

## Original Research Article

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# A descriptive study to assess the knowledge regarding menstrual problems and their management among adolescent girls in selected institute of Dehradun, Uttarakhand

Shivani Rawat<sup>1</sup>, Nikita Karmiyal<sup>1</sup>, Ekta Chauhan<sup>1</sup>, Simran Saini<sup>1</sup>, Deepti Kothiyal<sup>1</sup>, Vaibhav Karna<sup>1</sup>, Divyanshi Rana<sup>1</sup>, Shama Praveen<sup>2\*</sup>, Namrata Pundir<sup>3</sup>, Chandan Kumar<sup>4</sup>

<sup>1</sup>Himalayan College of Nursing, Swami Rama Himalayan University, Dehradun, Uttarakhand, India

<sup>2</sup>Department of Obstetrical and Gynecological Nursing, Swami Rama Himalayan University, Dehradun, Uttarakhand, India

<sup>3</sup>Department of Child Health Nursing, Swami Rama Himalayan University, Dehradun, Uttarakhand, India

<sup>4</sup>Department of Community Health Nursing, Swami Rama Himalayan University, Dehradun, Uttarakhand, India

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**\*Correspondence:**

Dr. Shama Praveen,

E-mail: shamapraveen4@gmail.com

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## ABSTRACT

**Background:** Menstrual problems are a disruptive physical and/or emotional symptoms just before and during menstruation, including heavy bleeding, missed periods and unmanageable mood swings. Menstrual problems can be cause of significant amount of stress to both the adolescent girls and their parents. Appropriate and early management of patient is necessary in order to minimize the possibility of complications in future.

**Methods:** Quantitative research approach with non-experimental descriptive research design was used in the present study. A total of 61 samples were selected through non probability convenient sampling technique from adolescent girls of radiant public school, Doiwala, Dehradun. Structured knowledge questionnaire was given to the participants and data was collected in order to assess knowledge of each participant.

**Results:** The present study showed that out 61 adolescent girls 95% (58) adolescents were suffering from dysmenorrhea during menstruation and 62.3% of adolescent girls had excellent knowledge regarding menstrual problems. There was a significant association between level of knowledge with age group and body type.

**Conclusions:** From the findings of the study, it was concluded that out of 61 adolescent girls 95% (58) were suffering from dysmenorrhea during menstruation and about 62.3% have excellent knowledge regarding menstrual problems and 93.44 adolescent girls uses hot water bag to manage dysmenorrhea.

**Keywords:** Adolescent girls, Dysmenorrhea, Knowledge, Management, Menstrual problems

## INTRODUCTION

The objective of present study was to assess the knowledge of adolescent girl about menstrual problem and its management.

Adolescence is a linkage between childhood and adulthood; it is described as a phase of life stretching between these two stages. Adolescence involves two basic components biological growth and social role transitions.<sup>1</sup>

WHO defines 'adolescents' as individuals in the 10-19 years age group. The majority of adolescents are, therefore, included in age-based definition which is adopted by "convention on the rights of child" as a person under the age of 18 years. WHO also combine adolescent and youth while these terms are used interchangeably.<sup>2</sup>

Menstrual problems are a disruptive physical and/or emotional symptom just before and during menstruation, including heavy bleeding, missed periods and unmanageable mood swings. Menstrual problems can be cause of significant amount of stress to both the adolescent girls and their parents. Appropriate and early management of patient is necessary in order to minimize the possibility of complications in future.<sup>3</sup>

In spite of knowing, all women have to deal with menses there is a very little knowledge amongst women regarding the process of mensuration. The term period is associated with a lot of misleading taboos and myths. The knowledge about menstruation process practice and menstrual hygiene is very limited to people living in rural areas. It is believed that having periods is a sinful act and is associated with impurity. While bleeding, women are not allowed to visit holy places, touch pickle, kitchen, preparing meal for priest, touching plants and many more.<sup>4</sup> Dysmenorrhea is derived from a great term which means- "painful monthly bleeding" dysmenorrhea can be bifurcated into primary dysmenorrhea and secondary dysmenorrhea. Primary dysmenorrhea is pain of lower abdomen occurring as a result of periods and is completely normal as it is not associated with any disease. On the other hand, secondary dysmenorrhea is a result of some disease. Secondary dysmenorrhea is associated with other pathology inside or outside the uterus. Dysmenorrhea is a common complaint amongst girls and women during their reproductive age. Dysmenorrhea leads to a change in emotional psychological and wellbeing of an individual.<sup>5</sup>

A study was conducted in Tamil Nadu by Rama Ravi. The population of the study was adolescent girls of rural school of Thiruvallur district, Tamil Nadu. The objective of this study was simply to estimate the prevalence of menstrual problem mainly dysmenorrhea menorrhagia and irregular menstrual cycle. 350 participants were involved in this study. Results of the study showed the mean age of participants was 14.74 years mean age of menarche of participants was 12.4 years according to this study 87.7% of girls suffered from menstrual problems. Dysmenorrhea was prevalent in 72.6% and menorrhagia was prevalent in 45.7% and the prevalence of a regular menstrual cycle was 31.7% respectively.<sup>6</sup>

The objective of present research study was to assess the knowledge of adolescent girl about menstrual problem and its management.

## METHODS

Non-experimental descriptive research design, was used to assess the knowledge regarding menstrual problems among adolescent girls. Data was collected at Radiant Public School, Doiwala, Dehradun Uttarakhand from 7<sup>th</sup> July to 9<sup>th</sup> July 2022.

The sample size was 61 adolescent girls from high school and intermediate class who fulfilled the inclusion criteria i.e. adolescent girls who were 13 to 17 years of age, had menarche and willing to participate. patients who were not willing, had psychological problems and not present at the time of data collection were excluded from the study.

Sample size was calculated based on previous literature and Non probability convenient sampling was used. A written permission was obtained from the ethics committee of SRHU, Principal of Himalayan College of Nursing, SRHU and Principal of Radiant Public School, Doiwala, Dehradun. After that data was collected by using structured knowledge questionnaire and need based education was given to each participant. data analysis was done by using descriptive (frequency, percentage, mean, median, mode and SD) and inferential (chi-square method).

## RESULTS

### *Objective 1: Frequency and percentage distribution of sociodemographic characteristics of adolescent girls*

Table 1 showed that 44.3% of the adolescent girls were of 11-15 years of age and 55.7% of the adolescent girls were of 16-20 years of age. 50.8% of adolescent girls were living in semiurban area. 77.1% of the adolescent girls were studying in class 10<sup>th</sup> and 22.9% of girls were studying in class 12<sup>th</sup>. 78.7% of the adolescent girls belonged to Hindu religion. 60.7% of adolescent girls were living in nuclear family. 96.7% adolescent girls had their menarche at the age of 11-15 years. 60.7% of adolescent girls were underweight. It was found that, 47.5% of adolescent girls were having menstrual flow for 4-5 days and 44.3% of adolescent girls had menstrual flow for 6-7 days. 68.9% of adolescent girls were having prior information regarding menstrual problems it was found that the source of their information was family (59%). 59% of adolescent girls' family's monthly income was 10001 INR - >15000 INR.

### *Knowledge regarding menstrual problems*

Table 2 showed that the minimum score was 9 and maximum score was 24, the range was 9-24, Mean $\pm$ SD 17.95 $\pm$ 2.99 with median 18 and mean was 78.043%.

**Table 1: Frequency and percentage distribution of sociodemographic characteristics of adolescent girls (n=61).**

Variables	Frequency	Percentage
<b>Age (in years)</b>		
11-15	27	44.3
16-20	34	55.7
<b>Living area</b>		
Rural	23	37.7
Urban	7	11.5
Semi urban	31	50.8
<b>Educational status</b>		
High school	47	77.1
Intermediate	14	22.9
<b>Religion</b>		
Hindu	48	78.7
Muslim	6	9.8
Sikh	7	11.5
<b>Type of family</b>		
Nuclear	37	60.7
Joint	24	39.3
<b>Age of menarche (in years)</b>		
11-15	59	96.7
16-20	2	3.3
<b>Body type (according to weight)</b>		
Underweight	37	60.7
Normal	22	36.1
Obese	2	3.2
<b>Flow of menstrual cycle (in days)</b>		
2-3	5	8.2
4-5	29	47.5
6-7	27	44.3
<b>A. Prior information regarding menstrual problems.</b>		
Yes	42	68.9
No	19	31.1
<b>B. Source of information (if yes)</b>		
Family	36	59
Books	7	11.5
Others	8	13.1
Not answered	10	16.4
<b>Family income (monthly)</b>		
<5000-10000 INR	25	41
10001->15000 INR	36	59

**Table 2: knowledge score of adolescent girls regarding menstrual problems (n=61).**

Variables	Maximum score	Minimum score	Range of score	Mean±SD	Median	Mean percentage
Knowledge score	24	9	9-24	17.95±2.99	18	78.043

**Table 3: Menstrual problems among adolescent girls.**

Menstrual problem	Frequency	Percentage
Dysmenorrhea	58	95
Diarrhoea	1	1.6
Headache	1	1.6
Not answered	1	1.6

Table 3 shows that 95% (58) of the adolescents' girls have dysmenorrhea as their major menstrual problem.

The Figure 1 shows that the 93.44% (57) adolescent girls used hot water bag to manage their dysmenorrhea. 3.27% (2) used cold water, 0.01% (1) used to avoid social interaction.

Table 4 shows that the significant association found between knowledge score with age and body type.



**Figure 1: Management of menstrual problems among adolescent girls.**

**Table 4: Association between knowledge score with their selected demographic variables.**

Variables	Below median (18)	At and above median (18)	Difference	Chi square value	P value
<b>Age (in years)</b>					
11-15	11	16			
16-20	10	24	1	14.7837	0.000121
<b>Living area</b>					
Urban	5	2			
Rural	6	17	2	5.315	0.070
Semi urban	10	21			
<b>Educational status</b>					
High school	17	30			
Inter mediate	04	10	1	0.274	0.600
<b>Religion</b>					
Hindu	17	31			
Muslim	04	02	2	4.045	0.132
Sikh	0	07			
<b>Type of family</b>					
Joint	06	18			
nuclear	15	22	1	1.556	0.212
<b>Age of menarche</b>					
11-15 years	19	40			
16-20 years	02	0	1	2.629	0.104
<b>Body type (according to weight)</b>					
Normal	19	03			
Under weight	01	36	02	42.998	0.00001
Obese	01	01			
<b>Flow of menstrual cycle (days)</b>					
2-3	02	03			
4-5	09	20	2	0.288	0.865
6-7	10	17			
<b>a. Prior knowledge</b>					
Yes	16	26			
No	07	12	01	0.0085	0.926
<b>b. Source of information</b>					
Family	16	20			
Books	02	05	03	4.784	0.188
Others	01	07			
Not answered	06	04			
<b>Monthly income of family</b>					
<5000-10000	08	17	1	0.109	0.741
10001 - >15000	13	23			

Df<sub>1</sub>=3.84 at the level of p<0.05

## DISCUSSION

The study evaluated the knowledge of adolescent girls regarding Menstrual problems and its management. The minimum score was 9 and maximum score was 24, the range was 9-24, mean $\pm$ SD 17.95 $\pm$ 2.99 with median 18 and mean was 78.043%. The findings of the study also revealed that the majority 62.3% of the total participant have good knowledge about menstrual problem and its managements. About 26.3% of the participants have excellent knowledge 0.10% of them have average knowledge and 1.4% of the adolescent girls have poor knowledge. The present study revealed that out of 61 adolescent girls 95% (58) were suffering from dysmenorrhea during menstruation and 93.44 adolescent girls uses hot water bag to manage dysmenorrhea.

The study outcome was supported by the cross-sectional prospective study conducted by Kavya Kothapalli, Geethika Bathula on 250 unmarried nursing students in Uluru, Andhra Pradesh, India. the result showed that the Among 250 students, 9.6% have irregular cycles, 90.4% have regular cycles and 70.8% have cycle length of 24-38 days. Majority of girls has one or more menstrual problems. 85.6% have dysmenorrhea as most prevalent symptom and among them 29.2% have severe dysmenorrhea resulting in absenteeism to classes. 41.6% have heavy menstrual flow. Most of students 78% have premenstrual symptoms.<sup>7</sup>

Another study was conducted in Garhwal, India by Negi et al showed that dysmenorrhea, PMS, and menstrual irregularities were main cause for the changes in dietary habits and physical activities. Dysmenorrhea was associated with eating junk food (66.10%), and PMS was associated with lacking of physical activities (78.94%). According to the study it was concluded that eating habit and physical activities directly affecting the menstrual health of adolescent girls.<sup>8</sup>

Present study findings were also supported by Pogodina et al on the topic “health-related quality of life and menstrual problems in adolescents”, according to this study 77% girls had menstrual problems. Dysmenorrhea was the most frequent of these, followed by girls with oligomenorrhea is 10.3% and girls with heavy menstrual bleeding is 4.8% and 10.3% girls had combined disorders. The prevalence of menstrual problems is high in schoolgirls.<sup>9</sup>

The study findings revealed that there was significant association between knowledge score regarding menstruation with age and body type of adolescent girls. These findings were supported by a study which was conducted by Amena et al among schoolgirls from Sharjah, UAE. The study objective was to assess the factors associated with age at menarche, menstrual knowledge, and hygiene practices among schoolgirls. Study findings revealed that the mean age at menarche

among females in UAE is 11.50 years. Also, there was no correlation between BMI and age at menarche. However, it was found that a higher income and a better socio-economic status were linked with earlier onset of menstruation. Those who had already reached menarche, were in higher grades, had higher household income, and those who received information regarding menstruation from their mothers, had a greater overall knowledge about menses.<sup>10</sup>

This study also has several limitations, the sample size is relatively small and may not be representative of all hence, it is recommended to conduct further studies using larger sample size. And no interventions were being made in the study, only the knowledge of patients were assessed and need based education was given.

## CONCLUSION

Despite the limitations, the study highlighted the need for creating awareness regarding menstrual problems. From the findings of the study, it was concluded that out of 61 adolescent girls 95% (58) were suffering from dysmenorrhea during menstruation and about 62.3% have excellent knowledge regarding menstrual problems and 93.44 adolescent girls uses hot water bag to manage dysmenorrhea.

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## REFERENCES

1. Rosen JE. Adolescent health and development (AHD): a resources guide for World Bank operations staff and government counterparts. Washington DC: The World Bank; 2004.
2. Nagy H, Khan MAB. Dysmenorrhea. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2022.
3. Gudipally PR, Sharma GK. Premenstrual Syndrome. StatPearls. Treasure Island (FL): StatPearls Publishing; 2022:18.
4. Moon LM, Perez-Milicua G, Dietrich JE. Evaluation and management of heavy menstrual bleeding in adolescents. *Curr Opin Obstet Gynecol.* 2017;29(5):328-36.
5. Thakre SB, Thakre SS, Ughade S, Thakre AD. Urban-rural differences in menstrual problems and practices of girl students in Nagpur, India. *Indian Pediatr.* 2012;49(9):733-6.
6. Ravi R, Shah PB, Edward S, Gopal P, Sathiyasekaran BWC. Social impact of menstrual

problems among adolescent school girls in rural Tamil Nadu. *Int J Adolesc Med Health.* 2017;30(5).

7. Kothapalli K, Bathula G. Menstrual problems in nursing students-a cross-sectional study in a tertiary care hospital. *Int J Acad Med Pharm.* 2023;5(3):1850-3.

8. Negi P, Mishra A, Lakhra P. Menstrual abnormalities and their association with lifestyle pattern in adolescent girls of Garhwal, India. *J Family Med Prim Care.* 2018;7(4):804-8.

9. Pogodina A, Dolgikh O, Astakhova T, Klimkina J, Khramova E, Rychkova L. Health-related quality of life and menstrual problems in adolescents. *J Paediatr Child Health.* 2022 06;58(6):1028-32.

10. Ali AM, Bashier SA, Ahmed S, Subeh HH, Taha RM, Ibrahim SA, et al. Factors associated with age at menarche, menstrual knowledge, and hygiene practices among schoolgirls in Sharjah, UAE. *Int J Adolesc Youth.* 2024;29(1):2367117.

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