### **Original Research Article**

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20205418

# A cross-sectional study on awareness and knowledge of menstrual hygiene practices among college going girls in Coimbatore district, Tamil Nadu

## Palani Vel Rajan<sup>1</sup>, Jeevithan Shanmugam<sup>2\*</sup>, Naveen Prabhu Jayaraj<sup>3</sup>, Archana Arumugam<sup>4</sup>

Received: 21 November 2020 Revised: 28 November 2020 Accepted: 30 November 2020

#### \*Correspondence:

Dr. Jeevithan Shanmugam, E-mail: dr.jeevithan@gmail.com

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#### **ABSTRACT**

**Background:** Women in India are restricted in their daily activities and mobility due to taboos, cultural barriers associated with menstruation and menstrual practices. Poor menstrual hygiene can make them susceptible to various reproductive tract infections. In this study we assessed the awareness, knowledge of menstruation and practice of menstrual hygiene among adolescents.

**Methods:** A college based cross-sectional study was conducted in the field practice area of an urban health training centre (UHTC) of a tertiary care hospital in the district of Coimbatore. Universal sampling method was used for selection of participants. A structured proforma was used for data collection. Microsoft excel 2007 was used for data entry and data analysis was done using SPSS version 27.

**Results:** It was found that 80.4% had formal education on menstrual hygiene. 94.5% of them had the habit of changing pads/cloths before they go to bed. 94.1% had the habit of washing with water every time and 76.49% of those who had the habit of washing used soap/antiseptic while washing.

**Conclusions**: Knowledge about menstruation and menstrual hygiene should be provided in schools and colleges. Ensuring availability of sanitary products, water, privacy and appropriate waste disposal in all public services and institutions can address the challenges.

Keywords: Menstruation, Menstrual hygiene, Sanitary material, Waste disposal

#### INTRODUCTION

According to WHO, the term 'adolescents' refers to people belonging to age group between 10 and 19 years. Adolescence is a period of transition forms childhood to adulthood. During this period, pubertal development and

sexual maturation take place.<sup>2</sup> The first physical change that occurs in about 60% of girls is thelarche.<sup>3,4</sup> Menstruation is cyclical shedding of the endometrial layer under the influence of the hypothalamo-pituitary axis.<sup>5,6</sup> The first menstruation is called as menarche. Menstruation and menstrual practices are overshadowed

<sup>&</sup>lt;sup>1</sup>Department of Community Medicine, Trichy SRM Medical College Hospital and Research Centre, Trichy, Tamil Nadu, India

<sup>&</sup>lt;sup>2</sup>Department of Community Medicine, KMCH Institute of Health Sciences and Research, Coimbatore, Tamil Nadu, India

<sup>&</sup>lt;sup>3</sup>Department of Community Medicine, Karpagam Faculty of Medical Sciences and Research, Coimbatore, Tamil Nadu. India

<sup>&</sup>lt;sup>4</sup>Department of Obstetrics and Gynaecology, Jawaharlal Nehru Medical College, Belagavi, Karnataka, India

by socio-cultural taboos and is linked with several false practises leading to adverse health outcomes. Unhygienic menstrual practices can lead to untoward consequences like pelvic inflammatory disease and infertility.6 Exclusion and shame lead to misconceptions and unhygienic practices during menstruation thereby resulting missing school and self-medication practices. Girls also tend to refrain from social interaction. One of the main issues regarding menstruation and menstrual hygiene for young girls is privacy. Anand et al states that many studies conclude that both reproductive tract infections (RTI) and vaginal discharge are related with non-use of hygienic methods during menstruation.8 For better menstrual hygiene especially among college going students, there is need for improvement in knowledge and practices as well as better access to materials like sanitary pads, clean toilets with running water and privacy. Social restrictions for women during menstruation have an impact on their emotional state, mindset and lifestyle. Large number of girls in less economically developed countries drop out of school at menarche.<sup>9</sup> There is also considerable doubt whether used sanitary materials come under biomedical or plastic waste, thereby making its safe disposal a problem. Proper menstrual hygiene can promote healthy sexual maturation and prevention of diseases. Knowledge about menstruation is also important to distinguish between normal and abnormal uterine bleeding and also for the purpose of knowing fertile periods and contraception. 10 The role of male in reproductive health has been acknowledged as an important contributor. 11 Hence this study was planned to assess the awareness and knowledge of menstrual hygiene practice among college going girls in the district of Coimbatore.

#### **METHODS**

This cross-sectional study was conducted in February 2018 among 710 private college girls in the field practice area of Urban Health Training Centre in the district of Coimbatore, Tamil Nadu after Institutional ethical committee approval. Prior permission was obtained from College authorities. A validated self-administered semistructured proforma containing questions related to menstruation and menstrual hygiene was used for this study. All the college girls who were present in class on the day of data collection and who were willing to participate in the study were included. All the participants were explained about the nature of the study, their rights and details about confidentiality and how this study will help in future contribution to the field. Written informed consent was obtained from those who were willing to participate. The proforma which contained questions related to their awareness on menstrual hygiene and their menstrual hygiene practices apart from the basic socio demographic questions was administered. participants were asked not to mention their name and identity on the proforma. The data collected was entered in Microsoft Excel and was analysed using SPSS software version 27. The results were expressed as frequencies and percentages.

#### RESULTS

710 college girls between the age group of 18-22 years responded. Among the study population, 1.1% attained menarche by 10 years of age, 4.4% attained menarche by 11 years of age. 21.1% attained menarche by 12 years of age, 31.3% attained menarche by 13 years of age, 24.5% attained menarche by 14 years of age, 15.5% attained menarche by 15 years of age and 2.1% attained menarche by 16 years and above (Table 1). 87% of the study population had regular menstrual cycles. 72.7% of the study population had 3-5 days of menstruation while another 23.1% had flow for 6-8 days (Figure 1). 65% of the study population had cycles between 28 and 32 days. 21.86% of the study population had cycle less than 28 days (Figure 2). 97.7% of the study population used disposable sanitary napkins. Only 2.3% of them used cloth. Of those who used cloths, 40 % washed the cloths and reused them (Figure 3). 80.4% of the study population had formal education on menstrual hygiene. 94.5% of them had the habit of changing pads/cloths before they go to bed. 94.1% had the habit of washing with water at every change and 76.49% of those who had the habit of washing used soap/antiseptic while washing (Table 2).

Table 1: Distribution of study population according to age which they attained menarche.

Age (year)	Frequency	Percentage (%)
10	8	1.1
11	31	4.4
12	150	21.1
13	220	31.3
14	174	24.5
15	110	15.5
16 and above	15	2.1
Total	710	100

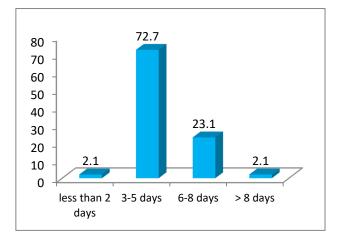


Figure 1: Distribution of study population according to duration of menstruation.

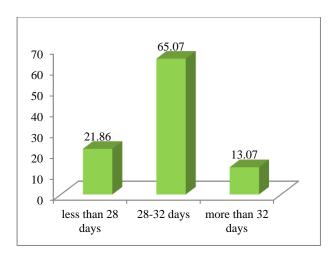


Figure 2: Distribution of study population according to length of each cycle.

65% had cycles between 28 and 32 days. 21.86% had cycle less than 28 days.

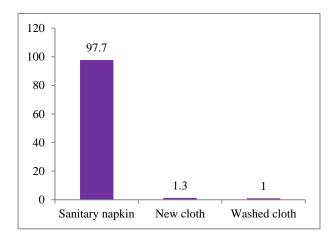


Figure 3: Distribution of study population according to type of absorbent used.

Table 2: Distribution of respondents according to their hygienic practices during menstruation.

Practice	Number	Frequency
Having previous education on menstrual hygiene	571	80.4
Change pads/cloth before going to bed	971	94.5
Washing with water every time	668	94.1
Using soap/antiseptic while washing	511	72

#### **DISCUSSION**

This study was planned to know the awareness/knowledge of menstruation and menstrual hygiene practices among girl students in private college in the field practise area of UHTC of a tertiary care hospital in the district of Coimbatore.

In this study, mean age of attaining menarche were 13. Many studies done among different populations in various places in India showed similar mean age. 7.12-14 87% of the participants had regular menstrual cycle which is high when compared to study done by Singh et al. 15 Menstrual cycles are often irregular during adolescence. 16,17 Immaturity of the hypothalamic-pituitary-ovarian axis during the early years after menarche often results in anovulation and cycles may be somewhat long; however, 90% of cycles will be within the range of 21-45 days, although short cycles of less than 20 days and long cycles of more than 45 days may occur. 18 By the third year after menarche, 60-80% of menstrual cycles are 21-34 days long, as is typical of adults. 17-19

About 97.7% of the participants used disposable sanitary napkins and 2.3% of them used clothes which is in accordance with study done by Juyal and Adhikari et al<sup>12,20</sup> Socio economic reasons are the main cause for use of cloth followed by lack of knowledge on menstrual hygiene.<sup>7,8,12,13</sup> In our study, 80.4% of the participants had a formal education on menstrual hygiene which is almost as same as the study done by Sharma et al.<sup>21</sup>

However due to the media awareness/school and college health awareness program there is improved knowledge and more use of sanitary napkins. Moreover, issue of free sanitary napkins since 2011 in Tamil Nadu has also decreased the use of cloths.<sup>22</sup>

About 94.1% of participants had the habit of washing their private parts every time they changed pads which is in accordance with a study done by Juyal et al whereas in a study done by Sharma et al only 42% of the study population had the habit of washing their genitalia every time which is very less compared to our study. <sup>15,21</sup> In a study done on menstrual hygiene by El Gilanya in Egypt documented that personal hygiene is highly affected due to lack of privacy. <sup>6</sup> Lack of privacy and proper toilet facilities were also attributed in other studies. <sup>7,8,13</sup> Since our study was done in a private college, the privacy and proper sanitation would have resulted in good results.

There were several limitations associated with this study. A self-administered questionnaire was used rather than conducting interviews and so the reliability of the answers could not be verified.

#### **CONCLUSION**

Millions of women are now suffering from reproductive tract infections and its complications. A major risk factor for reproductive tract infections is lack of menstrual hygiene. Women should be educated about the facts of menstruation and its physiological implications before bringing any change in menstrual practices. This can be achieved through educational TV programmes and knowledgeable parents. The mean age at menarche was 13 years which means that formal education on

menstruation and menstrual hygiene should start from school so that they will be well informed on this normal phenomenon.

Funding: No funding sources Conflict of interest: None declared

Ethical approval: The study was approved by the

Institutional Ethics Committee

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Cite this article as: Rajan PV, Shanmugam J, Jayaraj NP, Arumugam A. A cross-sectional study on awareness and knowledge of menstrual hygiene practices among college going girls in Coimbatore district, Tamil Nadu. Int J Community Med Public Health 2021;8:125-8.