

Effect of Skipping Breakfast on Young Girls' Menstruation

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Abstract

Introduction: Breakfast is often referred to as the most important meal of the day. Evidence suggests that breakfast contributes to wellbeing in a number of areas. First, it is a central component of nutritional wellbeing, contributing to total daily energy and nutrient intake. Nearly 15% of college girls rarely or never ate breakfast, and those who ate breakfast almost every day (and did not often eat between meals) reported slightly but significantly better physical health than skippers. Eating breakfast is important for the health and development of young women. From clinical experience, there is great evidence that the frequency of irregular menstruation and intensity of dysmenorrhea was increased in young women, who were currently skipping meals, suggesting that diet in adolescence has long-lasting adverse effects on reproductive function in young women. Menstrual disorders frequently affect the quality of life of adolescents and young adult women. Breakfast as a part of healthful diet and lifestyle can positively impact children's and young adults' health and wellbeing. Daily eating habits significantly influence menstrual function in young women. We conducted the study to explore the association of skipping breakfast on menstruation.

Objectives

- To find out the proportion of girls with menstrual irregularity in those skipping breakfast;
- To find out effect of breakfast skipping on menstruation among girls of age group 17–22 years.

Method and Material: A cross-sectional study was used. The studied sample consisted of 90 female students of a selected college of Bhopal city. Data were collected by using an interviewing questionnaire. Analysis of the findings was done using Epi Info 7 software.

Results: Mean age of the study participants was 20+3.66 years. Out of 90 students, 82% were found to have been skipping breakfast for more than 3 days a week. The study also revealed that dysmenorrhea was more in girls who skipped breakfast than in those who had breakfast ($P=0.0001$).

Conclusion: From the above finding, we can conclude that episodes of dysmenorrhea occurred more in female students who skipped the breakfast meal more than those who took breakfast regularly.

Keywords: Menstruation, Dietary habits, Skipping breakfast, BMI, Premenstrual syndromes, Menstrual disorders

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Introduction

Breakfast is often referred to as the most important meal of the day. Evidence suggests that breakfast contributes to wellbeing in a number of areas. First, it is a central component of nutritional wellbeing, contributing to total daily energy and nutrient intake.¹ Daily eating habits significantly influence menstrual function in young women and several studies reported that vitamin deficiency or hypoglycemia can induce premenstrual syndromes in which patients complain of irritability, constipation and edema several days before the onset of menstruation. Very recently, it was confirmed that the frequency of irregular menstruation was increased in young women who were currently on a diet and found out that the intensity of dysmenorrhea was high in those with a history of dieting in adolescence, suggesting that diet in adolescence has long-lasting adverse effects on reproductive function in young women.² Menstrual disorders frequently affect the quality of life of adolescents and young adult women. Breakfast as a part of healthful diet and lifestyle can positively impact children's and young adults' health and wellbeing and development of young women. Nearly 15% of college girls rarely or never ate breakfast, and those who ate breakfast almost every day (and did not often eat between the meals) reported slightly but significantly better physical health than skippers. Irregular menstruation is one of the positive clinical symptoms which predict dysfunction of the hypothalamic-pituitary-ovarian axis. The list of menstrual disorders may range from amenorrhea, irregular cycles and abnormal flow to dysmenorrhea and premenstrual symptoms (Campbell and McGrath, 1997). Dietary habits are fundamental factors that influence human life style and individual quality of life (QOL). Dietary habits in young women may determine their QOL in subsequent middle or old age and should be evaluated from the perspective of total benefit throughout whole life.³⁻⁵ Meal skipping

rates may be highest during young adulthood, a period of transition and development. Although these dietary behaviors may increase future risk of chronic disease, limited research has investigated correlates of meal skipping in young adults; therefore, we conducted the study to explore the association of skipping breakfast on menstruation.^{6,7}

Objectives

- To find out the proportion of girls with menstrual irregularity in those skipping breakfast.
- To find out effect of breakfast skipping on menstruation among girls of age group 17–22years.

Methodology

A total of 90 students in the age group ranging from 17 to 22 were selected for the present study. A cross-sectional study was carried out in a selected girls' college of Bhopal city belonging to 17–22 years of age, after taking consent from the college authorities and approval from our institutional ethical committee. This study was carried out with a questionnaire to collect data on breakfast history, food habits, sleeping habits, physical activities and menstrual cycle and also the all study subjects were briefed and requested to answer the questionnaire. The questionnaire was self-administered, semi-structured and prepared in English language. The obtained data were entered into Microsoft Excel 2007 and analyzed by using Epi info 7.

Results

Age of the study participants was 20+3.66 years. Out of 90 students, 82% were found to have been skipping breakfast for more than 3 days a week. The study also revealed that dysmenorrhea was more in girls who skipped the breakfast than in those who had breakfast ($P=0.0001$).

Table 1.Characteristics of Study Participants

Characteristics	Frequency (%)
Mean age of the study participants	20±3.66
Mean age of menarche	13.34±1.39
Height	
<150 cm	20 (22.22)
150–160 cm	39 (43.33)
>160 cm	31 (34.44)
Weight	
<50 kg	39 (43.33)
>50 kg	51 (56.66)
BMI	
Underweight (<18.5)	20 (22.22)
Normal (18.5–24.9)	53 (58.88)
Overweight (>25)	17 (18.88)
Having breakfast	16 (17.77)
Skipping breakfast	74 (82)

Table 2. Dietary Habits and Life Style

Junk Foods	Skipping Breakfast (74)	Having Breakfast (16)
<3 times per week	29	12
>3 times per week	45	4
Fresh fruits and juices		
<3 days per week	15	7
4–7 days per week	59	9
Physical activity		
<3 days per week	22	9
4–7 days per week	31	6
No physical exercise	21	1

Table 3. Distribution according to Menstrual History

Characteristics	Having Breakfast(16)	Skipping Breakfast(74)
Menstrual duration (in days)		
<3	5 (31.25)	44 (59.46)
3–7	8 (50)	20 (27.02)
>7	3 (18.75)	10 (13.52)
Blood flow		
With clot	16 (100)	12 (16.02)
Without clot	0	62(83.78)

Table 4. Association between Skipping Breakfast and Menstrual Disorder

Menstrual Disorder	Have Breakfast (16) (%)	Skip Breakfast (74)	Chi-square	P value
Dysmenorrhea				
Yes	04 (25)	60 (81.08)	20.1407	0.0001
No	12 (75)	14 (18.91)		
Menorrhagia				
Yes	13 (81.25)	12 (16.22)	14.673	0.126
No	03 (18.65)	62 (83.78)		
Oligomenorrhea				
Yes	01 (6.25)	55 (74.32)	25.93	<0.05
No	15 (93.75)	19 (25.67)		

Discussion

Our study found out that majority of study participants skipping breakfast were suffering from one or the other menstrual problems. This finding is consistent with the finding of study done by Hayam Fathy A. Eittah on 300 girls of nursing in Menoufiya University, Egypt.²

In addition, Dars et al., in their study on female students in Hyderabad, Pakistan,⁸ showed a significant association between nutritional status and menstruation pattern, which is found in our study as well.

Conclusions

Based on the study, finding episodes of menstrual disorder was more in those who skipped breakfast than who regularly had breakfast. The current study revealed that dysmenorrhea and oligomenorrhea occurs in female students who skipped the breakfast meal more than those who took breakfast.

Recommendation

Encouragement should be done to take healthy breakfast to all female students studying in schools and colleges. Evaluation of breakfast skipping should be carried out in perspective of future reproductive functions. This problem needs to be examined with a larger sample size. Development of educational programs to increase awareness about the importance and effect of breakfast on target girls from different ages should be done.

Conflict of Interest: None

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