

**How to Cite:**

Nandanwar, P., & Hambarde, V. (2022). Knowledge regarding puberty menorrhagia among adolescent girls in selected schools: A descriptive study. *International Journal of Health Sciences*, 6(S3), 9589–9600. <https://doi.org/10.53730/ijhs.v6nS3.8287>

## **Knowledge regarding puberty menorrhagia among adolescent girls in selected schools: A descriptive study**

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**Abstract**---Objectives: 1) To assess the knowledge regarding puberty menorrhagia among adolescent girls in selected schools of the city. 2) To find out the association between the knowledge and selected demographic variables. 3) To disseminate informational booklet on puberty menorrhagia. Methodology: Non experimental descriptive design used for the study. It was conducted over 100 adolescent girls by using Non probability convenient sampling technique. Results: Assessment was done using Self structured questionnaire on knowledge regarding Puberty Menorrhagia. Analysis showed that Mean knowledge score was  $11.18 \pm 3.49$  and mean percentage of knowledge score was  $37.26 \pm 11.63$ . Mean knowledge score among adolescent girls for the area of introduction was  $4.19 \pm 1.44$ , for the area of aetiopathology it was  $0.11 \pm 0.31$ , for the area of definition it was  $0.35 \pm 0.57$ , for the causes it was  $0.48 \pm 0.50$ , for sign and symptoms it was  $1.09 \pm 0.79$ , for management it was  $1.26 \pm 0.79$ , for home remedies it was  $3.13 \pm 1.66$  and for the area of complications it was  $0.57 \pm 0.63$ . Conclusion: Analysis reveals that there was association of knowledge score with age, father's occupation and previous knowledge regarding puberty menorrhagia while none of the other demographic variables were associated with knowledge score. Thus it was concluded that assessment of knowledge regarding puberty menorrhagia among adolescent girls in selected schools of the city was average. Adolescent girls were having good knowledge in the area of introduction and home remedies of puberty menorrhagia.

**Keywords**---puberty menorrhagia, menstrual problems, adolescent girls, assessment, knowledge.

## **Introduction**

In addition to the physiological development, menstruation is the most essential aspect of a girl's life in adolescent period. Menarche is a beginning of menstruation. The intervals of the menstruation cycles and amount of blood loss are fluctuating throughout this period. Gynaecological attendance is more common in adolescent girls with menstrual complaints. Menorrhagia, metrorrhagia, oligomenorrhea, amenorrhea and dysmenorrhea are the common menstrual disorders. The most common menstrual problem is menorrhagia.<sup>1</sup> Puberty menorrhagia is also known as extreme blood loss more than 80 ml or more than 7 days from menarche to the age 19 year. Dysfunctional uterine bleeding is the commonest cause of puberty menorrhagia. The main physiological factor which is responsible for puberty menorrhagia is immaturity of hypothalamic- pituitary-ovarian axis. Patients with puberty menorrhagia having complaints of heavy blood loss which is leading to anaemia.<sup>2</sup>

## **Background**

No longer a toddler, not however a woman! a beautiful line is expressing philosophy of a adolescence. Adolescence period is evolution of a child in to responsible adult. Not only physical and sexual but also emotional and mental changes occurs in this period. There is a need to emphasize on adolescent's health to blossoming tomorrow's adult.<sup>3</sup> Worldwide 1.2 billion are adolescents who are crossing childhood to becoming adults. In India there are 243 million adolescent who accounts near about one quarter population ranging from 10 to 19 years of age.<sup>4</sup>

## **Need of the study**

In adolescent girl's life menarche is major event. If considering all over gynaecological problems, puberty menorrhagia is the commonest menstrual problem in adolescent girls. The incidence of puberty menorrhagia is 5% of Indian adolescent population.<sup>5</sup> A major challenge for gynaecologist is puberty menorrhagia which is related to anemia and hypoproteinemia as very crucial systemic complications. In management of puberty menorrhagia, early diagnosis and treatment of each and every case is important.<sup>6</sup> A study was conducted to evaluate puberty menorrhagia in MGM Medical College and Hospital, Aurangabad. This study has found menorrhagia in 48% late adolescence period i.e. 11-19 years, 28% middle adolescence. Researcher found that majority of them not getting medical care because of unaware about the condition and education can aid in making them aware about their health.<sup>7</sup> Viewing above incidence and prevalence of puberty menorrhagia among pubertal adolescent girls, thus investigator felt the need to design a descriptive study to assess the knowledge regarding puberty menorrhagia among adolescent girls in selected schools of the city and to disseminate informational booklet on puberty menorrhagia to create the awareness.

## **Title**

Knowledge regarding Puberty Menorrhagia among adolescent girls in selected schools: A Descriptive Study.

## **Objectives**

### **Primary Objective**

To assess the knowledge regarding puberty menorrhagia among adolescent girls in selected schools of the city.

### **Secondary Objective**

- To assess the knowledge regarding puberty menorrhagia among adolescent girls in selected schools of the city.
- To find out the association between the knowledge and selected demographic variables.
- To disseminate informational booklet on puberty menorrhagia.

## **Operational Definition**

- *Knowledge*: In this study, response obtained from adolescent girls of selected schools of the city regarding puberty menorrhagia.
- *Puberty Menorrhagia*: In this study, puberty menorrhagia refers to excessive menstruation more than 80 ml or more than 7 days.
- *Adolescents*: In this study, adolescents refer to those girls who belong to 13-16 years of age.
- *Schools*: In this study, school refers to those places where adolescents are going to be educated.

## **Assumptions**

- Adolescent girls have some knowledge regarding puberty menorrhagia.
- Adolescent girls are unaware about the consequences of puberty menorrhagia.
- There may be significant association between knowledge regarding puberty menorrhagia with their selected demographic variables.

## **Limitations**

The study is limited to:

- The study was not interventional study only to assess the level of knowledge among adolescent girls regarding Puberty Menorrhagia.
- The study was conducted only on adolescent girls.
- Only selected schools were selected for the study.

### **Ethical Aspect**

The ethical committee of the institution had given the approval for this study proposal. Prior permission was obtained from the concerned authority for conducting this study. After explaining all the aspects of the study to the participants and their parents, written consents were taken from them. All the information obtained from the participant was kept confidential.

### **Review of Literature**

In the present study, the review of literature is organized under following headings:

- Literature related to menstrual disorders.
- Literature related to puberty menorrhagia among adolescents.

### **Conceptual Framework**

The conceptual framework used for the present study is developed from the health belief model.

### **Methodology**

#### **Research approach**

Quantitative research approach

#### **Research design**

Non-experimental descriptive research design

#### **Setting of the study**

The study is conducted in selected schools.

#### **Research variable**

Knowledge regarding Puberty Menorrhagia among adolescent girls.

#### **Demographic variables**

Age, Religion, Type of family, Mother's educational level, Mother's occupation, Father's educational level, Father's occupation, Monthly family income of parents in rupees, Age of menarche, Previous knowledge regarding Puberty Menorrhagia and If yes, then source of information.

## **Population**

- *Target population:* It includes all adolescent girls in selected schools.
- *Accessible population:* In this study accessible population is adolescent girls who meet the designated criteria and who belongs to 13-16 years of age in selected schools of the city and are available at the time of data collection.

## **Sampling**

- *Sample size:* 100 adolescent girls.
- *Sampling technique:* Non probability convenient sampling technique

## **Sampling criteria**

### **Inclusion criteria**

Adolescent girls:

- Who belongs to 13-16 years of age
- Who are willing to participate in study
- Who are available at the time of data collection
- Who understand Marathi, Hindi and English language

### **Exclusion criteria**

Adolescent girls:

- Who are not willing to participate in study
- Who are not available at the time of data collection

## **Description of Tools**

- Section I- semi- structured questionnaire on demographic variables
- Section II – Self-administered of knowledge

## **Validity**

For content validity tool was given to 20 experts for the content and construct validity; including Obstetrics and Gynecology nursing experts, , professors in Obstetrics and Gynecological, physician of Obstetrics and Gynecological , Statistician and their valuable suggestions were given and necessary corrections were made after the consultation with guide.

## **Reliability**

In this study, by using Guttman Split Half method of reliability, it was found to be 0.8073 and hence tool is reliable and valid.

### Pilot study

It was conducted on 10 adolescent girls and collected data was coded, tabulated and descriptive and inferential statistics used to analyze. The pilot study was feasible in term of time, money and resources.

### Data collection

The main study data was gathered from 28 December 2020 to 16 January 2021. Permission was obtained from concerned authority. The samples were approached in small groups on a daily basis. Self-introduction was given by the investigator and the purpose of the study was mentioned. The consent was given to the samples and their parents one day prior to the conduction of the study. Test was conducted by semi- structured questionnaire and collect back after 30 minutes. After the conduction of test the investigator administered the informational booklet (on knowledge regarding puberty menorrhagia).

### Results

**Section I:** Description of adolescent girls in selected schools with regards to their demographic variables.

Table IV-1

Table showing frequency and percentage wise distribution of adolescent girls in selected schools according to their demographic variables

n=100

Demographic Variables	Frequency (f)	Percentage (%)
Age(years)		
13 years	4	4
14 years	42	42
15 years	39	39
16 years	15	15
Religion		
Hindu	72	72
Muslim	2	2
Christian	0	0
Buddhist	25	25
Other	1	1
Type of family		
Nuclear	71	71
Joint	27	27
Extended	2	2
Mother's Education		
Primary	15	15
Secondary	79	79
Graduation	4	4
Post-Graduation	2	2
Other	0	0

Mother's Occupation		
Service	21	21
Business	12	12
Homemaker	51	51
Labour	16	16
Father's Education		
Primary	19	19
Secondary	67	67
Graduation	10	10
Post-Graduation	4	4
Other	0	0
Father's Occupation		
Service	32	32
Business	24	24
Unemployed	2	2
Labour	42	42
Monthly Family Income of Parents (Rs)		
Below 10000 Rs.	34	34
10001-15000 Rs.	36	36
15001-20000 Rs.	22	22
Above 20000 Rs.	8	8
Age of menarche(years) n=95		
11 years	1	1.1
12 years	14	14.7
13 years	48	50.5
14 years	26	27.4
15 years	6	6.3
Previous information regarding puberty menorrhagia		
Yes	11	11
No	89	89
Source of information regarding puberty menorrhagia n=11		
Health Personnel	0	0
Media	1	9.1
Teachers	2	18.2
Parents	8	72.7

**Section II:** Description of assessment of knowledge score regarding Puberty Menorrhagia among adolescent girls in selected schools of the city.

Table IV-2

showing frequency percentage wise distribution of assessment of knowledge score regarding puberty menorrhagia among adolescent girls in selected schools

n=100

Level of knowledge	Score Range	Level of Knowledge Score	
		Frequency (f)	Percentage (%)
Poor	0-20%(0-6)	11	11
Average	21-40%(7-12)	58	58

Good	41-60%(13-18)	27	27
Very Good	61-80%(19-24)	4	4
Excellent	81-100%(25-30)	0	0
Minimum score		4	
Maximum score		21	
Mean knowledge score		11.18 ± 3.49	
Mean % Knowledge Score		37.26 ± 11.63	

**Section III:** Distribution of area wise assessment of knowledge score of adolescent girls in selected schools of the city regarding Puberty Menorrhagia.

Table IV – 3

Table showing area wise assessment of level of knowledge among adolescent girls in selected schools of the city

n=100

S.N.	Knowledge Area	Correct Response		Incorrect Response	
		N	%	N	%
<b>Introduction</b>					
1	What is puberty?	55	55	45	45
2	What is the average age of puberty in girls?	23	23	77	77
3	Which are the physiological changes occur during puberty in girls?	74	74	26	26
4	What is menarche?	35	35	65	65
5	What is menstruation?	88	88	12	12
6	What is the average length of menstrual cycle?	24	24	76	76
7	What is the normal duration of menstrual cycle in days?	73	73	27	27
8	What is the average amount of menstruation?	22	22	78	78
10	What is abnormal menstruation?	25	25	75	75
<b>Aetiopathology</b>					
9	Which factor is responsible for menstruation?	11	11	89	89
<b>Definition</b>					
11	What is Menorrhagia?	11	11	89	89
12	What is Puberty Menorrhagia?	24	24	76	76
<b>Causes</b>					
13	What is the cause of Puberty Menorrhagia?	48	48	52	52
<b>Sign and symptoms</b>					
14	What is the indicative sign of Puberty Menorrhagia?	20	20	80	80
15	What are the sign and symptoms of puberty menorrhagia, EXCEPT?	24	24	76	76
16	How frequently one can need to change pad in puberty menorrhagia?	8	8	92	92

17	What will happen if there is excessive blood loss?	57	57	43	43
Management					
18	What is the management of puberty menorrhagia?	30	30	70	70
19	When to seek doctor's advice?	53	53	47	47
20	What is advised during heavy bleeding?	43	43	57	57
Home Remedies					
21	Which home remedies can help to reduce symptoms of puberty menorrhagia	40	40	60	60
22	How unhealthy weight can affect menstruation?	30	30	70	70
23	Which dietary supplements are needed during Puberty Menorrhagia?	19	19	81	81
24	Which are the iron rich foods?	49	49	51	51
25	Which foods are richest source of vitamin C?	32	32	68	68
26	How to keep your-self hydrated during Puberty Menorrhagia?	59	59	41	41
27	How to overcome pain during Puberty Menorrhagia?	46	46	54	54
28	Why yoga is recommended in puberty menorrhagia?	38	38	62	62
Complications					
29	What is the complication of Puberty Menorrhagia?	39	39	61	61
30	How to treat severe puberty menorrhagia	18	18	82	82

Table IV – 4

Table showing area wise mean, standard deviation, and mean percentage of knowledge score of adolescent girls in selected schools of the city

Area of knowledge score	No of questions	Mean	SD	Mean %
Introduction	9	4.19	1.44	46.55
Aetiopathology	1	0.11	0.31	11
Definition	2	0.35	0.57	17.50
Causes	1	0.48	0.50	48
Sign and symptoms	4	1.09	0.79	27.25
Management	3	1.26	0.79	42
Home Remedies	8	3.13	1.66	39.12
Complications	2	0.57	0.63	28.50

**Section IV:** Description on association of knowledge score regarding Puberty Menorrhagia among adolescent girls of the city with their selected demographic variables.

Table IV-5

Table showing association of knowledge score with selected demographic variables

n=100

Demographic variables	Calculated values			Df	Table value	Level of significance p<0.05	Significance
	T - value	F - value	p - value				
Age (in years)	-	4.03	0.010	3,96	2.68	p<0.05	S
Religion	-	0.79	0.49	3,96	2.68	p>0.05	NS
Type of family	-	0.17	0.83	2,97	3.07	p>0.05	NS
Mother's educational level	-	0.66	0.57	3,96	2.68	p>0.05	NS
Mother's occupation	-	1.11	0.34	3,96	2.68	p>0.05	NS
Father's educational level	-	1.73	0.16	3,96	2.68	p>0.05	NS
Father's occupation	-	4.10	0.009	3,96	2.68	p<0.05	S
Monthly family income of parents	-	0.17	0.91	3,96	2.68	p>0.05	NS
Age of menarche	-	0.52	0.71	4,90	2.45	p>0.05	NS
Previous information regarding puberty menorrhagia	2.73	-	0.007	98	1.98	p<0.05	S
Sources of information	-	0.23	0.79	2,97	3.07	p>0.05	NS

Key-S-Significant  
Not Significant

NS-

### Discussion

A study was conducted to Assess the Knowledge and Attitude of Menorrhagia among Adolescent Girls in Selected College of Raichur, with a view to develop health education module. The objectives of this study were to assess the knowledge and attitude regarding menorrhagia, to find out the association between knowledge and attitude of adolescent girls regarding menorrhagia with demographic variables, to develop health education module regarding menorrhagic girls. A descriptive survey research approach was used. By using non probability purposive sampling the college was selected for the study. This study included 100 adolescent Girls of Selected College of Raichur using simple random sampling i.e. lottery method. For collecting the study data structured interview schedule questionnaire was used. <sup>8</sup>

In the above study 56% adolescent girls had low knowledge score, 37% had average knowledge score and 7% had high knowledge score regarding menorrhagia. In present study, 58% has average knowledge score regarding puberty menorrhagia. 27% of adolescent girls had good level of knowledge score, 11% of adolescent girls had poor knowledge score and 4% of adolescent girls had very good level of knowledge score. However none of the adolescent girls were having excellent level of knowledge score. In the above study, there was no significant association with their demographic variables such as age, religion, education and BMI. In present study, there was significant association found between knowledge score with the demographic variables such as age, father's occupation and previous information regarding puberty menorrhagia.

### **Conclusion**

Thus it was concluded that assessment of knowledge regarding puberty menorrhagia among adolescent girls in selected schools of the city was average. Adolescent girls were having good knowledge in the area of introduction and home remedies of puberty menorrhagia.

### **Acknowledgement**

By being grateful to god you acknowledge that nothing is gained by your power alone. This dissertation would not have been possible without the inspiration and support of a number of wonderful people – my thanks and appreciation to all of them for being part of this journey and making the dissertation possible.

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