



## Menstruation: Blessing or Curse for Adolescent Girls in school

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### Abstract

**Introduction:** Menstruation is a milestone event in a girl's life and it is the beginning of her reproductive life. A girl menstruates on an average for three to five days a month, 12 months a year, and the cycle carries on till she reaches menopause in 40-45 years. Periods are normal and healthy, yet many females of rural and urban India struggle to manage this monthly occurrence. An unhygienic menstrual practice has been associated with adverse health among girls.

**Aim:** To explore the knowledge, attitude and practices about menstruation and reproductive morbidity among 12-18 years old menstruating girls in rural and urban schools in Mirzapur.

**Material and Method:** A descriptive cross-sectional study was conducted in rural and urban school, in Mirzapur to evaluate the knowledge, attitude and practice about menstrual hygiene and reproductive morbidity among 12-18 years old menstruating girls. A total of 800 girls were involved in the study, out of which 400 were from rural school and 400 were from urban school by using a simple random sampling technique. The data was collected by using a structured questionnaire. Descriptive statistic was used for analyzing the data.

**Results:** Only 16% of them were aware about menstruation prior to the attainment of menarche; 72% of respondents knew that the menstruation is a natural physiological process; 95% knew that ideal absorbent material is sanitary pads. But only 25% girls use sanitary pads only, 20% used old/new clothes only, while 55% used both sanitary pads and clothes. 75% girls found sanitary pads costly. 89% of respondent girls are having at least one reproductive tract problem. Statistically significant association was found between perceived reproductive morbidity and poor menstrual hygiene practices.

**Conclusion:** Girls will continue to struggle till they lack information, and deep set, harmful social norms remain unaddressed. They must taught about menstruation and its relationship with their reproductive health.

**Keywords:** Menstruation, Adolescent girls, Sanitary pads, Mirzapur, Reproductive morbidities.

## Introduction

Is menstruation a curse or a blessing? Every girl at some point of time in her life asks this question when she realizes that a part of her natural process is a social taboo. Yes, menstruation cycle or periods in India are still a less spoken even in 21<sup>st</sup> century.

Menstruation is the natural process of the reproductive cycle of female in which blood from the uterus exits through the vagina.<sup>1</sup> It usually starts in between the age of 11 to 14 years and is one of the indicators of the onset of puberty in female. Despite being a phenomenon unique to girls, this has always been surrounded by secrecy and myths in many parts of worlds.<sup>2</sup> Menstruation had been linked to various myth dates back to the Vedic times. It has been linked to Indra's slaying of Vritras and it has been declared in the Veda that guilt, of killing a brahmana-murder, appears every month as menstrual flow to woman. Since women's had taken a part of Indra's guilt.<sup>3</sup>

Menstruation is considered as unclean or dirty in the Indian society. Biologically, periods is a blessing in disguise, for it becomes the reason a woman feels the bliss of being a mother. During periods girls were told not to visit temples or religious places,<sup>4</sup> not to enter the kitchen,<sup>5</sup> some girls resents from attending the school. In some places it was believed that menstruating woman considered unhygienic and unclean and hence the food they prepare or handle can get contaminated.<sup>2</sup> In many villages, girls were forced to sit in a separate room for 5 days and are not allowed to enter the house before the bleeding stops.

Adolescent girls constitute a vulnerable age group,<sup>6</sup> and during menstruation a girls is undergoing many hormonal and physiological changes in her body. Most often girls experience pain during menstruation but no matter to what extent it pains, they are not allowed to speak about it publicly. Ironically, a condom is bought without any shame but a sanitary pads, wrapped in a black carry bag. A pad that adds to the hygiene of a

woman is so secretive that some girls don't buy it if they find a male shopkeeper.

Menstruation is a milestone event in a girl's life and it is the beginning of reproductive life. Hence, all aspects of menstruation need to be understood by adolescent girls.<sup>7</sup> The reaction to menstruation depends upon awareness and knowledge of people. A manner in which a young girl learned about menstruation and its associated changes may have an impact on her response to the event of menarche throughout her life.<sup>8</sup>

We are heading towards modernization and woman empowerment but it's not hidden that even today many girls use dirty cloth. People wrapped in their superstitions, find using sanitary pads a shameful activity. Women should be educate about importance of menstrual hygiene to avoid future long-term ill effects of poor menstrual hygiene practices leading to premature births, stillbirths, miscarriages, infertility problems, toxic shock syndrome, carcinoma cervix as a complication of recurrent reproductive tract infections.<sup>9</sup>

In situations like this people now need to talk about periods and its hygiene. It is necessary to make people aware that it is not a social taboo. We cannot simply let our girls feel shameful about their body and its processes. A girl needs to be aware why she has periods and what's happening to her body when she menstruates. She needs to be aware about the different types of safe and hygienic menstrual absorbents available in market. Girls will continue to struggle till they lack information, and deep set, harmful social norms remain unaddressed. Education of girls will directly had a impact on national health and national development as well as economic and social progress.<sup>10, 11</sup> Educated women will tend to have lesser number of children's, she will adopt a healthier lifestyles and raise healthier families by making more informed choices.<sup>12</sup> They will more likely to practice and seek appropriate preventive and medical services such as personal hygiene, immunization and nutrition they help reduce infant morbidity and mortality.<sup>13, 14</sup> This in turn

leads to reduced the fertility rates and higher market productivity thereby improving the national economy.<sup>12</sup>

Menstruation matters to girls so it should matter to everyone, everywhere. None of the study from this place had been published on the level of knowledge, attitude and practices of adolescent girls regarding menstruation, related hygiene and co-existing reproductive morbidities. So, this study was planned to know the magnitude of this problem in the area, so that interventions can be planned in the future.

### Materials and Methods

Uttar Pradesh, is a state located in North India, it has 18 divisions and 75 districts.<sup>15</sup> A cross sectional study was carried out in Mirzapur, a district of Uttar Pradesh. Study was carried out from 12<sup>th</sup> July 2018 to 18<sup>th</sup> September 2018 to access the Knowledge, Attitude and Practice on menstruation and reproductive morbidity among 12-18 years old menstruating girls in rural and urban schools in Mirzapur.

Mirzapur district was divided into 13 blocks. List of all schools in each block was obtained from block educational officer. Then, a separate list of school was made for rural and urban areas. Pilot study was conducted and sample size of 800 students was estimated. An institutional ethical clearance was taken before the start of the study. Consent from the Principal of different school's was taken before conducting the study.

A total of 800 girls were involved in the study, out of which we have taken 400 girls from rural school and 400 girls from urban school by using a multistage random sampling technique. From each block 62 girls were selected and in that we have taken 31 girls who were from rural school and 31 girls from urban school [62x13=806]. The selection of students in class was done by using a random sampling lottery method. The girls involved in the study were told about the need of the study and a consent form was given to each girl who was involved in the study and was asked get it signed from their parents/guardians. They

were also provided assurance of anonymity and confidentiality of data. The confidentiality of each respondent was maintained.

### Inclusion Criteria

- Girls age in between 12-18 years and have attained menarche.

### Exclusion Criteria

- Girls who had not attained menarche at the time of survey.
- Girls or her parents/ guardians who refused to give consent.

A self-administered questionnaire was prepared after an extensive review of previous literature,<sup>7</sup> which consists of 4 sections as follows: socio-demographic profile, knowledge, attitude and practice regarding menstruation and reproductive morbidity. Questionnaire was distributed among girls during the school hours. At the end of the study, questionnaire was collected from the girls and all their queries were answered satisfactorily by the examiners. Data that was obtained was analyzed statistically by using simple proportions.

### Results

800 adolescent girls were involved in the study. Most of the girls were in the age of 15 years 25% (200) followed by 16 years 20% (160).

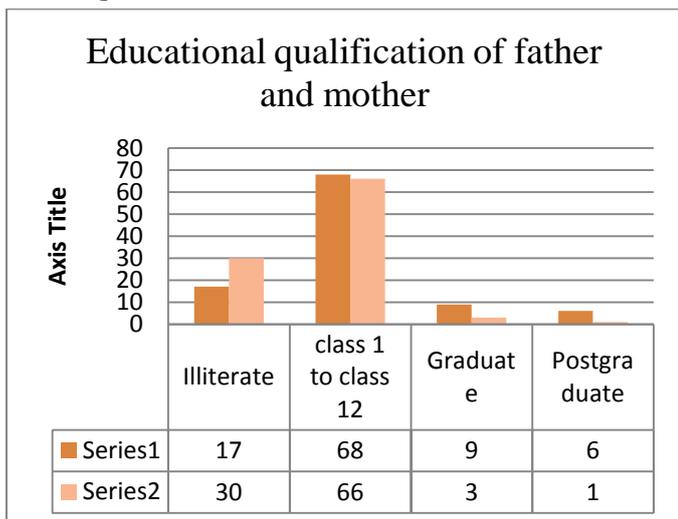
72% (576) of them were Hindu, 23% (184) were Muslims and 5% (40) belong to other religions (Sikhs and Christian). 80% (640) of the girls were living in nuclear families and 20% (160) were living in joint family.

2% (16), 5% (40), 50% (400), 23% (184), and 20% (160) of girls belong to upper class (class I), upper middle class (class II), middle class (class III), lower middle class (class IV) and lower class (class V) of socioeconomic status respectively.<sup>16</sup>

Age and percentage of girls	
12 years	10 %
13 years	12%
14 years	16%
15 years	25%
16 years	20%
17 years	11%
18 years	6%
Religion	
Hindu	72%
Muslims	23%

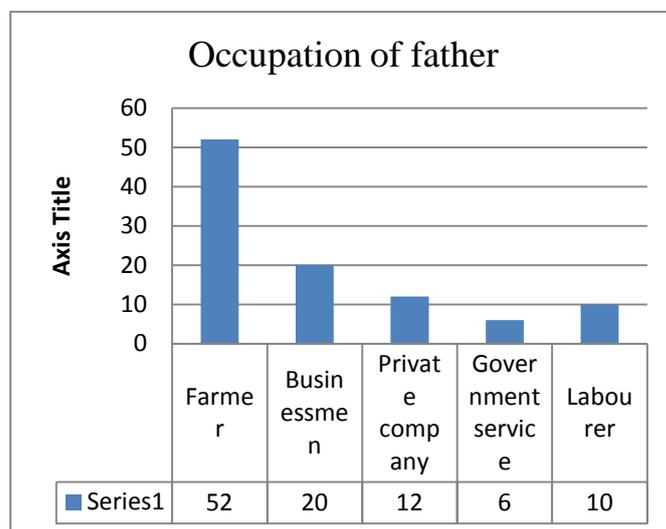
Other (Sikhs & Christian)	5%
<b>Families</b>	
Nuclear Families	80%
Joint Families	20%
<b>Socioeconomic Status</b>	
Class I	2%
Class II	5%
Class III	50%
Class IV	23%
Class V	20%

Most of the fathers of girls were having education in between [class 1 to class 12<sup>th</sup>] around 68% (544), 17% (136) were illiterate, 9% (72) were graduate and 6% (48) were postgraduate. [Graph 1; series 1]. 30% (240) of girl’s mother was illiterate, 66% (528) were having education in between [class 1 to class 12<sup>th</sup>], 3% (24) were graduates and 1% (8) was post graduate. [Graph 1; series 2]



Among the respondent 12% (96) said that they don’t follow any restriction during menstruations whereas 88% (704) said they follows various types of restrictions like they sleep separately 55% (440), restricted to attend any religious activity 68% (544), did not go to school because of fear of

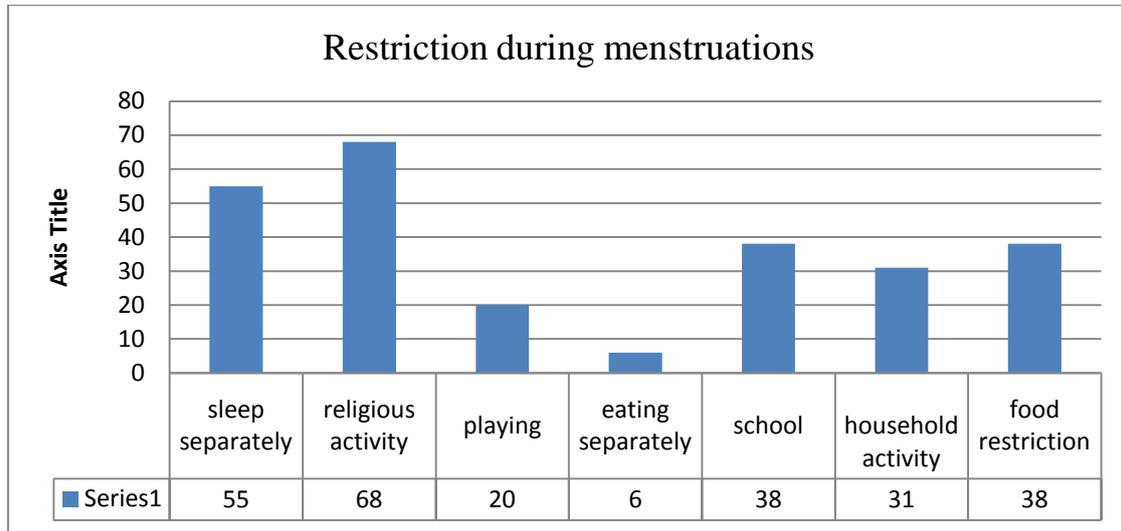
Fathers of most of the girls were farmers 52% (416), followed by businessmen 20% (160), around 12% (96) were working in private company, 6% (48) were in government service and daily wage labourer were 10% (80) [Graph 2]. Mothers of most of the girls were housewives 93% (744) and only 7% (56) were working.



Graph 2: Occupation of father

70% (560) girls got there first menstruation in the age of 13-14 years, while 25% (200) got it in the age of 11-12 years and 5% (40) in the age of 15-16 years. 75% (600) had menstruation that last for 3-5 days, 20% (160) said it was for more than 5 days and 5% (40) has it for less than 3 days. 68% (544) said that their menstrual cycle is regular while 32% (256) said it was irregular.

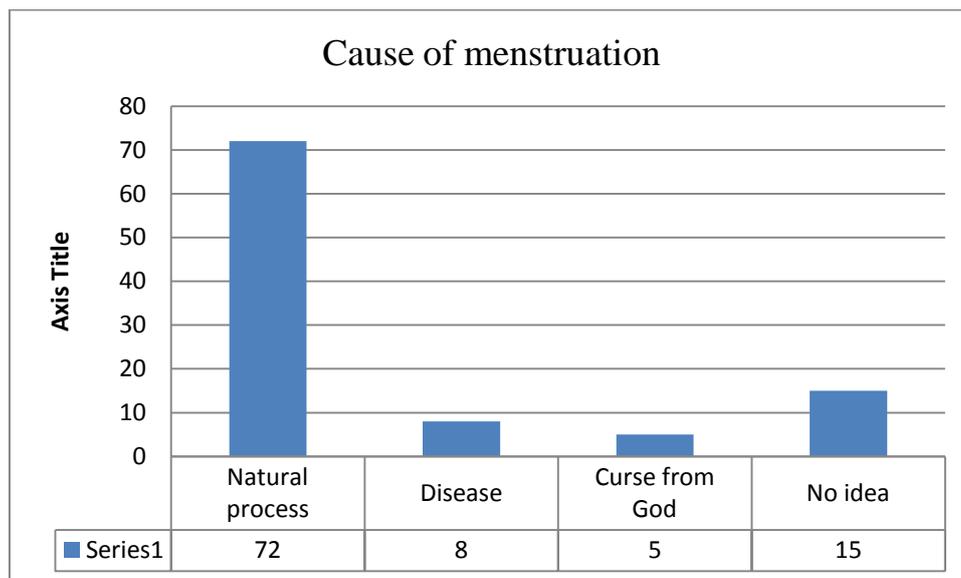
stain in clothes 38% (304), did not carry out any household activities 31% (248), did not go to play 20% (160), they eat separately 6% (48) and are restricted from eating certain foods during the menstrual period 38% (304). [Graph 3]



**Graph 3:** Restriction during menstruations

Only 16% (128) girls were aware about menstruation prior to the attainment of menarche and their source of information was their elder sister 45% (360), mother 30% (240), friends 23% (184) and relatives 2% (16).

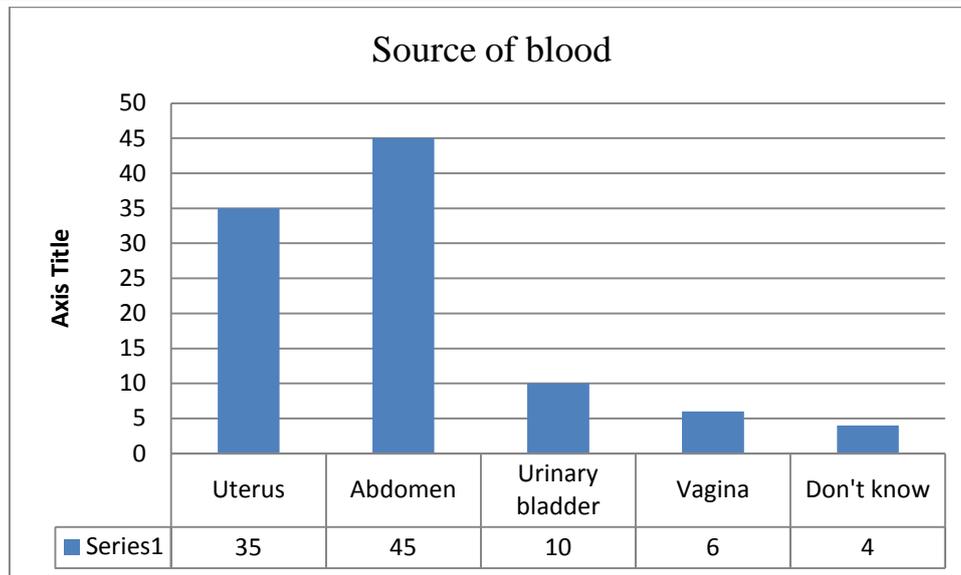
72% (576) of respondents knew that the menstruation is a natural physiological process, 8% (64) believed that it was a disease, 5% (40) thought that it was curse from God and 15% (120) had no idea about it. [Graph 4]



**Graph 4:** Cause of menstruation

35% (280) knew that the source of menstrual blood is uterus, while others believed that it was from abdomen 45% (360), urinary bladder 10% (80), vagina 6% (48) and 4% (32) said that they

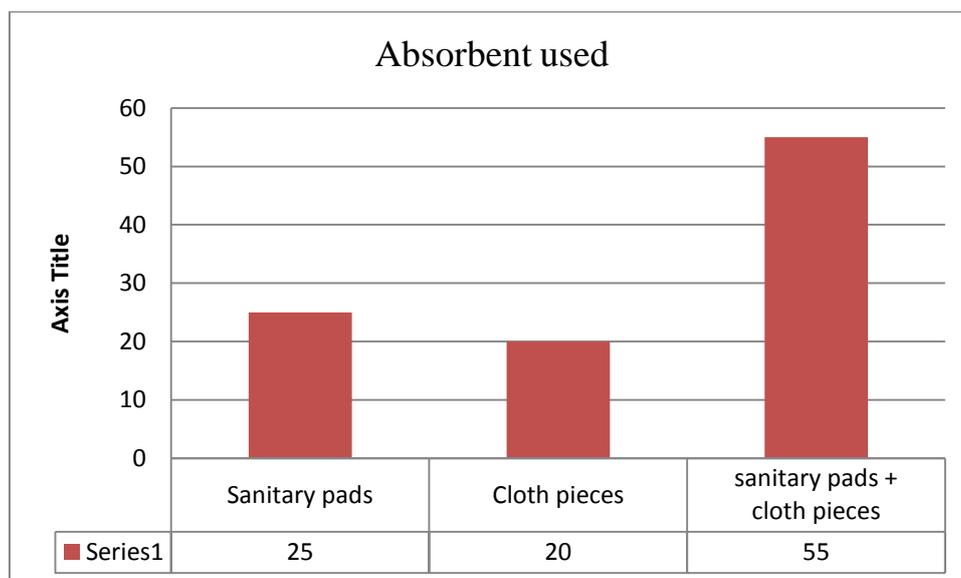
don't know [Graph 5]. 95% (760) girls knew that ideal absorbent material is sanitary pads and only 5% (40) said it was cloth pieces.



**Graph 5:** Source of blood

Practice: During menstruation 25% (200) girls use sanitary pads only, 20% (160) used old/new clothes only, while 55% (440) use both sanitary pads and clothes [Graph 6]. However, the use of

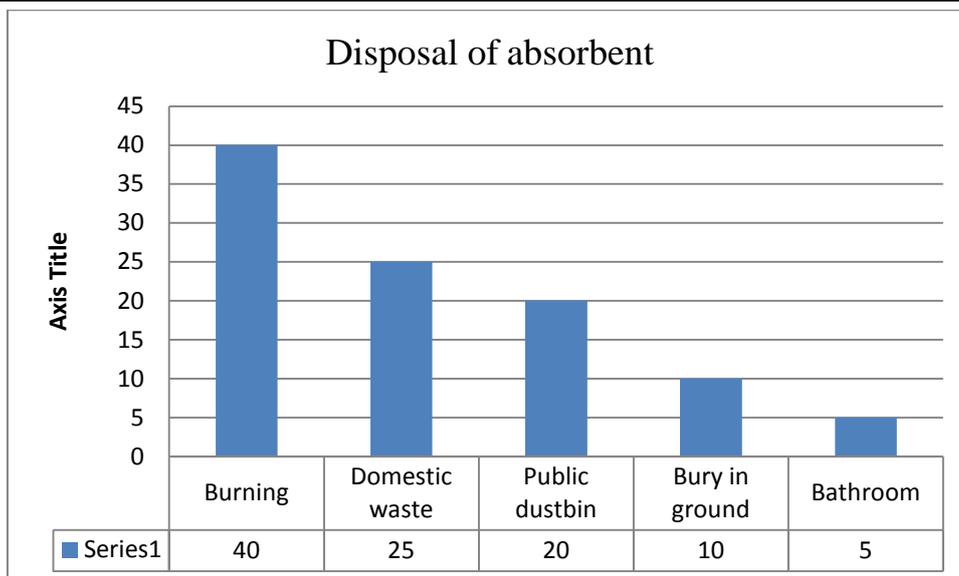
sanitary pads was more among urban girls. Some girls reuse the cloth after washing and this finding was higher in rural girls.<sup>6</sup>



**Graph 6:** Absorbent used

88% (704) of girls change the absorbent 2– 4 times during the menstruation, 2% (16) girl’s changes once in a day while 10% (80) changes 5-6 times in a day. 40% (320) girls disposed the

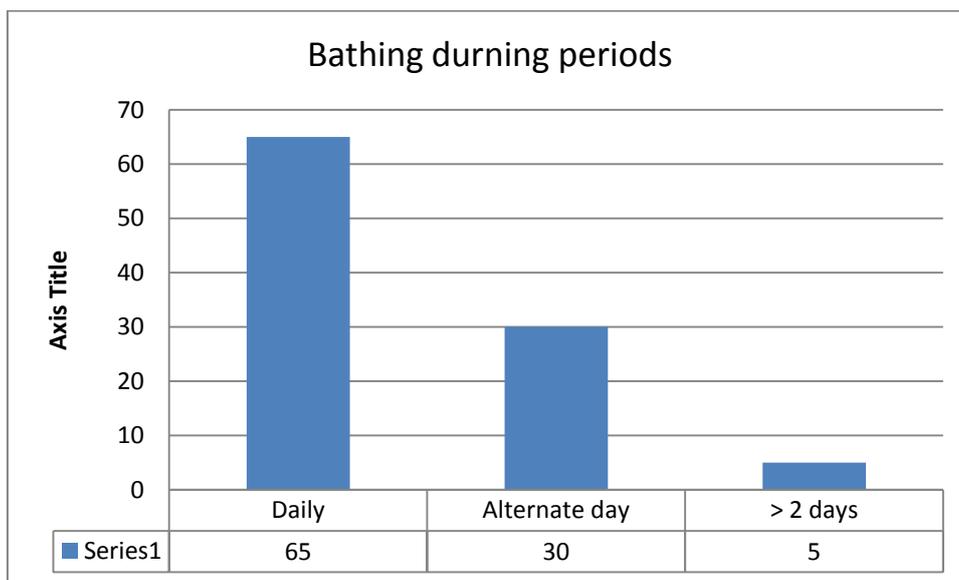
absorbent by burning, 25% (200) throw it with domestic waste, 20% (160) uses public dustbin, 10% (80) buried it in the ground while 5% (40) use bathroom/ toilet to dispose it. [Graph 7]



**Graph 7:** Disposal of absorbent

Among the cloth users (55%+20%) i.e. 600 girls, all of them wash the used cloth and then dry it without sunlight 65% (390) and 35% (210) dry it with sunlight. Maintenance of hygiene during menstruation: 65% (520) girls bath daily during

menstruation, 30% (240) bath alternate day and 5% (40) girls bath >2 days [Graph 8]. The practice of daily bathing was significantly higher among urban girls.

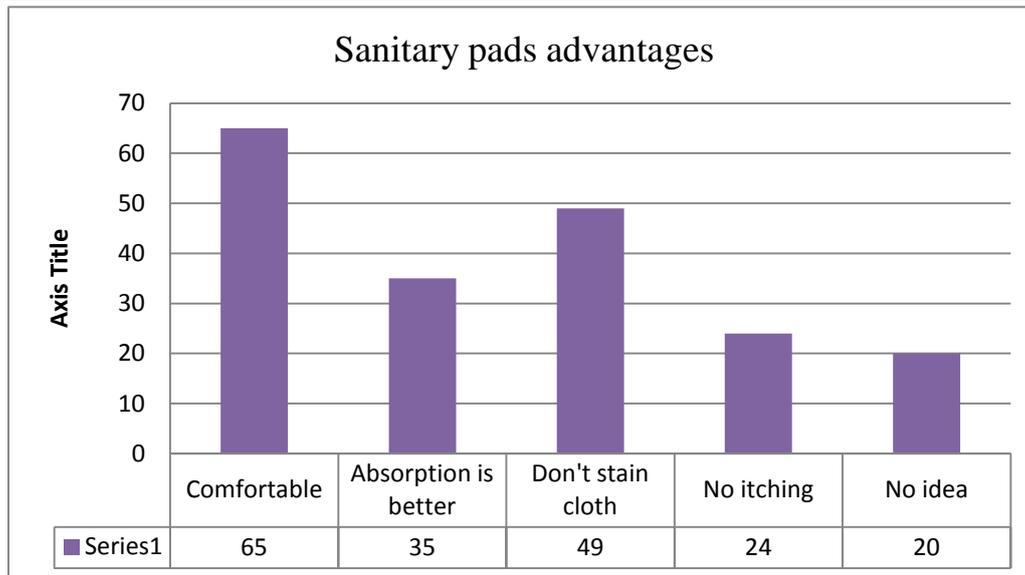


**Graph 8:** Bathing during periods

85% (680) of girls clean external genitalia >2 times per day during menstruation while 15% (120) wash it <2 times per day. 55% (440) of girls washed genitals with water while 45% (360) girls washed it by using soap and water.

65% (520) girls feel that sanitary pad are comfortable and 35% (280) said that its absorption

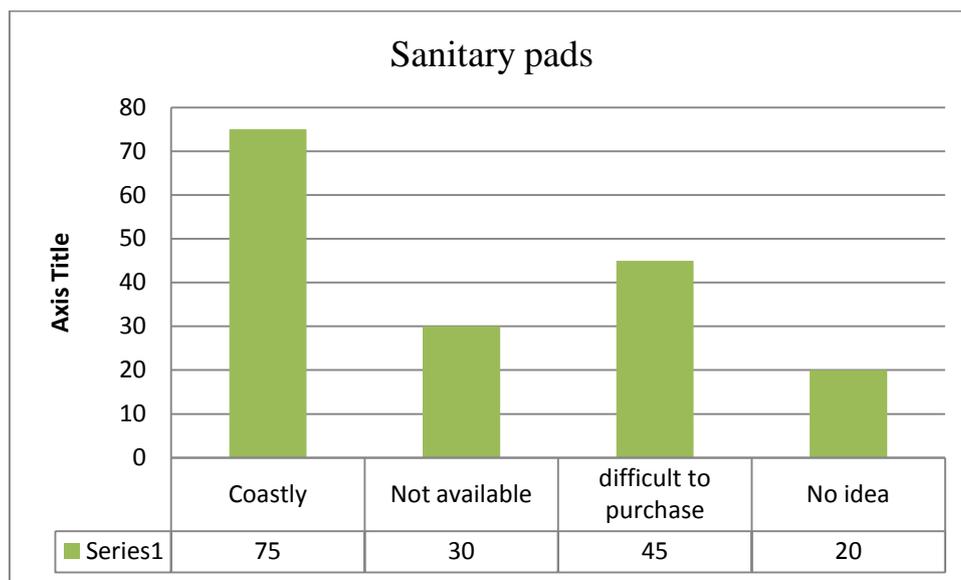
is better than clothes. 49% (392) girls said that it does not stained clothes. 24% (192) said that there is no itching on using the pads. 20% (160) of girls have no idea about it since they use clothes during menstruation. [Graph 9]



**Graph 9:** Sanitary pads advantages

75% (600) girls said that sanitary pads are very costly. 30% (240) said that pads are not available everywhere and if available they find difficult to

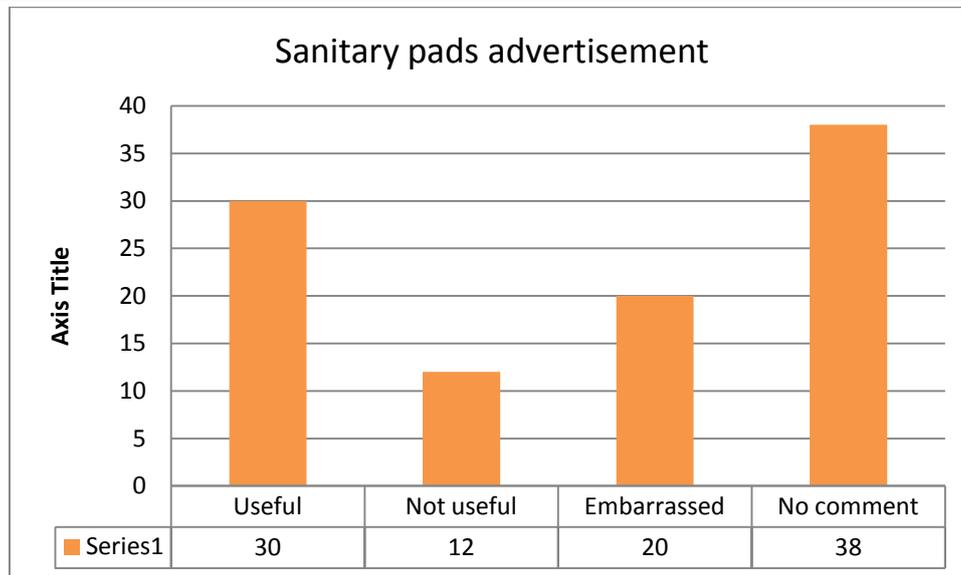
purchase 45% (360) it there was a male shopkeeper. 20% (160) girls had no idea about it. [Graph 10]



**Graph 10:** Sanitary pads

- 30% (240) girls said that sanitary pads advertisement was useful while 12% (96) did not found it useful. 20% (160) girls feel embarrassed if they watch

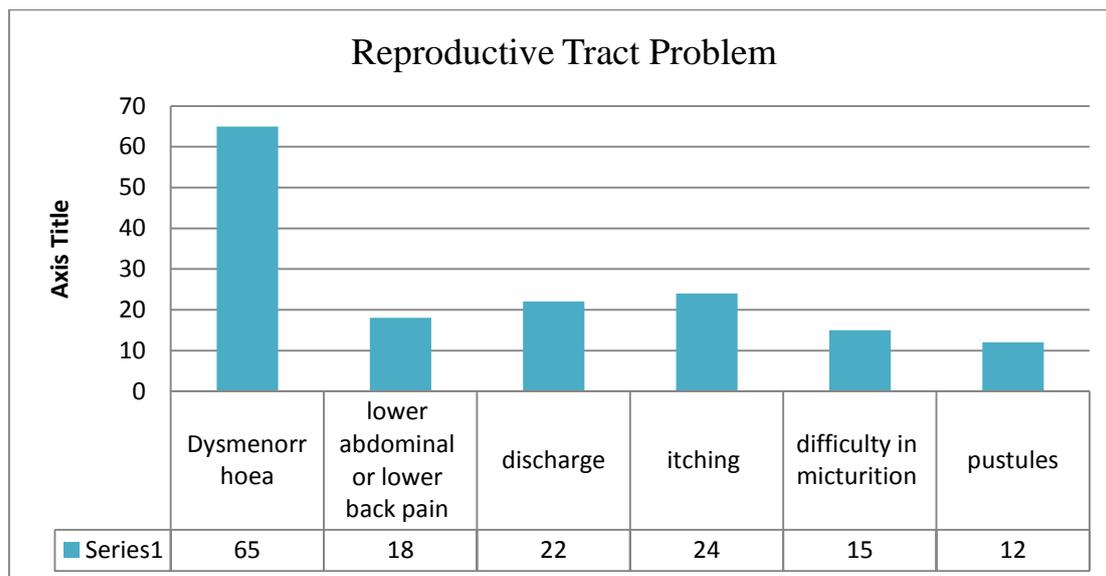
advertisement with family or in public while 38% (304) girls don't want to comment on it. [Graph 11]



**Graph 11:** Sanitary pads advertisement

89% (712) of respondent girls are having at least one reproductive tract problem. 65% (462) had dysmenorrhoea, lower abdominal/lower back pain 18% (128), discharge from genitalia 22% (156),

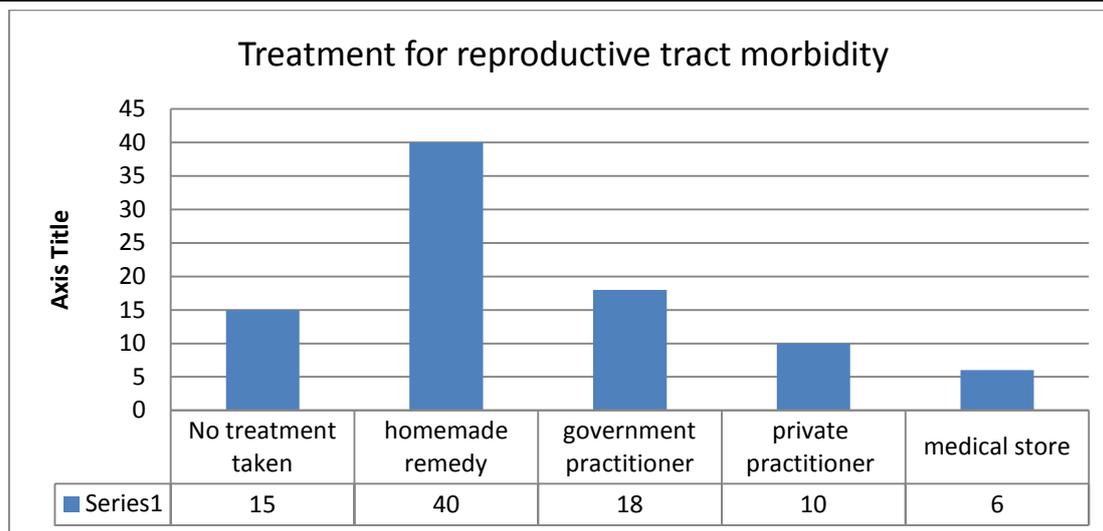
itching from genitalia 24% (170), difficulty in micturition 15% (106), and pustules over genitalia 12% (85). [Graph 12]



**Graph 12:** Reproductive Tract Problem

89% adolescent girls had reproductive tract morbidity but among them only 74% (526) take treatment for these health problems out of which 40% (210) girls used homemade remedy, 18%

(94) took medicine from government practitioner, 10% (52) from private practitioner and 6% (31) from medical store (medical facility utilized by 34% of girls i.e. 177 girls). [Graph 13]



**Graph 13:** Treatment for reproductive tract morbidity

Some of the symptoms suggestive of reproductive tract infections were observed to be more common among the girls who were having unsatisfactory menstrual hygiene practices, and this difference was found to be statistically significant ( $P < 0.05$ ).

### Discussion

Many studies had been conducted all over the world to know about knowledge, attitude and practice about menstruation and reproductive morbidity. This study shows that the age of menstruating girls ranged from 12 to 18 years. About 70% girls attained menarche at the age of 13-14 years which was similar to study conducted by Mathiyalagen *et al.*<sup>7</sup> and Khanna *et al.*<sup>17</sup> Another study conducted by Dasgupta A *et al.*<sup>8</sup> showed that age of menstruating girls ranged from 14 to 17 years and maximum girls attained menarche between 14 and 15 years of age. Majority of girls in our study 75% reported that their menstruation lasts for 3-5 days which was similar to finding by Balasubramanian<sup>18</sup> and Juyal *et al.*<sup>6</sup>

In India, different communities follow a different type of restrictions during menstruation. In our study, girls were restricted from doing any religious activity 68%, followed by asked to sleep separately 55% which was similar to study conducted by Mathiyalagen, *et al.* our result was in contrast to study conducted by Verma *et al.*<sup>19</sup>

were recorded playing and going outside home were the most common restrictions.

16% girls were aware about menstruation prior to the attainment of menarche which was similar to study conducted by Mathiyalagen *et al.* but our result was in contrast to study conducted by Verma *et al.* where 58.3% girls were aware. Ideally, every girl must be aware about menstruation before the attainment of menarche which will have a long role in maintaining the menstrual hygiene as well as help in preventing its menstruation related morbidities. About 84% girls gained knowledge about it after menstruation which made few girls panic when they bleed for first time.

The main source of information about menstruation in our study was their elder sister 45% and mother 30% which was similar to the study conducted by Dasgupta A *et al.* where main informant was mother 37.5%. This gap might be due to poor literacy and ignorance of society who feels shamed on talking on such an issues. The incomplete and many times false knowledge of menstruation was passing from generation to generation from mother to daughter.

About 72% of the girls believed that menstruation is a natural phenomenon which was fairly similar to the observation by Verma *et al.* and Mathiyalagen *et al.* where 85.83% and 71.5% of girls respectively believed it to be a natural phenomenon. It was found that a majority of about

65% were not aware of the correct source of menstrual bleeding which was similar to study conducted by Pundkar *et al.*<sup>20</sup> where about 70.71% girls did not know the source. The above findings might be due to low literacy level among mothers and absence of menstrual hygiene related education programs in schools and also because of silence of the society on promoting educational campaign on such issues.

Apparently 95% girls knew that ideal absorbent material is sanitary pads and 65% girls said it was comfortable but when it's come to use only 25% girls use sanitary pads, 20% used old/new clothes, while 55% use both sanitary pads and clothes. Our result was in contrast to Mathiyalagen *et al.* where 78.1% of the girls use only sanitary pads rather than cloth pieces and only 21.9% girls used both cloth and sanitary pads. Another Study conducted by Dasgupta A *et al.* shows that 11.25% girls used sanitary pads during menstruation. The reason for not using sanitary pads in our study was high cost 75%, difficult to purchase 45% and less availability 30%.

Regarding the methods of disposal of the used material, most of the girls 75% reused cloth pieces by washing it with soap after use and then dries it without sunlight 65% and 35% dries it with sunlight. Only 25% girls properly disposed the used material. Most preferred method of disposal was burning 40% it was similar to study conducted by Dasgupta A *et al.* where 73.75% girls reused cloth pieces. Study conducted in Rajasthan by Khanna *et al.* shows that 75% of the girls used old cloth during their periods and 20% reported using readymade sanitary pads.

85% of girls clean external genitalia >2 times per day during menstruation while 15% wash it <2 times per day which was similar to study conducted by Juyal R *et al.* and Pundkar *et al.* In our study 55% of girls washed genitals with water while 45% girls washed it by using soap and water which was similar to study conducted by Mathiyalagen *et al.* were most common agent was only water (53.7%) followed by soap and water (46.3%). Our result was in contrast to study

conducted by Pundkar *et al.* were water and soap (63%) was the most common agent.

The prevalence of dysmenorrhea in our study was found to be 65% whereas it ranged from 60% to 93% Ali S *et al.*<sup>21</sup>, in Multan city, Pakistan and 62%–65% in India as reported from East Delhi Nair P *et al.*<sup>22</sup> and Karnataka by George NS *et al.*<sup>23</sup> Even in India, a study conducted among young girls in Indore by Kural *et al.*<sup>24</sup> had observed 84.2% prevalence of dysmenorrhea. Other finding like lower abdominal/lower back pain 18%, discharge from genitalia 22%, itching from genitalia 24%, difficulty in micturition 15%, and pustules over genitalia 12% was also found in our study. These were almost similar to the findings reported by Juyal *et al.* (19% vaginal discharge and 7.9% itching in genitalia) and Ram *et al.*<sup>25</sup> (12% burning sensation).

89% adolescent girls had reproductive tract morbidity but among them only 34% take medical treatment and 40% take homemade remedy as told by their mother and grandmothers. This result was similar to study conducted by Mathiyalagen *et al.* were 37.4% took medical treatment. Another study conducted at Nagpur by Kulkarni *et al.*<sup>26</sup> shows similar results where girls seeking and not seeking health care was 33.67% and 62.33%, respectively.

### Conclusion and Recommendations

Menstruation is nothing but a normal biological phenomenon, and adolescent girls must understand it before menarche. Different kinds of myths that are associated to it must be cleared. They must also teach about its relationship with their reproductive health. The first and foremost step we can take is to raise the awareness among the adolescent girls related to menstruation and hygiene. The girls should be made aware of the facts of menstruation and proper hygienic practices through school curriculum and school teacher, mass media, health personnel and above all, well-informed parents. Community based health education campaigns could prove worthwhile in achieving this task.

Provision of sanitary pads and adequate facilities for sanitation and washing must be made available. Sanitary pads can be made locally at very low cost and distributed in areas where access to the product is difficult either because of cost, ignorance and less availability.

Strengthening the scheme made by Government of India to improve menstrual hygiene for 1.5 Crore adolescent girls by distributing low cost sanitary napkins in rural areas under the National Rural Health Mission since 2010.<sup>27</sup> Thus, we would need a multi-sectorial approach so as to link physical infrastructure, water and sanitation projects to health education and reproductive health programs and address the issue in more holistic ways for the betterment of society.<sup>28</sup>

When society become educated and aware about menstruation and talking on menstruation is as simple as discussing politics in Indian then surely a day will come when girls/women will certainly call menstruation a blessing.

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