Knowledge and Practice of Female Employee About Premenstrual Syndrome and its Effect on Daily Life Activities in EL-Minia University

Mona A.Abd EL-Hamid.[1] , [2] Diaa Ahmed El Moghazy, [3] Manal F..Moustafa and. [4]Ekbal A. Emam.

[1],[4] Women Health & Obstetrics Nursing Faculty of Nursing, El-Minia University, Egypt
[2] Obstetrics and Gynecological Faculty of Medicine El-Minia University, Egypt
[3]Obstetrics& Gynecological Nursing Faculty of Nursing Assuit University, Egypt

Abstract: Premenstrual syndrome is a common health problem affecting females and because of its cyclic occurrence it is postulated to have different effects on quality of life. **Aim** of this study was to assess the female employee knowledge and practice about premenstrual syndrome and its effect on daily life activities. **Method and materials:** A cross sectional descriptive study was conducted on one hundred and thirteen women. A specially designed self-administered questionnaire was developed which included socio-demographic data, obstetrical history, symptoms of premenstrual syndrome (PMS), source of information about PMS, its effect on daily life activities and work and management of premenstrual syndrome. **Results:** The study revealed that the mean age ± SD of the studied sample was (31.7 ± 9) years,(%84.96) of the studied samples were normal age of menarche, (61.95%) of the females were taken information about PMS from mothers, (63.72%) of the studied samples were had an effect on work. The most common reported physical symptom of PMS (79.64%) was backache while the most common reported Psychiatric symptom (76.99%) was worry. The measures practiced by the studied sample to overcome symptoms of PMS were (warm drinks, warm bathing, sports and activities, comfortable and rest period and medications).PMS symptoms was significantly more intense in the single female participants. **Conclusion**, PMS had an effect on work and daily life activities of female employee working in El- Minia University. Health education, appropriate medical treatment and counseling services, as part and parcel of the overall health service, should be provided to the affected female.

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1. Introduction

Premenstrual syndrome(PMS) refers to a group of menstrually related disorders is characterized by mental and physical symptoms that vary with different phases of the menstrual cycle. These symptoms result in the deterioration of interpersonal relationships, personal health and function. Symptoms start shortly after ovulation, increase in severity, and reach a maximum during the last five premenstrual days. After the onset of menstrual bleeding, the symptoms rapidly disappear and are usually gone within three to four days **(1)** PMS is related to ovulatory cycles and resolves at menopause. PMS may have an onset at any time during the reproductive years, and once symptoms are established they tend to remain fairly constant until menopause **(2)**. These symptoms sufficient to impair daily activities, A woman's experience of premenstrual symptoms has been found to reduce work efficiency, increase absenteeism, and negatively impact on family **(3)**.

The most common physical symptoms are (headaches, breast tenderness, swelling, abdominal bloating, heaviness, low energy, tired and weak, back and muscle pain, sleep more, stay in bed increased / decreased appetite, and crave food), and emotional symptoms are (depressed mood, sad, lonely, anxious, nervous, mood swings, trouble with relationships, irritable, angry, impatient , difficulty concentrating , feel out of control, cannot cope, less productive in job or home and avoid social activity) **(4)**.

The different types of PMS according to **WHO, (5)** Primary PMS, Secondary PMS**,** Mild PMS, Moderate PMS, Severe PMS (treatment resistant) Mood alteration and psychological effects , Gastrointestinal symptoms, Skin problems, Respiratory problems, Eye complaints & Neurological and vascular symptoms **(6)**

PMS is known to have a great impact on daily life activities and social functions, and might result in significantly decreased quality of life (QOL). Women with PMS had the worse QOL score in almost all domains of QOL except for spiritual health (physical function, psychological health, social function, pain, vitality, role limitation, health status perception, and health status change **(7).**

Treatment goals for PMS are to eliminate symptoms, reduce their impact on activities and interpersonal relationships, and minimize adverse effects of treatment. The current treatment options for

PMS vary considerably and reflect the multiple etiology theories and the complexity of hormonal interactions likely involved in PMS. **(8)**

Once an accurate diagnosis is made, appropriate interventions should be based on two principles; first, PMS is a chronic problem that typically does not resolve until menopause, making both cost and side effects important components of the treatment choice. Second, women experience different degrees of symptom severity, and the intensity of the treatment approach should matched to the symptoms. Most women seek treatment as a result of problems with mood (irritability, mood liability, etc.)(**9**) **Non-pharmacologic interventions** for PMS include patient education, supportive therapy, and behavioral changes. Women who have been educated about the biological basis and prevalence of PMS report an increased sense of control and relief of symptoms. Psychological interventions such as relaxation therapy and cognitive behavioral therapy show some benefit. Behavioral measures include keeping a symptom diary, getting adequate rest and exercise, making dietary modifications and lifestyle changes**.(10).**

Dietary modifications & life style changes: Dietary restrictions are often recommended to help alleviate the physical and psychological symptoms of PMS. The most common dietary recommendations are to restrict sugar, don't eat food high in salt reduce intake (junk food –fast foods, fatty foods, fatty foods, sweeter, burgers, crisps, salts, tea and coffee and intake of cigarettes and alcohol and increase consumption of complex carbohydrates. Try to change your eating pattern. Eat frequently and never go without food for more than 5 hours. Increase the amount of (water, green vegetables and salad, fruit and nuts, pasta, brown rice, and dried beans, chicken and fish,(**11**)

Also Carbohydrates intake are said to raise the positive effect on mood and cognition. Fiber-rich foods are particularly important in maintenance or restoration of healthy estrogen levels. (**12**)

Lifestyle Changes : Lifestyle changes to decrease premenstrual symptoms include physical exercise and stress reduction technique. The Dietary Guidelines for Americans, 2005 recommends that people perform at least 30 minutes of moderate-intensity physical activity on most, preferably all, days of the week**.(13**)

Stress: reduction of stress is a great help in eliminating the PMS symptoms

Exercise will reduce physical and emotional symptoms .It releases built up stress and enhances your sense of well being. Do some gentle exercise such as going for a short walk. . Try to exercise for 20-30 min 3 times a week. Remember exercise should be fun. As well as exercising, make sure you get enough rest each day **(14&15).**

Herbal remedies and other supplements: The following is a description of some commonly used herbal preparations used to treat PMS. **St. John's wort (Hypericum perforatum)**: is an herbal remedy that may help some patients with mild-to-moderate depression. ex **Ginger tea. ,** help to reduce mild nausea and other minor symptoms of PMS **Seed oil ,** for treatment of PMS **Dong Quai,** used for have vasodilating, antispasmodic, and anti platelet. **Dandelion** promoting diures treating the fluid retention **Vitamin B6** It's help reduce sugar cravings, irritability, and bloating **Calcium** Take daily calcium it helps prevent water retention, mood swings, and cramps**(16-18).**

Complementary and Alternative Medicine (CAM): Many remedies for PMS have been listed such as (chiropractic, acupuncture, homoeopathy, light, yoga and meditation therapy reduce negative emotions through cognitive restructuring, enhanced problem solving skills in personal**.(19).**

Pharmacologic therapy of PMS: pharmacologic treatment should be considered and ranged of hormone treatments and medications available to help you manage your symptoms. Medications are given to treat specific symptoms or alter the menstrual cycle. Treatment should be individualized to target the most troublesome symptoms in each patient **Hormonal treatments** The aim of hormone treatment is to suppress ovulation and reduce the hormones of the premenstrual phase**.(20).**

Medications: group of medicines are mood stabilizers and antidepressants and can improve PMS symptoms significantly. Anti-prostaglandin and anti-inflammatory effective for breast pain and bloating Non-steroidal anti-inflammatory drugs help to reduce breast tenderness and pain(**21).**

Surgery the use of surgery should be the last treatment option for women with PMS. It's usually reserved for individuals with sever symptoms that have not respond to medical therapy and after failure of all conservative measures. Bilateral oophorectomy with hysterectomy is rarely indicated for the treatment of PMS alone. Clearly hysterectomy and bilateral oophorectomy is extremely effective in the treatment of PMS**.(22)** The nursing role in PMS involves helping the women and her family to understand the possible causes of the syndrome, specific symptoms and the rationale for any planned treatments.

Incidence of PMS ; Depending on how it is assessed, between 5% and 97% of women have been reported as suffering from PMS. More accurate estimates point to around 35% of women having moderate to severe symptoms which disrupt social life, work, and family life and may cause a woman to

seek treatment, whilst 5-10% will experience severely debilitating symptoms causing major disruption in all aspects of life **(23)**

The prevalence in Egypt was also found to be variable in a study by **Mekhail,(24)** PMS was found to be high prevalence (47.2%) among the studied females in El-salam district at Ismailia city. Of theses, 39.1% had moderate, and 8.1% had sever PMS, another study by **El-Defrawi, (25)** in Suez Canal area has reported prevalence rate of(69.6%)

Significance of the Study

Premenstrual syndrome (PMS) refers to a group of menstrual related disorders that occur in up to 40 percent of women of reproductive age, with 5 percent of these women having severe impairment. Which affect their ability to work, work achievement, affect the quality of their lives and their activities **Knaapen, (26).** Data generated from this study will help in identifying the female employee knowledge and practice about premenstrual syndrome and its effect on their daily life activity

2. Subjects and Methods:

Aim of the Study

The present study was conducted to assess the female employee knowledge and practice about premenstrual syndrome and its effect on daily life activities.

Research hypothesis

1- Identifying the female employee knowledge and practice about premenstrual syndrome and its effect on their daily life activity.

Technical designs

- Research design:-

A cross sectional descriptive research design was utilized in this study.

Subjects:

Setting

This study was carried out at all faculties (N=16) (Nursing, Medicine, Arts, Fine arts, Education, Specific education, Science, pharmacy, Computers &information, tourism & hotels, Language, Dar Al Uloom, Engineering, Dental medicine, Agriculture and physical education) in El-Minia University.

Sample

The sample of the present study included 113 female employees. The data collection started from 3/2010 to 6/2010 which is collected through two days per week.

Inclusion criteria: All of female employee at faculties in El- Minia University in reproductive age from 18 to 48 years old.

Exclusion criteria: Women have gynecological diseases, cardiac disease, hypertension disease, liver disease, bleeding, and any thing affect on menstrual cycle ex. Family planning method (I U D).

Tools: self-administered questionnaire as research instrument completed by researcher for collecting this data

1-Socio-demographic characteristics of the studied sample such as: This information included the age of the female employee as well as the education, marital status, place of work and residence.

2-Data about their obstetrical history: This includes the age of menarche, menstrual duration, interval, menstrual regularity, duration and source of information about premenstrual syndrome.

3- Knowledge of female employee about premenstrual syndrome: This include female employee knowledge about premenstrual syndrome (physical symptoms such as back pain, breast tenderness, headache, fatigue…etc and psychological symptoms such as anxiety, irritability, depression, mood swings…etc).

4- The effect of premenstrual syndrome on daily life activity:

This includes data about:

a- The effect of premenstrual syndrome on daily life activities.

- Mild effect with good participation
- Moderate effect with satisfactory participation
- Sever effect with no participation

b- The effect of premenstrual syndrome on the work in forms of:

- Absenteeism- Coming late to work - Excusing early
- Low productivity Delaying work for after end of syndrome

5- Management of premenstrual syndrome:

This include female employee knowledge and practice about how to manage premenstrual syndrome such as drinks taken or avoided, medication, sports and activities, rest period and bathing.

Administrative Design:

Procedure*:*

- Before conducting the study an official permission was obtained from the Deans of the faculties to proceed with study.
- The researcher introduced herself to the eligible female employee and briefly explained the nature of the study.
- Formal consent was obtained from female employee orally before being involved in the study after explanation of the nature and purpose of the study and there are no risks or cost in participation, and there are voluntary participation and confidentiality of each subject who agrees to participate and to fill the questionnaire.
- The researcher collected the sample through two days, one faculty per week and given sample self

administered questionnaire to fill data and explained any question from them about the questionnaire.

- The filling of questionnaire took 10-15 minutes by participants.
- After filling the questionnaire, the researcher provided health education about hygienic practices during menstruation and premenstrual syndrome and recommendations for dietary modification and prescription of regular moderate aerobic exercise within the context for her life & responsibilities

Operational Design

Pilot study:

Pilot study was done on 10% of the women to evaluate the clarity and understanding of the tools. It also helped in the estimation of the time needed to fill the form. According to the results of the pilot, tools modifications were done. The women who were tested in the pilot study were included in the main study sample.

Fieldwork

A Clear explanation of the nature and the aim of the study were given to the women to obtain their informed verbal consent which includes the rights for privacy and confidentiality.

Statistical analysis

Data were analyzed using the statistical package for social science (SPSS) version 11.5 (Windows Microsoft). Continuous data were expressed as frequency, percentage, mean and SD. discrete data were expressed as frequency and percentage. Comparison between variables was done using chi-square test. Probability (*p*-value) less than 0.05 was considered significant and less than 0.001 was considered highly significant.

Limitation of the study:

There were some of the limitations facing the researcher during the period of data collection:-

1. Some women can't tolerate to complete the all questionnaire sheet with the researcher because of the overload of the work.
2. As the information was collected about previous practices, recall bias was a possibility.

3. Results

The results of this study will be described according to the following parts:

Part I: Socio- demographic characteristics of the studied sample.

Part II: Distribution of the studied sample according to their obstetrical history.

Part III: Distribution of the studied sample according to their knowledge about source of information.

Part IV: Distribution of the studied sample according to their symptoms of premenstrual syndrome.

Part V: Distribution of the studied sample according to the effect of symptoms of premenstrual syndrome on daily life activities and work.

Part VI: Distribution of the studied sample according to their habits to mange premenstrual syndrome symptoms.

Part VII: effect of symptoms on work and daily life activities and the female practice to overcome the syndrome

Table (1): Distribution of the studied sample according to their socio demographic characteristics.

Socio- demographic characteristics	(N=113)	%
Age		
18 to < 28 years	62	54.87
28 to < 38 years	28	24.78
38 ≤ 48 years	23	20.35
Mean age ± SD	31.7 ± 9	
Marital status		
Single	47	41.59
Married	59	52.21
Divorce	5	4.42
Widow	2	1.77
Educational level		
Secondary or (Diploma degree)	55	48.67
University	49	43.36
Post graduate	9	7.96
Place of residence		
Urban	77	68.14
Rural	36	31.86
Place of work		
Faculty of Nursing	13	11.50
Faculty of Fine Arts	8	7.1
Faculty of Physical Education	14	12.38
Faculty of Language	6	5.3
Faculty of Medicine	9	7.96
Faculty of Specific Education	2	1.77
Faculty of Computer and Information	6	5.3
Faculty of Dar Al uloom	8	7.1
Faculty of Science	5	4.42
Faculty of Pharmacy	5	4.42
Faculty of Agriculture	11	9.73
Faculty of Dental Medicine	7	6.19
Faculty of Arts	6	5.3
Faculty of Engineering	5	4.42
Faculty of Education	6	5.3
Faculty of Hotel and Tourism	2	1.77

Table (1): Illustrated distribution of the studied sample according to their socio- demographic characteristics. It was noticed that the mean age ± SD of the studied sample was (31.7 ± 9) years. As regards marital status, it was observed that around half

(52.21%) of the studied sample were married, &only (1.77%) were widow. Concerning the educational level, it was observed that secondary or diploma degree have the nearly half percentage in our studied sample (48.67%), (43.36%) of them were universal education respectively

Table (2): Distribution of the studied sample according to their obstetrical history

Obstetrical data	(N=113)	%
Age of menarche: mean age=(13 ±.8)		
Normal (11-16)	96	84.96
Abnormal (<11->16)	17	15.04
Duration of menstruation		
Normal (3_7)	92	81.42
Abnormal (<3->7)	21	18.58
Regularity of menstruation		
Yes	113	100.00
No	–	–
Interval of menstruation		
Normal (21_35)	113	100.00
Abnormal (<21->35)	–	–
Duration of premenstrual syndrome		
3days before	54	47.78
5days before	24	21.23
7days before	35	30.97

Shows distribution of the studied sample according to their obstetrical history and age of menarche it was observed that the vast majority (%84.96) of the studied sample were normal age of menarche. As regards duration of menstruation, it was noticed that the vast majority (81.42%) Concerning regularity and interval of menstruation, it was observed that the entire studied sample (100%) was normal.

Table (3): Distribution of the studied sample according to their knowledge about source of information.

Source of information about premenstrual syndrome#	(N=113)	%
Mother	70	61.95
Sisters	21	18.58
Grand mother	7	6.19
Beers	53	46.90
Books and news paper	49	43.36
Mass media	31	27.43
More than one	58	51.33
All of them	1	0.88
Others	17	15.04

N.B: More than one answer #

Table (3): Show distribution of the studied sample according to their knowledge about source of information about premenstrual syndrome. As regards source of information about premenstrual syndrome. It revealed that more than half(61.95%) of the studied sample were taken information from mothers, and (15.04%) was other sources (eg. studying of obstetric subject, internet ,quraan, religious lessons and working in clinical faculties as medicine and nursing).

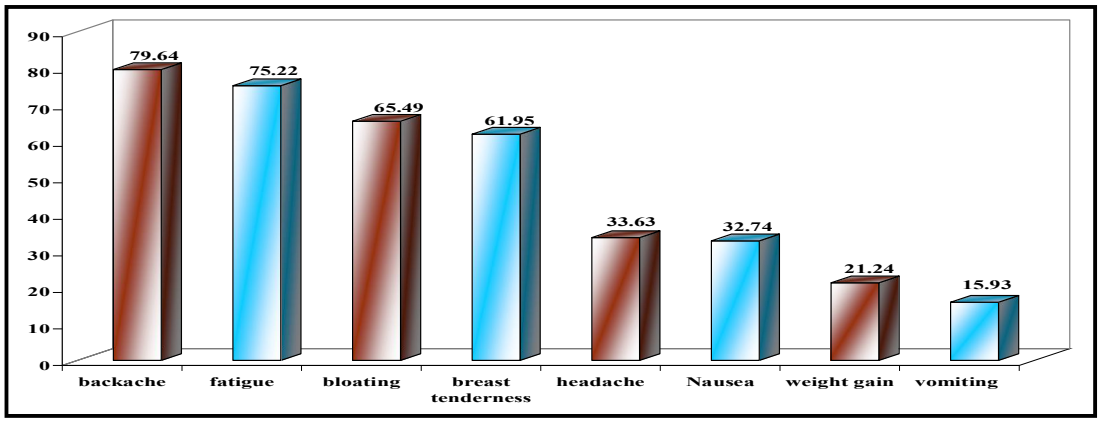

Figure (1): Shows the most common reported physical symptoms of PMS by the studied sample.

Figure (1): Shows that the most common reported physical symptoms of premenstrual syndrome by the studied sample (79.64%, 75.22%, 65.49%, 61.95%, 33.63%, 32.74%, 21.24% and 15.93%) respectively were; backache, fatigue, bloating, breast tenderness, headache, Nassau, weight gain and vomiting.

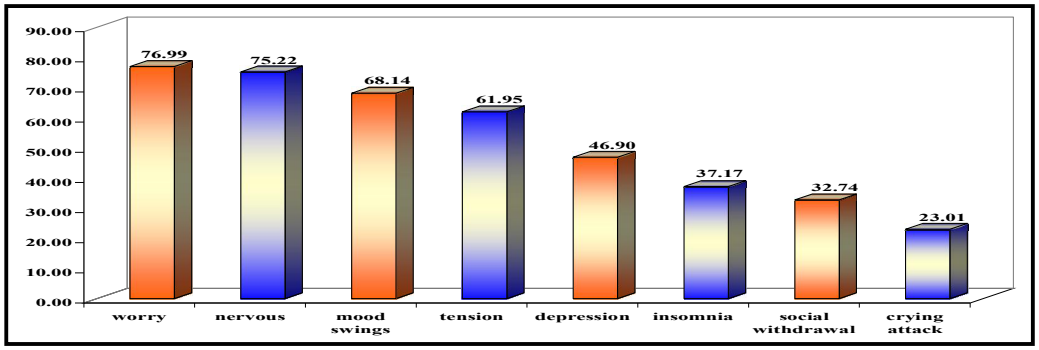

Figure (2): Shows the most common reported psychiatric symptoms of PMS by the studied sample.

Figure (2): Displays that the most common reported Psychiatric symptoms of premenstrual syndrome by the studied sample(76.99%, 75.22%, 68.14%, 61.95%, 46.90%, 37.17%, 32.74% and 23.01%) respectively were; worry, nervous, mood swings, tension, depression, insomnia, social withdrawal and crying attack.

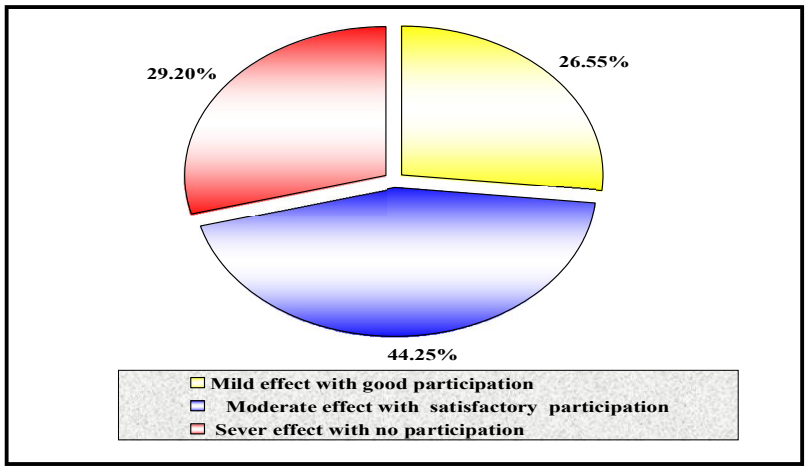

Figure (3): Effect of premenstrual syndrome on daily life activities of the studied sample.

Figure (3) revealed the effect of premenstrual syndrome on daily life activities. It was observed that nearly half (44.25%) of the studied sample were had moderate effect with satisfactory participation. While nearly one third (29.20%) of them were had sever effect with no participation and more than quarter (26.55%) of them were had mild effect with good participation.

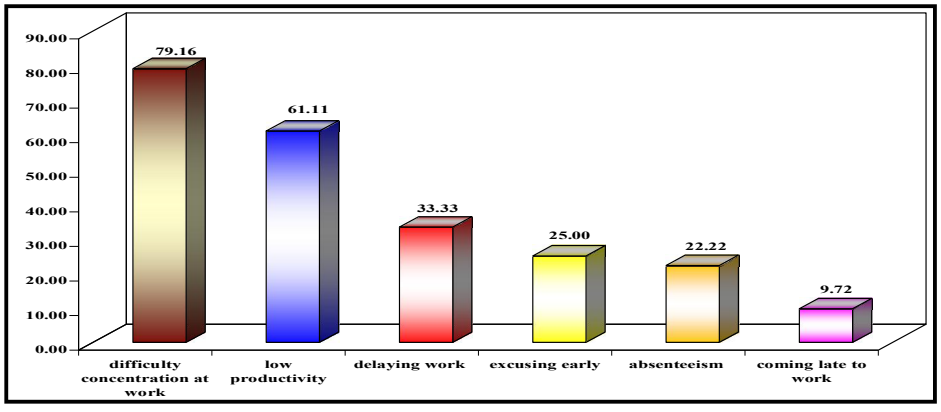

Figure (4): Shows forms of premenstrual syndrome effects on work of the studied sample.

Figure (4): Displays the form of the effect of symptoms of PMS on work of the studied sample. It was observed that studied sample were had an effect on work in form of (79.16% ,61.11%, 33.33%, 25.00%, 22.22% and 9.72%) respectively was (difficulty concentration at work, low productivity, delaying work for after end of syndrome, excusing early, absenteeism and coming late to work).

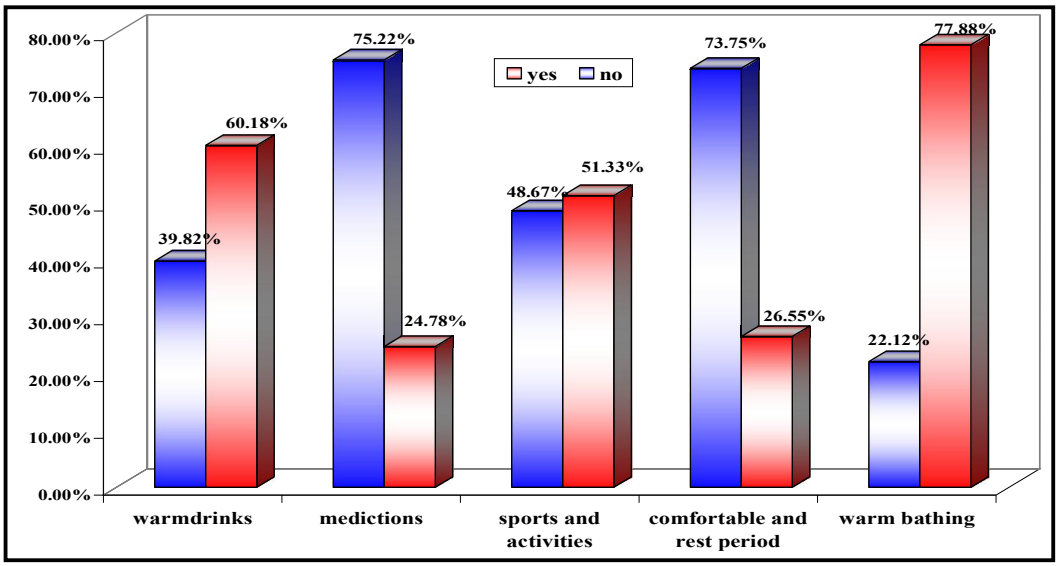

Figure (5): Displays the measures used by the studied sample to overcome premenstrual syndrome symptoms

Figure (5): Shows the measures used by the studied sample to overcome premenstrual syndrome symptoms. It displays that (77.88%, 60.18%, 51.33%, 26.55% and 24.78%) respectively the most common used measure by the studied sample to overcome the premenstrual syndrome symptoms were: warm bathing, warm drinks, sports and activities, comfortable and rest period and medications).

Table (4): Frequency difference between the rural and the urban female of studied sample regarding source of information about premenstrual syndrome.

Source of information #	Urban (n = 77)		Rural (n = 36)		X2	*P*-value
	No	%	No	%		
Mother	46	59.74	24	66.67	0.50	0.480
Sisters	14	18.18	7	19.44	0.03	0.872
Grand mother	2	2.60	5	13.89	5.38	0.020*
Beers	33	42.86	20	55.56	1.59	0.208
Books and news paper	37	48.05	12	33.33	2.16	0.141
Mass media (Television and internet)	29	37.66	2	5.56	12.70	0.000*

NB1: More than one answer #
NB2: Statistical significant when *P* value ≤ 0.05

Table (4) illustrated that there no statistical significant difference between rural and urban female of the studied sample regarding source of information about premenstrual syndrome taken from the mother, sisters, beers, books and news paper. But there is statistical significant difference between rural and urban female of the studied sample regarding source of information about premenstrual syndrome taken from the grand mother and the significant is for the rural female (p= 0.020). While there is a highly statistical significant difference between rural and urban female of the studied sample regarding source of information about premenstrual syndrome taken from**(mass media)** and the significant is for the urban female (p= 0.000).

Table (5): Frequency difference between the studied sample marital status in symptoms of premenstrual syndrome and effect of symptoms on work and daily life activities.

Symptoms of premenstrual syndrome	Single (n = 47)		Married (n = 59)		X2	*P*-value
	No	%	No	%		
a) Physical symptoms #						
Backache	36	76.60	47	79.66	0.70	0.872
Breast tenderness	31	65.96	34	57.63	1.60	0.656
Headache	12	25.53	25	42.37	6.18	0.103
Fatigue	32	68.09	47	79.66	2.63	0.453
Nausea	24	51.06	10	16.95	8.92	0.050*
Vomiting	26	55.32	9	15.25	8.97	0.050*
Wait gain	10	21.28	13	22.03	0.57	0.904
Bloating	30	63.83	40	67.80	0.48	0.924
b) Psychiatric symptoms#						
Worry	34	72.34	46	77.97	1.67	0.645
Nervous	34	72.34	45	76.27	0.96	0.810
Crying attack	9	19.15	16	27.12	1.58	0.664
Depression	19	40.43	30	50.85	5.13	0.163
Fell lonely	11	23.40	17	28.81	3.86	0.277
Mood swings	29	61.70	44	74.58	2.48	0.479
Insomnia	16	34.04	26	44.07	5.54	0.136
Social withdrawal	15	31.91	26	44.07	5.52	0.138
Tension	20	42.55	35	59.32	10.09	0.018*
Effect of premenstrual syndrome on daily life activities	15	31.91	35	59.32	10.09	0.017*
Effect of symptoms of premenstrual syndrome on work	25	53.19	48	81.35	2.54	0.030*
Absenteeism	4	16.00	20	41.66	5.15	0.021*
Coming late to work	2	8.00	11	22.91	7.27	0.054*
Excusing early	6	24.00	11	22.91	3.36	0.080*
Low productivity	9	36.00	40	83.33	5.52	0.010
Difficulty concentration at work	20	80.00	35	72.91	10.09	0.018
Delaying work for after end of syndrome	7	28.00	15	31.25	2.59	0.459

NB1: More than one answer #

NB2: Statistical significant when *P* value ≤ 0.05

Table (5) illustrated that there is statistical significant difference between the single and married participants regarding physical symptoms (**vomiting and nausea) with *p* value (0.050)** the significant is for the single female participants. In addition, there is statistical significant difference between them regarding the psychological symptoms in only (tension) with ***p* value (0.018**) and the significant is for the married female participants.

Concerning the effect of PMS on the daily life activities of the single and married participants, it was found that there is statistical significant difference between them with ***p* value (0.017)** and the significant is for the married female participants. Also there is statistical significant difference between them regarding the effects of PMS on work with ***p* value (0.030)** and the significant is for the married female participants and this effect in forms of (absenteeism, coming late to work and excusing early).

4.Discussion

Premenstrual Syndrome (PMS) is a disorder that characterized by the cyclic recurrence of symptoms during the luteal phase of the menstrual cycle.1-3 Symptoms typically begin between the ages of 25 and 35 years. Women who have severe affective symptoms may also meet criteria for premenstrual dysphoric disorder (PMDD). In both PMS and PMDD, symptoms diminish rapidly with the onset of menses **(27).**

The aim of this study is to assess the female employee knowledge and practice about premenstrual syndrome and its effect on daily life activities.

The results of the current study will be discussed and compared them with other related studies, literature, as well as representing the researcher interpretation of the current results.

As regarding socio-demographic characteristics of the studied sample, the findings of the present study showed that the mean age of the studied sample was (31.7 ± 9)

The results of table (2) Shows distribution of the studied sample according to their obstetrical history, concerning the age of menarche it was observed that the vast majority (84.96%) of the studied sample were normal age and the mean age of menarche was (13 ±.8) and this supported by **Aly,(8)** who studied premenstrual syndrome among Assuit university students and the mean age of menarche of hid studied sample was (13.5 ±1.2).

As regards duration of menstruation, it was noticed that the vast majority (81.42%) of the studied sample had normal duration of menstruation. Concerning regularity and interval of menstruation, it was observed that the entire studied sample (100%) was normal regularity and interval of menstruation and this is agreed with the results of **Diaz ,(29)** who studied menstruation in girls and adolescents and found that all studied participants (100%) was normal regularity and interval of menstruation.

Also results of table (3) showed that the most common source of information about premenstrual syndrome. It revealed that more than half (61.95%) of the studied sample were taken information from mothers (6.19%) was from grand mother, and (15.04%)was other sources eg. studding of obstetric subject, internet, quraan, religious lessons and working in clinical faculties as Medicine and Nursing). This result disagreed with the results of **(Marván, and Claudia,(30)** who studied the role of Prior knowledge about premenstrual syndrome and found that the most common source of information about premenstrual syndrome are from videotape and films describing PMS with percent of (52.80%). Also our results disagreed with **Choi** (**31**) who studied the impact of premenstrual symptoms on activities of daily life in Korean women and found that Korean women have no or little knowledge about PMS and only infrequently consult their physicians.

In the present study **Figure(1):** showed that (79.64%, 75.22%, 65.49%, 61.95% and 33.63%) respectively the most common reported physical symptoms of premenstrual syndrome by the studied sample were; backache, fatigue, bloating, breast tenderness and headache. This result is agreed with the results of **Aly, (28)** who found that the most frequently physical symptoms reported by the studied students were backache, fatigue, headache, bloating and breast tenderness. Also the result is agreed with the findings of **Alvir and Thys-Jacobs, (32)** who mentioned that backache, fatigue, bloating, breast tenderness and headache were the most common reported physical symptoms of PMS by the studied sample. Similar results were found by Ghonamy (33) who studied premenstrual syndrome among Egyptian Cairo university females and reported the most common somatic symptoms were backache, fatigue, headache, abdominal cramps and breast tenderness.

On the other hand, the present study found that (79.64%) backache was the most reported complaint among the studied sample. These results are accordance with the finding of **Aly & amasha,and Tenkir et al.,(28,34,35**)who mentioned that backache was the most reported complaint among the studied sample. But this result in accordance with the study of **Mekhail, (24)** who reported that abdominal bloating was the most common complaint among the studied group.

Also regarding psychiatric symptoms **Figure (2)** revealed that (76.99%, 75.22%, 68.14%, 61.95% and 46.90%) respectively the most common reported psychiatric symptoms were (worry, nervous, mood swings, tension, depression). This result is supported by the results of **Atwood(36),Lee et al.,(37)** who found that the most observed psychological symptoms were: worry, mood swings, depression, tension, and nervous. These findings were in line withAngst etal **(Angst et al.(38) Alters & Schiff (39) Hylan, et al.,(40**) who mentioned that up to 60% of American women with PMS reported Psychiatric symptoms such as worry, depression, tension, nervousness and mood swings.

On the other hand, the present study found that most common reported psychiatric symptom of premenstrual syndrome by the studied sample (76.99%) was (worry). This result is accordance with the finding of **Aly,(28); Amasha(34)** who mentioned that worry was that most common reported psychiatric symptoms of PMS by the studied sample, also is accordance with the study of **Jill and Elissa** (**41**) who reported that worry was the most common complaint among the studied group. But the result disagreed with **Mohammed (42**) who studied the prevalence and severity of premenstrual syndrome among adolescent Iranian Girls and found that the most common complaints were; crying attack (84%) and sudden feeling of sadness (72.3%).

Concerning the **effect of premenstrual syndrome on daily life activities, results of Figure (3)** showed that nearly half (44.25%) of the studied sample were had moderate effect with satisfactory participation. While nearly one third (29.20%) of them were had sever effect with no participation and more than quarter (26.55%) of them were had mild effect with good participation. This result in consistent with the results of **Dennerstein (43)** who studied the effect of PMS on activities of daily life and found that activities of daily life were predominantly mild, moderate and sever affection

with percentages of (26.73%, 48.15% and 25.22%) respectively. Similar results were found by **(Balaha (44)**who studied the effect of premenstrual syndrome in female medical students and his results were founded his studied participants affected from; 45% mild, 32.6% moderate to 22.4% severe affection on their daily life activities. Also the result agreed with the finding of **Ova, (45)** who studied premenstrual syndrome (PMS) and premenstrual dysphoric disorder (PMDD) in Indonesian women and these women affected form moderate to sever affection on their daily life activities with a percentage of (3.9% and 1.1%) respectively. But the results disagreed with **Choi et al,** (**31**) who studied the impact of premenstrual symptoms on activities of daily life in Korean women and found that premenstrual syndrome have no effect on Korean women daily life activities.

In addition the results of **Figure (4) Concerning the effect of symptoms of premenstrual syndrome on work.** It was observed that about two thirds (63.72%) of the studied sample were had an effect on work in form of (79.16%) was difficulty concentration at work, (61.11%) was low productivity, (33.33%) was delaying work for after end of syndrome and (22.22%) was absenteeism. while more than one third (36.28%) of the studied sample had no effect at all. This result is in agreement with **Ichino and Moretti,(46**) who studied the biological gender differences, absenteeism and the earning gap and found that women with PMS had an effect on work in form of absenteeism, low productivity, delaying work and difficulty concentration at work with a percentage of (24.55, 60.95, 25.35 and 73.02) respectively.

Also the results supported by **Ekholm, (47**) who studied influence of premenstrual syndrome on family, social life, and work performance and relieved that the most reported effect were low productivity, absenteeism and delaying work for a later time or missed work. In the same line our finding supported by **(Borenstein, et al,** (**48**) who studied premenstrual syndrome carries high costs for employers the women recorded missed work time and estimates of lost productivity related to PMS. Similar results were found by **Pharma** (**49**) who studied PMS/ in real life: its impact to women's quality of life and observed that the physical and emotional manifestations of PMS causes increased absenteeism and reduced work productivity.

On the other hand, the present study found that most common reported effect of symptoms of premenstrual syndrome on work by the studied sample was; (79.16%) difficulty concentration at work this is agreed with finding of **Davydov (50)** who studied the effects of premenstrual syndrome on work and personality and found that the most common effects is (85.21%) difficulty concentration at work.

Results showed the practices used by studied sample to overcome the syndrome and there were various types of measures mentioned in this research which were performed by the female employee. Their aim was to alleviate PMS symptoms and the measures (77.88%, 60.18%, 51.33%, 26.55% and 24.78%) respectively were: warm bathing warm drinks, , sports and activities, comfortable and rest period and medications). This result supported by **Stevinson, & Ernst, (51)** who observed that the most practiced measures were warm drinks and sports and observed that women practiced exercise were had high pain tolerance and helps in accepting PMS as a normal experience. Also the results agreed with **Amasha,** (**34**) who found that the majority of the studied sample drink warm fluids (51.2%), (26.7) taking medications, (48%) practice exercise, (25%) taking rest period and (89.4%) warm bath to reduce PMS symptoms. In the same line the results supported by **George, (52)** who studied a review of treatment approaches to pre-menstrual syndrome and found that the most practice measures were high proportion of these women perceived lifestyle adjustments- rest, exercise, less caffeine/ alcohol/ sugar, increase fluid intake and taking warm bathing.

On the other hand, the present study found that most common reported practice by the studied sample to overcome the symptoms of premenstrual syndrome was; warm drinks and warm bathing this disagreed with the finding of **Ismail, (53)** who observed that most common reported practice by the studied sample to overcome the symptoms of premenstrual syndrome was nutritional approaches to overcome the syndrome. Also the results disagreed with **Bakr, & Ez-Elarab, (54**) who mentioned that sleep was the commonest remedy used to overcome the symptoms of PMS reported by the studied female participants'.

There is statistical significant difference between rural and urban female of the studied sample regarding source of information about premenstrual syndrome taken from the grand mother and the significant is for the rural female (p= 0.020) and this supported by the results of **Abou Seeeda, and Abdel Hafez,** (**55**)who studied the PMS in rural and urban Egyptians and found that the most common source of information about premenstrual syndrome taken from the grand mother and the significant is for the rural female.

While there is a highly statistical significant difference between rural and urban female of the studied sample regarding source of information about premenstrual syndrome taken from mass media and

the significant is for the urban female (p= 0.000) this result agreed with the finding of **Portella (56**) who studied the association between the source of information about PMS and the place of residence and mention that internet and mass media were the most common source about PMS among the studied sample.

Table (5) illustrated that there is statistical significant difference between the single and married participants regarding physical symptoms (nausea and vomiting) with p value (0.050) the significant is for the single female participants. This result disapproved by the finding of **Dennerstein.,(43)** who had a study about the effects of premenstrual symptoms on activities of daily life and found that married women reported more symptoms of premenstrual syndrome. These findings inconsistent with **Ghanbari (57**) who found that there is no statistical significant difference between his studied sample group regarding marital status and the symptoms of the syndrome .Also disagreed with **(Bakhshani et al) (58)** who stated that no significant difference was found between married and unmarried women in his studied sample regarding symptoms of premenstrual syndrome.

Concerning the effect of PMS on the daily life activities of the single and married participants, it was found that there is statistical significant difference between them with p value (0.017) and the significant is for the married female participants. This supported with the finding of **Dennerstein.** (**43**) who had a study about effects of premenstrual symptoms on activities of daily life and found that married women reported more impact of symptoms on activities of daily life (ADL).

Also there is statistical significant difference between them regarding the effects of PMS on work with p value (0.030) and the significant is for the married participants and this effect is in forms of (absenteeism, coming late to work and excusing early), this is supported by **Lee (37**) who study the effect of premenstrual syndrome and its economical burden in employed women and mention that there is significant difference between married and unmarried women in his studied sample regarding the effects of PMS symptoms on work and the married women reported effects in forms of (missed work, high level of tension at work and absenteeism) . Also approved with the finding of **Chang (59**)who studied premenstrual syndrome in employed Chinese women in Hong Kong and found that absence and low achievement was significantly more frequent among married employed women as they had more responsibilities and concerns than unmarried women.

5. Conclusion

The following were concluded from this study:

- PMS is an intermittent problem that cannot be resolved until menopause. However, appropriate management can help to alleviate the disturbing symptoms of PMS. Findings, of this study, could be used to guide health care providers, who work with those experiencing PMS, regarding what symptoms tend to occur most often, which symptoms tend to have the highest intensity and what strategies to use to effectively deal with the most disturbing symptoms.
- The results of this explorative study provide sufficient evidence that PMS have significant impact on quality of life, assessed as ADL. (26.55%) of studied sample were had mild effect with good participation, (44.25%) moderate effect with satisfactory participation, (29.20%) severe effect with no participation. PMS is associated with difficulty concentration at work, reduced work productivity, increased work absenteeism and coming late to work. These results suggest that severe premenstrual disorder results in an economic burden both for women as well as for society.

Recommendations

In the light of the findings of the present study, the following recommendations are suggested:

- counseling about premenstrual syndrome and menstrual disorders"& hygienic practices should be given by nurses to help the female employee understanding what her symptoms most likely represent, their causes, to enhance self- efficiency and self-management also the goals and components of treatment, recommendations for dietary modification and prescription of regular moderate aerobic exercise within the context for her life & responsibilities.
- The mass media should be used more effectively to improve awareness of women about the PMS.
- Further researches should be carried out to investigate other factors and their association with prevalence of PMS.

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