

# A Study on Nutritional Status and Eating Habits Among Girls During Menstruation and Educating them Through the Educational Tools

Ms. N. Asiffa Jabeen<sup>1</sup>, Ms. A. Ramyadharshini<sup>2</sup>

<sup>1</sup>Assistant Professor, Department of Nutrition and Dietetics, Jamal Mohamed College, Tiruchirappalli

<sup>2</sup>M.Sc Student, Department of Nutrition and Dietetics, Jamal Mohamed College, Tiruchirappalli

## Abstract:

Menstruation is a natural physiological event that is indicative of fertility. It is characterized by periodic vaginal bleeding caused by uterine mucosal shedding. The typical menstrual cycle has a length of 28 days and flow duration of 4 days. Even though menstruation is a natural physiological process, almost every woman experiences some form of menstrual discomfort. These include irregular periods, changes in the length of the cycle, changes in the flow, colour, or consistency of menstrual blood, and other symptoms that are related to diet and eating habits and can include lower abdominal pain, nausea, vomiting, mood swings, irritability, fatigue, bloating, acne, and breast tenderness. The study was conducted between the age groups of 17-25 years girls. The aim of the study is to find the comparative data of eating habits and nutritional status during normal days and menstruation, and to know about the sleep pattern, psychological changes and behaviour during menstruation. It is also to educate the girls through the educational tool with the general information regarding menstruation and the foods to be included and avoided during menstruation.

**Keywords:** Menstruation, Eating habits, Psychological behaviour, Sleep pattern, Nutritional status.

## INTRODUCTION:

The normal process of the reproductive cycle during which blood leaves the uterus through the vagina is called menstruation. It is a normal process that starts in girls between the ages of 11 and 14 and is one of the signs that they attain maturity both physically and sexually. The commencement of menstruation is influenced by a number of variables, including social, cultural, geographic, economic, nutritional, and environmental factors.

Variations are observed in the onset of menarche, but weight, height, and body fat also have a role. There are three phases to the menstrual cycle, which has an average duration of 28 days: follicular, ovulatory, and luteal. The luteal phase starts at the conclusion of ovulation and lasts until the start of the menstrual flow. The follicular phase starts on the first day of menstruation and lasts until the ninth day. The ovulatory phase takes place between days 10 and 14.

Menstrual cycle irregularity, excessive bleeding, prolonged flow length, and premenstrual dysphoric disorder (PMDD), where mood swings, dysmenorrhea (uterine cramps), exhaustion, and irritability can be crippling symptoms connected with menstruation, have all been linked to sleep disruptions.

Women's eating habits are significantly impacted by hormonal changes that occur during the menstrual cycle. Serotonin and other neurotransmitters, such as oestrogen and progesterone, have a major effect on the hypothalamic areas responsible for appetite and satiety. The luteal period was when the median energy intake value peaked. During the luteal phase, the median dietary values of protein, fat, carbohydrates, and sugar were likewise maximum.

## OBJECTIVES:

- To know the nutritional status of the girls during menstruation.
- To know about the eating habits among girls during menstruation.
- To know about the sleep pattern, psychological changes and behaviour during menstruation.
- To know about the understanding of girls about the connection between the food intake and the menstrual cycle.
- To educate the girls about menstruation and the foods to be included and avoided.

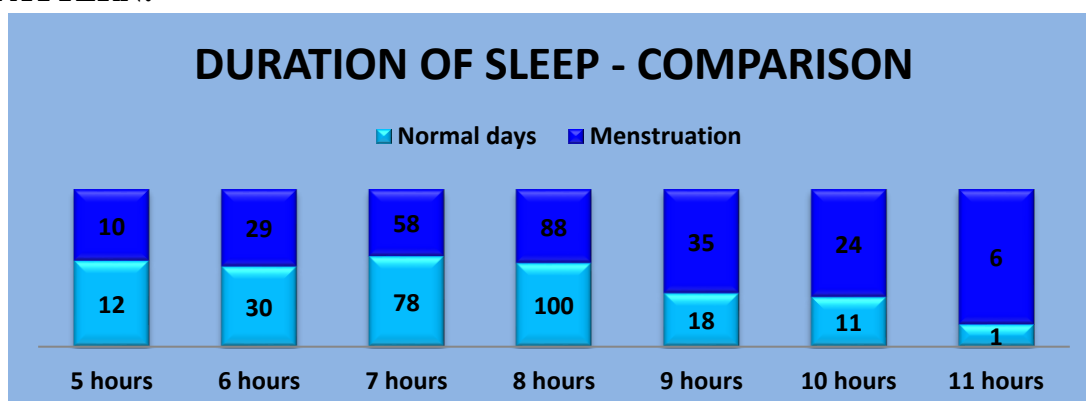
## METHODOLOGY:

- The study was conducted in the districts of Pudukkottai and Tiruchirappalli.
- The study groups were between the ages of 18-25 years.
- The questionnaire were framed which include the sleep pattern, behavioural changes, eating habits, food cravings and physical activity during menstruation.
- The framed questionnaire was circulated among the study group and the data were collected.
- The collected data was analysed manually to obtain the results.
- The educational tool was designed and then it was circulated among the respondents.

## RESULTS AND DISCUSSION:

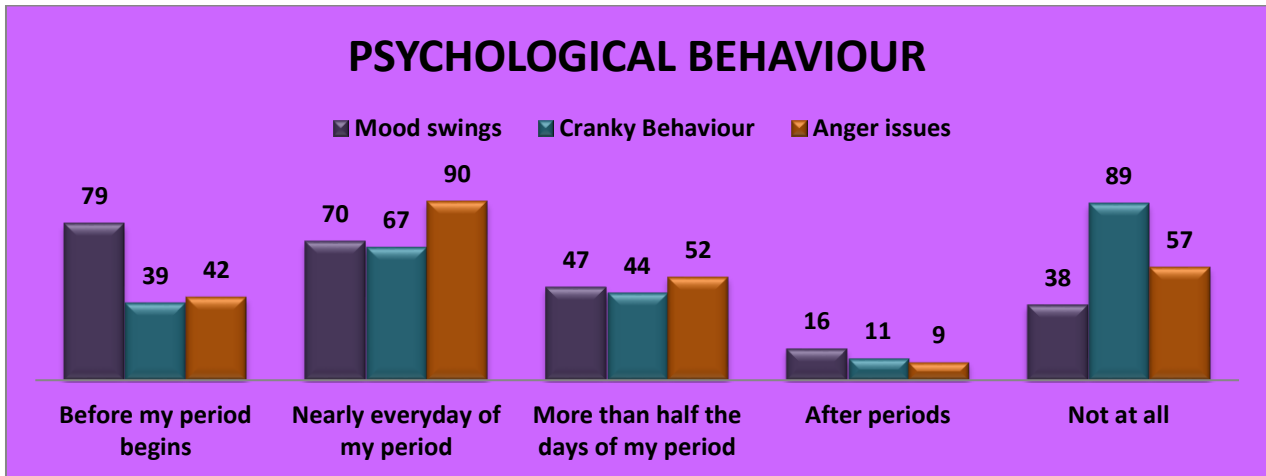
The study has taken into account a variety of factors, including the subjects' general information, family type, income, sleep patterns, eating and eating habits, and psychological makeup. The findings are presented based on data collected on food intake, psychological factors, and sleep patterns. The maximum number of respondents was between the age group of 21. Also maximum number of respondents was under the student category and most of them were in nuclear family. And also maximum number of respondents was reported that their head of their family was skilled worker. These questions were asked to find the socio economic status of the respondents.

## SLEEP PATTERN:



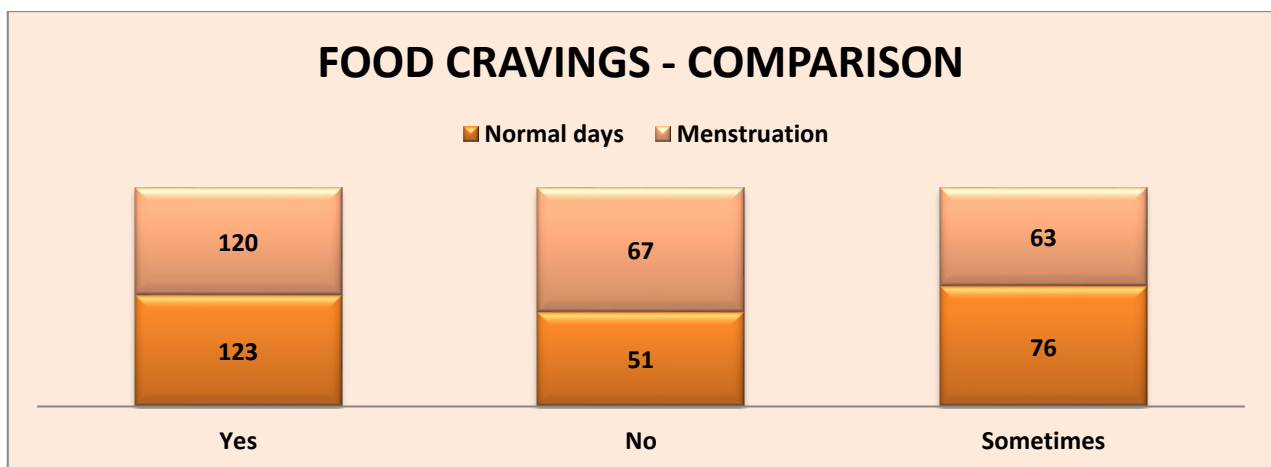
The above data implies the information on the sleep pattern of the respondents during normal days and during menstruation. It is found that the sleeping hours were increased during menstruation. Even though the time increases there was an increase in the sleep disturbances due to the occurrence of menstrual symptoms like cramps, heavy bleeding, bloating, etc., The disturbance may also be due to tiredness and hormonal changes during menstruation.

**PSYCHOLOGICAL CHANGES:**



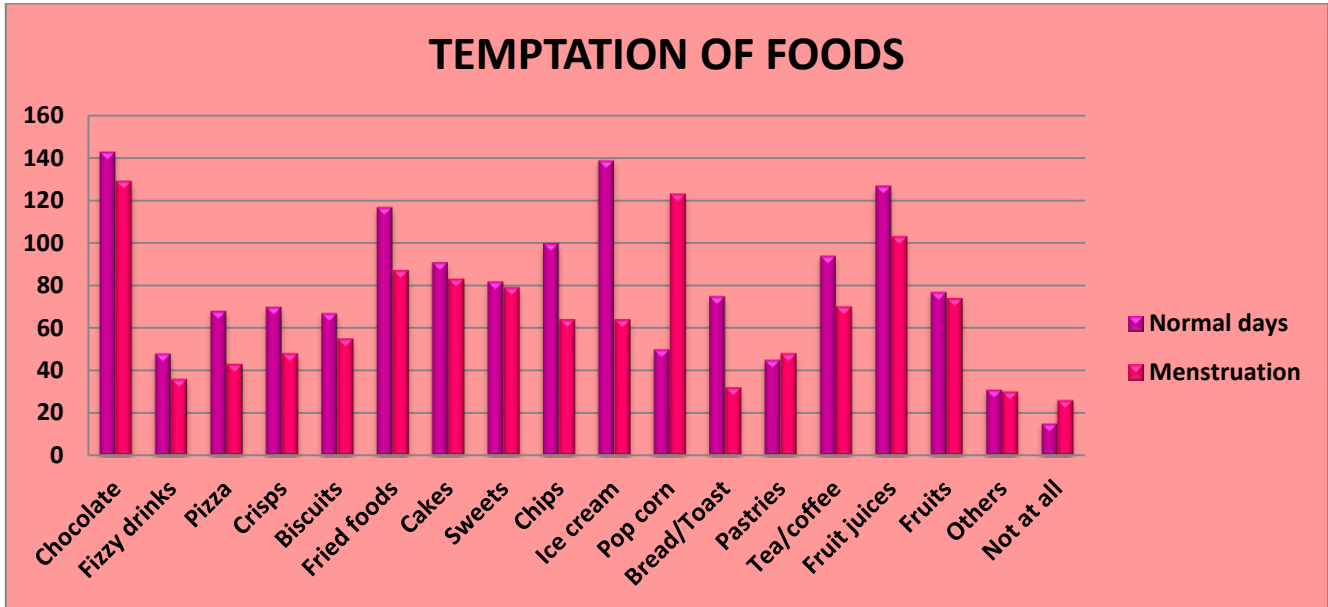
The above diagram gives the information on the psychological changes during menstruation. Most of the respondents reported that they have mood swings before their period begins, and cranky behaviour and anger issues nearly every day of their periods. Also some of them reported that they don't have any mood changes during menstruation. These mood swings were due to the hormonal changes during the follicular phase of the menstrual cycle. The cause of these mood swings is changes in serotonin levels, a neurotransmitter that is essential for mood regulation in the brain. The cause is also increased levels of progesterone and oestrogen during the follicular phase.

**FOOD CRAVINGS:**



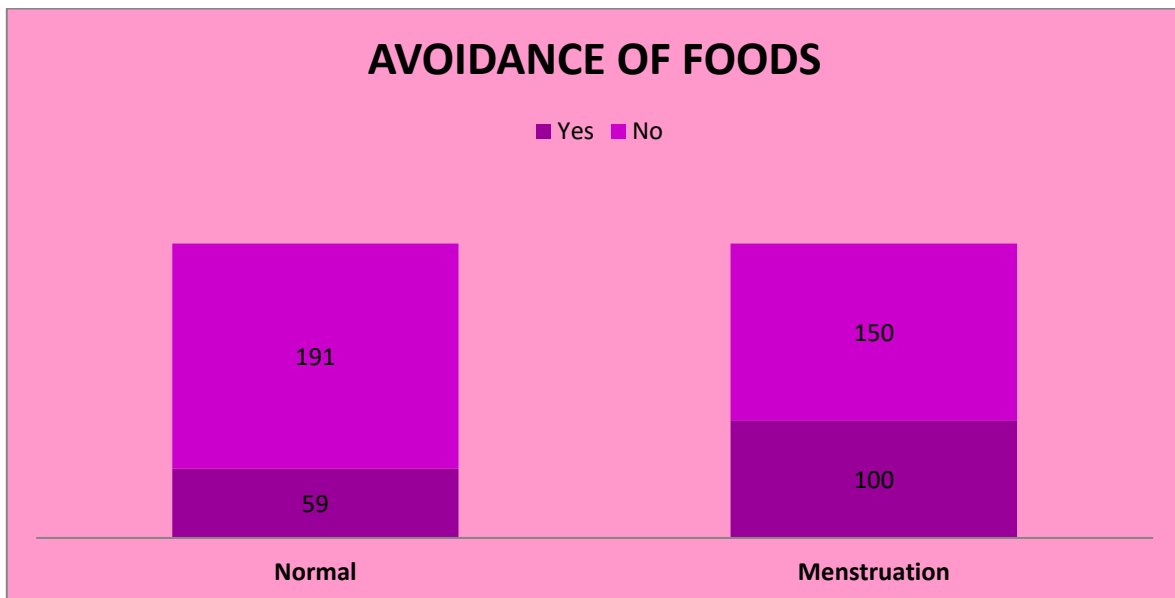
The above chart implies the comparative information on the food cravings during normal days and during menstruation. It is found that there is a reduction in the cravings for food during menstruation when compared to normal days. It is because there is an increase in oestrogen level during follicular phase which will suppress the hunger and reduce the cravings for food. During luteal phase there was increase in the progesterone level which will increase the appetite and cravings for foods.

**CRAVINGS FOR SPECIFIC FOODS:**



The above diagram represents the comparison of cravings of various foods during menstruation and during normal days. It is found that there is an increased craving for chocolates during both normal and menstrual days. Cravings for all other items differ during normal days and during menstruation. This high craving for chocolate is due to hormonal changes. Consumption of sweet foods like chocolate will improve the mood during menstruation which helps in the reduction of mood swings.

**AVOIDANCE OF FOODS:**



The above chart implies the comparative data on the avoidance of foods during normal days and menstruation. It is evident that there is an increase the rate of avoidance of food during menstruation when compared to normal days. This avoidance may due to fluctuations in the hormonal level which may reduce the food cravings and cause the reduction in the appetite during the follicular phase.

**CONCLUSION:**

The above study gives the information about sleep pattern, psychological changes and eating habits during menstruation. It is found that there is decrease in the subjective sleep quality before and during menstruation. It may be due to sleep disturbances that occur because of the menstrual symptoms like bloating, abdominal cramps and heavy bleeding. The respondents reported that there is also a psychological change during menstruation. There is an occurrence of mood swings and anger issues were reported nearly every day of the periods. These mood swings were due to reduction in the serotonin level, a brain neurotransmitter which is responsible for the improvement in the mood. There is also a change in the dietary pattern during menstruation. During luteal phase the dietary intake will be more. This is due to increased level of oestrogen which will increase the hunger and cravings for food will be elevated. But during follicular phase, which is also called as menstrual phase, the progesterone level will be increased which will suppress the hunger and reduce the cravings for food.

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