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## To study the menstrual pattern and various menstrual problems among urban adolescent girls

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### Abstract

Adolescence is very important transitional period in which development from girlhood to womanhood with physical, psychological changes occurs. Menstruation is a milestone but there are substantial lacunae in knowledge about menstruation and related problems, which leads to severe reproductive health problems.

**Objective:** To study the menstrual pattern and various menstrual problems among urban adolescent girls.

**Method:** A cross sectional study carried out, total 100 adolescent girls included who attended gynecological OPD predesigned questionnaire filled after informed consent. Data was collected, compiled and analyzed.

**Result:** Majority of adolescent girls (62%) had menarche between 10-13 yrs of age. Oligomenorrhea is most common menstrual problem (56%), dysmenorrhea was the main reason of absenteeism from school (with 42.9%). Menorrhagia along with dysmenorrhea was second most common reason (14.2%) for absenteeism from school.

**Conclusion:** This study highlights the need of awareness of menstruation and related problems among the adolescent girls to avoid future reproductive health problems

**Keywords:** Adolescent girls, menarche, menstruation, Oligomenorrhoea, Dysmenorrhoea

### Introduction

WHO defines adolescent between 10-19 years of age<sup>[1]</sup>. In India adolescent constitute 21.4% of total population. This age group plays a crucial role in the development of a child as major physical, psychological behavioral and reproductive changes take place during this period<sup>[2, 3]</sup>.

Menarche and menstruation is a very important, natural event which plays an important part in reproductive life, despite of the changing attitude of people menstruation in Indian society is still considered unclean and dirty<sup>[4]</sup>. Girls are isolated and restricted from doing daily activities. They find difficulty and shy in discussing their menstrual problems with family or gynecologist this behavior not only affects their health but also hampers their education.

Many studies conducted in hospitals in India show that vast majority of girls suffer from various menstrual problems like primary amenorrhea, dysmenorrhea, menorrhagia, oligomenorrhoea, anemia, premenstrual problems, leucorrhoea and genital infections are frequent complaints of adolescents in India<sup>[5]</sup> But due to lack of proper health care facility, health education, poor hygiene, poor standard of living, cultural taboos and beliefs, poverty and male dominance, problems related to girl's health especially menstrual problems and menstrual hygiene are often ignored and the actual measurement of depth of problem remain hidden, later on it leads to high morbidity and mortality<sup>[6, 7]</sup>.

Adolescent girl is the future of the world. Girl today is a mother tomorrow therefore their health should be given prime importance. Hence this study was conducted with an aim to evaluate the age of menarche, various menstrual problems, pattern and magnitude of menstrual problems. The information obtained will thus help in educating girls in India and organizing health programs to improve the reproductive health of women.

### Material and Methods

A cross sectional study was conducted in the department of obstetrics and gynaecology of Govt Doon Medical College Dehradun. We recruited the 100 adolescent girls randomly who presented with menstrual problems in gynaecology OPD. Total of 100 girls were asked to fill up a questionnaire which included questions like age of menarche, pattern of menstruation, duration and amount of flow, number of pads used. Data collected compiled and analyzed.

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## Result

This study shows Majority of girls (62%) attained their menarche between 10-13 years of age and remaining 38% were in the age group of 14-16 years (Table 1). Majority of girls had problem of oligomenorrhea (56%). 34% of girls had normal cycle length of 28-35 days and only 10% had frequent bleeding with cycle length less than 28 days. But duration (3-5 days) and quantity of flow was normal in maximum girls 78% and 64% respectively. Excessive flow with passage of clots or duration of flow for more than 5 days was noted in 22% and 14% of girls respectively. Only 6% had flow for less than 2 days (Table 2). Menstruation is associated with multiple morbidities, in our study majority of girls had problem of oligomenorrhea (58%) followed by dysmenorrhea (52%) and menorrhagia (22%). Dysmenorrhea was the main reason of absenteeism from school (with 42.9%). Menorrhagia along with dysmenorrhea was second most common reason (14.2%) for absenteeism from school. Third main reason was menorrhagia, reported by 22%.

**Table 1:** Frequency (%) of distribution of girls according to age at menarche

Age at menarche	Frequency (%)
10-13	62%
14-16	38%
17-19	0

**Table 2:** Pattern of menstrual cycle

Duration of blood flow (days)	Frequency (%)
<2	6
3-5	78
>5	14
Length of cycle (days)	
<28	10
28-35	34
>35	56
Quantity of blood flow	
Normal	64
Excessive	22
Scanty	14

**Table 3:** Common menstrual problems

Menstrual problems	Frequency (%)
Oligomenorrhea	58%
Dysmenorrhea	52%
Menorrhagia	22%
Premenstrual symptoms	16%
Leucorrhea	2%

**Table 4:** Reasons for absenteeism from school related to menstrual problem (N=28)

Menstrual Problem	Numbers	Percentage (%)
Dysmenorrhea	12	42.9
Menorrhagia + dysmenorrhea	4	14.2
Menorrhagia	6	21.5
Premenstrual syndrome	4	14.2
Fear of leakage	2	7.2

## Discussion

Our study shows the majority of adolescent girls had menarche between 10-13 years of age (62%) which collaborates with study conducted by S Rokade [7], who reported mean age of menarche as 12.6±1.05 years in Maharashtrian girls, Varuna

Pathak [9] reported age of menarche as 13 years. It is also collaborates with various studies conducted in developed countries like studies report the mean age of menarche as 13.28 years in Turkey [11], 13 years in Russia [12], 12.3 years in Thailand [13], 12.5 years in Japan [14], 13.2 years in Egypt [15].

Our study shows 56% of girls had prolong cycles of more than 35 days with irregular cycles. However studies conducted in Guntur, Andhra Pradesh [16] and Meerut, Uttar Pradesh [17] observed 66.54% and 66.9% girls with regular menstruation cycles, and in study conducted by M. Kulkarni 11.16% girls with irregular cycles. This difference may be due to nutritional factors and general health of study subjects. Most common associated menstrual problem in girls is oligomenorrhoea which contributes around 56%, followed by dysmenorrhea seen in 52% of the population where as various studies showed dysmenorrhea as a commonest menstrual problem [8,9,10], and oligomenorrhoea was observed in 16.08% girls by Mohite RV [10] and 3.2% by Varuna Pathak [9].

In our study other problems like premenstrual symptoms and menorrhagia was observed in 16% and 22% girls respectively, whereas various studies showed premenstrual symptoms ranged from 41.5% to 75.4%. Menorrhagia was seen in 17.82% population by Mohite RV, 16.07% by M Kulkarni which is comparable with our study [8, 10].

Our study shows oligomenorrhea is the most common menstrual problem and second one is dysmenorrhea. As peri pubertal phase is phase of hormonal imbalance, further investigations and evaluations are needed for the reason of oligomenorrhea and menorrhagia. Our study also reveals that the dysmenorrhea is the most common reason of absentees from school/college, similar findings were found in the studies conducted in North India South India and Mumbai [18, 19, 20]. Level of education, awareness, cultural taboos and practices affects the percentage of girls presenting with their menstrual complaints to healthcare facility. Other factors like nutrition, anemia, personal hygiene, geographic conditions, socio-economic factors also influence menstrual problems.

Through our study we gained knowledge on various menstrual problems and their contribution in physical as well as psychological disturbance among adolescent girls.

## Conclusion

Menstruation is a natural, inevitable and important part in reproductive life of a girl. Changes in the normal pattern of menstruation may affect a girl physically and psychologically. But due to lack of awareness, poor hygiene, various cultural taboos and practices in India these problems are usually ignored. The study provides an indication to implement intensive health educational activities among the adolescent girls regarding menstrual awareness, associated problems and early consultation to health care facility.

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