

Perceived stress scale: This consists of standardized Cohen's Perceived stress scale with 10 items, in that 4 items are positive and 6 items are negative and are rated in the form of never, almost never, sometimes, fairly often and very often, determines the perceived stress during the last month, which was used at one point of time (after menstruation).

The 4-item scale is a smaller version of 10-item scale, which is statndardised and consists of 2 positive (items 2 and 10) and 2 negative items (items 4 and 5) and are rated in the form of never, almost never, sometimes, fairly often and very often. This scale was used at two points of time (during ovulation and before menstruation).

The total score ranges from 0-40. The scoring for positively stated items (items 4, 5, 7 and 8): never=4, almost never=3, sometimes=2, fairly often=1, and very often=0. The scoring for negative items (items 1, 2, 3, 6, 9 and 10): never=0, almost never=1, sometimes=2, fairly often=3, and very often=4.

- Scores 26-40= High Acuity
- Scores 11-25= Moderate Acuity
- Scores 0-10= Low Acuity

Part-III: It consists of two Sections, Section-A and Section-B of peri menstrual symptoms.

Section-A: Physical symptoms: This consists of pain scale and standardized Audra L. Gollenberg's physical symptoms like generalized body aches, abdominal bloating, lower back pain, fatigue, breast tenderness, swelling of hands or feet, abdominal cramping, head ache, insomnia, acne, appetite change and any food cravings among women after menstruation, during ovulation and before menstruation.

Section-B: psychological symptoms: this consists of standardized Audra L. Gollenberg's psychological symptoms like depression, crying spells, ager, aggression, short temper, tension or irritability, anxiety or nervousness among women after menstruation, during ovulation and before menstruation.

Scoring

Experiencing ≤ 5 symptoms considered as Mild.
Experiencing ≥5 symptoms (one must be psychological) considered as Moderate.
Experiencing ≥8 symptoms considered as Severe.

Procedure for Data Collection

The technique used for data collection was self-administered method and 3-point time data collection i.e. after menstruation, during ovulation and before menstruation.

All the women with regular menstrual cycle and who met eligibility criteria were selected purposively and the tool was given on 2^{nd} or 3^{rd} day of menstrual cycle. The women were instructed to complete the 10-item and 4-item perceived stress scale and checklist of peri-menstrual symptoms at 3 different points of time; after menstruation (5^{th}-7^{th} day), during ovulation (13^{th}-16^{th} day) and before menstruation (22^{nd}-28^{th} day). The completed tool was collected from the respondents in the subsequent visits. The investigator gave the tool on an average of 10 respondents per day. The same process was continued till the investigator got 100 respondents.

RESULTS

Table 1: Frequency and percentage distribution of Demographic variables.

Sl. No		Frequency	Percentage (%)
1.	**Age in Years**		
	a. 18-26	35	35
	b. 27-35	50	50
	c. 36-44	15	15
2.	**Religion**		
	a. Hindu	26	26
	b. Muslim	23	23
	c. Christian	51	51
3.	**Educational Status**		
	a. Diplomate	48	48

	b. Degree &Above	52	52
4.	**Occupation**		
	a. Teachers	18	18
	b. Other Staff	29	29
	c. Students	53	53
5.	**Family Monthly Income**		
	a. Below Rs. 10000	31	31
	b. Rs. 10001-20,000	49	49
	c. Above Rs. 20,000	20	20
6.	**Marital Status**		
	a. Single	58	58
	b. Married	42	42
7.	**Dietary Pattern**		
	a. Vegetarian	10	10
	b. Non-vegetarian	90	90
8.	**BMI in Kg/m^2**		
	a. <19 (Underweight)	18	18
	b. 19.8-25 (Normal weight)	67	67
	c. 26-29 (over weight)	11	11
	d. >29 (obese)	4	4
9.	**Place of living**		
	a. Urban	88	88
	b. Rural	12	12
10.	**Average length of menstrual cycle in days**		
	a. 21-25	5	5
	b. 26-30	81	81
	c. 30-35	14	14
11.	**Number of days of bleeding**		
	a. 3-5	86	86
	b. 6-7	14	14
12.	**Number of pads using per day**		
	a. 2-4	92	92
	b. 5-7	8	8
13.	**Sought medical care**		
	Yes	18	18
	No	82	82

Table 2: Description of Perceived Stress among Women.

S.NO	PERCEIVED STRESS	After Menstruation		During Ovulation		Before Menstruation	
		frequency	Percentage (%)	frequency	Percentage (%)	frequency	Percentage (%)
1	Low acuity	5	5	18	18	15	15
2	Moderate acuity	93	93	78	78	81	81
3	High acuity	2	2	4	4	4	4
Total		**100**	**100%**	**100**	**100%**	**100**	**100%**

Table 3: Description of Severity Of Perimenstrual Symptoms.

Sl.NO	Peri Menstrual Symptoms	After menstruation		During ovulation		Before menstruation	
		frequency	Percentage (%)	frequency	Percentage (%)	frequency	Percentage (%)
1	Mild	55	55	59	59	45	45
2	Moderate	35	35	25	25	39	39
3	Severe	10	10	16	16	16	16
Total		**100**	**100%**	**100**	**100%**	**100**	**100%**

Table 4: Correlation between perceived stress and Severity of Peri Menstrual Symptoms among Women.

Sl. No		After menstruation			During ovulation			Before menstruation		
1.	**Perceived stress**	**Mean**	**SD**	**r**	**Mean**	**SD**	**r**	**Mean**	**SD**	**r**
		18.05	4.15	0.188* (P-value 0.062)	7.02	2.42	0.128* (P-value 0.205)	7.29	1.83	0.023* (P-value 0.823)
2.	**Peri menstrual symptoms**	14.62	7.99		14.29	8.26		16.52	7.73	

Note: * Indicates not significant at 0.05 level.

Table 5: Association between the perceived stress and demographic variables among women by age, religion, and education.

Sl. No	Variables		Below Median	Above median	Total	df	Chi-Square	Table value at 0.05	Inference
1.	**Age in years**	18-26	21	14	35	2	1.71	5.99	NS
		27-35	35	15	50				
		36-44	5	10	15				
		Total	**61**	**39**	**100**				
2.	**Religion**	Hindu	16	10	26	2	0.71	5.99	NS
		Muslim	16	7	23				
		Christian	29	22	51				
		Total	**61**	**39**	**100**				
3.	**Education**	Diplomatic	27	21	48	1	0.875	3.84	NS
		Degree and above	34	18	52				
		Total	**61**	**39**	**100**				

Table 7: Association between the perceived stress and demographic variables among women by occupation, family monthly income and marital status.

Sl. No	Variables		Below Median	Above median	Total	df	Chi-Square	Table value at 0.05	Inference
4..	**Occupation**	Teachers	10	8	18	2	2.143	5.99	NS
		Other staff	12	17	29				
		Students	17	36	53				
		Total	**61**	**39**	**100**				
5.	**Family monthly income**	Below Rs. 10,000	18	13	31	2	0.49	5.99	NS
		Rs.10,001-20,000	32	17	49				
		Above Rs 20,000	11	9	20				
		Total	**61**	**39**	**100**				
6.	**Marital status**	Single	38	20	58	1	1.184	3.84	NS
		Married	23	19	42				
		Total	**61**	**39**	**100**				

Table 8: Association between the perceived stress and demographic variables among women by Dietary pattern, BMI, Place of living and average length of menstrual cycle.

Sl. No	Variables		Below Median	Above median	Total	df	Chi-Square	Table value at 0.05	Inference
7.	**Dietary pattern**	Vegetarian	8	2	10	1	1.686	3.84	NS
		Non-vegetarian	53	37	90				
		Total	**61**	**39**	**100**				
8.	**BMI in Kg/M^2**	<19	14	4	18	3	7.84	7.81	S
		19.8-25	37	30	67				

		26-29	7	4	11				
		>29	3	1	4				
		Total	**61**	**39**	**100**				
9.	**Place of living**	Urban	53	35	88	1	0.022	3.84	NS
		Rural	8	4	12				
		Total	**61**	**39**	**100**				
10.	**Average length of menstrual cycle in days**	21-25	4	1	5	2	1.060	5.99	NS
		26-30	47	34	81				
		31-35	10	4	14				
		Total	**61**	**39**	**100**				

Table 9: Association between the perceived stress and demographic variables among women by average number of days of bleeding, number of pads using per day, sought medical care.

Sl. No	Variables		Below Median	Above median	Total	df	Chi-Square	Table value at 0.05	Inference
11.	**Average number of days of bleeding**	3-5	49	37	86	1	2.339	3.84	NS
		6-7	11	3	14				
		Total	**61**	**39**	**100**				
12.	**Number of pads using per day**	2-4	57	35	92	1	0.442	3.84	NS
		5-7	4	4	8				
		Total	**61**	**3**	**10**				
13.	**Sought medical care**	Yes	11	7	18	1	1.088	3.84	NS
		No	50	32	82				
		Total	**61**	**39**	**100**				

Findings of the Study

The data was analyzed by descriptive and inferential statistics. Among the 100 respondents, 93 percent had moderate acuity and 2 percent had high acuity after menstruation, where as 78 percent had moderate acuity and 4 percent had high acuity during ovulation and 81 percent had moderate acuity and 4 percent had high acuity before menstruation. 35 percent had moderate symptoms and 10 percent had severe symptoms after menstruation, where as 25 percent had moderate symptoms and 16 percent had severe symptoms during ovulation and 39 percent had moderate symptoms and 16 percent had severe symptoms before menstruation. The result shows there is a positive relation between perceived stress and severity of peri menstrual symptoms (r=0.2664 at 0.05 level of significance) and there is significant association between perceived stress and background variable of the women like BMI. A significant association was also there between severity of peri menstrual symptoms and background variables like occupation of the women. **Conclusion:** This study shows that the women with moderate to high stress experiences moderate to severe peri menstrual symptoms and necessary interventions must be taken to reduce stress and to manage symptoms.

DISCUSSION

Age of women in years: In the group, 35(35 percent) respondents are in the age group of 18-26years followed by 50(50 percent) in the age group of 27-35 years and 15(15percent) are in the age group of 36-44years.

Religion: In the group, majority of the women are Christians 51(51 percent) followed by Hindu 26(26 percent) and 23(23percent) are Muslims.

Education of women: In the group, majority of the women belongs to degree and above 52 (52 percent), while 48 (48 percent) of the women are diplomate.

Occupation of women: In the group, majority of the women are students 53 (53 percent), followed by 29 (29 percent) are other staff, while 18 (18 percent) of the women are teachers.

Family income in Rs/month: In the study out of the 100 respondents, maximum respondents 49(49 percent) have more than ₹ 10,001-20,000/- month followed by 31(31 percent) having ₹ below 10,000/month and 20(20 percent) have ₹ above 20,000/month.

Marital status: In the study out of the 100 respondents, maximum respondents 58(58 percent) are single, while 42(42 percent) are married.

Dietary pattern of women: In the study out of the 100 respondents, maximum respondents 90(90 percent) are Non-vegetarian, while 10(10 percent) are vegetarian.

BMI of women: In the study out of the 100 respondents, maximum respondents 67(67 percent) have normal weight, while 18 (18 percent) are underweight followed by 11(11percent) are overweight and 4 (4 percent) are obese.

Place of living: In the study out of the 100 respondents, most of the women 88 (88 percent) belongs to urban area, while 12 (12 percent) women belongs to rural area.

Average length of menstrual cycle of women: In the group majority of the women 81(81 percent) have 26-30 days of menstrual cycle, while 14 (14 percent) have 30-35 days of menstrual cycle and 5 (5 percent) have 21-25 days of menstrual cycle.

Number of days of bleeding during menstruation: In the group majority of the respondents 86(86 percent) have 3-5 days of bleeding, while 14 (14 percent) have 6-7 days of bleeding.

Average number of pads using per day during menstruation: In the group majority of the respondents 92 (92 percent) are using 2-4 pads per day, while 8 (8 percent) are using 5-7 pads per day.

Women who sought medical care for peri menstrual symptoms: In the group majority of the respondents 82 (82 percent) not sought medical care, while 18 (18 percent) sought medical care for peri menstrual symptoms.

Section-II Description Of Perceived Stress Among Women

During the study it was found that distribution of perceived stress among women; after menstruation, during ovulation and before menstruation. In the group, After Menstruation majority of the respondents 93 (93 percent) have moderate acuity, while 5(5 percent) have low acuity and 2 (2 percent) have high acuity. During Ovulation, 18 (18 percent) of the respondents have low acuity while 78 (78 percent) of the respondents have moderate acuity and 4 (4 percent) have high acuity. And Before Menstruation 81 (81 percent) of the respondents have moderate acuity, while 15 (15 percent) of the respondents have low acuity and 4 (4 percent) of the respondents have high acuity.

Section-III Description Of Severity Of Peri Menstrual Symptoms

Analysis of the present study revealed that in the group, After Menstruation majority of the respondents 55 (55 percent) have mild symptoms while 35 (35 percent) have moderate symptoms and 10 (10 percent) have severe symptoms, During Ovulation 59 (59 percent) have mild symptoms, while 25 (25 percent) have moderate symptoms and 16 (16 percent) have severe symptoms. While Before Menstruation 45 (45 percent) respondents have mild symptoms, while 39 (39 percent) have moderate symptoms and 16 (16 percent) have severe symptoms.

Section- IV Relationship Between Perceived Stress And Severity Of Perimenstrual Symptoms

The Mean of Perceived stress is high after menstruation as compared to during ovulation and before menstruation. Severity of peri menstrual symptoms is high before menstruation as compared to after menstruation and during ovulation. Correlation between perceived stress and severity of peri menstrual symptoms after menstruation (r= 0.188), during ovulation (r=0.128) and before menstruation (r=0.023) which is not significant (P-value 0.062, 0.205, 0.823) at 0.05 level and positively correlated. Hence Null hypothesis (H_0) is accepted and research hypothesis (H_1) is rejected.

A similar study finding shows that there is significant relationship between perceived stress and severity of peri menstrual symptoms. High perceived stress was strongly associated with risk of experiencing multiple/severe symptoms and moderate/ severe PMS in the subsequent cycle. During the premenstrual week, ≥ 8 moderate/ severe symptoms were reported in 17% of cycles; ≥5 moderate/severe symptoms in 36% of cycles, and 32% were classified as moderate/ severe symptoms.[37]

Section-V Association Between Perceived Stress And Demographic Variables

The demographic variables of women and perceived stress were taken for finding the association. The chi-square values of selected demographic variables were: age of women in years (χ^2= 1.33, P>.05), religion (χ^2= 0.71, P>.05), educational status (χ^2= 0.875, P>.05), occupation of women (χ^2= 0.56, P>.05), family monthly income (χ^2= 0.49, P>.05), marital status (χ^2= 1.184, P>.05), dietary pattern (χ^2= 1.686, P>.05), BMI (χ^2= 7.84, P>.05), place of living (χ^2= 0.02, P>.05), average length of menstrual cycle (χ^2= 1.060, P>.05), average number of days of bleeding (χ^2= 2.339, P>.05), number of pads using per day during menstruation (χ^2= 0.442, P>.05), women who sought medical care (χ^2= 1.088, P>.05). Therefore research hypothesis (H_1) is accepted and null hypothesis (H_0) is rejected for BMI, while research hypothesis (H_1) is rejected and null hypothesis (H_0) is accepted for age of the women in years, religion, education, occupation, family monthly income, marital status, dietary pattern, place of living, average length of menstrual cycle, number of pads using per day, number of days of bleeding and women who sought medical care.

The findings of a similar study show that there is association between BMI and perceived stress among women.[38]

Section-VI Association Between Demographic Variables And Severity Of Perimenstrual Symptoms

Severity of perimenstrual symptoms and demographic variables were taken for finding the association. The chi-square values of selected demographic variables were: age of women in years (χ^2= 0.536, P>.05), religion (χ^2= 1.86, P>.05), educational status (χ^2= 0.03, P>.05), occupation of women (χ^2= 4.43, P>.05), family monthly income (χ^2= 1.173, P>.05), marital status (χ^2= 0.090, P>.05), dietary pattern (χ^2= 0.218, P>.05), BMI (χ^2= 3.76, P>.05), place of living (χ^2= 0.31, P>.05), average length

of menstrual cycle (χ^2= 0.155, P>.05), average number of days of bleeding (χ^2= 1.952, P>.05), number of pads using per day during menstruation (χ^2= 0.031, P>.05), women who sought medical care (χ^2= 0.079, P>.05). Therefore research hypothesis (H_1) is accepted and null hypothesis (H_0) is rejected for occupation, while research hypothesis (H_1) is rejected and null hypothesis (H_0) is accepted for age of the women in years, religion, education, family monthly income, marital status, dietary pattern, BMI, place of living, average length of menstrual cycle, number of pads using per day, number of days of bleeding and women who sought medical care.

The findings of a similar study show that there is an association between occupation and severity of perimenstrual symptoms.

CONCLUSION

In this study, the investigator intended to analyse the relationship between perceived stress and severity of peri menstrual symptoms among women. The study revealed that there is a relation between perceived stress and severity of peri menstrual symptoms among women. Among women, perceived stress in the last month increases the severity of symptoms in subsequent cycles. Percentages of severity of peri menstrual symptoms of most of the women are more before menstruation. The study also revealed that there is a significant association between perceived stress and demographic variable like BMI and there is a significant association between severity of peri menstrual symptoms and demographic variable like occupation.

RECOMMENDATIONS

- A large scale study can be conducted on samples from different settings.
- A study can be conducted to examine stress and pre-menstrual symptoms among women.
- A study can be conducted to assess the influence of occupational stress on peri menstrual symptoms among women.
- A study can be conducted to assess the perceived academic stress and pre menstrual symptoms among adolescent girls.

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