

The Journal of Phytopharmacology

(Pharmacognosy and phytomedicine Research)

Research Article

ISSN 2230-480X
JPHYTO 2013; 2(5): 28-37
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A cross sectional study of knowledge, attitude and practices of menstrual hygiene among medical students in north India

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Abstract

Menstruation and menstrual practices are associated with taboos and socio-cultural restrictions. Good hygienic practices such as the use of sanitary pads and adequate washing of genital area are essential during menstruation. Doctors are the main health care providers and thus, their knowledge helps in transforming the community practices. **Aims and objectives:** To assess the knowledge, attitude and practice of menstrual hygiene among first year medical students in north India. **Materials and Method:** A cross sectional study was conducted among 50 girls of first year MBBS of Sri Aurobindo Institute of Medical Sciences, Indore. A pre formed pre-tested questionnaire was used. Data were analyzed statistically by simple proportions. **Result:** Most of the girls (n=89, 50.56%) were in the age group of 18-20 years. Surprisingly, 32.38% (57) girls were ignorant about menstruation before menarche. Mean age of attaining menarche was 13 ranges were 9-17. We found that in 35.22% (n=62) of students, menstrual habits were inculcated by their mothers. 152 girls (86.36%) were using sanitary napkins as absorbent material during their menstrual cycle. 42% (73 girls) were doing vaginal wash daily. 57% (n=100) of girls were having regular menses. 82% (n=144) of girls were reported to experience premenstrual symptoms. 12% of girls were having knowledge of different types of myths about menstruation. 34% (n=59) of girls were forced to practice restrictions during menses.

Keywords: Menstruation, Menstrual hygiene, Premenstrual syndrome.

Introduction

According to WHO, the term 'adolescents' refers to young people between the ages of 10 and 19 years.¹ Adolescence is a transition period from childhood to adult life during which pubertal development and sexual maturation take place² Rapid transformations due to the hormonal changes that accelerate the physical growth and development of secondary sexual characteristics usually occurs during adolescence.³ The larche [the onset of secondary or postnatal breast development] usually occurs at the pubarche (beginning of puberty) in girls. The larche is the first physical change of puberty in about 60% of girls.^{4,5}

The first menstruation also called as 'MENARCHE' is an indicator of developmental maturation in women whose arrival determines the transition from being a child to being a teenager. Menarche is characterized as one of the few rites of passage that is still valued in modern societies for all adolescents, regardless of their social group.³

Some girls are not prepared for thelarche and menarche at the commencement of puberty which leads to consequences such as negative body image, appearance anxiety, lowered self-esteem, and delayed diagnosis of breast tumors.⁵

Menstruation and menstrual practices are still shadowed by taboos and socio-cultural restrictions.⁶ Menstruation is the cyclical shedding of endometrium under the hormonal influence controlled by the hypothalamopituitary axis.^{7,8}

Menstruation is linked with several misconceptions and false practices, which sometimes result into adverse health outcomes.⁶

Menstrual disturbances are the commonest presenting complaint in the adolescent age group and unhygienic practices during menstruation can lead to untoward consequences like pelvic inflammatory diseases and even infertility.⁸ Special health care needs and requirements of women during monthly cycle of menstruation are collectively given the term “Menstrual hygiene”.¹⁰

Aims and objectives

To assess the knowledge, attitude and the practice (KAP) of menstrual hygiene among first year medical students of Sri Aurobindo Institute of Medical Sciences, Indore, in north India.

Materials & methods

This is an anonymous, questionnaire-based survey. A Self-developed, pre-validated questionnaire (Annexure 1) was used. Data is expressed as counts and percentages. A cross sectional observational study was conducted among 50 girls of first year MBBS of Sri Aurobindo Institute of Medical Sciences, Indore. A pre formed pre-tested questionnaire was used. Some questions had multiple options to choose from therefore the sum total of percentage is not always 100%.

Statistical analysis

Data were analyzed statistically by simple proportions.

Results

Total 209 girls of 1st, 2nd and 3rd year MBBS took part in the questionnaire but 176 complete responses could be obtained. Incompletely filled questionnaire were excluded from the study as shown in figure-1.

Most of the girls (n=89, 50.56%) were in the age group of 18 -20 yrs followed by 60 girls (34.65%) in 21- 23 yrs age group as shown in table-1. In spite of the fact that most of them were having well educated family background, 32.38% (57) girls were ignorant about the menstruation before commencement of menarche as explained in table - 2 and figure-2.

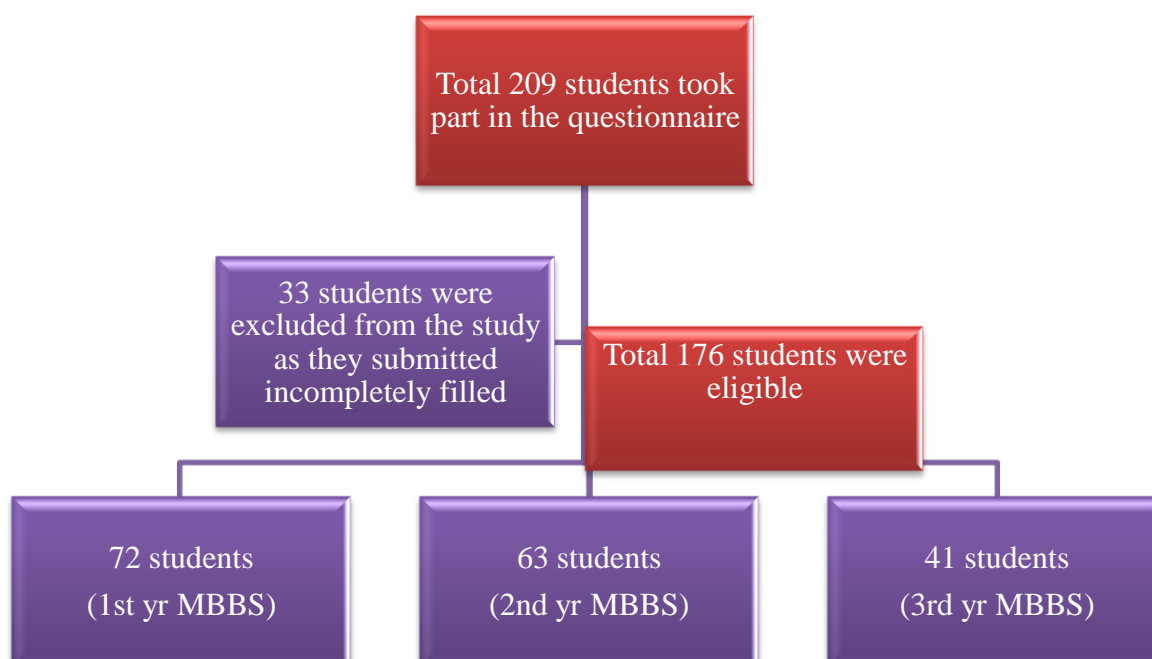


Figure 1: Shows eligible medical girl candidates

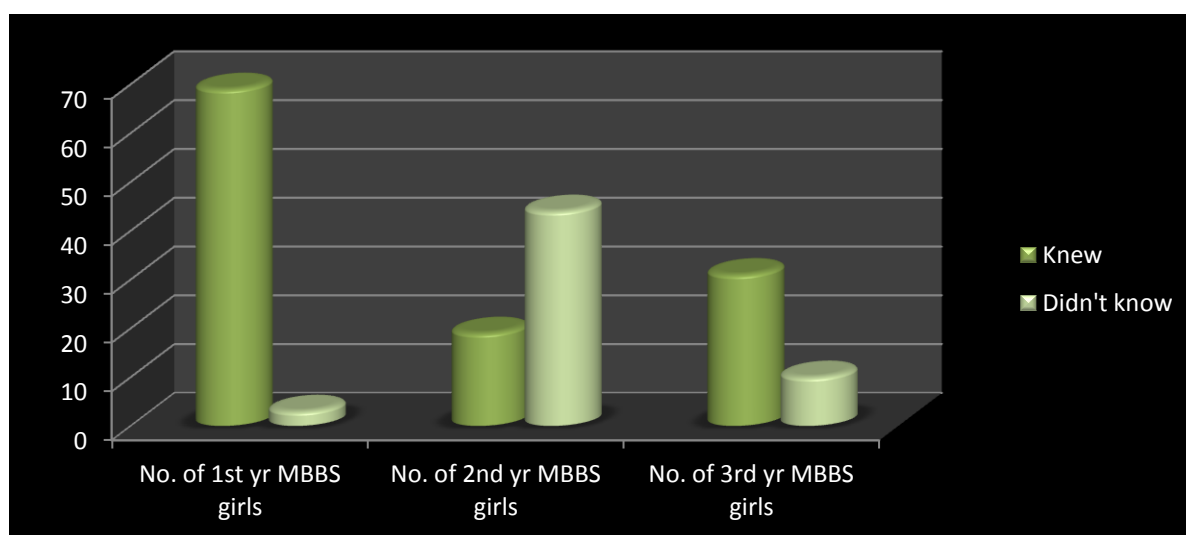


Figure 2: Shows previous knowledge of menstruation before attainment of menarche

Table 1: Age distribution of eligible girl candidates

Age group	Number of girls	Percentage
18-22	89	50.56%
21-23	61	34.65%
24-26	26	14.77%

Table 2: Shows previous knowledge of menstruation before attainment of menarche

Knowledge of menstruation before menarche	Number of 1 st Yr MBBS girls	Number of 2 nd Yr MBBS girls	Number of 3 rd yr MBBS girls	Total	Percentage
Knew	69	19	31	119	67.61%
Didn't know	3	44	10	57	32.38%
Total	72	63	41	176	100%

Mean age of attaining menarche was 13 ranges were 9-17 which has been depicted in table-3.

In our study we found that in 35.22% (n=62) of students, menstrual habits were inculcated by their mothers while friends were the main source of information in 23.29% of students as shown in figure-3.

152 girls (86.36%) were using sanitary napkins as absorbent material during their menstrual cycle, while 10.79% (19 girls) were practicing cloth or sanitary towel and used 1.7% tampons as menstrual absorbent. This has been shown in figure-4 in the form of pie chart.

Though 82% (144girls) were reported to have the habit of washing hands after changing pads but only 42% (73 girls) were doing vaginal wash daily which reveals the fact that inspite being a medical student there is still lacunae in the knowledge about complete menstrual hygiene. It was seen that only 13% (n =22) were used to clean pubic hairs daily while most of the girls 38% (66 girls) were doing it once a month. 57% (n=100) of girls were having regular menses with moderate menstrual flow. Irregular menses were reported by 43% (n=75) of medical students and 51 out of 75 were having PCOS (polycystic ovarian syndrome).

Table 3: Showing age of attainment of menarche

Age (in yrs) of attainment of menarche	Number of girls	Percentage
9	1	0.56%
10	4	2.27%
11	9	5.11%
12	51	28.97%
13	68	38.63%
14	29	16.47%
15	6	3.40%
16	5	2.84%
17	3	1.70%

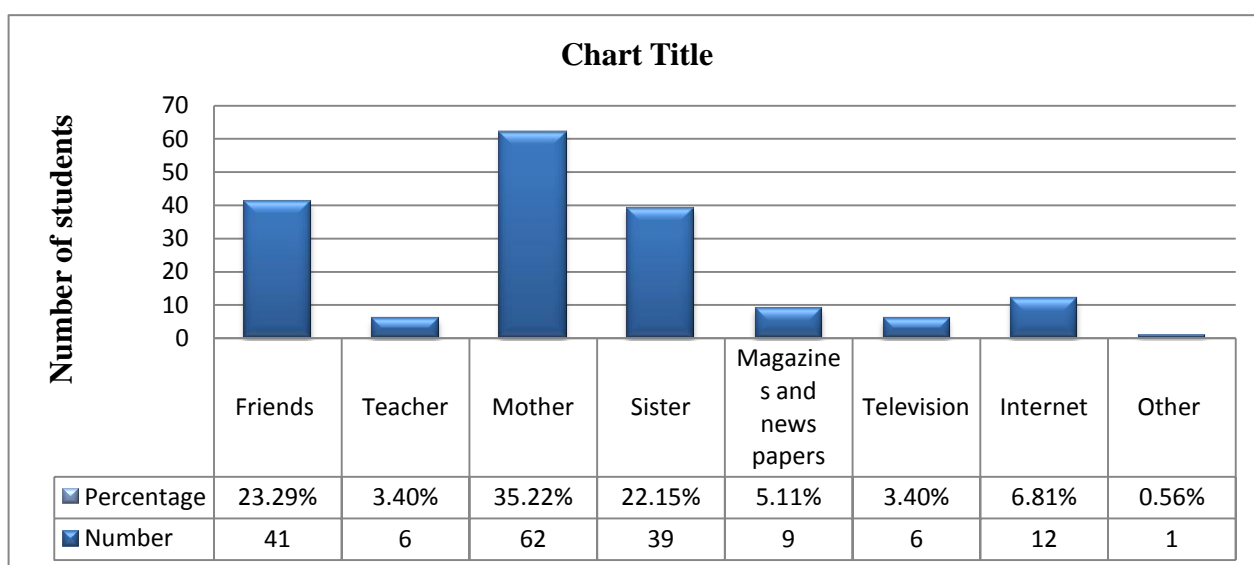


Figure 3: Shows information about the first informer of menarche to the students

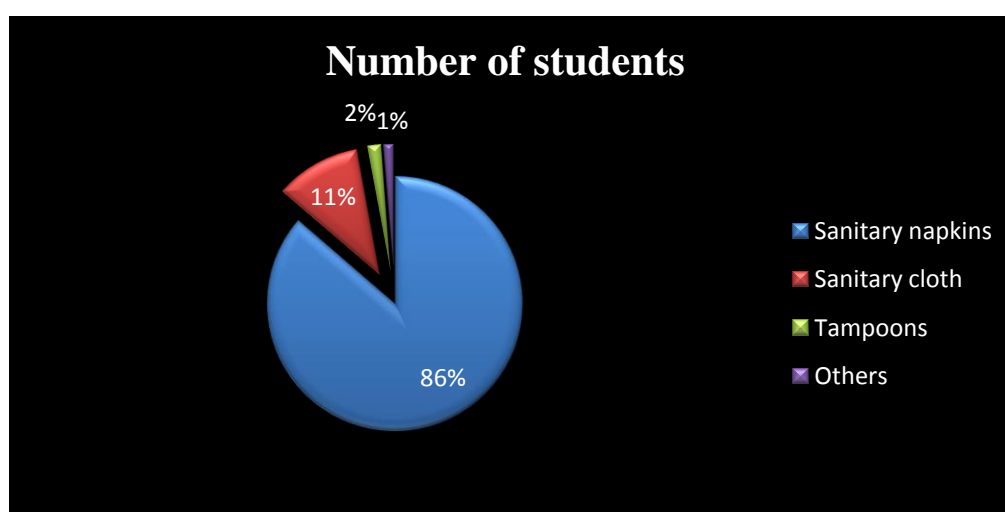


Figure 4: Shows percentage of menstrual absorbent used

72% (n=126) of girls used to change their pads 6hourly during first 2 days of their menstrual cycles.

82% (n=144) of girls were reported to experience premenstrual symptoms like headache, backache, lower abdominal pain, fatigue, weakness, mood swings and because of that 76% (n=133) were having disturbed daily routine .

12% of girls were having knowledge of different types of myths about menstruation. 34% (n=59) of girls were forced to practice restrictions during menses. Most of the girls out of 59 had to follow more than three restrictions. Most of the girls were residing in hostel so they usually do not follow these restrictions religiously but they had to follow it when at home. Various restrictions as mentioned are depicted in figure-5.

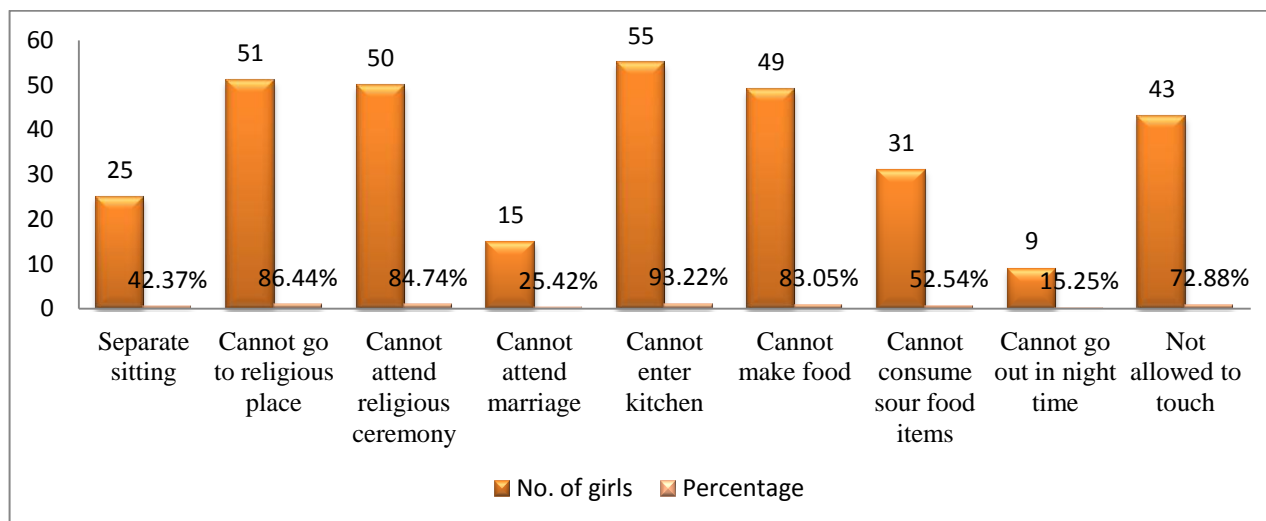


Figure 5: Showing restrictions followed by medical students in the study

Discussion

A lot of studies have been done on practices of menstrual hygiene but most of them have been done on rural population or in school girls. There is paucity of this study in medical students to the best of author's knowledge. This study has tried to fill this huge gap.

In our study 67.61 % of students had previous knowledge of menstrual practices before attaining menarche and this result is in accordance with other studies done in population other than medical students.^{6, 7, 11} But in a study done in rural adolescent girls of Nepal, the knowledge and practice were 40.6% and 12.9% respectively, according to Adhikari P et al 2007.¹² It is evident from a study done by Kalpana Katiyar et al 2013 that awareness is only 38.5% among adolescent females in an urban area of Meerut.¹³ The plausible reason for unawareness among rural girls is lack of educational background. Similarly in a study performed among adolescent school girls in (Nagpur) Maharashtra by Subhash B. Thakre et al 2011 only 36.95% of the girls were aware of menstruation before menarche.¹⁴

In our study mean age of attaining menarche were 13 which are almost similar to other studies done in different

population (urban, rural, and tribal) in various places all over the India.^{6, 11, 14, 15}

We found that inculcation of menstrual habits was mainly done by mothers in 35.22% (n=62) of students which is in accordance with results of Dasgupta A et al 2008 in which mother was first informer in 37.5% of girls and [6] and also by Subhash B. Thakre et al 2011.¹⁴ Kalpana Katiyar et al 2013 documented that 66.9% of urban adolescent females of Meerut learned about menstrual practices from mother.

But in a study done by Juyal R et al 2012 in Uttarakhand, friends were the first source of information in 31.8% of girls.¹¹ In contradiction to this, S B Salve et al 2012 reported difference in first informer among rural (female teacher is the informant) and urban adolescent girls (mother is the informant).¹⁶

86.36% medical students were using sanitary napkins as absorbent material, while 10.79% were practicing cloth during their menstrual cycle as we found during our study which is in accordance with Adhikari P et al 2007 and Juyal et al 2012.^{11, 12} But in studies done previously completely different scenario was seen where cloth was

used mainly as menstrual absorbent.^{6, 14, 15, 17, 18} Popularity of tampons has been declined tremendously because of more incidences of toxic shock syndrome with tampons.¹²

42% girls were doing vaginal wash daily which shows paucity in maintaining menstrual hygiene by medical students. Surprisingly 94% of girls used to wash their genitalia as seen in a study in Uttarakhand.¹¹

El-Gilanya A studied menstrual hygiene among adolescent school girls in Mansoura, Egypt and documented that due to lack of privacy, personal hygiene is highly affected.⁸

43% of medical students reported irregular menses and this result is almost same as documented by Singh MM et al 1999.⁹ In a study done in Meerut, 72.7% of menstruating girls suffered from at least one menstrual disorder.¹³

We found that 34% (n=59) of girls had to practice restrictions during menses like they had to sit separately, cannot go to religious places, not allowed to attend religious ceremonies, cannot enter kitchen and not allowed to make food and even going out in night time was restricted.^{14, 16} While some are restricted to eat certain food items like tamarind, pickle and even curd which according to some myth is supposed to disturb ovarian functions. Similar type of restrictions was reported by other studies also.^{6, 14, 16, 17, 20}

Conclusion

Menstrual hygiene, a very important risk factor for reproductive tract infections, is a vital aspect of health education. Today millions of women are sufferers of RTI and its complications and often the infection is transmitted to the offspring of the pregnant mother. Before bringing any change in menstrual practices they should be educated about the facts of menstruation and its physiological implications. The girls should be educated about the significance of menstruation and development of secondary sexual characteristics, selection of a sanitary menstrual absorbent and its proper disposal. This can be achieved through educational television programmes, compulsory sex education in school curriculum and knowledgeable parents, so that she does not develop psychological upset and the received education would indirectly wipe away the age old wrong ideas and make her to feel free to discuss menstrual matters without any inhibitions.

List of abbreviations

KAP- knowledge attitude and practice

PCOS- Polycystic ovarian syndrome

RTI- reproductive tract infections

Acknowledgement

The author would like to thank Dr.R.K.Chandorkar and Dr.R.R.Wavare for their valuable support throughout the study.

Conflicts of interest

The authors declare that they have no competing interests.

References

1. WHO | Adolescent health - World Health Organization. Retrieved on December 24, 2013. www.who.int/topics/adolescent_health/en.
2. Adrien Gaudineau, Virginie Ehlinger, Christophe Vayssiere. Factors associated with early menarche: results from the French Health Behaviour in School-aged Children (HBSC) study BMC Public Health 2010, 10:175.
3. José Roberto da Silva Brêtas; Aline Cássia Tadini; Maria José Dias de Freitas. Meaning of menarche according to adolescents Acta paul. enferm. 2012; 25(2): 256-262.
4. Loughry, et al. (1989). "Breast volume measurement of 598 women using biostereometric analysis". Annals of Plastic Surgery 22 (5): 380–385.
5. "Menarche: the Transition from Girl to Woman," Sharon Golub (ed.), Lexington Books, Toronto, 1983.
6. A Dasgupta and M Sarkar Menstrual Hygiene: How Hygienic is the Adolescent Girl? Indian J Community Med. 2008 April; 33(2): 77–80.
7. Deo DS, Ghattargi CH. Perceptions and practices regarding menstruation. A comparative study in urban and rural adolescent girls. Indian Journal of Community Medicine. 2005;30:33–34.

8. El-Gilanya A, Badawi K, EL-Fedawy S. Menstrual hygiene among adolescent school girls in Mansoura, Egypt. *Reproductive Health Matters*. 2005;13:147–152.
9. Manjula R., Geethalakshmi R. G., Sangam D. K A Study on menstruation and menstrual hygiene among Pre-University girls in Davangere District, Karnataka. *Indian Journal of Public Health Research & Development* 2011; 2 (2):57-59
10. Lawan UM, Nafisa Wali Yusuf, Aisha Bala Musa. Menstruation and menstrual hygiene amongst adolescent school girls in Kano, northwestern Nigeria. *African journal of reproductive health*. 2010; 14(3):201-208.
11. Juyal R, Kandpal SD, Semwal J, Negi KS. Practices of menstrual hygiene among adolescent girls in a District of Uttarakhand. *Indian Journal of Community Health*. 2012 April-June 2012; 24(2): 124-128.
12. Adhikari P, Kadel B, Dhungel SI. Knowledge and practice regarding menstrual hygiene in rural adolescent girls of Nepal. *Kathmandu Univ Med J (KUMJ)*. 2007 Jul-Sep;5(3): 382-6.
13. Kalpana Katiyar, Harivansh Chopra, Sunil Kumar Garg. KAP study of menstrual problems in adolescent females in an urban area of Meerut. *Indian J Community Health*. 2013;25(3):217-220
14. Subhash B. Thakre, Sushma S. Thakre, Monika Reddy. Menstrual hygiene: knowledge and practice among adolescent school girls of Saoner, Nagpur district. *Journal of Clinical and Diagnostic Research*. 2011; 5:1027-103.
15. Khanna A, Goyal RS, Bhawsar R. Menstrual practices and reproductive problems: a study of adolescent girls in Rajasthan. *J Health Manag* 2005;7:91-107.
16. S B Salve, R K Dase, S M Mahajan. Assessment of knowledge and practices about menstrual hygiene amongst rural and urban adolescent girls- A comparative study. *Internat J recent Trends Science Technology* 2012;3(3):65-70.
17. Mudey AB, Keshwani N, Mudey GA, Goyal RC. A cross-sectional study on the awareness regarding safe and hygienic practices amongst school going adolescent girls in the rural areas of Wardha district. *Global Journal of Health Science* 2010; 2/2:225-231.
18. Quazi SZ., Gaidhane A., Singh D. Beliefs and practices regarding menstruation among the adolescent girls of high schools and junior colleges of the rural areas of Thane district. *Journal of DMIMSU* 2006. 2:76-71.
19. Singh MM, Devi R, Gupta SS. Awareness and health seeking behavior of rural adolescent school girls on menstrual and reproductive health problems. *Indian J Med Sci* 1999;53:439-43.
20. Narayan KA, Shrivastava, DK, Pelto PJ, Veerapmmal S. Puberty rituals, reproductive and health of adolescent school girls of south India. *Asia Pacific Population Journal* June, 2001; 16:225-38.

Annexure – 1

Questionnaire used for the assessment of knowledge, attitude and practices of menstrual hygiene among medical students.

Name- Age- Which semester (MBBS) - Residence-

1. Did you know about the menstruation before attainment of your first menstruation at the onset of puberty?

- a) Yes
- b) No

2. You were introduced your menstrual habits by whom?

- a) Teacher
- b) Mother
- c) Sister
- d) Friends
- e) Magazines and news paper
- f) Television
- g) Internet
- h) Other

3. Which of the following material do you use as menstrual absorbent?

- a) Sanitary towel
- b) Sanitary napkins
- c) Tampons
- d) Any other

4. How often do you change your undergarments during menstrual days?

- a) Once a day
- b) Twice a day

5. Do you wash your hand after changing the pad?

a) Yes

b) No

7. How often you clean your pubic hair?

a) Daily

b) Weekly

c) Once a month

d) Once in 3- 4 months.

8. Do you use vaginal wash daily?

a) Yes

b) No

9. How would you categorize your menses?

a) Regular

b) Irregular

10. How would you categorize your menstrual flow-?

a) Mild

b) Moderate

c) Heavy

d) Only Spotting

11. How often do you change your pad during first two days of menstruation?

a) 4 hr

b) 6 hr

c) 8 hr

d) Once a day

12. Do you experience any Premenstrual Syndrome Symptoms?

a) Headache

- b) Backache
- c) Lower abdominal pain
- d) Fatigue and weakness
- e) Mood swings
- f) Any other

13. Does that disturb your daily routine?

- a) Yes
- b) No

14. Are you aware about any myths related to menstruation?

- a) Yes
- b) No

15. Are you forced to practice restrictions during menses?

- a) Yes (If yes then mention it)
- b) No