



ISSN (E): 2277- 7695

ISSN (P): 2349-8242

NAAS Rating: 5.03

TPI 2020; 9(1): 331-334

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www.thepharmajournal.com

Received: 04-11-2019

Accepted: 08-12-2019

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Study on menstrual cycle of adolescent girls of rural area of Ambajogai Tehsil of Beed district

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Abstract

Teenage is known as turbulent period in girls' life because during this period they attain menarche which is considered as a most evident sign of sexual maturity in them. This study measures menarchial age, awareness about the menarche. A questionnaire among the 100 girls between age group 10-19 years in 4 villages of ambajogai and Kej blocks of district Beed. I.E. Sangav, kodari, shripatraywadi and dipewadgaon. The mean age of onset of menarche was 13.6 (+ 1.1) years. The most common symptom reported by the adolescent girls during the menstrual periods was lower abdominal pain (78%) second most prevalent symptoms were tiredness (54%), followed by body pain (43%). Only (37%) girls were aware about menstruation before its onset because they have got knowledge from their elder sisters, mother and television. But majority (63%) girls were unaware about it. Mothers were main source of information on attainment of menarche. It is necessary to include comprehensive school education program on menarche and menstrual problems.

Keywords: Menarche, adolescent

Introduction

India has one of the fastest growing youth population in the world and teenage girls between the age group of 13 and 19 years constitute more than 105 million (censuses of India). Teenage is known as turbulent period in girls' life because during this period they attain menarche which is considered as a most evident sign of sexual maturity in them. Menarche is one of the most significant milestones in a woman's life. Menarche means the first menstrual cycle, or first menstrual bleeding, in females. From both social and medical perspectives, it is often considered the central event of female puberty, *as it signals the possibility of fertility*. In the Indian context the age of onset of menarche is generally between 11-15yrs (Rupa Veni *et al.* 2013) [9]. However, mean age at menarche varies region wise and is known to be sensitive indicator nutritional status, geographical location, environmental condition, magnitude of socio-economic inequalities in a society and indulgence of teenage girls in strenuous activity. Adolescent girls form a susceptible population, especially in India where female child is abandoned. Indian society still regards menstruation as something unclean or dirty. The response to menstruation is determined by the awareness and knowledge about the same. The manner in which a girl acquires knowledge about menstruation and its related changes affects her reaction to the event of menarche. Although menstruation is a natural phenomenon; however, numerous misconceptions and practices are linked to it which leads to lots of negative outcomes. There is substantial lacuna in the knowledge towards menstruation among adolescent girls. Several research studies have revealed this gap (Khanna *et al.* 2005 and Singh 2006) [7, 10] showed low level of awareness about menstruation among girls when they first experience it.

The normal range for ovulatory cycles is between 21 and 35 days. While most periods last from 3 to 5 days, duration of menstrual flow normally ranges from 2 to 7 days. For the first few years after menarche, irregular and longer cycles are common. (Abiove-kutevi EA *et al.* 1997 and Kaplowitz P. 2006) [6]. It has also been observed that early onset of menarche has been the risk factor for breast, and ovarian cancer and other diseases. It has been noted that the average age of menarche is gradually going down.

Objectives of the study

- To study the awareness of rural girls about menstruation.
- To find out the experience encounter by rural girls at menarche and later on during menstrual periods.

Methodology

This study included 100 adolescent girls in the age group of 10 to 19 years old.

Study area: The study was carried out in the 4 villages of Ambejogai and Kej blocks of district Beed. I.e. Sangav, kodari, shripatraywadi and dipewadgaon

Data collection: 120 respondents were randomly selected and questionnaires were distributed to selected girl, out of 120 only 20 respondents did not answer properly those questionnaires were excluded from the data base. The questionnaire included socio-demographic information about the responded age, educational status of self and family income and residence. The question related to menstruation comprised menarchial age, symptoms of menstruation etc. The questionnaire was verbally interpreted in simple language and properly explained to avoid any form of misunderstanding and to get accurate response by the subject. The questionnaires were collected immediately after completion to minimize interpersonal communication amongst the subjects and to prevent the influence of friends on individual response. Informed consent of the girls was obtained

Result and Discussion

Socio-demographic variables of the rural girls depicted in table 1. With regards to the religion (68%) girls belongs to the

family Hindu, followed by 23% from Muslim and 3% from Christian. A higher percentage of the rural girls (58%) belongs to middle socio-economic status, followed by (30%) from low and only (12%) from high socio-economic status. With respect to the type of family (65%) girls belongs to joint family and only (35%) from nuclear family.

Table 1: Sociodemographic information about selected rural girls

S. No.	Sociodemographic variables	N (%)
1.	Age (yrs.)	
	• 10-15	63
	• 16-19	37
2.	Religion	
	• Hindu	68
	• Muslim	24
	• Christian	03
3.	Social economic status	
	• LOW	30
	• Middle	58
	• High	12
4.	Family size	
	• < 4	35
	• 5-8	55
	• >8	10
5.	Type of family	
	• Joint	65
	• Nuclear	35

Table 2: Menstrual Characteristic of adolescent

S. No.	Variables	N (%)
1.	Menarche AGE	
	• Early menarche (10-12)	15
	• Medium menarche (13-14)	67
	• Late menarche (15-19)	18
	• Mean Age of menarche	13±1
2.	Cycle length(days)	
	• <21	18
	• 21-27	29
	• 28-35	40
	• >35	13
3.	Duration of flow (days)	
	• <4	21
	• 5-6	68
	• ≥7	11
4.	Menstrual Blood Flow	
	• Scarce	32
	• Moderate	42
	• Abundant	26

The menstrual pattern of the selected female students is presented in Table 2. It can be seen that mean age of menarche was 13 ±1.1 years, exhibiting wide variations, i.e., 10-19 years among the participants. Cycle duration of 28-35 days was reported by 40% (n =100); 29% girls reported 21-27 days cycle length. More than half of them reported 5-6 days' duration of menstrual blood flow. Hence, 11% of the

participants had >7 days of flow. Although this condition is found in such a small part of the population, it is of concern as it is associated to higher blood loss, increasing the risk of anemia. With regards to scarce-to-moderate blood loss during menstruation was reported by 74% (n =100) of the population. Abundant blood loss was experienced by 26% of the population.

Table 3: Menstrual Characteristic according to age group

S. No.	Variables	Age Group			
		Early Adolescence (N=63)	Percentage	Late adolescence (N- 37)	Percentage
1.	Duration of cycle (days)				
	• <21	12	19	06	16
	• 21-27	17	26.9	12	32

	• 28-35	29	46	11	29
	• >35	5	7	07	18
2.	Duration Flow				
	• <4	9	14.2	12	32.4
	• 5-6	50	79.3	18	48.6
	• >7	4	06.3	03	08.1
3.	Menstruation Blood loss				
	• Scarce	17	26.9	15	40.5
	• Moderate	28	44.4	14	37.8
	• Abundant	18	28	8	21.6
4.	Regular Periods				
	• Yes	50	79	11	29.7
	• No	13	20	26	70.2

As Table 3 shows, menstrual characteristic according to age. Short cycle length is more frequent among late adolescent participants. The prevalence of normal cycle length (28-35 days) is higher in the early adolescence period. About 08.1% of the participants in the early adolescence period experienced long blood flow duration, while it was only 6.3% for the late adolescent participants. 79% early adolescence reported and only 48.6% late adolescence reported normal duration of flow (5-6 days) means normal blood flow mostly occur in early adolescence girl. Menstrual irregularity however was of less frequent occurrence; 20% of participants in the early adolescent group (10-15 years of age) experienced frequent irregular menstruation than those in the late adolescence group. (Lee. *et al.* 2006 revealed the same result in his research study) [8]

Table 4: Symptoms of menstruation

S. No.	Symptoms	N (%)
1.	Tiredness	54
2.	Backache	25
3.	Lower abdominal pain	78
4.	Dizziness	18
5.	Body pain	43
6.	Irritable	35
7.	Mood swing	21
8.	Anxiety	25
9.	Acne	30
10.	Headache	15
11.	Insomnia	17
12.	Nausea	38
13.	Vomiting	11
14.	Altered appetite	26
15.	Craving	17

Table 4 depicts the Frequency of the menstrual symptoms among adolescent subjects more than half adolescent girls reported 78% lower abdominal pain followed by tiredness 54% and body pain (43%)

Table 5: Knowledge and awareness regarding menstruation among adolescent girls (N=100).

S. No.	Variable	Frequency	Percentage
1.	Awareness about menstruation		
	• Before menarche	37	37
	• After menarche	63	63
2.	Experience at first menarche		
	• Fear	23	23
	• Embarrassed	40	40
	• Anxious	17	17
	• Guilty/bad	15	15
	• No reaction	05	05

Table 5 Indicates (37%) girls were aware about menstruation before its onset because they have got knowledge from their elder sisters, mother and television. But majority (63%) girls were unaware about it. Near about (40%) girl encountered embarrassed reaction to first menstruation while (17%) anxious followed by (15%) felt guilty. It shows that in rural areas this topic is still not discussed openly by the mothers, elder sisters which creates MIS concept among teen age girls

Table 6: Source of information related to menstruation (N=100)

S. No.	Source of information	Frequency	Percentage (%)
1	Mother	41	41
2	Sister	15	15
3	Friend	12	12
4	Teacher	10	10
5	Health worker	08	08
6	Mass media	14	14

Table 6 Indicate that mother (41%) was main source of information (Kamth R. *et al.* found the same result) followed by elder sisters (15%) and only (14%) girls got information through mass media.

Conclusion

Dysmenorrhea and menstrual irregularity are more prevalent among adolescent females. Common menstrual symptoms are tiredness, backache, and headache. It appears that occurrence of dysmenorrhea is increasing in the population; such sufferings would affect the productivity among females. Therefore, it can be stated that a comprehensive school education program on menarche and menstrual problems may help girls to cope better and seek proper medical assistance. Dysmenorrhea and menstrual irregularity are more prevalent among adolescent females. Common menstrual symptoms are tiredness, backache, and headache. It appears that occurrence of dysmenorrhea is increasing in the population; such sufferings would affect the productivity among females. Therefore, it can be stated that a comprehensive school education program on menarche and menstrual problems may help girls to cope better and seek proper medical assistance in the present study, the mean age of menarche was 13± 1.1 years, which is essentially similar to many other studies. (Cakir *et al.* 2007 and Sing A *et al.* 2008) [3, 11]. Menstrual irregularity is more prevalent among late adolescent girl. The most common symptom present in the adolescent girls during the menstrual periods was lower abdominal (78%) pain second most prevalent symptoms were tiredness (54%), followed by body pain (43%). Our observations were similar with (Agarwal and Agarwal. 2010) [2]

It was also found that the only mother is the main source of information for rural teen age girls about the menstruation it is necessary to include comprehensive school education program on menarche and menstrual problems. It may help girls to cope up better and seek proper medical assistance

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