Premenstrual Syndrome - A Comparative Study of Working Women vs Housewives in Karachi

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Abstract

Objective: To compare the frequency of premenstrual syndrome (PMS) in working women and house wives and its relationship with associated factors.

Methods: A comparative cross sectional study having qualitative characteristics, was conducted in Karachi.form August 2002 to August 2003. Working women in the study were from Abbasi Shaheed Hospital and-house wives from Federal B Area Karachi.

Hundred women were included aged between 20-40 years belonging to two groups of 50 each. The first group comprised of working women from a hospital, ranging from highly educated doctors to janitors. The other group comprised of non-working housewives of middle and low income group. In both groups exclusions were made for those who had irregular menstrual cycle, on contraceptive pills, desiring pregnancy, were lactating or had known major psychiatric or medical disorders. Results were compiled after three consecutive menstrual cycles using questionnaire.

Results: The results indicated that PMS is significantly higher in working women than housewives (50% vs 30%). Statistical analysis showed that it is more commonly present in the age range of 26-35 years, in single women or women with low parity and the well educated. Irritability, depression and loss of interest are most frequent complaints in working women. General malaise, abdominal cramps and dysmenorrhoea are more common in house wives. Working women show greater tendency to use analgesics.

Conclusion: PMS was more common in working women compared to housewives. There is a need to identify women with PMS and to establish an intervention that would help to alleviate the symptoms so that their work performance remains unaltered.

Keywords: Premenstrual syndrome (PMS), Working women. (AASH & KMDC 18(1):1;2013).

Introduction

The term Premenstrual syndrome (PMS) is defined in Tenth Revision of the international classification of disease (ICD 10) as: 'Physiological, emotional, and mental stress related to the period of time immediately preceding menstruation'[1].

Premenstrual dysphoric disorder (PMDD) is the extreme predominantly psychological end of the PMS spectrum estimated to occur in 3-9% of women[2]. The principal cause of PMS is uncertain: it is strongly considered that the cyclical endogenous progesterone produced in the luteal phase of the cycle is responsible for symptoms in women who are usually sensitive to normal progesterone levels. Indeed no differences have been demonstrated in progesterone levels between women with or without PMS[3].

A wide range of symptoms has been described but it is the timing and severity that are most important, more so than the specific character. Depression, irritability, anxiety. tension, aggression, inability to cope and feeling out of control are typical psychological symptoms. Bloatedness, mastalgia and headache are the classical physical symptoms[4].

The confirmation of luteal phase timing with the relief of symptoms by the end of menstruation is diagnostic, provided the symptoms are of such severity to impact on patient's normal functioning[5]. Validated assessment instrument included the calendar of premenstrual experiences (COPE) and the daily rating of severity of symptoms (DRSP) form[5,6].

This study was carried out to determine the exact frequency of premenstrual syndrome in work-

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ing women and house wives so that an intervention can be established that would help alleviate their pre menstrual symptoms, signs and discomforts.

Patients and Methods

A comparative cross sectional study having qualitative characteristics was conducted in Karachi form August 2002 to August 2003. Working women included were from Abbasi Shaheed Hospital and house wives were from Federal B Area, Karachi.

Prior to embarking on the final study, a pilot study comprising of 10 patients was carried out. This enabled various study characteristics to be identified and helped in the final editing of the questionnaire. The patients of the pilot study were not included in the final study, the data of which is presented in this paper.

For the final study, sample size was calculated using the WHO Sample Size Calculator[7].100 women were selected and divided in to two groups. First group comprised of working women at Abbasi Shaheed Hospital Karachi and these included doctors, paramedics, support and janitorial staff. The other group included non-working housewives residing in the community of Federal B Area, Karachi. They belonged to middle and lower income group.Equal numbers i.e. 50 for each group were selected with age ranging between 20-40 years. Care was taken to exclude those women who had irregular menstrual cycle, on contraceptive pills, desiring pregnancy, were lactating or had known major psychiatric or medical disorders.The approach to working women group was not too difficult-being at their workplace i.e. Abbasi Shaheed Hospital.

For the housewives group, author visited in person to complete the sample size of this group. Door to door approach was adopted by visiting around 30 residential compounds, personally convincing and counseling the participants to volunteer for this study.All the women who fulfilled inclusion criteria were selected based on convenient approach for follow-up.

The methodology tool was a structured questionnaire designed to assess the demographic characteristics, physical, behavioral and psychological symptoms of PMS experienced by the subjects included in the study. The given questionnaire was printed in Urdu and words used were easy to comprehend and understand.

All the females were given the questionnaire and they followed it for three consecutive menstrual cycles following which the questionnaire was collected in person and results compiled and evaluated. Chi square test was applied to compare the two groups i.e housewives and working women.. All descriptive and inferential calculations were done by SPSS Version-14.

Results

Results were compiled and it showed that 50% of working women and 30% of house wives were diagnosed cases of PMS. Results showed a significant difference in frequency of PMS in working women and house wives ($p=0.041$),

Among working women diagnosed with PMS, 20% were doctors, 16% were nurses, 8% laboratory technicians and 6% were from support and janitorial staff. Thus suggesting that PMS is significantly higher in educated working women ($p= 0.1666$). Highest frequency of PMS was observed between 25 to 35 years of age ($p<0.019$), with prevalence of 30% in working class and 16% in house wives.(Table 1).

The level of education of women included in the study ranged from under matric to post graduate. Considering relationship of education levels with PMS, it was found to be more prevalent in educated women due to increased degree of awareness. Overall PMS was 20% in post graduate working class, 16% in post graduate house wives whereas the figure were 12% and 10% in graduate working women and housewives respectively. Results showed that PMS is significantly higher in more educated women than less educated one in both groups ($p=0.000$) (Table 1).

PMS was more frequently found in singles including unmarried, divorced, and separated women. Frequency of 30% and 24% was found in working women and housewives respectively. This revealed significant association of PMS with single marital status. (p=0.040) (Table 1).

The overall results show that PMS is more frequent in nulliparous and primiparous women than multiparous. Observed values were 20% in nulliparous and 16% in primiparous working women, whereas it was 8% in nullipara and 12% in primiparous housewives. Thus showing asignificant association of PMS with low parity (p= 0.010)(Table 1).

The most common symptom of PMS in working women was irritability, followed by depression and loss of interest. In housewives generalized malaise and abdominal cramps were the most significant complaints. Comparison of the three categories of symptoms between the two groups gave the following values; p=0.008 for physical symptom, p=0.229 for behavioral symptoms and p =0.0000 for psychological symptoms.(Tables 2,3 and 4).

Thirty percent of working women and 18% of house wives were found to use painkillers for relief of their premenstrual discomforts. It revealed significant difference between analgesics intake in working women and housewives. (p=0.000) Dysmenorrhoea which is a separate medical entity was observed in 44% of working women and 54% of house wives. (p=0.317)

Table 1. Demographic characteristics among working women and housewives diagnosed with PMS.

Variables	Working women (n=25) (n %)	Housewives (n=15) (n%)
Age of Women (yrs.)		
18-25	7(28)	5(33)
26-35	15(60)*	8(53)*
36-40	3(12)	2(13)
Education		
Under Matric	1(4)	—-
Matric	2(8)	1(6)
Inter	4(16)	1(6)
Graduate	8(32)	5(33)
Post Graduate	10(40)*	8(53)
Marital Status		
Married	10(40)	3(20)
Singles	15(60)**	12(80)
Parity of women		
Para 0	10(40)**	4(26.6)
Para 1	8(32)	6(40)
Para 2	3(12)	3(20)
Para 3	2(8)	—-
Para 4	1(4)	1(6)
Para 5 and above	1(4)	1(6)

* $p < 0.05$ and **$p <$ or $= 0.01$

Table 2. Comparison of frequency of physical symptoms of PMS in the two study groups.

Physical Symptoms of PMS	Working women (n = 25) (n %)	Housewives (n = 15) (n %)
1 Headache/Migraine	6 (24)	6 (40)
2 Bloatedness	2 (8)	4(16.6)
3 Backache	4 (16)	8 (53)
4 Breast tenderness	2 (8)	4(16.6)
5 General Malaise	8 (32)	10(66) *
6 Abd Cramps	6 (24)	10(66) *
7 Altered bowel habits	1 (4)	1(6)
8 Altered appetite	1 (4)	2(6)

* $p < 0.05$

Table 3. Comparison of frequency of behavioral symptoms of PMS in the two study groups.

Physical Symptoms of PMS	Working women (n = 25) (n %)	Housewives (n = 15) (n %)
1 Loss of interest	12(48) *	8(53)
2 Wants to be alone	2 (8)	4(16.6)
3 Loss of concentration	6 (24)	4(16.6)
4 Poor Judgment	4 (16)	2(13)
5 Slow muddled thinking	2 (8)	2(13)

* $p < 0.05$

Table 4. Comparison of frequency of psychological symptoms of PMS in the two study groups.

Psychological Symptoms of PMS	Working women (n = 25) (n %)	Housewives (n = 15) (n %)
1 Irritability	15(60)	6(40)
2 Depression	10(40)	8(53)
3 Unpleasant thoughts	6(24)	2(13)
4 Sleep disturbances	4(16)	4(16.6)
5 Low self esteem	8(32)	2(13)

Discussion

PMS is said to be a psychoneuroendocrine disorder with biological, psychological and social parameters, not caused by organic disease. It occurs regularly during same phase of menstrual (ovarian) cycle and disappears during remainder of the cycle. The condition is called "ovarian cycle syndrome"[1].

This study was conducted as an effort to compare the frequency of PMS in working women with housewives of same type of population sample. The result showed that ratio of PMS in working women to housewives was 50%:30%. The main objective of this study was to determine whether working women suffer more from this syndrome than housewives.

PMS is an unusual entity since the women usually present themselves with a wide variety of premenstrual symptoms and it is the role of the clinician to determine the validity of this syndrome. It is diagnosed on the basis of history of women, for at least three menstrual cycles with all other abnormalities excluded[5,6].

In past studies on PMS, the emphasis was on its greater frequency in working women and interference with job and social performance but this study was conducted to compare its frequency in housewives also.

A study conducted in the University of California concluded that PMS significantly effects health related quality of life, occupational productivity and increases healthcare utilization[8]. Another study conducted by the same group of researchers stated that PMS in working women reported high absenteeism rates ($p < 0.006$) and less productivity per month[9,10].

A study conducted at Post graduate Medical Institute Peshawar, concluded that the frequency and severity of PMS is more common in working women as compared to housewives, probably due to more stressful life. In working women the predominant symptoms were tension and irritability (45.28%) followed by fatigue (41.5%) and depression (39.62%), while in housewives fatigue was at the top i.e. 76%, followed by depression (52%) and anxiety (36%)[11].

Another study was conducted in Hyderabad to determine the frequency and severity of Premenstrual Syndrome (PMS) in medical college students to evaluate the impact of the condition on the quality of life and find out the associated risk factors. The results of the study revealed that Premenstrual Syndrome is a common problem in young girls which adversely affects their educational performance and emotional well-being[12].

A study was conducted in Tohoku University Graduate School of Medicine, to know prevalence of PMS in Japanese adolescents group. They found out that 64.6% were found to suffer from premenstrual symptoms, which is lower than that in adult women. On the other hand, the rates of prevalence of moderate to severe PMS and PMDD in girls were higher than those in adult women. PMS significantly effects performance and was responsible for school absenteeism[13].

It is however, true that working women report their symptoms and are able to correlate these symptoms with respect to their menstrual cycle more appropriately than less educated housewives. Housewives may experience equally severe symptoms but dont recognize them as such and hence, rarely report.

Symptomatology of PMS is vast and diverse. There are lots of individual variations between symptoms of PMS and their degree of perception and interference with work. Response of a women towards premenstrual discomforts is conditioned by

genetic and environmental factors, which act as confounding variables in study e.g. heavy workload, bad marital relationship and poor socioeconomic conditions all increase prevalence of PMS.

Results of this study have shown that PMS is more commonly found in single - unmarried, divorced, separated women and widows. Women between 26-35 years of age are more prone to develop PMS in both groups under study. The same fact is in agreement with the findings of previous workers[14].

Considering both groups, results showed that irritability, fatigue, malaise and abdominal cramps are most common complaints. Similar findings were indicated in the results of a previous study[15] that reported lower abdominal pain and backache to be most prevalent complaints, whereas another study[16] found fatigue to be most common premenstrual complaint.

The study of another group in Pakistan showed that frequency of symptoms occurring in PMS was general body discomfort, anxiety, backache, fatigue and depression. Most frequently reported symptoms in PMDD group were anger, anxiety, stress, depression, fatigue and general body discomfort[17].

Regarding the use of analgesics in this study, working women showed greater tendency towards intake of drugs which also support the concept that PMS interferes with work performance and to combat this they resort to use of medicines.

With regard to occurrence of dysmenorrhoea in the study group, no significant difference was observed between two groups of this study. Majority of women from both groups had dysmenorrhoea and perhaps the most common misdiagnoses of PMS is that of dysmenorrhoea but actual reason for this confusion is the inadequate history of the patient, since for all practical purposes both conditions are separate entities.

Although PMS affects all women of different age group, parity and socioeconomic groups, educated women are able to correlate their discomforts and symptoms better than non-educated ones. Number, type and severity of symptoms differ in different individuals and is conditioned by environmental and genetic factors like one peculiar symptom is more prevalent in members of one family.

Working women are playing an important role in different aspects of life. Nowadays it is hard to find any field where there is no female worker. Therefore it is necessary to recognize this syndrome and create awareness regarding its assesment, diagnosis and treatment.

Health service providers should help women to correlate their symptoms with exact phase of menstrual cycle. Appropriate medical care should be provided to facilitate resolution of problems and improvement of workers health.

In working women it leads to interference in their work performance, lack of interest and concentration in work, irritability and job absenteeism and women are often reluctant to seek help even for treatable PMS because of social attitudes regardless of severity of premenstrual symptoms.

There are individual variations between perception and interference with daily activities. Women should be encouraged to discuss their premenstrual and menstrual queries and discomforts and a sympathetic approach should be adopted by health care providers. In majority of cases reassurance and satisfaction of being normal is the only intervention required.

There is a need to conduct a multi-centre trial to know exact prevalence of this syndrome in our urban and rural areas. Every woman should be educated about patho-physiology of this syndrome, its symptomatology and need to reassure the woman that PMS is due to ovulatory cycles and not exactly a pathological process.

In summary, menstrual related disorders are multi-dimensional and affect diverse physiological systems. Elucidation of the patho-physiologic mechanism of these disorders should allow for a more precise diagnosis and provide direction for tar-

geted therapeutic interventions. There is need to conduct a more vast study to know exact frequency of PMS at workplace and helping women to seek medical care so that their work performance remains unaltered.

There is a need to understand the limitations before interpretation of the results. This study was done in a small group belonging to a certain socio-economic status. Their selection stemmed from their easy approach to researcher. Selecting this sample population one must not forget that Karachi being cosmopolitan has large population groups like settlers from India after partition in 1947, ethnic groups like Bangladeshis, and rural Pakistanis. It is a multicultural and multi-linguistic society exposed to recurrent obituaries, unrest, law breaking and persistent tense atmosphere. The study also does not include rural women of this country with wide difference in social, educational and cultural backgrounds. Symptomatology of PMS is affected by socio-cultural factors, thus results of this study cannot be generalized to a bigger group of population or to whole population.

Conclusion

Premenstrual symptoms are among the most common disorders of women. PMS is not a western syndrome alone, its frequency is global including eastern and Pakistani women.

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