

## Menstrual pattern among adolescent girls in rural area of Bijapur

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**Abstract:** *Introduction:* Adolescence is a crucial period in everyone's life. This is the period of transition from childhood to adulthood. These are formative years when maximum amount of physical, psychological and behavioral changes takes place. For girls, adolescence is period of extreme stress and strain. Menarche and menstruation are bound to elicit tremendous psychological response in them. *Objectives of the study:* To know the menstrual pattern among adolescent girls. *Material methods:* Community based cross sectional study was done in rural field practice area of department of community medicine, BLDEA'S Shri B.M.Patil medical college, Bijapur. The study subjects include all adolescent girls who have attained menarche. *Results:* Mean age of menarche of adolescent girls in the present study was 14 years, mean duration of blood flow  $3.9 \pm 5.07$  days. Mean intermenstrual period  $28.7 \pm 3.26$  days and dysmenorrhoea was present in 27.9% of adolescent girls.

**Keywords:** Menstrual pattern, Adolescent girls, Dysmenorrhoea, Rural area

### Introduction

Menarche is the onset of first menstruation among girls. This is often recognized as the onset of maturity in girls. There are variations in the age at which menarche occurs [1]. Menstruation occurs once a month as a regular rhythmic period. Menstrual cycle is a continuous process. It remains as a normal physiological phenomenon throughout the childbearing years of the women and stops permanently at menopause approximately between the ages of 45-55 years [2]. A woman gets 13 menses in a year and around 400 menses in her reproductive life. The menstrual cycle is usually of 28 days measured from the first day of the menstrual period to next period with deviation of 2-3 days. The duration of bleeding is about 3-5 days and estimated blood loss is between 50-200 ml. The menstrual cycle is often irregular during first few years after menarche. These are usually anovulatory cycles. But at the age of 17-18 years, regular menstrual cycle becomes established [3].

*Pattern of menstruation includes:*

- a) Regularity of menstrual cycle
- b) Days of menstrual bleeding
- c) Interval between cycle and
- d) Amount of blood flow.

Many adolescent girls experience premenstrual symptoms 7 to 10 days before onset of bleeding. These include irritability, lassitude, malaise, headache, gastrointestinal upset, feeling of fullness in breast. In majority of females, apart from per vaginal bleeding there are no symptoms during menstruation. Pain in abdomen during menstruation is one of the frequent complaint. Complaints like leg pain, backache may also be associated with normal menstrual cycle [4]. To know the menstrual pattern among adolescent girls, the study has been conducted in rural area Shivangi which is the field practice area of department of community medicine, Shri B.M.Patil medical college, Bijapur.

*Objectives of the study:* To study the menstrual pattern among adolescent girls.

### Material and Methods

The present study was a community based descriptive cross sectional study undertaken to find out menstrual pattern among adolescent girls in rural area, of Bijapur. The present study was carried out in a rural area Shivangi, which is a rural field practice area of Department of Community Medicine,

B.L.D.E.A's Shri B. M. Patil Medical College, Bijapur. Shivangi is small village having population of 7750 according to 2001 census. The study conducted during a period of one year from November 2005 to October 2006 and collected data twice in week. House to house visit was done. All adolescent girls who have attained menarche, their parents and community leaders were explained in detail about the purpose and methodology of the study. Age of the adolescent girls was verified by birth certificate and school records. Only after taking parents consent, girls were interviewed, examined and investigated. A pre-tested, pre-designed questionnaire was used to record information.

*Selection of study subjects:* Adolescent girls who have attained menarche were included in this study. Adolescent girls who did not give consent to the study, who have not attained menarche and who are not mentally sound were excluded from the study.

**Results**

Out of total 440 girls 222 (50.4 %) had menarche at the age of 14 years. Only 4(0.9%) girls attained menarche at 16 years and 404 (92.5%) girls had regular menstrual cycles and 33 (7.5%) had irregular menstrual cycles. In the present study 408 (92.7%) of the adolescent girls were menstruating at the interval of 21 to 35 days. The mean inter-menstrual period is 28.7±3.26 days. The amount of blood flow was moderate in 398 (90.5 %) girls, heavy 26 (5.9 %) and scanty in 16 (3.6%) girls. Out of 440 girls, 386 (87.7%) girls had blood flow for 3-5 days. The mean duration of blood flow is 3.95 ± 0.7days.

<b>Table-1: Distribution of adolescent girls according to their menstrual pattern</b>		
Age (menarche)	Number	Percentage
11	10	2.3
12	72	16.4
13	102	23.2
14	222	50.4
15	30	6.8
16	04	0.9
<b>Total</b>	<b>440</b>	<b>100</b>
Inter-menstrual interval	Number	Percentage
Less than 21 days	02	0.5
21 to 35 days	408	92.7
More than 35 days	30	6.8
<b>Total</b>	<b>440</b>	<b>100</b>

Amount of blood flow	Number	Percentage
Scanty	16	3.6
Moderate	398	90.5
Heavy	26	5.9
<b>Total</b>	<b>440</b>	<b>100</b>
Days of Blood flow	Number	Percentage
Less than 3 days	28	6.4
3 – 5 days	386	87.7
More than 5 days	26	5.9
<b>Total</b>	<b>440</b>	<b>100</b>

<b>Table-2: Distribution of adolescent girls according to their premenstrual symptoms</b>		
Symptoms	Number	Percentage
Cramps	196	44.6
Abdominal pain	100	22.7
Headache	30	6.8
Backache	48	10.9
Body ache	28	6.4
Constipation	14	3.2
Depression	02	0.45
Irritability	25	5.7
No symptoms	30	6.8
*Multiple answers, Average symptoms were 1.25		

<b>Table-3: Distribution of adolescent girls according to menstrual symptoms</b>		
Symptoms	Number	Percentage
Abdominal pain	345	78.4
Cramp	132	30
Uncomfortable	56	12.7
Backache	53	12.1
Body ache	48	10.9
Headache	08	1.8
Irritability	20	4.6
Depression	06	1.4
No symptoms	38	8.7
* Multiple Answer, Average symptoms were 1.5		

Out of total 440 respondents, 30 (6.8%) girls were free from premenstrual symptoms, 196 (44.6%) had cramps, followed by 100 (22.7%) had abdominal pain and depression in 2(0.45%) girls was the least common premenstrual symptom and 345 (78.4%) girls

had abdominal pain during menstruation followed by 132 (30%) cramp, and 6(1.4%) girls had depression. 8.7% did not have any symptoms during menses. The average number of menstrual symptom per adolescent girl was 1.5.

Among 440 adolescent girls 256 (58.2%) had no menstrual problems. Dysmenorrhoea was present in 123 (28%), irregular menses 33(7.5%), menorrhagia 26 (5.9%) and polymenorrhoea 2 (0.5%)

<b>Table-4: Distribution of adolescent girls according to menstrual disorders</b>		
<b>Disorder of Menstruation</b>	<b>Number</b>	<b>Percentage</b>
Dysmenorrhoea	123	28.0
Menorrhagia	26	5.9
Irregular menses	33	7.5
Polymenorrhoea	2	0.45
No disorder	256	58.2
<b>Total</b>	<b>440</b>	<b>100</b>

**Discussion**

The mean age of menarche in this study was 13.45 ± 0.95 years. A few other studies conducted in India gave an average age at menarche to be 13.5 years by P. M. Durge at al, Wills Sheela 13.6 years, B.G.Prasad 13.6 years which are similar to the present study The mean inter-menstrual interval in the present study was 28.7 ± 3.26 days. The study done by Prasad B.G et al observed that 74.5% of the adolescent girls were menstruating at the interval of 26 to 30 days. The mean inter-menstrual period was 28.21 ± 1.58 days [5]. The average menstrual flow was 3.95 ± 0.7 days in the present study, Koshi et al found 4.5 ± 1.6 days and Rama Rao A 5.05 ± 1.19 days [6]. Majority of adolescent girls had premenstrual symptom with an average 1.25 per adolescent girls, premenstrual symptoms like cramps in 44.6%, followed by abdominal pain in 22.7% and depression was the least common. Only 6.8% girls were free from premenstrual symptoms, Prasad B.G. et al (1972) in the study of urban girls from Lucknow observed that 93.8% girls had average 2.2 premenstrual symptoms. In his study majority of girls had abdominal pain (67.2%). Girls had other symptoms like cramps in thigh muscle, backache, psychological upset,

change in appetite, headache, and constipation [5]. 78.4% girls had abdominal pain during menstruation followed by cramp in 30%. The average number of menstrual symptom was 1.5 per adolescent girl in this study. Prasad.B.G et al (1972) in his study observed that 93.8% girls had average 2.1 menstrual complaints. In his study also, maximum number of girls (68.3%) had abdominal pain during menstruation and other symptoms were pain in legs, backache, psychological upset, headache, constipation etc[5]. Dysmenorrhoea was seen in 27.9% of present study. Durge P. M et al (1993) in her study on 200 adolescent girls of Nagpur district found that of 145 who attained menarche, 75% of the girls were free of menstrual disorders. 20.4% of the girls had dysmenorrhoea while 4.6% had other problems like scanty menses and menorrhagia [7]. 7.5% adolescent girls had irregular cycles to begin with, of which reverted back to normal cycles within subsequent cycles. It is due to the hormonal fluctuation taking place in peri-pubertal and peri-menopausal age of women. Similar study done by Vaidya R A et al shows that 16.5% had irregular cycle.

**Conclusion**

This is an analysis of 440 adolescent girls as regard to their menstrual pattern from which following conclusion can be drawn.

1. Mean age of menarche was 13.45±0.95 of years.
2. There were 1.25 premenstrual symptom per adolescent girls commonest being cramps. Menstrual symptom were on an average 1.5 per adolescent girls, commonest being abdominal pain
3. Dysmenorrhoea was seen in 28% of the adolescent girls.

**Recommendation**

Menstrual problem should be dealt keeping in mind emotional and psychological aspects of adolescent age. Adolescent girls may feel shy and embarrassed to discuss aspects of menstruation like dysmenorrhoea consequently leading to ill health. Understanding friendliness, assurance and patience is needed when dealing with adolescent girls. Adolescent clinic should be established to address adolescent problems with respect, honesty and confidentiality along with social and psychological support.

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