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Research Paper

A STUDY ON PERCEPTION ABOUT PRE MENSTRUAL SYNDROME BY RURAL WOMEN IN THANJAVUR DISTRICT, TAMIL NADU

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ABSTRACT

Premenstrual syndrome (PMS) refers to physical and emotional symptoms occurring in the one to two weeks before a woman's menstrual period. Symptoms often vary between women and resolve around the start of bleeding. Common symptoms include acne, tender breasts, bloating, feeling tired, irritability, and mood changes. Often symptoms are present for around six days. A woman's pattern of symptoms may change over time. (Biggs, WS; Demuth, RH,2015) Symptoms do not occur during pregnancy or following menopause. The reason of PMS is unknown. Some symptoms may be worsened by a high-salt diet, alcohol, or caffeine. The underlying mechanism is believed to involve changes in hormone levels. Premenstrual dysphoric disorder (PMDD) is a more severe form of PMS that has greater psychological symptoms. The PMS awareness and taking medications for the same is high among the urban women. But how the PMS affects the rural women is yet to be documented in Indian research literature. This study deals with assessing the extent of PMS borne by the rural women in Thanjavur district of the state of Tamil Nadu, India.

KEYWORDS: *Premenstrual syndrome (PMS), PMS-A, PMS-C, PMS-D, PMS-H*
JEL Classification: I 12, B 54,

INTRODUCTION

Negative premenstrual change can result in distress for a significant proportion of women. Premenstrual syndrome (PMS) is the cyclic occurrence of symptoms that are of sufficient severity to interfere with some aspects of life and which appear with consistent and predictable relationship to menses (Endicott J, Halbreich U, Schact S, Nee, J.,1981). PMS is among the most common health problems reported by reproductive age women. They tend to occur a week or so prior to actual menstruation then slow down as flow scales up. Generally these should be mild and tolerable, but for many they are quite disruptive. Severe symptoms may be indicative of a serious underlying disorder.

The present study conducted is micro level empirical field study pertaining to the extent of pre menstrual symptoms felt by the women residing in the rural part of Thanjavur District in the state of Tamil Nadu in India.

Methodology of the study:

The PMS awareness and taking medications for the same is high among the urban women. But how the PMS affects the rural women is yet to be documented in Indian research literature. To make a humble beginning in that path, this research attempt is made. The Thanjavur District, one of the 32 Districts in the State of Tamil Nadu, mainly dominated by rural places depending on Agriculture, is taken as the area for the present study. It is one of the biggest districts in Tamil Nadu State with an area of 3,396.57 Sq. km. It lies on the east coast of Tamil Nadu. In an extensive study conducted between August 2016 and November 2016, among the women visiting village Primary Health Centres in Thanjavur

District and those women who accompany them, the perception about the PMS was surveyed. Only those women who are willing to share their views and only those who are in the menstruating phase alone are surveyed. Fulfilling these conditions, a total of 468 sample respondents were surveyed. Data collection was done during the same period using a validated questionnaire.

The learning objectives of the study are

1. Assessing the perception of rural women towards PMS and its impact on their relationships.
2. Knowing the severity of PMS symptoms as felt by rural women.
3. Enquiring whether there exists any relationship between the impacts of various types of PMS.
4. Enquiring whether there exists any relationship between the various symptoms and the aging of women.

REVIEW OF LITERATURE

According to World Health Organization, sadness, loss of confidence, low self-esteem, and less energy are more common among females (WHO,2000). Epidemiologic surveys have estimated that as many as 80% of women of reproductive age experience some symptoms attributed to the premenstrual phase of the menstrual cycle. (Steiner M, Macdougall M, Brown E.,2003). The prevalence of PMS severity was as much as 53 % among young college girls in Pakistan according to ICD-10 (Tabassum. S, et al, 2005), A study on Prevalence and severity of premenstrual symptoms among Iranian female university students reported that 98.2% had, at least, one mild to severe premenstrual symptom in their study (Bakhshani et al,2009). Irrespective of severity, all menstrual women reported, at least, had one premenstrual symptom of minimal severity (Cleckner-Smith, 1998). Studies reported the prevalence of PMS among Indian college girls as 86% (Singh et al,2015). Similarly, related studies reported 6.4% prevalence of PMDD in Indian women (Banerjee N, et al., 2000) and reported the prevalence of Premenstrual Tension Syndrome as 90% (Kamat et al.2012). Regarding the individual symptom severity, studies showed that overall most commonly reported symptom is fatigue or lack of Energy (Bakhshani et al,2009)(Nourjah.P,2008). Anger/irritability has been reported as most common symptom by few studies (Steiner M, Macdougall M, Brown E.,2003) (Steiner M,et al.2011) (Nisar N, et al., 2008) (Tabassum S,,et al, 2005) (Pearlstein T, et al., 2005) (Bansal M, et al., 2012). Steiner et al. found that nearly three-quarters of the PMDD and almost half of the severe PMS cases reported symptoms interfered with their relationships with friends, classmates, and/or coworkers, and/or school/work efficiency/productivity. Thus several studies were undertaken to know the prevalence, extent of severity and impact of PMS among women of different age groups and of different culture.

DATA ANALYSIS

Perception about PMS and Quality of Life:

Questioned about the general perception regarding PMS, 84% of the women surveyed feel that they are the cursed and they only get affected by it much, which is further supported by the perception by 69 % women that their relatives and friends are not that much affected as they are. Asking about how the PMS affects the quality of life, a majority of 89% strongly opined that it affects their sexual desire and in turn the physical relationship with their husband; 75% of the respondents agree that they are not able to carry out their house keeping domestic works and the regular field works , if gone for employment; 57% of the women respondents feel that the PMS cost their free time, play time and even watching television programmes; 54% of the rural women respondents interviewed were of the view that they cannot move with their family members, relatives and neighbours freely, not feeling better in their relationship and nearly (52%) of the respondents feel that their self approval find belittled by the play of hormones.

Table No.1 : Perception about the PMS

Sl.No.	Perception	Yes	No
1	PMS affect me only much	84%	16%
2	My relatives and friends are not affected by PMS, as I am.	69%	31%
3	PMS affect my self esteem	52%	48%
4	PMS affect my learning, work-life and income	74%	26%
5	PMS affect my play and free time	57%	43%
6	PMS affect my relationship with my husband	89%	11%

Source:Computed

Type-wise PMS experienced:

PMS consists of emotional and behavioral symptom like anxiety, depression, crying spells, mood swings, irritability, appetite changes and food cravings, insomnia, social withdrawal, poor concentration. Physical signs and symptoms may include body aches, headache, fatigue, weight gain, abdominal bloating, and breast tenderness. (Dennerstein L, Lehert P, Heinemann K.). Although the list of potential signs and symptoms is long, most women with premenstrual syndrome experience only a few of these. These symptoms occur in a predictable and cyclical manner, appearing in the luteal -later phase of the menstrual cycle and regress with the start of menses.

In 1980 Dr. Guy Abraham, at UCLA, developed a classification system which grouped more than 150 reported symptoms of PMS into 5 types as follows.

PMS A: The A stands for the prevalent Anxiety. There can be weepiness, paranoia, mood swings and irritability. These feelings are felt due to a relative drop in progesterone, how it breaks down, and possibly high prolactin. Periods tend to start suddenly and may be heavy with clots.

PMS C: Some women experience strong food Cravings, especially for chocolate or sweets, and increased appetite. It is believed due to abnormal carbohydrate synthesis causing high blood levels of insulin. Other symptoms associated with fluctuations in blood sugar levels are headache, fatigue, moodiness and irritability.

PMS D: The key symptoms include depression, forgetfulness, insomnia, confusion, tearfulness, clumsiness, withdrawal, and in severe cases, risk of suicide. Low estrogen and/or serotonin are known contributors to PMS D.

PMS H: Hyperhydration is the hallmark here. Symptoms might include water retention, swelling, breast tenderness, bloating, and weight gain. Breast tenderness may be due to over–production of prolactin.

PMS P: Pain is the predominant symptom for youngirls, especially in the joints, lower back, abdomen or head. It is caused by pro-inflammatory prostaglandins.

The review of earlier literature in this area of research, suggest select 24 important symptoms are widely faced by menstruating women. These are again grouped as the five sub groups and the respondents were asked to mark the severity of the symptom in a five point scale, indicating 1 as very mild and 5 as very high.

Table No.2 : Overall Weighted Mean Scores of PMS

Sl.No.	Pre Menstrual Symptoms	1	2	3	4	5	Total	weighted mean scores (WMS)	Sub Total of WMS
	PMS – A								
1	Anxiety	26	58	125	132	127	468	3.59	
2	Irritability	14	112	135	142	65	468	3.28	
3	Mood Swings	102	145	109	84	28	468	2.55	
4	Nervous Tension	125	114	119	79	31	468	2.52	2.99
	PMS – C								
5	Appetite Increase	312	35	48	62	11	468	1.77	
6	Headache	65	82	122	105	94	468	3.17	
7	Fatigue	12	56	108	136	156	468	3.79	
8	Dizziness or Fainting	116	185	78	54	35	468	2.37	
9	Palpitations	145	138	111	45	29	468	2.31	2.68
	PMS – D								
10	Depression	89	159	139	65	16	468	2.49	
11	Crying	289	148	18	7	6	468	1.49	
12	Forgetfulness	208	165	31	22	42	468	1.99	
13	Confusion	35	158	122	89	64	468	2.98	
14	Insomnia	136	87	117	96	32	468	2.57	2.30
	PMS – H								
15	Fluid Retention	52	97	187	49	83	468	3.03	
16	Weight Gain	68	87	125	107	81	468	3.10	
17	Swollen Extremities	139	105	54	116	54	468	2.66	
18	Breast Tenderness	2	9	169	187	101	468	3.80	
19	Abdominal Bloating	39	89	104	118	118	468	3.40	3.20
	PMS-P & Others								
20	Oily Skin	69	108	164	86	41	468	2.83	
21	Acne	105	174	58	97	34	468	2.53	
22	Backache	39	58	159	103	109	468	3.40	
23	Hives	186	105	68	59	50	468	2.32	
24	Weakness & radiation Down thighs	28	59	205	98	78	468	3.30	2.88
	Overall Mean Score								2.81

Of all the 24 symptoms enumerated, Breast Tenderness is the severely experienced pre menstrual symptom with the mean score of 3.8 out of 5. It is followed by fatigue (3.78), Anxiety (3.58), Abdominal Bloating (3.399) , backache(3.395), Weakness & radiation Down thighs (3.29),Irritability (3.28), Headache (3.17), Weight Gain(3.09), Fluid Retention (3.02), Confusion(2.97), Oily skin development (2.83), Swollen Extremities(2.66), Insomnia-the sleep disturbances (2.57), mood swings (2.55), development of acne (2.53) and nervous tension(2.52)- all 17 symptoms being above 2.5 out of 5 mark. Crying , loss of appetite and craving for one food and forgetfulness are the symptoms which are having very low mean scores indicating these symptoms are negligible ones, according to the rural women respondents in the region.

The weighted mean score for the type-wise symptoms indicates that PMS-H playing a vital role with a higher weighted mean score of 3.20. All the constituents like Breast tenderness, Abdominal Bloating, Weight Gain, Fluid Retention and Swollen Extremities are found above average mark showing that Hyper-hydration is the important key behind the premenstrual problems faced by the women. PMS-A is ranked as the second

severe group with a weighted mean score of 2.99, Here also all the four constituents namely Anxiety, Irritability, Mood swings and Nervous tension are in the above 2.5 mark. It is followed by the PMS-P &Others, backache and weaknesses being the most experienced symptom. PMS-C, mainly craving or omitting one particular food and PMS-D depression centred are not that much a cause of concern for rural women. Strangely, studies suggest that these are the important subgroup symptoms than others among western and urban women.

As a whole, the PMS is not just brushed aside by the rural women, as any one conveniently concludes, as the overall weighted mean score being 2.8 out of 5.

Age-wise Analysis of PMS:

It is obviously assumed that the experience of women in the early menstrual years may differ from those in the later years, as their attitude towards PMS tend to change over the years. To know whether it is true or not, the respondents were classified into two groups, dividing the menstrual duration roughly into two as women of age of below and above 30 years. Of the 468 women surveyed , 214 are of the age group of below 31 years and 254 are above 30 years of age. To find whether there is any significant difference is found between the group the weighted mean score is tabulated age- wise also in the Table No.3

Table No.3 : Age –wise Weighted Mean Scores of PMS

Sl.No.	PMS Symptoms	30 & Below years of age	Above 30 Years of age	Total
1	Anxiety	4.27	3.43	3.59
2	Irritability	3.88	3.14	3.28
3	Mood Swings	2.91	2.47	2.55
4	Nervous Tension	2.69	2.48	2.52
5	Appetite Increase	1.90	1.74	1.77
6	Headache	3.51	3.09	3.17
7	Fatigue	4.09	3.72	3.79
8	Dizziness or Fainting	2.57	2.32	2.37
9	Palpitations	2.45	2.28	2.31
10	Depression	2.79	2.42	2.49
11	Crying	1.64	1.45	1.49
12	Forgetfulness	1.78	2.04	1.99
13	Confusion	2.76	3.03	2.98
14	Insomnia	2.26	2.64	2.57
15	Fluid Retention	3.26	2.98	3.03
16	Weight Gain	3.21	3.07	3.1
17	Swollen Extremities	2.82	2.62	2.66
18	Breast Tenderness	4.44	3.65	3.8
19	Abdominal Bloating	4.33	3.18	3.4
20	Oily Skin	3.26	2.73	2.83
21	Acne	3.19	2.37	2.53
22	Backache	4.09	3.24	3.4
23	Hives	2.69	2.23	2.32
24	Weakness & radiation Down thighs	4.09	3.11	3.3
	Total	3.12	2.73	2.80

Among the women of years of age below 30 years as expected, of all the 24 symptoms enumerated, Breast Tenderness is the severely experienced pre menstrual symptom, but with an unexpected high mean score of 4.4 out of 5. It is followed by Abdominal Bloating (4.33), Anxiety (4.27), fatigue (4.09), backache(4.09), Weakness & radiation Down thighs (4.09), all 6 symptoms being above 4 out of 5 mark. Though these are the symptoms primarily expressed as important ones by the women of the higher age group also, the extent of severity is not that much felt, as none of these symptoms are above the weighted mean score of 4 out

of 5. Crying, craving for one food and loss of appetite (1.90) and forgetfulness (1.78) are the symptoms which are having very low mean scores indicating these symptoms are negligible ones, according to the rural women respondents in both the age groups in the region.

Of all the 24 symptoms, Confusion, insomnia and forgetfulness are the only three PMS symptoms which are found severer among the women in the later menstrual phase, comparing their younger counterparts. Similarly, the difference of experience is mainly felt among the symptom Abdominal bloating with a maximum mean score variation of 1.14, which is followed by Weakness & radiation Down thighs(0.98), backache(0.85), anxiety (0.84) and acne (0.82), breast tenderness(0.78) and irritability (0.73).

As a whole, the PMS may be perceived as a mentally as well as physically disturbing phenomenon with an overall weighted mean score 2.8 out of 5, the women in the earlier phase weigh it severely with a mean score of 3.12 and the women in the later menstrual phase weighing the PMS moderately with an overall mean score of 2.73.

Table No. 4: Two Factor Anova for agewise perception about the PMS

Source of Variation:	d.f.	Sum Squares	Mean Squares	F Statistic	F Critical	p-Value
Variation between the age groups:	2	1.80	0.90	20.7981	3.2093	0.0000
Variation between the symptoms:	22	27.55	1.25	28.9678	1.7889	0.0000
Error:	44	1.90	0.04			
Total:	68	31.24				

The two factor Analysis of Variance further depicts that the variation between the symptoms is statistically significant enough as the F statistic value is far higher than the table value. Similarly, the variation between the age group regarding these perceptions on the PMS is also statistically very significant one as the the calculated value is more than the critical one.

Table No.5: Correlation Analysis between the PMS Types

	PMS:_A	PMS:_C	PMS_:D	PMS_:_H	PMS_:P_&Others
PMS:_A	1.0000				
PMS:_C	0.9290	1.0000			
PMS_:D	0.3474	0.0814	1.0000		
PMS_:_H	0.9405	0.9908	0.0484	1.0000	
PMS_:P_&OThers	0.9579	0.9096	0.3465	0.9273	1.0000

The correlation analysis between the various PMS types further reveals that there exists a strong positive correlation existing between the PMS-A and PMS-P& Others as the Pearson's correlation coefficient is 0.96, the maximum point. It is followed by the high positive relationship between PMS A and PMS-H with a coefficient of 0.94, between the PMS- A and PMS-C with a coefficient of 0.929 and between the PMS-H and PMS-P & Others with a score of 0.927. The least relationship is witnessed between the types PMS-D and PMS-H. Thus it is concluded that PMS –H the highly felt type is very much correlated with all other types except the type, PMS-D, which in turn is not that much a worrisome feature as felt by the respondent women in the region.

CONCLUSION

It shows that the rural women who seem to take the PMS granted expressed their inner sufferings hitherto not much discussed with, in the present survey. They acknowledge that the PMS affects the interpersonal relationship knowingly or unknowingly as depicted in the Table-1. The present study has thrown light on the various symptoms as felt by the rural women in Tamil Nadu especially in the Cauvery Delta District Thanjavur which gives us a new insight to solve these issues. The immediate solutions are also suggested to the respondents accordingly. For example, the PMS-H may be reduced highly by avoiding excess sodium and eating potassium-rich foods like bananas, avocados, apricots, and broccoli, or supplements. Those who felt

significantly affected by PMS were suggested to consult doctors immediately as it may be Premenstrual dysphoric disorder (PMDD) which is a more severe form of PMS, which needs immediate care.

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