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Effect Of Body Mass Index on Menstrual Irregularities in Working Women

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Abstract

Objective: To find the outcome of BMI on the menstrual pattern in working women. **Methods:** A total of 100 working women between the ages of 21 and 45 were chosen for the study. A self-structured questionnaire was used for data collection. The formula for calculating BMI (kg/m2) was: BMI (kg/m2) = Weight (kg) / Height 2 (m2). **Results**: The girls were 30.96 years old on average (range 21–45 years). 49 % of the women were working in Govt. sector, 2% in the private sector, 21% were manual workers, and 30% did not specify their occupation. 10% of the women were 10 years old when they reached menarche, 18% were 11 years old when they reached menarche, 42% were 12 years old when they reached menarche, 20% were 13 years old when they reached menarche, and 10% were 14 years old when they reached menarche. The BMI of the women was used to estimate their nutritional status (BMI). 56 percent of the working women were normal (BMI 18.5-24.9), 28 percent were heavyweight (BMI 25-29.9), and 2 percent were obese (BMI 25-29.9). **Conclusion**: According to the findings, many working women are obese. In a survey of a hundred working women, 14 percent were underweight. Women who were overweight or obese had irregular periods. BMI and menstruation pattern had a statistically significant connection (P 0.005)

Keywords: Menstrual pattern; Body mass index; Working women.

INTRODUCTION

BMI is a straightforward and cost-effective method for assessing weight categories such as underweight, healthy weight, overweight, and obesity.

Obesity has become much more common in adults with a BMI greater than or equal to 30 kg/m2. With the exception of older women, this trend has now slowed. Obesity rates have continued to climb among adult women aged 60 and up. (1)

Menarche age is influenced by a number of factors, including overall health, genetics, socioeconomic status, and dietary habits. Between the ages of 12 and 13, menarche occurs. (3) Most women hemorrhage for 2 to 7 days during their first menstrual period (4).

Menstrual difficulties are often dismissed as a slight fitness unease, making them unconnected to the community well-being agenda. The menstrual cycle is a normal biological procedure characterized by periodic and cyclic shedding of progesterone-producing endometrium, as well as blood loss, which is an additional vital sign that can be used to assess normal development and rule out pathological conditions in adolescent and young girls (6). Menstrual disorder affects adolescent girls in various ways, which can interfere with adolescent and young adult women's regular lives. Menstrual abnormalities and disorders are frequently linked to physical, mental, social, psychological, and reproductive issues. Obesity has increased in the industrialized world as a result of changes in lifestyle, habits, and diet, resulting in a younger age of menarche. (7). The goal of this study was to see how BMI affected working women's menstrual patterns.

MATERIALS AND METHODS

The current study was a non-experimental survey that took place during November and December of 2021. After obtaining their assent, a total of 100 working women aged 21 to 45 were chosen. The data was collected using a straightforward sampling strategy. The information was gathered using a questionnaire that had been pre-designed and tested.

Figure 1: Age of Menarche of Working women

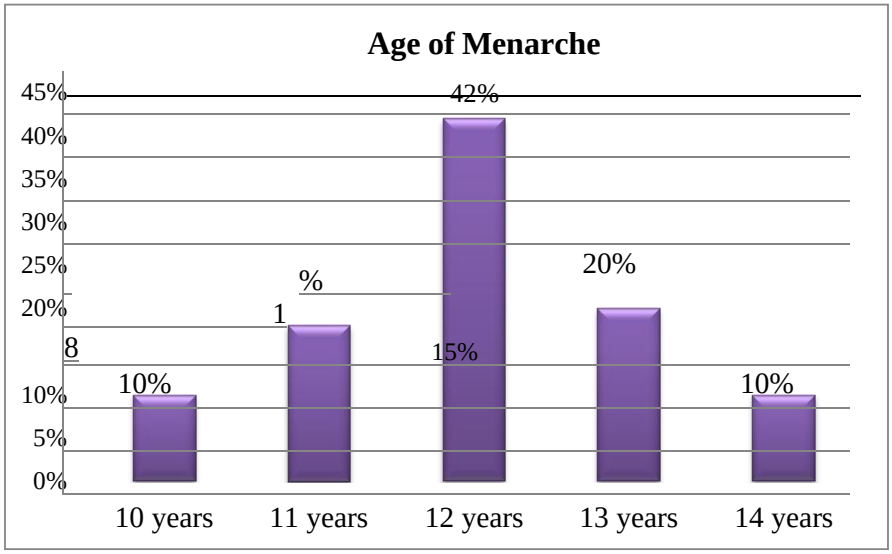

Table 1: Showing the Menstrual Irregularities in Working Women

Menstrual Cycle Variable	Frequency	%
How long does your period last?		
2 to 3 days	24	24%
3 to 4 days	31	31%
4 to 5 days	45	45%
More than 5 days	12	12%
On the average, how long is your monthlycycle		
20 to 24 days	18	18%
24 to 28 days	25	25%
28 to 32 days	25	25%
More than 32 days	26	26%
How is your Menstrual flow usually		
Scanty (1 Sanitary Pads per day)	30	30%
Normal (5 Sanitary Pads per day)	30	30%
Heavy (8 Sanitary Pads per day)	28	28%

Nutritional Status:

The girls' nutritional status was measured by their BMI. 66% of the working women were normal, 28 % were overweight, and two percent were obese. The outcomes are listed in the table below.

Table 2: Body mass index among Working Women

BMI	Frequency	%	P value
Underweight (BMI <18.5)	14	14%	

Normal (BMI 18.5-24.9)	56	56%	(X_2^2=102.8, P<0.005)
Overweight (BMI 25-29.9)	28	28%	
Obese (BMI>=30)	2	2%	

BMI and menstrual pattern: 70% of working women with a BMI of 18.5-24.9 had a regular menstrual cycle. Infrequent cycles were seen in all 30 working women with a BMI of 25 to >=30. BMI and menstruation pattern have a statistically significant connection (P0.005). Menarche occurred at an average age of 12.61.3 years, with a statistically significant difference between BMI categories in connection to menarche age and menstrual regularity (P0.05). In terms of dysmenorrhea, the majority of obese women suffer from it (95.0 %). The majority of women who were in good health had regular periods (89.9 %). 40 percent of obese women, on the other hand, reported irregular menstruation.

DISCUSSION

In present research, by the age of thirteen, 90% of girls will have reached menarche. None of the working women in this study suffered from primary amenorrhea because they all reached menarche before the age of 14.

The monthly flow was found to be 36 percent scanty, 36 percent normal, and 28 percent heavy, similar to research done by Begum J et al (6) that reported a upper fraction of women with small flow and a smaller proportion of those with more flow. According to some researchers, dysmenorrhea is one of the most frequent problems in this age range. (8), (9). According to the findings, 52 percent of them had difficult periods. They reported pain 32 percent of the time before their periods, 30 percent of the time during their periods, and 38 percent of the time after their periods. There are studies that highlight the significance of the (BMI) as a nutritional assessment index. (10), (11).

The BMI was used to measure the nutritional status of working women in this study. Working women were normal in 56 percent of cases (BMI 18.5-24.9), overweight in 28 percent of cases (BMI 25-29.9), and obese in two percent of cases (BMI >=30). Karlberg and Wang [12], [13] conducted two large studies that found a link between the onset of puberty and a larger BMI growth. In our study, 70% of women with a BMI of 18.5-24.9 had a regular menstrual cycle. Infrequent cycles were found in all 30 percent of people with a BMI of 25 – 29.9 to >=30.

CONCLUSION

According to the findings, menstrual problems are very common and frequently cause disruptions in working women's daily routines; thus, it is critical that these issues be recognized and that they be addressed with care. More research should be done to determine the cause of this trend, and novel methodologies should be used.

CONFLICT OF INTEREST

There are no relationships, conditions, or circumstances that could create a potential conflict of interest for the author.

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