

## **Knowledge and Practices of Menstrual Hygiene among Adolescent Girls of Government Women College Parade, Jammu (J&K)**

**Jyoti Kapoor**

*Lecturer in Government AMT School, Govt Medical College, Bakshi Nagar, Jammu (J&K)*

### **Abstract**

*Adolescence is a transition period from childhood to adulthood. In this period one of the major physiological changes that takes place in the adolescent girls is the onset of menstruation. Good menstrual hygiene is crucial for the health and dignity of girls and women. The present study was aimed to assess the knowledge and reported practices of menstrual hygiene among adolescent girls of selected Government College, Parade, Jammu (J&K). The sample consisted of 50 adolescent girls. Purposive sampling technique was used to select the sample. Socio-demographic profile and self-structured questionnaire was used to assess the level of knowledge and practice regarding menstrual hygiene among adolescent girls. The study concluded that the knowledge among adolescent girls was good and practices used them were satisfactory. There is need to increase knowledge regarding menstrual hygiene and make adolescents practice good hygiene habits to prevent various pelvic infections and diseases.*

Adolescent is a phase of rapid growth and development during which physical, sexual and emotional changes occur. The period of adolescence of a girl is a period of physical and psychological preparation for safe motherhood. Almost a quarter of India's population comprises of girls below 20 years. This period is marked with onset of menarche. Menstruation is a phenomenon unique to all female although it is a natural process. Women having a better knowledge regarding menstrual hygiene and safe menstrual practices are less vulnerable to reproductive tract infections and other complications.

Adolescent girls (10-19 years) constitute about a fifth of the total female population in the world. They belong to vital age group not only because they are entrant population to parenthood but also they are threshold to childhood and adulthood. Menstruation is still considered as something unclean or a dirty in Indian society. This concept is responsible for related taboos. This first menstruation is often traumatic to an adolescent girls because it usually occurs without her knowing about it.

This study was conducted among 664 school girls aged 14-18 years in Mensoma, Egypt. They were asked about type of sanitary protection used, frequency of changing pads or cloths, means of disposal and bathing during menstruation. The significant predictors

among girls from rural and poor families and others aspect of personal were generally found to be poor such as not changing pads regularly at night and not bathing during menstruation. Instruction in menstrual hygiene should be linked to be expand programme of health education in school. A supportive environment for menstrual hygiene has to be provided.

One might expect that menarche will be positively received by a young women. However negative response such as shame, fear, anxiety and depression are more common. The manner in which a girl learns about menstruation and its associated changes may have an impact on her response to the event of menarche.

A descriptive study conducted to assess the level of knowledge regarding menstrual hygiene among adolescent girls indicated that a significantly large proportion of girls were not aware of menstruation when they first experienced it. Mothers, sister and friends were found to be the major source of information. Large number of them reported using old clothes during menstruation and many were resuming the same during subsequent periods. This study found a significantly strong relationship between practices during menstruation and prevalence of reproductive tract infections (RTIs). The prevalence of RTIs was more than three time higher among girls

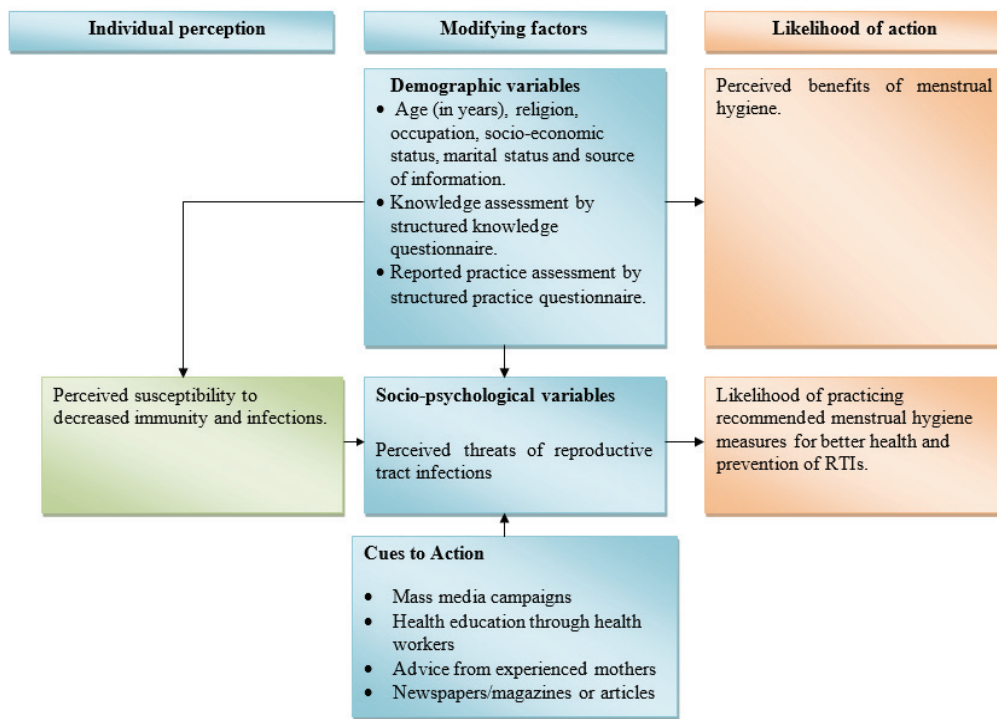


Fig 1: Conceptual framework based on Health Belief Model by Becker (1975).

having unsafe menstrual practices.

A study conducted in 2007 showed that due to lack of information on this natural phenomenon and culturally divergent beliefs and practices, rural adolescent girls in India manage menstruation in an unsafe manner that leads to RTIs and other reproductive health problems. Menstruation and puberty hygiene is rarely discussed at home. Due to cultural and religious restrictions many young girls in the country lack appropriate and sufficient information regarding menstrual hygiene causing unhealthy behaviour during their menstrual periods.

Disturbance of menstruation either actual or perceived, is the commonest presenting complaint in the adolescent age although it is a physiological process. And unhygienic practices during menstruation can lead to untoward consequences like pelvic inflammatory disease, infertility etc. (Manjula et al, 2011).

Every year approximately 10 percent of women worldwide are exposed to genital infections including urinary tract infections and bacterial vaginosis, and 75 percent of women have a history of a genital infection. Specifically, the common risk factors for vaginal infections include pregnancy and poor hygiene (both perineal and menstrual hygiene) (Shivleela et al, 2015).

A study in Ethiopia showed that though most (92%) students were aware of menstruation before menarche, their utilisation of sanitary napkins was low at 37.6 percent and a significant proportion (62.4%)

were using rags and pieces of cloth; 11 percent of girls in Ethiopia change their menstrual cloths once a day (Sarah, et al, 2012). Another study concluded that cultural and social practices regarding menstruation depend on girls education, attitude, family environment, culture and belief (Dasgupta & Sarkar, 2008).

This study was conducted to assess their knowledge and provide them informational booklet to enhance their knowledge regarding menstrual hygiene.

### Hypothesis

Null hypothesis  $H_0$ : There will be no significant knowledge and reported practices

regarding menstrual hygiene among adolescent girls at  $p < 0.05$  level.

### Objectives

- To assess the level of knowledge regarding menstrual hygiene among adolescent girls.
- To assess the reported practices regarding menstrual hygiene among adolescent girls.
- To determine the association of level of knowledge regarding menstrual hygiene among adolescent girls with selected socio-demographic variables.
- To prepare and distribute informational booklet regarding menstrual hygiene among adolescent girls.

### Conceptual Framework

The conceptual framework selected for this study is based on "Health Belief Model" Which was introduced by Becker MH (1975) (Fig 1).

Health beliefs are person's ideas, convictions and attitude about health and illness that usually influence health behaviour, positively or negatively. Positive health behaviours include immunisation, proper sleep pattern, adequate exercise and good nutrition.

Rosenstoch's (1974) and Becker (1975) health belief model provides a way of understanding and predicting how patients will behave in relation to their health and how they will follow health care therapies or regimens. The components of this model in-

involve individual's perception of susceptibility to an illness and the patient's perception of seriousness of illness likelihood that the patient will take preventive action from one's perception of the benefits and barriers of taking action. Preventive action includes lifestyle changes, increased perception in recommended medical therapies, or a search for medical advice or treatment. The Health Belief Model helps us to understand factors influencing patients' perceptions, beliefs, and behaviour and to plan care that will most effectively assist patients in maintaining or restoring health and preventing illness.

## Review of Literature

In a cross-sectional study to assess the knowledge, attitude and practice of menstrual hygiene among 209 MBBS girls of Aurobindo Institute of Medical Sciences, Indore, a pre-formed pre-tested questionnaire was used to collect the data. Most of the girls i.e. 89 (50.56%) were in the age group of 18-20 years; 57 (32.38%) girls were ignorant about menstruation before menarche. Mean age of attaining menarche was 13. In 64 (35.22%) students, menstrual habits were inculcated by their mothers; 152 girls (86.36%) were using sanitary napkins as absorbent material during their menstrual cycle; 73 girls (42%) were doing vaginal wash daily; 100 girls (57%) were having regular menses; 144 girls (82%) were reported to experience pre-menstrual symptoms; 12 percent were having knowledge of different types of myths about menstruation; 59 (34%) were forced to practice restrictions during menses (Sharma et al, 2013).

A study to assess the perception and practices related to menstruation and menstrual hygiene among 100 adolescent rural girls of Budwan district of West Bengal showed that 45 percent of girls knew about menstrual cycle before their menarche. In most cases (60%), the first informant were their peer group followed by mothers. Most of the girls in the study were not aware of the cause and the source of bleeding. A majority of them had knowledge about the use of sanitary pads but 34 percent of them used old clothes. All of them had one or more cultural taboos and restrictions related to menstruation (Maji, 2016).

A study to check the effect of community-based health education intervention on management of menstrual hygiene among rural Indian adolescent girls over 3 years showed that 55 percent were aware of menstruation before its initiation. Compared with baseline (35%), the practices of using readymade pads increased significantly from 5 percent to 25 percent and reuse of clothes declined from 85 percent to 57 percent the trends analysis showed that adolescent girls perceived a positive change in their behaviour

and level of awareness (Dongre et al, 2007).

A study to evaluate the knowledge and practice on different aspects of menstrual hygiene of adolescent girls found that they were not properly maintaining the menstrual hygiene. Only 60 percent of girls knew that menstruation was a physiologic process, 37 percent knew that it was caused by hormones, 94 percent used sanitary pads during that period but only 11 percent dispose it. Overall knowledge and practice were 41 percent and 13 percent respectively (Petal et al, 2006).

A study on menstrual knowledge and practices amongst 352 randomly selected healthy secondary school girls in Nigeria revealed that 54 percent had attained menarche, 40 percent were deficient in knowledge about menstruation. Although menstrual

**Table 1: Frequency and percentage distribution of sample characteristics according to demographic variables (N=50)**

| Sr. No. | Socio Demographic Variables | Frequency | Percentage |
|---------|-----------------------------|-----------|------------|
| 1       | Age (in years)              |           |            |
|         | 16-18                       | 8         | 16         |
|         | 18-20                       | 36        | 72         |
|         | 20-22                       | 6         | 12         |
| 2       | Religion                    |           |            |
|         | Hindu                       | 43        | 86         |
|         | Sikh                        | 7         | 14         |
|         | Muslim                      | 0         | 0          |
| 3       | Socio economic status       |           |            |
|         | >10,000                     | -         | -          |
|         | 10,000-20,000               | 7         | 14         |
|         | 20,000-30,000               | 14        | 28         |
|         | 30,000-40,000               | 29        | 58         |
| 4       | Marital status              |           |            |
|         | Married                     | 7         | 14         |
|         | Unmarried                   | 43        | 86         |
| 5       | Source of information       |           |            |
|         | TV                          | 37        | 74         |
|         | Newspaper                   | 5         | 10         |
|         | Internet                    | 8         | 16         |

**Table 2: Frequency and percentage distribution of level of knowledge regarding menstrual hygiene among adolescent girls (N=50)**

| Level of knowledge | Knowledge score |    |    |
|--------------------|-----------------|----|----|
|                    | Score           | n  | %  |
| Very Good          | Above 70%       | 15 | 30 |
| Good               | 50 - 70%        | 20 | 40 |
| Average            | Below 50%       | 15 | 30 |

Maximum score = 40, Minimum score = 10

**Table 3: Frequency and percentage distribution of reported practices regarding menstrual hygiene among adolescent girls (N=50)**

| Reported practices | Reported practice score |    |    |
|--------------------|-------------------------|----|----|
|                    | Score                   | n  | %  |
| Satisfactory       | 50-70%                  | 40 | 80 |
| Unsatisfactory     | Below 40%               | 10 | 20 |

Maximum score = 50, Minimum score = 10



**Table 4: Association of level of knowledge regarding menstrual hygiene among adolescent girls with age (N=50)**

| Age (in years) | Level of knowledge |           |               |    |    |                   |
|----------------|--------------------|-----------|---------------|----|----|-------------------|
|                | Good               | Average   | Below average | n  | df | $\chi^2$          |
| 16-18          | 1 (12.5)           | 1 (12.5)  | 6 (75)        | 8  | 4  | 8.92 <sup>s</sup> |
| 19-21          | 12 (33.3)          | 15 (41.7) | 9 (25)        | 36 |    |                   |
| 22-24          | 2 (33.3)           | 4 (66.7)  | -             | 6  |    |                   |

Significant at  $p < 0.05$

**Table 5: Association of level of knowledge regarding menstrual hygiene among adolescent girls with religion (N=50)**

| Religion | Level of knowledge |           |               |    |    |                    |
|----------|--------------------|-----------|---------------|----|----|--------------------|
|          | Good               | Average   | Below average | n  | df | $\chi^2$           |
| Hindu    | 15 (34.9)          | 17 (39.6) | 11 (25.5)     | 43 | 3  | 4.092 <sup>s</sup> |
| Sikh     | -                  | 3 (42.8)  | 4 (57.2)      | 7  |    |                    |
| Muslim   | -                  | -         | -             | -  |    |                    |

Significant at  $p < 0.05$

**Table 6: Association of level of knowledge regarding menstrual hygiene among adolescent girls with socio-economic status (N=50)**

| Socio-economic status | Level of knowledge |           |               |    |    |                    |
|-----------------------|--------------------|-----------|---------------|----|----|--------------------|
|                       | Good               | Average   | Below Average | n  | df | $\chi^2$           |
| >10,000               | -                  | -         | -             | -  | 4  | 5.183 <sup>s</sup> |
| 10,000-20,000         | 1 (14.3)           | 2 (28.6)  | 4 (57.1)      | 7  |    |                    |
| 20,000-30,000         | 5 (35.8)           | 6 (42.8)  | 3 (21.4)      | 14 |    |                    |
| 30,000-40,000         | 12 (41.4)          | 12 (41.4) | 5 (17.3)      | 29 |    |                    |

Significant at  $p < 0.05$

**Table 7: Association of level of knowledge regarding menstrual hygiene among adolescent girls with marital status (N=50)**

| Marital status | Level of knowledge |           |               |    |    |                    |
|----------------|--------------------|-----------|---------------|----|----|--------------------|
|                | Good               | Average   | Below average | n  | df | $\chi^2$           |
| Married        | 3 (42.9)           | 3 (42.9)  | 1 (14.2)      | 7  | 3  | 1.119 <sup>s</sup> |
| Unmarried      | 12 (27.9)          | 17 (39.5) | 14 (32.6)     | 43 |    |                    |

Significant at  $p < 0.05$

**Table 8: Association of level of knowledge regarding menstrual hygiene among adolescent girls with source of information (N=50)**

| Source of information | Level of knowledge |           |               |    |    |                    |
|-----------------------|--------------------|-----------|---------------|----|----|--------------------|
|                       | Good               | Average   | Below Average | n  | df | $\chi^2$           |
| TV                    | 11 (29.8)          | 14 (37.8) | 12 (32.4)     | 37 | 4  | 1.163 <sup>s</sup> |
| Newspaper             | 1 (20)             | 3 (60)    | 1 (20)        | 5  |    |                    |
| Internet              | 3 (37.5)           | 3 (37.5)  | 2 (25)        | 8  |    |                    |

Significant at  $p < 0.05$

knowledge was higher in post-menorrhoeal girls, 10 percent were totally ignorant about menses and 84 percent were not psychological prepared for the first menses. Girls' menstrual knowledge was positively associated with parental education. Although more than half the girls menstruated regularly, 67 percent used sanitary materials like menstrual absorbent. The mean duration of menstrual flow was  $4.32 \pm 1.15$

days with a range of 3-7 days in 96 percent of the study population. There is an acute need for psychological preparation of girls for menstruation well ahead of menarche (Abioye-Kuteyi, 2000).

Shivleela et al (2015) assessed the knowledge and practice of menstrual hygiene among 828 high school girls in Western Ethiopia using a pre-tested structured questionnaire. The results showed that 504 (60.9%) and 330 (39.9%) respondents had good knowledge and practice of menstrual hygiene respectively. There was a significant positive association between good knowledge of menstruation and educational status of mothers having radio/TV Educational status of the mother and pocket money from parents revealed significant positive association with good practice of menstrual hygiene.

Adinma & Adinma (2008) conducted a study amongst 550 secondary school girls in south-eastern Nigeria to determine their perceptions, problems and practices on menstruation. Majority of them (76%) were in age of 15-17 years. Only 40 percent perceived menstruation to be physiological. Abnormal pain (67%) was the commonest medical problems although 46 percent had multiple problems. Sanitary menstrual absorbents were used by 56 percent of the respondents.

Deo & Ghattarg (2005) sought to check the perception and practices of urban and rural adolescent girls regarding menstruation. In urban girls, mother was the main source of information about menstruation (28%) while it was teacher in the rural counterparts (28%); other sources were friends, relatives and books. The number of girls not practicing any taboo was significantly more among rural girls (22%) as compared to urban girls (5%). Majority of urban and rural girls in this study preferred cloth pieces to the sanitary pads to deal with menstrual flow.

A study to assess the practices of menstrual hygiene among adolescent girls in a district of Uttarakhand revealed that 65 girls (72% rural, 57% urban) were aware about menstruation prior to menarche. Awareness among rural girls was significantly more as compared to urban girls. Friends were the first informant in about 32 percent girls. But the correct reason and source of bleeding during menstruation was not known to most of the respondents. Overall 39 percent adolescent girls were using sanitary napkins as menstrual absorbent, while 30 percent were using a new cloth every time (Juyal et al, 2012).

## Materials & Methods

In the present study, descriptive research approach and non-experimental research design was used. The

research setting was Government Women College Parade, Jammu. The sample consisted of 50 subjects. Purposive sampling technique was used to select the sample. Prior to the data collection, formal permission was obtained from the College Principal.

Socio-demographic profile and a self-structured questionnaire was used to collect personal information. Socio-demographic profile included items like age (in years), religion, socio-economic status, marital status and source of information. Self-structured questionnaire schedule was prepared to assess the level of knowledge and practices of adolescent girls regarding menstrual hygiene. The review of literature, experts' opinions and investigator's own experience provided the basis for construction of tool.

Data collection was done in January 2017. Prior to interview the girls, the investigator gave a self-introduction and explained the purpose of gathering information. Good rapport was established with the subjects and they were assured that their responses will be confidential and the information will be used only for research purpose.

## Results

In order to explore association of level of knowledge with the age of adolescent girls, chi-square was computed, which was found statistically significant at  $p < 0.05$  level. Hence, it was concluded that age has impact on level of knowledge regarding menstrual hygiene among adolescent girls.

To explore association of level of knowledge with religion of adolescent girls, chi-square was computed, it was found to be statistically significant at  $p < 0.05$  level. It was concluded that religion has impact on level of knowledge regarding menstrual hygiene among girls.

To explore association of level of knowledge with socio economic status of adolescent girls, chi-square was computed. It was found statistically significant at  $p < 0.05$  level and so it was concluded that socio economic status has impact on level of knowledge regarding menstrual hygiene among adolescent girls.

To explore association of level of knowledge with marital status of adolescent girls, Chi square was computed. It was found statistically significant at  $p < 0.05$  level. It was concluded that marital status has impact on level of knowledge regarding menstrual hygiene among adolescent girls.

To explore association level of knowledge with source of information of adolescent girls, chi square was computed. It was found statically significant at  $p < 0.05$  level. Hence, it is concluded that source of

information has impact on level of knowledge regarding menstrual hygiene among girls.

## Discussion

*Level of knowledge regarding menstrual hygiene among adolescent girls:* The baseline level of knowledge of adolescent girls regarding menstrual hygiene revealed that out of 50 girls, 20 (40%) of the girls had good knowledge about menstrual hygiene. This was consistent with the study conducted to assess the knowledge, attitudes and behaviour on menstrual hygiene among adolescences girls about dysmenorrhea and menstrual hygiene in suburban districts of Tehran. A 44-item questionnaire was used to collect the data. The findings showed that maximum (77%) of the adolescent girls had adequate level of knowledge regarding menstrual hygiene (Poureslami & Ashtiani, 2002).

*Practices regarding menstrual hygiene among adolescent girls:* Maximum (80%) adolescent girls reported satisfactory practices and 20 percent adolescent girls reported unsatisfactory practices. In a similar study conducted to assess the knowledge, attitude and practices of menstrual hygiene among high school students in Jatinangor, Indonesia, majority ( $n=210$ , 88.4%) girls were having good practices regarding menstrual hygiene (Balquis et al, 2016).

*Association of level of knowledge about menstrual hygiene among adolescent girls with selected socio-demographic variables:* The association of level of knowledge regarding menstrual hygiene among adolescent girls with selected socio-demographic variables was statistically significant at 0.05 percent level of significance.

In conformity to these finding, a similar study among adolescent girls in eastern India revealed that girls of higher socioeconomic status have better knowledge and menstrual hygiene practices which was statistically significant.

## Implications of the Study

*Nursing practice:* Present study would help understand necessity of menstrual hygiene. To this end, nurses can adopt self-instructional module. Student nurses can be posted in government colleges during their training programme to obtain skills in meeting the needs of adolescent girls regarding menstrual hygiene. Nurses can conduct teaching sessions on menstrual hygiene during their visits to the government colleges. The nurses plays an important role in disease/infection prevention and promotion of menstrual hygiene practices.

*Nursing education:* Nursing educator has to pay more attention on training of nursing students to assess the level of knowledge regarding the menstrual hy-

giene so they can impart appropriate knowledge to adolescent girls. The student nurses should encourage the adolescent girls regarding their self-hygiene during menstrual cycle. The nursing curriculum should have emphasis on health information to community using different teaching methods; they should be educated on promotion of menstrual hygiene and prevention of infection in adolescent girls.

**Nursing administration:** Nurse administrators can educate nursing personnel and involve them in health education measures for girls regarding menstrual hygiene. Wider professional interaction between the nurses and public will help improve professional standards. Nursing students should be educated in menstrual hygiene so they can give education further and helps in protection of girls from infection.

**Nursing research:** This study provides baseline data about knowledge of mothers regarding menstrual hygiene. The nurses will come to know about the ignorance of mothers and their level of knowledge regarding menstrual hygiene. Such studies will improve the quality of nursing care and also establish the importance of nurses in health care delivery system.

**General Education:** This will help lower the high mortality and morbidity rates due to reproductive tract infections. TV, newspapers, magazines etc. should help in spreading awareness regarding menstrual hygiene among people especially adolescent girls.

## Recommendations

A study may be conducted on large sample for wider generalisation. An exploratory study can be done (a) to assess the knowledge and (b) practices of adolescent girls regarding menstrual hygiene.

## Conclusion

In this study, most of the adolescent girls were aware of normal physiology of menstruation. A mother plays vital role as a teacher for imparting primary knowledge regarding menstrual cycle to adolescent girls. Adolescent girls need to be armed with proper and complete knowledge via formal and informal communications. Use of sanitary pads should be promoted by making its availability free of cost or at nominal price. Adolescents should be taught regarding the reproductive infection and its prevention in schools and other educational or professional institutes.

## References

1. World Health Organization. Adolescent Health and Development ([http://www.searo.who.int/EW/section13/section\\_1245.html](http://www.searo.who.int/EW/section13/section_1245.html))
2. Dawood MY. Dysmenorrhea. Clinical obstetrics and gynaecology. *Pubmed* 1990 Mar; 33(1): 168-78
3. Anushree PC, Roy A et al. Knowledge regarding menstrual hygiene

- among adolescent girls in selected school, Mangalore with a view to develop an information Booklet. *Journal of Nursing and Health Sciences* 2014; 3(1): 55-60
4. El-Gilany A, Badawi K, et al. Menstrual Hygiene among adolescent school girls in Mansoura Egypt. *Reproductive Health Matters* 2005; 13(26): 147-52
5. Dass Gupta A, Sarkar M. Menstrual Hygiene: How hygienic is the adolescent girl? *Indian Journal of Community Med* 2008; 33(2): 77-80
6. Khanna A, Goyal RS et al. Menstrual practices and reproductive problems: a study of adolescent girls in Rajasthan. *Journal of Health Management* 2005; 7: 91-107
7. Aggarwal R, Singal A, et al. Breastfeeding community. *Nightingale Nursing Times* 2005; 51(6): 366-76
8. Dawn CS. The Text Book of Gynaecology. The Dawn Books (P): Calcutta, 1982; p 234
9. Krick J, Somner M. Menstruation and body awareness, critical issues for girls on education. *EQUALS* 2005; (15): 4-5
10. Manjula R, Geethalakshmi RG, Sangam DK. 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
11. Shivleela P Upashe. Assessment of knowledge and practices of menstrual hygiene among high school girls in western Ethiopia. *BMC Women Health* 2015; 15: 84
12. Sarah H, Therese M Sue. A resource for improving menstrual hygiene around the world. *Water Aid* 2012; 22-43
13. Sharma N, Sharma P, et al. A cross-sectional study of knowledge, attitude and practices of menstrual hygiene among medical students in North India. *The Journal of Phyto Pharmacology* 2013; 2(5): 28-37
14. Maji S. A study on Menstrual Knowledge and Practice among rural adolescent girls in Burdwan district, West Bengal. *Intern Journal of Advances Research* 2016; 4(9): 896-902
15. Dongre AR, Deshmukh P, Garg BS. The effect of community-based health education intervention on management of menstrual hygiene among rural Indian adolescent girls. *World Health Popul* 2007; 9(3): 48-54
16. Petal A, Kadel B, Dhungel SI, Mandal A. Knowledge and practice regarding menstrual hygiene in rural adolescent girls of Nepal. *Kathmandu Univ Med J* 2006; 5(3): 382-86
17. Abioye-Kutey EA. Menstrual knowledge and practices amongst secondary school girls in Ile Ife, Nigeria. *Journal of Royal Soc for Promotion of Health* 2000; 120(1): 23-26
18. Adinma ED, Adinma JIB. Perceptions and practices on menstruation amongst nigerian secondary school girls. *African Journal of Reproductive Health* 2008; 12(1): 74-83
19. Deo DS, Ghattarg CH. Perceptions and practices regarding Menstruation: A comparative study in urban and rural adolescent girls. *Indian Journal of Community Medicine* 2005; 30(1)
20. Juyal R, Kandpal SD, et al. Practices of menstrual hygiene among adolescent girls in a district of Uttarakhand. *Indian Journal of Community Health* 2012; 24(2): 124-28
21. Poureslami M, Osati Ashtiani F. Assessing knowledge, attitudes and behaviour of adolescent girls in suburban districts of Tehran about dysmenorrhea and menstrual hygiene. *Journal of Intern Women's Studies* 2002; 3(2): 10-11
22. Balquis M, Desy Arya I, et al. Knowledge, attitude and practice of menstrual hygiene among high school students in Jatinangor, Indonesia. *Research Gate J* 2016; 3: 230-38
23. Mishra SK, Gupta D et al. A study on the relationship of sociocultural characteristics, menstrual hygiene practices and gynaecological problems among adolescent girls in Eastern India. *International Journal of Adolescent Medicine and Health* 2016; Feb, 3(29)