

# Knowledge and impact of gynaecological problems in high school going girls in rural Maharashtra, India

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## Abstract

**Background:** Menstruation is still regarded as something unclean or dirty in the Indian society. Because of various myths, misconceptions and restrictions practiced during menstruation, the adolescent girls often develop negative attitudes towards this natural physiological phenomenon. Majority of the girls lack scientific knowledge about menstruation and puberty. **Aim:** To assess the awareness regarding menstruation, menstrual problems, hygiene, serious gynaecological conditions in high school going girls in rural Maharashtra, India. **Material and Methods:** In this cross sectional community based study, a total of 240 high school girls from 8th to 10th standard were assessed for knowledge and impact of gynaecological problems. A predesigned questionnaire was developed. **Results:** Majority (84%) of adolescent girls participating in study attend school during menses. 16% girls were absent in school during menstruation and most common reason for absence being pain in abdomen (87%), followed by bleeding (08%). Majority 226 (94%) girls participating in study do not have any restriction to follow during menses. There is lack of knowledge regarding sex education and prevention of Ca cervix in adolescent girls. **Conclusion:** There is a certain awareness regarding menstruation and related adolescent problems in rural high school girls. Awareness regarding prevention of carcinoma cervix and its prevention as well as sex education is almost non-existent.

**Keywords:** High school girls, Gynaecological problems, awareness, knowledge

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## INTRODUCTION

Gynaecological problems of adolescents occupy a special space in the spectrum of gynaecological disorders of all ages. This is because of the physical nature of the problems which are so unique, special and specific for the age group and also because of the associated psychological factors which are very important in the growth and psychological remodelling of someone in the transition between

childhood and womanhood.<sup>1</sup> Menstruation is still regarded as something unclean or dirty in the Indian society. Because of various myths, misconceptions and restrictions practiced during menstruation, the adolescent girls often develop negative attitudes towards this natural physiological phenomenon. Majority of the girls lack scientific knowledge about menstruation and puberty.<sup>2</sup> Adolescent girls often are reluctant to discuss this topic with their parents and often hesitate to seek help regarding their menstrual problems. Menstruation can also predispose women to life threatening RTI (Reproductive Tract Infection) if hygiene is not maintained throughout menstruation. Due to lack of proper information, adolescents have to face various health problems and complications. So, this study was intended to provide details on practices of menstruation and its related problems faced by adolescent girls with the socio-cultural beliefs prevailing in that region. The data of the study can be used for the planning of programs, making new policies for improving the level of information. It is imperative to

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have a thorough knowledge of the normal changes occurring in this age-group and prevalence of specific gynaecological problems in order to offer quality medical/surgical services to this group of patients. Yet adolescent gynaecology is a subspecialized area of gynaecology, which has still not been explored optimally. In this study, an attempt has been made to assess the awareness regarding menstruation, menstrual problems, hygiene, serious gynaecological conditions in high school going girls in rural Maharashtra, India.

### MATERIAL AND METHODS

In this cross sectional community based study, a total of 240 high school girls from 8th to 10th standard were assessed for knowledge and impact of gynaecological problems. A predesigned questionnaire was developed.

#### Inclusion criteria

- All high school girls from 8th to 10th std.
- The high school chosen for girls coming from different socioeconomic backgrounds.
- Schools having different curriculum and teaching methodologies.

#### Exclusion criteria

- Adolescent girls studying up to 7th std.
- Adolescent girls studying in junior colleges.

#### Methodology

Before exposing the candidate to questionnaire informed consent was taken regarding the study and about their participation. Questionnaire was prepared in local spoken language that was Marathi, regarding various factors affecting gynaecological morbidity. The answers were analyzed for identifying the possible causes of gynaecological disorders, health status of the girl, mentality regarding the various gynaecological conditions. Girls with positive history causing morbidity were referred to Department of Obstetrics and Gynaecology of Medical College for further detailed examination, investigation and treatment. The study was mean to isolate the high risk cases in adolescent girls like, primary amenorrhea, puberty menorrhagia, dysmenorrhea, urinary tract infection and ovarian tumors.

### RESULTS

Most of the adolescent girls participating in the study belongs to Lower middle class 205 (85%) followed by Middle lower class 19 (8%) and upper middle class 16 (7%) socio-economic status according to modified B.G. Prasad socio-economic status scale. According to FOGSI, mean age at menarche among Indian adolescents was 13.76±2SD. Majority (66%) of adolescent girls participating in study attained menarche between 13-14yrs followed by 22% in 10-12 yrs. Mean age of menarche in adolescent girls participating in study being 12.76±2SD.

Table 1: Source of knowledge about Menstruation

| Premenarche knowledge regarding menstruation and knowledge provider in adolescent girls participating in study | Source of knowledge | Number (%) |
|--|---------------------|------------|
| Yes 163 (68%)  | Mother              | 92 (56%)   |
|  | Sister              | 05 (03%)   |
|  | Teacher             | 56 (34%)   |
|  | Friend              | 07 (04%)   |
|  | Doctor              | 03 (2%)    |
| No 77 (32%)  | Not applicable      |            |

Majority 163 (68%) of adolescent girls participating in study had prior knowledge regarding menstruation and main source of knowledge being mother 92 (56%), followed by teacher 56 (34%), friend 7 (04%) and sister 5 (3%). Still most of the girls have to rely on non-scientific knowledge provided by mother. Out of 240 girls participating in study, majority 163 (68%) of adolescent girls have regular menstruation, 67 (28%) have irregular menstruation, 2 (0.8%) menstruated only once and 8 (3.3%) not attained menstruation yet. Majority 170 (71%) have duration of cycle of 21-35 days followed by 55 (23%) have duration of cycle of more than 35 Days and 05 (02%) have duration of cycle of less than 21 Days. Duration of menstruation for 4-6 days was found among 178 (74%) followed by 27 (11%) for more than 6 days and 25 (10%)

for less than 3 days. Most of the girls have normal blood flow during menses. Most of the adolescent girls participating in study uses commercial pads 220 (92%) followed by cotton cloths 20 (8%). This is contradictory to popular belief that girls residing in rural area don't use hygienic pad during menstruation. 147 (61%) of the adolescent girls participating in study uses less than two pads per day followed by 82 (34%) and 05 (02%) uses 2-4 pads per day and more than 5 pads per day respectively. That is most of participants had normal blood loss during menses. Most common symptom associated with menstruation was pain in abdomen 117 (49%), followed by nausea 06 (0.4%), heavy bleeding 02 (0.8%). However, treatment received by participating girls for only pain in abdomen 26 (22%). That is dysmenorrhoea was the most

common complaint of participant girls during menses.

**Table 2: Symptoms associated with menstruation and its treatment**

| Symptoms associated with menstruation and its treatment in adolescent girls participating in study | Number (%) | Treatment received |
|--|------------|--------------------|
| Pain in abdomen  | 117 (49%)  | 26 (22%)           |
| Heavy bleeding   | 2 (0.8%)   | 0                  |
| Nausea   | 6 (2.5%)   | 0                  |
| Headache   | 1 (0.4%)   | 0                  |

Majority (84%) of adolescent girls participating in study attend school during menses. 16% girls were absent in school during menstruation and most common reason for absence being pain in abdomen (87%), followed by bleeding (08%). But only 26% girls need to take treatment for pain in abdomen others were not taking any treatment for the complaint as the pain not being that much severe. Most 226 (94%) of the girls participating in study do not complain of any vaginal discharge. Vaginal discharge/ itching was found in only 14 (6%) of adolescent girls participating in study and 2 (15%) received treatment. 202 (84%) girls participating in study do not have any symptom of PCOS. Symptoms of PCOS in adolescent girls participating in study were present among 38 (16%) and acne 20 (8%) was the major symptom of PCOS in adolescent girls participating in study followed by weight gain 11 (5%) and hirsutism 7 (3%).

**Table 3:**

| Gynaecological problem | No. of cases |             |
|------------------------|--------------|-------------|
|                        | Yes          | No          |
| Vaginal discharge      | 14 (6%)      | 226 (94%)   |
| Symptoms of PCOS       | 38 (16%)     | 202 (84%)   |
| Burning micturition    | 7 (3%)       | 233 (97%)   |
| Urinary frequency      | 3 (1.2%)     | 237 (98.2%) |
| Fever with chills      | 2 (0.8%)     | 238 (99.2%) |
| Easy fatigability      | 22 (9%)      | 218 (91%)   |
| Breathlessness         | 3 (1%)       | 237 (98.2%) |

Urinary complaints were not much common in adolescent menstruating girls participating in study, though burning micturition 7 (3%) was more common followed by increased urinary frequency 3 (1.2%) and fever with chills 2 (0.8%). Symptoms of anemia were not much common in adolescent girls participating in study. Easy fatigability 22 (9%) being the most common symptom of anemia in adolescent girls participating in study followed by breathlessness 3 (1%). Majority 226 (94%) girls participating in study do not have any restriction to follow during menses. This is a major improvement in socio-cultural status and mentality of society. 14 (6%) adolescent girls participating in study have restrictions for some day to day activities during menstruation and out of which majority were not allowed to enter in kitchen 10 (71%) followed by not allowed enter in places of worship 4 (29%). There is lack of knowledge regarding sex education and prevention of Ca cervix in adolescent girls participating in study. Only 2 (0.8%) of adolescent girls participating in study had received sex education and 1 (0.04%) have knowledge of prevention of ca cervix. So, existing system providing sex education and efforts for prevention of Ca cervix haven't been much effective yet.

## DISCUSSION

The study was carried out as a cross sectional study in rural Maharashtra among the high school going girls. After much deliberations, questionnaire was prepared and answers were sought from the participants in their school environment only. As the enquirers were females, the shy girls opened up and gave truthful answers. After completing the questionnaire physical examination of girls was carried out. Overall nutritional status was unsatisfactory. The girls having any sort of variable answers were reviewed, detail history was taken, necessary examination was done and if required they were called for necessary tests in tertiary care hospital. The girls were enquired about knowledge of menstruation before attaining menarche and the knowledge provider in positive cases. It is expected that scientific knowledge of physiology of menstruation is given along with school education by teachers. Our data reveals almost 56% girls got their first-hand knowledge about menstruation from their mothers followed by school teachers (34%). The girls were enquired for regularity of menstrual cycle, out of all girls participating in the study, majority 68% of adolescent girls have regular menstruation, 28% have irregular menstruation. Study by Jena P *et al* where 70% girls were menstruating regularly while 30% girls had irregular menses which is comparable with the present study.<sup>3</sup>

Detailed menstrual history was asked to all girls participating in the study. Duration of menstruation for 3-6 days was found in 74% girls followed by 11% girls having menstruation for more than 6 days. This is compared with the study by Jena P *et al* in which 93.8% girls have duration of blood flow between 3-6 days. This means majority of girls have normal duration of blood flow.<sup>3</sup> Majority of girls i.e. 71% have duration of cycle 21-35 days followed by 23% having duration of cycle more than 35 days. Study by Jena P *et al* where 81.5% girls have menstrual cycle length between 21-35 days which is comparable with the present study. That is majority of girls have normal duration of cycle.<sup>3</sup> The commonest menstrual abnormality noted in adolescent girls participating in present study is irregular menses (i.e. 28%), Study by Kumari A also has irregular menses as the commonest menstrual abnormality (i.e. 54.2%) this is comparable with the present study.<sup>4</sup> The second common menstrual abnormality noted in adolescent girls participating in present study is oligomenorrhoea (i.e. 23%) which is comparable with the study done by Kumari A (i.e. 21%)<sup>4</sup> and the study by Samarth S (i.e. 12.82%)<sup>5</sup> but not comparable with the study done by Goswami P (i.e. 2.22%).<sup>6</sup> Menstrual abnormalities are common in adolescent girls because in initial few cycles after menarche are anovulatory. But very few of them report to health services because of unawareness regarding need of treatment and lack of free communication between family members and the girl. The girls were enquired about their preference for use of type of vulval pads during menses. As per data gained in our study 92% of girls were using hygienic commercial pads during menses and only 8% girls use cotton cloths for menstrual purpose. This is a drastic change in behavior of girls in view of maintenance of hygiene. This is contradictory to popular belief that rural girls don't use hygienic pads during menstruation. The girls in the study were asked for symptoms of premenstrual syndrome that they experienced. Most common symptom associated with menstruation is pain in abdomen (49%) which is comparable with the study done by Waghchavare V *et al* (42.5%)<sup>7</sup> and the study done by Agrawal A (33.95%)<sup>8</sup> but not comparable with the study done by Kumari A (13.3%).<sup>3</sup> However, treatment received by participating girls for only pain in abdomen is 22%. The reason may be lack of knowledge regarding menstruation and menstrual symptoms, lack of awareness about need and availability of treatment, shy nature of girls, low socio-economic condition. Enquiry for school absency during menses was done and it was found that, majority (84%) of adolescent girls participating in study attend school during menses. 16% girls were absent in school during menstruation and most common reason for absency is pain in abdomen (87%), but only 26% girls took treatment for

pain in abdomen and others did not take any treatment for the complaint because the pain was not that severe. Our study reveals that majority (94%) girls participating in the study do not have any restriction to follow during menses but 6% girls have to follow some traditional restrictions during menses like some (2%) are not allowed to enter in the places of worship whereas some (4%) are not allowed to enter in kitchen. This is a major improvement in the socio-cultural status and change in behavior of the society. Problem of vaginal discharge in adolescent girls participating in present the study (i.e.6%). Study by Abdelmoty HI *et al* (i.e. 5.7%)<sup>9</sup> and with the study by Ahmed SM (12.2%)<sup>10</sup> is comparable with the present study. Decrease in problem of vaginal discharge may be because of improvement in hygienic conditions by adolescent girls participating in the study. Incidence of UTI in adolescent girls participating in the study (i.e. 05%). While incidence of UTI in study by Ahmed SM (12.7%)<sup>10</sup> is comparable with the present study. Incidence of UTI in the study done by Aiyegoro OA (i.e. 55%)<sup>11</sup> and in the study done by Kripa CK (i.e.16.66%)<sup>12</sup> is not comparable with the present study. This change is also because of good hygiene maintained by adolescent girls participating in the study. Only 0.4% adolescent girls in present study have knowledge about prevention of cancer cervix which is much less in comparison with other studies .as in the study by Ahlavat P<sup>13</sup> 41% girls and the study by Siddhartha J<sup>14</sup> 44.5% girls have knowledge about prevention of cancer cervix. That is there is lack of awareness about prevention of cancer cervix in rural part of the country. There is need to provide information about risk factors of cancer cervix which are preventable. Majority (99.6%) of adolescent girls in the present study did not receive sex education. As compared to study by Kumar R 89.7% of subjects had sex education as the study had major population from urban area.<sup>15</sup> This suggest that there is no proper implementation of sex education programme started by Government of India in the rural parts of India. Major part of rural adolescent girls lacks knowledge about sex education, safe sex and contraception.

## CONCLUSION

There is not much impact of menstrual abnormality for school going, as only 16% of the girls remained absent from schools because of dysmenorrhoea / menorrhagia and majority (84%) attended school.<sup>[1]</sup> There is a certain awareness regarding menstruation and related adolescent problems in rural high school girls but the knowledge provided is mostly by mothers. Hence, non-scientific. Awareness regarding prevention of carcinoma cervix and



its prevention as well as sex education among high school going rural adolescent girls is almost non-existent (0.8% and 0.4%).

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