

## PREVALENCE OF STRESS DURING MENSTRUAL CYCLE AMONG ADOLESCENT GIRLS

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### **Abstract:**

**Background:** Menstruation is a natural phenomenon which occurs on monthly basis during the reproductive life of females, Irregular menstruation can have various health implications, mainly it affects the neuroendocrine system which is responsible to evoke the stress or emotional instability. **Objectives:** To assess the level of stress among adolescent girls during menstrual cycle and to find out association between the level of stress among adolescent girls and socio demographic variables. **Methods:** A descriptive research design was used to assess the stress among 100 adolescent girls from Piparia Village, Vadodara, who are recruited by using Non probability Purposive sampling. Descriptive and inferential statistics used for the statistical analysis and interpretation of data. **Result:** Out of 100 adolescent girls 4 had a mild stress, 74 of them had a moderate level of stress and 22 of them perceived severe stress during the menstrual cycle. **Keywords:** Prevalence of stress, menstrual cycle, adolescents

**Introduction:** Starting of menses is one of the crucial events in adolescents age, and a regular menstrual cycle is one of the signs of overall good health among females. Any Abnormality in menstrual cycles, with irregularity, heavy bleeding, hormonal disbalance can cause deleterious impact on future general and reproductive health. Menstrual cycle occurs when oocyte get release and prepare the uterus for possible pregnancy. Various Hormonal changes occurs on positive and negative pattern to control over the menstrual cycle.<sup>2</sup> Hormone secretion begins in the hypothalamus where gonadotropin-releasing hormone is secreted. The variability in length of the menstrual cycle occurs due to variations in the length of the maturation of follicular activity.<sup>3</sup> The main hormone during this phase is oestrogen, specifically beta-oestradiol. The increase in this hormone occurs by upregulation of the FSH receptors within the follicle at the beginning of the cycle. One Report on stress during menstrual cycle among girls in Western Countries depicted the prevalence ranging from 14-

40% which is associated with mood, depression, feeling of hopelessness, lethargy, fatigability which leads to negative consequences on mental health of individual.<sup>4</sup>

**Need of the study:** The cyclic hormonal changes occur in the female body which influence physical and emotional state of adolescent. One of research study on psychological symptoms reported 74% of the samples had pre-menstrual psychological sign, 94% experienced during the menstrual flow and 40.8% of samples reported postmenstrual sign.<sup>5</sup> However, 44.3% participants has anxiety, 45.5% had depression, 47.2% were experienced symptom of stress. Majority of research shows some common psychological symptoms which includes, irritability, anxiety, mood swings, it specifically occurs during the luteal phase.<sup>6</sup> It started before one or two weeks before the onset of menses. Global statistics shows the prevalence of stress and depression related symptoms is the most common gynaecological problem 15.8% to 89.5% among the women and adolescents with a prevalence of 60% to 93% in the United States.<sup>7</sup> Present study intended to assess the prevalence of stress during the menstrual cycle.

**Objectives:**

1. To assess the level of stress among adolescent girls during menstrual cycle
2. To find out association between the level of stress among adolescent girls and socio demographic variables.

**Delimitations:**

- Adolescent girls who aged between 13-17 years only.
- The study is limited to 100 adolescent girls only.
- Adolescent girls who are residing at Piparia Village, Vadodara.

**Materials and Methods:** The researcher followed descriptive research design for the present study. The aim of this research is to assess the prevalence of stress experience during menstrual cycle among adolescent girls of Piparia, Vadodara. A total of 100 Adolescent girls were recruited from Piparia village by using non probability purposive sampling. After obtaining institutional ethical clearance. Informed consent was obtained from participants, Descriptive statistics were generated by using Mean and standard deviations (SD) for the frequencies and categorical variables.

**Description of the tool used for research study:** The tool of research study consists of two section. Section-I: Section one consists of Socio demographic variables which includes age, Education, dietary pattern, duration of cycle, days of menstrual flow,

Section-II: It consist of Structured stress rating scale to assess the stress level among adolescent girls during menstrual cycle.Which is classified as follows:

- Mild stress 1-25
- Moderate stress 26-50
- Severe stress 51-75

**Procedure of data collection:**

**Phase-I:** Ethical permission was obtained from the ethical committee; written consent was obtained from the samples of Socio demographic data was obtained by demographic checklist. Afterwards stress level of adolescent during menstrual cycle by using structured stress rating scale.

Women have unique medical problems

**Result:**

**Demographic characteristics:** Majority of adolescent belongs to 13-14 years of age group (56), 40 adolescents belong to 15-16 years, 4 were from 17-18 years. 9 adolescent girls were vegetarian, 18 were non vegetarian, 73 were taking mixed food.Majority (70)of girls completed their 10<sup>th</sup> standard, 11 were illiterate, 9 were completed their 12<sup>th</sup>.Duration of menstruation cycle of 14 adolescents are following 28 days of cycle. 22 girls were getting their periods after 29 days, 52 adolescents had 30 days of cycle. 12 adolescents having irregular menses that is > 31 days cycle. 22 adolescents get menstrual cycle for 3 days. 22 adolescents had menstrual flow for 4 days, 44 getting menstrual flow for 5 days and 12 adolescent having menstrual flow for more than 5 days.

**Major findings of the study:**

Majority of adolescent girls had moderate level of stress (74%), (22%) of adolescent had severe stress level only (4%) of them had mild stress during the menstruation. Mean value of stress level among Adolescent girls is 31.7 with SD of 5.70.

All the socio demographic variable including age, education, dietary pattern, duration of cycle, days of menstrual cycle had significant association with level of stress among adolescent girls at the level of  $P < 0.05$  level.

**Discussion:** Women are the key foundation for their family and society. Hence, Family and social health depends on the fulfilment of their health and socio-cultural needs and adolescence is the critical period of women life.There are various reviews which supports the present study.

The descriptive study on association between menstruation with signs of anxiety, depression, and stress among school girls shows that 44.3% of the subjects had anxiety, 45.5% had depression, and 47.2% had stress.<sup>7</sup>

The scientific about Prevalence of menstrual problems and their association with psychological stress among young female studying health sciences depicts that High perceived stress which needs immediate concern to prevent further Psychological complications.<sup>8</sup>

An evaluate study conducted on effect of perceived stress on menstrual function shows that there is significant association was found in students with Perceived stress scale and one of the major factor behind this is irregularity of menstruation.<sup>9</sup>

One cross sectional study reported that about 22% of the students had acute pre-menstruation signs and there was significant association between pre-menstruation signs for example, stress, anxiety, and depression.<sup>10</sup>

A cross sectional survey conducted among the Japanese students, which reported that premenstrual symptoms, pain during menstruation, and irregular menstrual cycles create higher stress scores. Researcher also suggested that results suggest that psychosocial stress is independently associated with premenstrual symptoms.<sup>11</sup>

**Conclusion:** All the activities related to stress activates from the hypothalamic-pituitary-adrenal axis During the menstrual cycle hormonal fluctuation occur which is control by the hypothalamus and irregularity in all this hormone create a stressful situation which embarks powerful effect on the mental status of individual. Result of the present study also depicted that majority of adolescent experiencing moderate stress symptoms during the menstrual cycle which need prompt attention, as it can affect on academic performance and quality of life among adolescents.

#### **References:**

1. Z Sooky , Sharifi, Tagharrobi et al “Depression prevalence and its correlation with the psychosocial need satisfaction among Kashan high-school female students” Medical Science Autumn. 2010;14:256–63.
2. S. Mohamadirizi, M Kordi, Shakeri. “Relationship between perimenstrual symptoms and menstrual attitude” Years 2011-2012. Iran J ObstetGynecol Infertility
3. JC Lee, Yu BK, Lee KH, Min JH, Park SH. “the menstruation of Korean adolescent girls in Seoul Korean” Journal of Pediatric. 2011;54:201–6.

4. M Vichnin, H Lin , J Hillman , “Premenstrual Syndrome (PMS) in Adolescents: Severity”. *Journal PediatrAdolesc Gynecol.* 397–4022006;19:
5. Lenthe FJ van, Kemper, Mechelen, “maturation in adolescence results in greater obesity in adulthood” *The Amsterdam growth and health study*, 1996;64:18–24
6. SK Kumbhar, M Sujana, B Reddy et al, “Prevalence of dysmenorrhea among adolescent girls” and its impact on quality of life” *J Community Med.* 265–8 2011;2:
7. Mohamadirizi, Soheila, and Masoumeh Kordi. “Association between menstruation signs and anxiety, depression, and stress in school girls in Mashhad in 2011-2012.” *Iranian journal of nursing and midwifery research* vol. 18,5 (2013): 402-7.
8. Rafique, Nazish, and Mona H Al-Sheikh. “Prevalence of menstrual problems and their association with psychological stress in young female students studying health sciences.” *Saudi medical journal* vol. 39,1 (2018): 67-73. doi:10.15537/smj.2018.1.21438
9. Nagma, Shahida et al. “To evaluate the effect of perceived stress on menstrual function.” *Journal of clinical and diagnostic research:JCDR* vol. 9,3 (2015): QC01-3. doi:10.7860/JCDR/2015/6906.5611
10. S Negriff, LD Dorn, B Huang, “The measurement of menstrual symptoms, Factor structure of the menstrual symptom questionnaire in adolescent girls” *Journal of Health Psychol.* 2009;14:899–908.
11. K Yamamoto, A Okazaki, Y Sakamoto,” Relationship between premenstrual symptoms, menstrual pain, irregular menstrual cycles, and psychosocial stress” “*JPhysiolAnthropol.*” 2009;28(3):129–36