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A STUDY ON PSYCHOLOGICAL CHANGES AND FOOD PREFERENCES DURING MENSTRUATION

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ABSTRACT

Menstruation is a natural biological process that women experience on a periodical manner, often accompanied by various physiological and psychological changes. This study aimed to investigate the psychological changes and dietary preference during menstruation among adult women aged 18-52 years. Data were the details of the sample collected using Google form and questionnaire to assess the psychological status (mood swings, sleeping time) and dietary patterns during menstruation. Collected data was analyzed using MS EXCEL and SPSS software. Findings revealed significant variations in state of emotion and dietary choices during their menstrual cycle. Additionally distinct dietary craving for sweets, salty and spicy foods were commonly reported. The study contributes to a better understanding of the psychological and dietary pattern experienced by women during menstruation.

Key words: Adult women, Menstruation, Food cravings, psychological changes.

INTRODUCTION

Menstruation is the normal flow of blood and tissue through the vagina from the uterine lining. Menstruation happens between a girl's first period, known as menarche, and the end of her menstrual cycle, known as menopause. For women who menstruate regularly, the average menstrual cycle lasts roughly five days. Most girls in the US begin menstruating shortly after turning 12 years old. The length of a woman's menstrual cycle varies from month to month and typically lasts 28 days. The menstrual cycle can last anywhere from 21 to 45 days in teens, but for most women, it lasts between 21 and 35 days. Hormones

such as luteinizing hormone, follicle-stimulating hormone, and the female sex hormones progesterone and estrogen interact intricately to control the menstrual cycle. Four phases make up the menstrual cycle:1. Follicular (before to the egg being released), 2. Ovulatory or discharge of eggs, 3. Luteal (after discharge of eggs)and 4. Menstruation **(*N.Sree Parvathy, L. Varsha.*,2022).**

The follicular phase starts with low progesterone and estrogen levels. At this point, the follicle-stimulating hormone level starts to modestly rise, which encourages the ovaries to produce many follicles (Follicles are fluid-filled sacs). Estrogen is produced by this follicle and the Levels of estrogen rise gradually. Follicle-stimulating hormone and luteinizing hormone levels rise sharply during the start of the ovulatory phase. Ovulation, or the release of eggs, is triggered by luteinizing hormone and typically takes place 16 to 32 hours after the surge commences **(*N.Sree Parvathy, L. Varsha.*,2022).** Female puberty triggers physiological alterations that allow for fertilization-based sexual reproduction. The ovaries release hormones in reaction to chemical cues from the pituitary gland that promote physical maturation, such as increased weight and height, hair growth on the body, breast development, and menarche (the start of menstruation). Most females can become pregnant and have children after them menarche, which typically occurs between the ages of 12 and 13. Humans can give birth to several children, most frequently twins. A woman typically experiences menopause, or the point at which her menstrual cycles permanently end and she is no longer able to bear children, between the ages of 49 and 52 **(*Takahashi TA, Johnson KM.*, May 2015).**

Throughout the menstrual cycle, women experience various physiological and psychological symptoms related to the menstrual cycle, including pain, dysmenorrhea, mood swings, tension, anxiety, irritability, depression, fatigue, headaches, breast tenderness, increased appetite, and edema, even though nearly 30% of them have changes in the volume or pattern of menstrual blood flow eating patterns and hunger fluctuate .Women's appetite, energy levels, and consumption of macronutrients might vary significantly depending on hormonal swings that occur during the menstrual cycle. The impact of oestrogen and progesterone hormones on the release of certain gastrointestinal hormones that control appetite-energy intake and stomach emptying may account for these alterations ***(Sevim, y., &yağar, h.,* 2022).**

During the menstrual cycle, many women alter their eating habits, particularly with regard to the consumption of chocolate, sweets in general, and salty foods. A decrease level of serotonin mediators during this time can account for the increased carbohydrate consumption. Increasing serotonin levels would achieve a balance as a form of relief, so eating usually reduces irritability or promotes positive affect. This means that cravings for sweet foods, like chocolate, would be an unconscious way of improving such symptoms. The aim of the study is to determine the psychological changes during menstruation, to determine the relationship between menstruation and food preference during menstruation, to evaluate the knowledge on dietary intake during menstruation and to create awareness on menstrual health among women of reproductive age **(*Souza, L. B. de., et al.,* 2018).**

MATERIALSAND METHODS

Purposeful sampling, technique used to select women of reproductive age who undergo menstruation. Consent forms were collected from the adult women prior to the survey. Tirupur city was selected for this study and n=200 number of the sample size was chosen from the nearby urban and rural areas for an examination of the psychological effects and dietary preference of menstruation. The study was conducted in both the online and offline modes. To collect the data, questions were framed to draw the details from sample to satisfy the objectives of the study titled a study on psychological changes and dietary preferences during menstruation. The concept of "How menstruation that affects adult women's dietary preferences and psychological shifts" were determined by using the analytical tools such as MS EXCEL and SPSS.

RESULTS

Considering the 200 participates, about 49 % of the samples belong to the age group of 18-25 years. The World Health Organization (WHO, 2012) states that the median age of 13 is the usual range for menarche, or the beginning of menstruation, which occurs between the ages of 9 and 16.

Among the participants, 40% were unaware about menarche prior to its occurrence, whereas 60% were aware of it on before menarche occurs. The (69 %) of the respondents had their menarche between the age of 11 and 15. Only (1%) of the sample attained their menarche before the 10years of age. Whereas (25 %) of the sample had their menarche after 15years of the age. Out of the 100% of selected sample (5%) of the sample doesn't their menarche age.

The respondents (n=200) experienced the pressure occasionally (34%), frequently (54%) during their menstrual period. Due to societal behaviours only 12% of selected sample population had not experienced the stress. Out of 100% of the respondents 72% of selected sample responded that there are decreases in concentration level during menstruation. And about 18.5% reported that no changes in concentration, whereas 9.5% of reported that their concentration is decreases during menstruation.

Table 1 State of emotion that associated with menstruation

	N	Mean	Std. Deviation	Sig. (2-tailed)
MOOD swings	200	2.24	.604	.000

Descriptive statistics of mood swings during menstruation is shown in Table 1. Two hundred participants were selected as sample for the analysis. Regarding the statistical analysis on mood swings during menstruation, the null hypothesis is rejected at the 1% level of significance because the P-value is less than 0.01 and its favour the alternative hypothesis because (0.00). Menstrual misery includes both physical and psychological issues, such as mood swings, anxiety, sadness, and emotional disturbances **(*Malik, V. S., et al.*, 2023).**

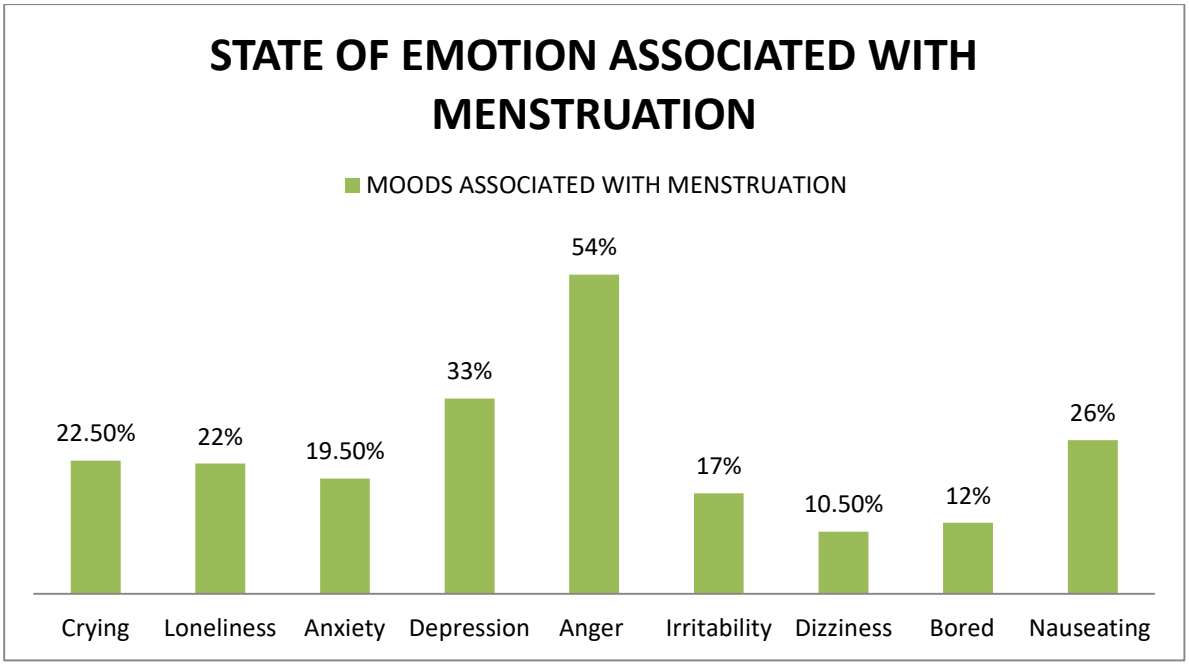

Figure I Emotions Exhibited during menstruation

The emotions that ranges from anger (54%) to bored & annoyed (12%) during menstruation. Whereas anger is more commonly experienced during menstruation compared to depression. While a significant portion (33%) of individuals report feeling depressed during menstruation . psychological symptoms related to the menstrual cycle, including pain, dysmenorrhea, mood swings, tension, anxiety, irritability, depression, fatigue, headaches, breast tenderness, increased appetite, and edema (***(Sevim, Y., &yağar, H.*, 2022).**

Nauseating is experienced by (26%) of individuals, crying is experienced by (22.5%) and loneliness is experienced by(22%) of women's out of (100%) participants during their menstruation. The other emotions associated with menstruation were dizziness, irritability and bored.

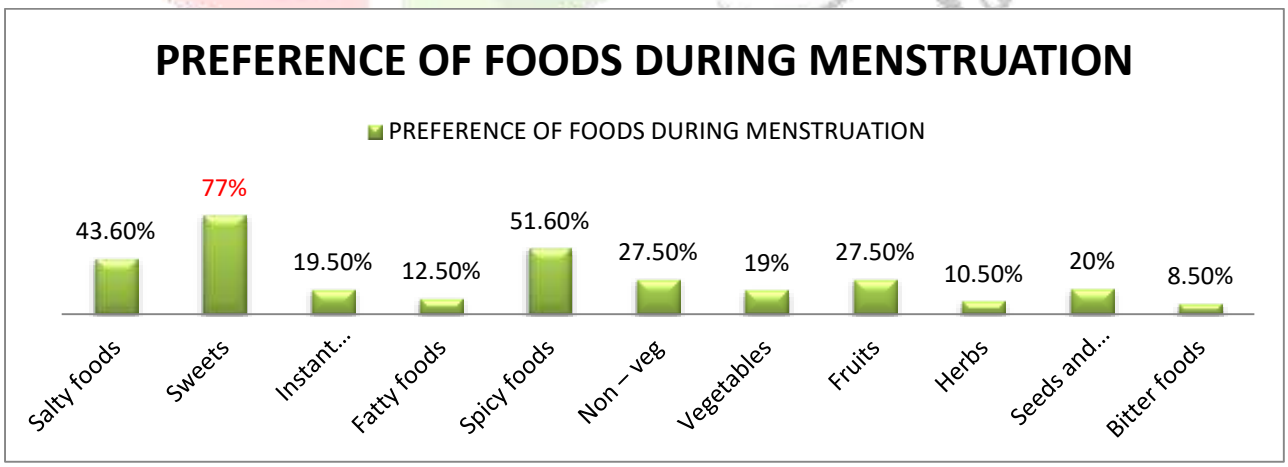

Figure II Dietary preference during menstruation

The Figure II indicates that 77% of participants preferred sweet foods during their menstrual cycle. This craving for sweet foods can be attributed to hormonal fluctuations, particularly the drop in

progesterone levels, which can increase the desire for sugary and carbohydrate-rich foods **(*Dye & Blundell,* 2017).**

Followed by salty foods (43.60%) and spicy foods (51.60) is the next higher preferences of foods during menstruation. This data indicates a higher preference for processed foods like fast foods compared to fruits (27.50%) and vegetables (19%).

Based on the study only 19% of the respondents reported preferring vegetables during menstruation, and 20% reported preferring seeds and nuts during menstruation with awareness about the benefits of consumption. Nuts and seeds are rich sources of essential fatty acids, particularly omega-3 and omega-6 fatty acids, which have anti-inflammatory properties and can help alleviate menstrual cramps and breast tenderness. They are also good sources of magnesium, which can help reduce bloating, mood swings, and other PMS symptoms. Incorporating a variety of nuts and seeds, such as almonds, walnuts, flaxseeds, and pumpkin seeds, into the diet during the menstrual cycle for their potential benefits **(*Saini,.Kumari.,* 2018).**

CONCLUSION

Adult women aged between 19 to 49 years, encompassing the entire continuum of transition from childhood to adulthood. Many physical and biological changes occur during the period. Menstruation is the process in which the uterus sheds blood and tissue through the vagina. This is the natural and healthy process for girls and women of reproductive age. According to the results, the majority of women are unaware of the psychological shifts and dietary desires that coincide with their menstrual cycle, its lead to complicated life style disease in women during their reproductive age. So, the awareness and education about menstruation and their complications is given through a nutrition education tool (brochure), they were made aware about menstruation, food choices. Understanding the physiological and dietary changes during menstruation is of great importance for women's menstrual health.

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