



EVALUATION OF MENSTRUAL PROBLEMS AMONG URBAN FEMALES OF AHMEDABAD

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Abstract-

Background: Urban females are more exposed to stress as compared to rural. The different types of stress and its gravity are related to their jobs, studies, social and economical factors. They are more prone to develop menstrual problems.

Aims and Objectives: The aim of present study is to evaluate prevalence of menstrual problems in urban females and its relation to different types of stress and its etiological factors.

Methodology: This is a cross sectional descriptive study included 500 females selected randomly from hostel of medical and nursing college, doctors and nurses and office going females. All females were given questionnaires included questions of demographic profile, menstrual pattern and associated symptoms, different type of stresses related to their profession. All feedback received from the subjects were analyzed with respect to menstrual problems like dysmenorrhoea, menorrhagia, oligomenorrhoea, amenorrhoea and premenstrual symptoms. Stress related problems stated earlier were evaluated and relationship with age and stress were established.

Results: Three hundred (60%) females were having some degree of menstrual problems. Dysmenorrhoea was more common in adolescent age group while oligomenorrhoea and amenorrhoea were more common in late twenty and menorrhagia was common in females towards menopausal age and premenstrual symptoms was an associated problem. 263 (87.6%) females had some kind of stress as an etiological factor for menstrual problems.

Conclusion: Stress is a very common etiological factor study for menstrual problems. There are very few data available. Researches are needed in this field to improve quality of life of menstruating urban females. This study will be helpful to make a strategy for improving the quality of services provided to women with menstrual problems.

Keywords- stress, profession menstrual problems

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Introduction

In developing countries now reproductive and child health care system also approaches for morbidity and quality of life of female. This is the era of advancement in all fields where females have to pass through lots of stress which affect body physiology including menstruation. Numerous studies have indicated that a considerable portion of women of reproductive age suffer from menses associated health problems such as premenstrual symptoms, dysmenorrhoea and irregular menstrual cycle in form of amenorrhoea and oligomenorrhoea [1]. Little attention is paid to identify and treat it. Menstrual problems, like other aspects of sexual and reproductive health is not included in the global burden of disease estimates [2]. Recent data from developing countries suggest that this problems should be given priority in primary care programs [3]. This menstrual disorders are a common presentation in urban females particular-

ly college girls, office female workers. 75% of such females experience some problems associated with menstruation [4]. The menstrual function is deemed to be one of the factors reflecting the functional potentiality of woman and that may be affected by numbers of variables which includes age, family history, socio-economic status, education, parity, and type of personality, exercise, weight, height, stress, contraceptive devices, and infection.

Present study is to identify prevalence of menstrual problems in urban females and its relation to various types of stress as an etiological factor. It also evaluates relation with family history and age of females. This will be helpful to make a strategy for improving the quality of services provided to women with menstrual problems.

Material and Methods

This is a cross sectional descriptive study conducted from January

2011 to June 2011 in Ahmedabad.

Inclusion Criteria- The participants were female of 15 to 35 years taken randomly from nursing and medical college hostilities, doctors and nurses and office going females.

Exclusion Criteria- Females with chronic health problems, psychiatric problems, any type of pelvic pathology, positive pregnancy test, lactating, using intra uterine contraceptive device, using oral contraceptive pills were excluded from study.

Written consent was taken. All females were assured about their identification secrecy and were given a questionnaire.

A normal menstrual cycle was defined as- The cycle from 21 to 35 days which last for 2 to 6 days, with average blood loss is 20 to 60 ml [4,5]. Dysmenorrhoea was defined as sharp intermitted spasmodic pain in the supra pubic area may radiate to inner and front region of thighs with or without systemic symptoms of nausea, vomiting, diarrhea, fatigue, mild fever and headache in last 3 menstrual periods [6,7]. Menorrhagia was defined as menstrual period with length < 21 days with duration of cycle > 7 days with blood loss > 100 ml in last three menstrual periods [4,5]. Oligomenorrhoea was defined as menstrual period with length > 35 days and duration of cycle < 2 days with scanty periods in last three menstrual periods [4,5]. Amenorrhoea was defined as absent menstrual periods from last three menstrual cycles in females who were menstruating normally before [4-6].

Premenstrual syndrome was defined [8-10] as presence of any four symptoms reported five days prior to the onset of menses in the three prior menstrual cycles and ceased within four days of onset of menses. We included somatic symptoms like belatedness, breast swelling and pain, pelvic pain, head ache, skin disorders and changes in bowel habits and the psychosocial symptoms like irritability, aggressiveness, depression, anxiety, inability to concentrate, hypersomnia or insomnia, change in appetite, specific food craving, change in libido and poor coordination.

Questionnaires included demographic characteristics of females, age, parity, weight, environment, employment, any type of stress related to exams, studies, performances, job, social and economical, life style, habits, detailed about menstrual cycle, pain and all symptoms of premenstrual syndrome.

Chi-square test was applied to know relation of stress with menstrual problems and p value < 0.05 was considered significant. Chi-square test is used to asses test of goodness of fit. P value is obtained using chi-square distribution in contingency table. Our sample data was random sampling from a fixed distribution of population where each member of population had an equal probability of selection and observation were assumed to be independent of each other. Forward stepwise analysis was applied to identify relation of different type of stress to different type of menstrual problems and relation of age with menstrual problems.

Results

Total 500 females were interviewed, out of them 300 were having some kind of menstrual problems. Thus 60% of females were suffering from menstrual problems in our study.

[Table-1] 300 females were suffering from some kind of menstrual problems among them 150 (53%) females were having dysmenorrhoea and about 126 (42%) females were having menorrhagia while only 15(5%) females were having oligo or amenorrhoea. Many females were having premenstrual symptom associated with other

menstrual problems while some females were having only premenstrual symptoms. Total 195 (65%) females were having premenstrual symptoms.

Table 1- Statistical data of different types of menstrual problems among population studied.

Dysmenorrhoea	Menorrhagia	Oligomenorrhoea/amenorrhoea
159 (53%)	126 (42%)	15 (5%)

Table 2- Age wise distribution of menstrual problems

Menstrual problems	Dysmenorrhoea (n159)	Pre Menstrual Symptoms (n195)	Menorrhagia (n 126)	Oligo/amenorrhoea (n15)
15-19 years	106 (67%)	100 (51%)	28 (22%)	2 (10%)
20-30 years	27 (17%)	74 (38%)	16 (13%)	8 (52%)
30-35 years	26 (16%)	21 (11%)	82 (65%)	5 (38%)

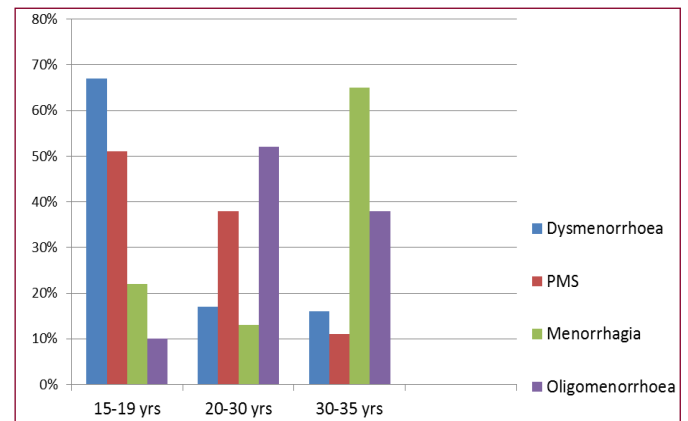


Fig. 1- age wise distribution of menstrual problems

[Table-2] shows that among females having dysmenorrhoea 106 (67%) were from adolescent age group. [Table-2] [Fig-1] PMS was common in 15 to 30 years females it was uncommon in older females. Many females were having premenstrual symptom as an associated symptom with other menstrual problem. Incidence of oligomenorrhoea and amenorrhoea were less and it was common problem among the females of 20-30 years (52%). Menorrhagia is common among the females of 30-35 years (65%) who were going towards menopausal age.

Table 3- Co-relation between family history and menstrual abnormalities

Family History	No. of patients (n-300)	%
Yes	165	55
No	15	5
Not Known	120	40

In our study we tried to find out correlation with positive family history and occurrence of menstrual problems but 120 (40%) females were not knowing about that and 165 (55%) were having positive family history in their maternal side. [Table-3] Still required further in-depth analysis.

Table 4- Co-relation of stress and menstrual problems

Menstrual problems	Stress factor		P value	Odds Ratio (CI 95%)
	Yes	No		
Present (n 300)	263 (87.6%)	37 (12.4%)	<0.0001	0.284-0.440
Absent (n 200)	65 (32.5%)	135 (67.5%)	significant	

We tried to identify stress in females and correlated it with menstrual problems. [Table-4] shows that 263 (87%) of the females who were having menstrual problems had some kind of stress related to

their job, studies, social or economic. [Table-4] The females who were not having menstrual problems only 65 (32.5%) were having stress. Thus stress is the very common etiological factor for menstrual problems. Stress had significant role causing menstrual problems. a female having some kind of stress was 96-98% risk of having menstrual problems. [Table-5] and [Fig-2].

Table 5- Co-relation between different types of stress factors and different menstrual problems

Menstrual problems	Dysmenorrhoea (n159)	Pre Menstrual Symptoms (n195)	Menorrhagia (n 126)	Oligo/amenorrhoea (n15)
Stress Present	150	180	80	13
Stress Related to studies	69 (46%)	56 (31.4%)	12 (15%)	1 (2.7%)
Stress Related to job	24 (16%)	53 (29.5%)	38 (47.5%)	7 (56.9%)
Social Stress	40 (27%)	34 (49%)	18 (22.5%)	2 (18.5%)
Economical stress	17 (11%)	37 (20%)	12 (14%)	3 (22%)

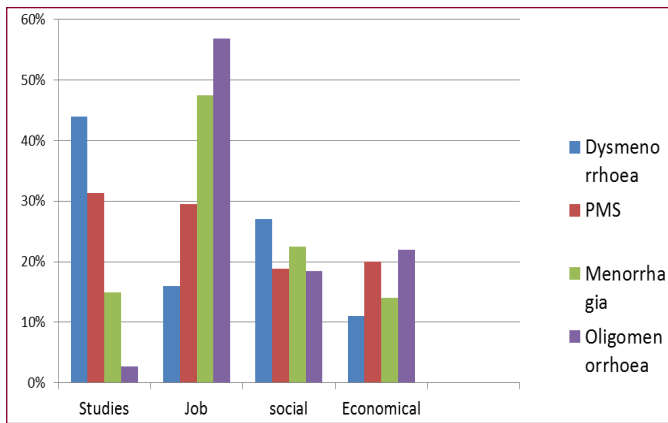


Fig. 2- Co-relation between different types of stress factors and menstrual problems

Stress was a very common etiological factor for menstrual problems. In our study the adolescent girls were having more stress related to their studies and exams were having more problems like Dysmenorrhoea. In our study among 159 females who were having dysmenorrhoea 150 were having stress mostly due to their studies and also as most of them were living in hostel they were not getting social support. Out of 15 females of oligomenorrhoea 13 were having stress factor presence. We noticed that out of 195 females 180 females were having premenstrual symptoms and some kind of stress. Females of middle age were having stress related to their job and economical condition, were suffering from menorrhagia and oligomenorrhoea. The females who were having menorrhagia Many of the females were suffering from PMS with either dysmenorrhoea, menorrhagia or oligomenorrhoea. Social stress was equally present in all type of menstrual problems in all age group of females.

Discussion

Menstrual problems are the commonest gynecological disorder among urban females who present to doctors today. In our study we observed that 300 (60%) of females were having some kind of menstrual problems. as the evaluation was purely made by questions only the incident was expected to be more if further evaluated by examinations.

In this study prevalence of dysmenorrhoea, menorrhagia and amenorrhoea were 159 (53%),126 (42%) and 15(5%) accordingly.in our study premenstrual symptoms were noted sometimes in associated with other menstrual problems and sometimes alone. We noted that dysmenorrhoea was more prevalent in adolescent age group while menorrhagia was more in female of 30-35 years and oligo and amenorrhoea were more in middle aged females. Premenstrual symptoms were found in females of 15 to 30 years of age. Several studies have been done to evaluate different kind of menstrual problems, their prevalence in various kind of population, their pathophysiology and etiology, incidence in different age groups, treatment and burden to society [11-15]. The WHO conducted a multi-county cross sectional survey of family formation patterns and health [1]. That study had summarized all data from developing countries and concluded that incidence of dysmenorrhoea was 25 - 58% and was more in studies of adolescent females in developing countries, incidence of menorrhagia was 8-27% more with older females, incidence of amenorrhoea and oligomenorrhoea was 5-13%. As adolescent girls were usually nulliparous, were doing more physical activity for losing weight and not eating properly so they were having dysmenorrhoea. No one knows exactly but fluctuating hormonal levels probably oestrogen and recent research suggests hormones called prostaglandin's could also be a cause.

In this study premenstrual symptoms were noted in 65% of females. Less data is available in developing countries about premenstrual symptoms. Surveys indicate that PMS is among the most common health problems reported by reproductive age women. Current estimates of the prevalence of clinically significant PMS vary from 12.6% to 31% of menstruating women.[18,19] PMS appears to be associated with ovulatory menstrual cycles. Therefore, it may begin at any time after menarche and continue until ovulation ends at menopause.

Stress activates the release of corticotrophin in the nervous system leading to menstrual cycle irregularities, and interferes with a variety of endocrine profiles, especially lowering gonadotropin and estrogen secretion [20-22] Given the proximity of neural cortex and the hypothalamus, interaction between hormones on the central nervous systems and reproductive hormones are expected. Still how stress affect it is an open question. Perceived job and studies stress and stain increase prolactin secretion. Shift work alters circadian rythems of hormone secretion and the synchronization of ovulatory events has been found to modify menstrual patterns.Our study supported the hypothesis that stress has a significant effect on menstrual problems. We had 87% association of stress with menstrual abnormalities as all females in our study were from urban population. They were of specific profession where night shifts were common. Their studies were difficult and were more stressfull and for studies and job many of them were living in hostel 200(66.7%) so family support was not there were adding to more stress. Even we noted that 180 (60%) females were of type A personality and due to their personality they were more prone to be affected by stress and all of them were having some menstrual problems. We observed that among the females who were having stress 80% got relief just after doing some stress relaxing remedies and only 20% needed some medical treatment. There are very less data available for identifying relationship of stress with menstrual problems. Michiko, et al. [21] studied in Japan in 2010 among a large female population about 2166 and evaluated relation of stress with menstrual cycle irregularities and 70% of females in their studies had association

with extreme or very stressful conditions. Uehata, et al. [24] showed that women who worked night shifts tend to report more irregular menstrual cycles. Tottedell, et al. [25] reported that an increase in the frequency of irregular night shift prolonged the menstrual cycle in nurses. Higher levels of perceived stress have been identified as risk factors for PMS by population-based studies.

There were several limitations to our study. Our study was a cross-sectional study without a control group.

In addition, stress in our study was evaluated by self-reported questionnaires. We did not examine and investigate any of females for menstrual problems and stress. Future studies that can address a causal relationship should be warranted, and appropriately assess the stress levels of females should be conducted to give a more conclusive result.

Conclusion

Menstrual problems are commonest gynecological disorders among urban population. Although not life threatening, this affect their daily life and work efficiency and performance. This is a major cause of absenteeism's in colleges and business establishments. Data obtained from this study and their etiologies are scanty. This study shows that 87% of the females suffering due to menstrual disorders were having stress related to one or more reasons as like studies, job, financial, or social issues. Health education, regular routine medical examination, adequate social support by family, school, job colleagues, meditation, stress management program and dietary improvements and total life style modification can help to prevent menstrual problems.

Questionnaire

- Age
- Weight
- Height
- Residence Hostel/Home
- Habits
- Lifestyle
- Physical Activity
- Socio Economic Class

Married Yes/No

- Any Contraceptive Devices
- If Yes
- Children Yes/No
 - Parity/Abortions

Studying Yes/No

- If Yes
- College Year
 - Stress Relaed to Studies Yes/No
 - Stress Rlated to Exams Yes/No
 - Stress Related to Performance Yes/No
 - Stress Related to Peer Pressure Yes/No

Doing Job Yes/No

- If Yes
- Job Environment
- Night Shifts Yes/No

- Pay Satisfaction Yes/No
- Work Stress Yes/No
- Economical Stress Yes/No
- Economical Burden Yes/No
- Economical Crisis Yes/No

Social Stress Yes/No

- If Yes
- If any Cause Specify
 - Married Life
 - Hostel Life
 - Social Support

Details About Menstrual Cycle

- Duration <21 Days /21-35 Days / >35 Days (Last 3 Cycles)
- Length of Cycle <2 Days 2-7 Days >7 Days
- Approx. Blood Loss Scanty 20-100 MI >100ml

Any Pain During Menstruation Yes/No

- If Yes
- Site
 - Type
 - Severity
 - Radiation
 - Associated Symptoms
 - Relieved By

Symptoms Prior of Menstrual Cycle (Tik If Any of Following Present Write When Disappear)

- Bloatingness
- Breast Swelling
- Pain
- Headache
- Skin Rash
- Bowel Habit Change
- Irritability
- Aggressiveness
- Depression
- Apprehension
- Anxiety
- Inability to Concentrate
- Change in Appetite
- Specific Food Craving
- Change In Libido
- Poor Concentration
- Any Medications Taking Yes/No
- Any Chronic Medical Illness Yes/No
- Any Stress Relieving Therapy Yes/No
- Job /College Absenteeism Yes/No
- Quality of Life
- Any other Relevant Information

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