

KAP Study of menstrual hygiene among female medical students at GMCH, Aurangabad.

Dr. Y.V. Bhagat¹, Dr. S.P. Andurkar²

^{1,2}(Department of community medicine, GMCH Aurangabad, India)

Abstract:

Background: Menstruation is a phenomenon unique to the females. Menarche marks the beginning of a multitude of physical, physiological and psychological changes in the lives of the adolescent girls. Reproductive tract infections are around 70% more common among reproductive women who had poor menstrual hygiene practices..

Materials and Methods: : This was a cross-sectional study conducted in a Government Medical College and Hospital Aurangabad among female medical students belonging to 1st year to 4th year of MBBS. All female medical students who give consent were included in the study.

Results: : During the study period total 271 female medical students were enrolled in the study, 37.5% belonged to second year of MBBS. Mean age of respondents was 20.63±1.51 years. 65.68% participant practiced good menstrual hygiene and had adequate menstrual hygiene knowledge (63.83%). Majority 63.83% of the participants had correct knowledge about menstruation. Compared to first year students third (p=0.008) and fourth year (p=0.018) female medical students have correct knowledge of menstrual hygiene. Mother was the source of information about menstrual hygiene.

Conclusion: Only 63.83% female medical students had correct knowledge about menstruation and only 65.68% followed good menstrual practices. This percentage is still very low even though sex education is started from the schooling. This might be due to various cultural background followed by women belong to various cultural background and ethnicity.

Key Word: Menarche, Menstrual hygiene.

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I. Introduction

Menstruation is a phenomenon unique to the females. It is a normal physiological process and a key sign of reproductive health in women in the reproductive age group. According to United Nations Children Emergency Fund (UNICEF) there are 243 million adolescents comprise 20% of the total population of India which clearly shows that India is truly “young”¹. Special health care needs and requirements of women during monthly cycle of menstruation are collectively given the term “Menstrual hygiene”². Menstrual hygiene is an issue that every girl and women have to deal with in her life but there is lack of awareness on the process of menstruation. First menstruation is called as Menarche. Menarche marks the beginning of a multitude of physical, physiological and psychological changes in the lives of the adolescent girls. Menarche is one part of maturation process, but it is often, culturally defined as the indicator for girl’s maturity and readiness for marriage and sexual activity. Several practice and misconception are often linked with menstruation, which may lead to adverse health outcomes³. In India too, this time is considered dirty and associated with taboos, which has a negative implication for women’s health⁴. Many taboos like avoiding bathing and restricted consumption of certain food like salt and pickle are widely prevalent⁵. Reproductive tract infections are around 70% more common among reproductive women who had poor menstrual hygiene practices. These infection might lead to foetal wastage, cervical cancer, infertility, ectopic pregnancy etc⁶. Sexually transmitted infections and reproductive tract infections affect health and social wellbeing of the reproductive aged women⁷. Good menstrual hygiene, such as use of sanitary napkin and adequate washing of the genital area is essential during menstruation⁴. Poor menstrual hygiene affect the educational activities as well as the day-to-day activities of women. In India, especially in rural area, women lack knowledge about menstrual hygiene practices due to social prohibition and are not allowed to discuss about this phenomenon⁸. Menstrual hygiene also has an environmental impact. Improper disposal of sanitary napkin or cloth like keeping them inside toilets and their indiscriminate disposing in ponds/drains poses a threat to the environment which indirectly affect health⁹. Menstrual hygiene is a matter of concern globally including India as it is not properly addressed in the reproductive health sector¹⁰. In developing countries, these aspects have been ignored by the leaders, policy

makers as well as researchers¹¹. With this background, the present study was conducted to assess the knowledge, attitude and practice among medical students regarding menstruation and menstrual hygiene.

II. Material And Methods

This was a cross-sectional study conducted in a Government Medical College and Hospital Aurangabad among female medical students belonging to 1st year to 4th year of MBBS. The study duration comprised of 1 month. All female medical students who give consent were included in the study. Predesigned, pretested semi-structured questionnaire was used as study tool. Study tool consisted of four sections, socio-demographic characteristics, knowledge about menstruation, menstrual hygiene practices during menstruation and attitude towards menstruation. Each correct response earned one point, whereas any wrong or don't know response attracted no mark. Interview method was used for data collection after obtaining informed consent from the participants. Data were collected in the quietest corner of the hostel compound that gives optimum privacy and the interviews took 45 – 90 minutes. For this study, satisfactory sanitary napkin use was defined as the use of disposable readymade sanitary napkin or homemade disposable napkins made from new cloth¹². Satisfactory menstrual hygiene was defined by using 3 or more absorbents in a day¹³.

Statistical analysis

Data was fed in master chart by using MS excel. Data was expressed as frequency and percentages, means, median, standard deviations and range in tabular and graphical format. Statistical comparison between two groups was made using the Chi-square test (categorical variables). p-values with two tailed. Statistical significance was set at $p = /<0.05$ as statistically significant and $p = /<0.01$ statistically highly significant. All calculations were made using the SPSS V26.0 trial version.

III. Result

During the study period total 271 female medical students were enrolled in the study, 37.5% belonged to second year of MBBS. Mean age of respondents was 20.63±1.51 years. 65.68% participant practiced good menstrual hygiene and had adequate menstrual hygiene knowledge (63.83%). For this study mean score for knowledge was 11, for attitude 75 and for practices is 11. The score above mean score was considered as adequate knowledge, correct attitude, practices and vice versa.

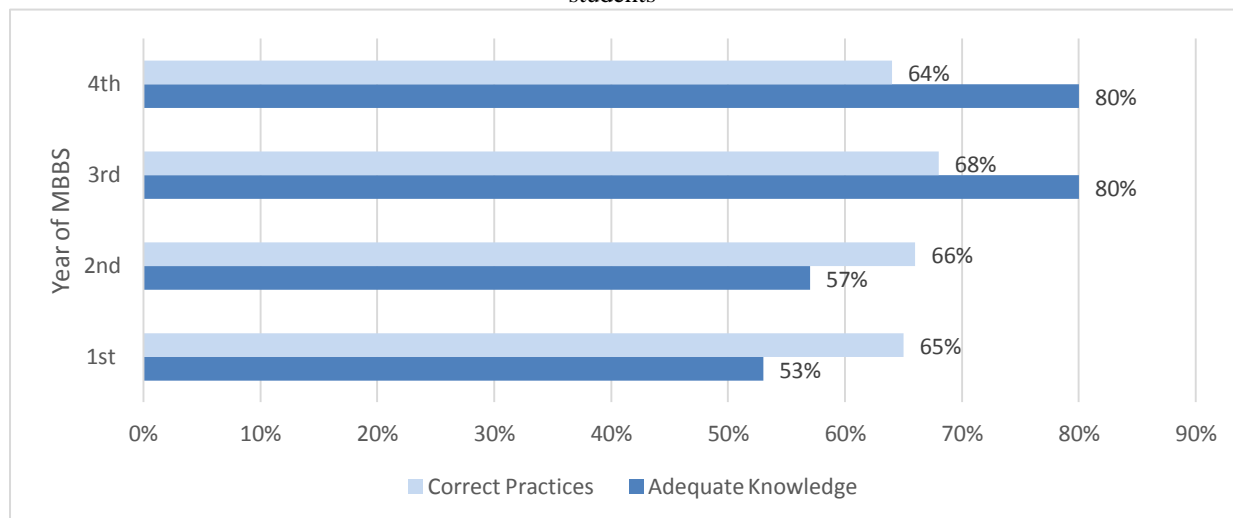
Table 1 Distribution of female medical students according to sociodemographic parameters (n=271)

sociodemographic parameters	Frequency	
YEAR OF MBBS	1 st	76 (27.9)
	2 nd	101(37.5)
	3 rd	50(18.4)
	4 th	44(16.2)
SOCIOECONOMIC STATUS	Class I	216(79.8)
	Class II	26(9.6)
	Class III	11(4)
	Class IV	7(2.6)
	Class V	14(5.1)
TYPES OF FAMILY	Nuclear	213(78.7)
	Joint	36(13.2)
	Three generation	23(8.5)
RELIGION	Hindu	227(83.5)
	Muslim	25 (9.2)
	Buddhist	18(6.6)
	Christian	2(0.7)
EDUCATION OF MOTHER	No education	4(1.5)
	Class 1-12	40(14.7)
	Diploma	42(15.4)
	College & above	194(71.3)
EDUCATION OF FATHER	No education	13(4.8)
	Class 1-12	113(41.5)
	Diploma	22(8.1)
	College & above	131(48.2)

(Fig in parenthesis are percentages)

Table 1 shows 78.7% female medical students living in nuclear family and 83.5% from Hindu religion. 79.8% participants belonged to upper class according to modified BG Prasad's scale 2020. Most of the parents of participants were educated up to college and above (Mother-71.3% & Father-48.2%).

Graph 1: Adequate Knowledge and correct practices of menstrual hygiene observed among female medical students



Graph 1: Shows that female medical students belonged to 3rd (80%) and 4th (80%) year had correct knowledge about sanitary napkin, use of sanitary napkin, washing of genital area, how and where to dispose sanitary napkin but only 68% and 64% respectively practiced it correctly. From 2nd only 57% of female medical students had correct knowledge but 66% female medical students followed correct practices of menstrual hygiene. In first year, female medical students, only 53% had correct knowledge but 65% women correctly practiced menstrual hygiene practices.

Table 2: Knowledge Regarding Menstruation among female medical students

Responses	Percentage
➤ Aware about menstruation is normal physiological condition	266 (98.15%)
➤ Aware about menstruation is due to hormonal change	269 (99.26%)
➤ Aware about menstrual blood come from Uterus	228 (84.13%)
➤ Aware about the ideal age range of menarche	118 (43.54%)
➤ Knew normal duration of menstrual cycle	183 (67.52%)
➤ Knew normal interval between two menstrual cycles	204 (75.27%)
➤ Heard about menstruation before attaining menarche	184 (67.89%)
➤ Knew about menstrual hygiene	268 (98.89%)
➤ Aware of the infection due to poor menstrual Hygiene	253 (93.35%)

Table 2 shows the level of knowledge among female medical students regarding menstruation. Majority 63.83% of the participants had correct knowledge about menstruation.

Table 3: Practices during Menstruation Among female medical students

Responses	Percentage
➤ Use of sanitary pad as main absorbent	269 (99.26%)
➤ Used cloth as pad in past	138 (50.92%)
➤ If you are using cloth as pad, clean it with soap and water	259 (95.57%)
➤ If you are using cloth, dry the cloth in sunlight	108 (39.85%)
➤ At least 2 times a day change the sanitary pad	235 (86.71%)
➤ Dispose your pads in dustbin	221 (81.54%)
➤ Paper used to wrap the used sanitary pad before disposing it	264 (97.41%)
➤ Changing and cleaning underwear during menstruation in a da	165 (60.88%)
➤ Went to college during menstruation	260 (95.94%)
➤ Bath daily during period	258 (95.20%)
➤ Clean genital area during menstruation	269 (99.26%)

Table 3 shows the different practices during menstruation among female medical students. Most of the girls followed good practices during menstruation like use of sanitary pad, regular changing of sanitary pad, cleaning of genital area, appropriate disposal of sanitary pad etc.

Table 4: Association of year of MBBS and knowledge, attitude and practices of menstrual hygiene

SCORE YEAR of MBBS	Knowledge		Attitude		Practices	
	Correct ≥7	Incorrect < 7	Correct ≥75	Incorrect < 75	Correct ≥11	Incorrect < 11
First year	40 (53%)	35 (47%)	43 (57%)	32 (43%)	49 (65%)	26 (35%)
Second year	58 (57%)	44 (43%)	59 (58%)	43 (42%)	67 (66%)	35 (34%)
Third year	40 (80%)	10 (20%)	20 (40%)	30 (60%)	34 (68%)	16 (32%)
Fourth year	35 (80%)	9 (20%)	21 (48%)	23 (52%)	28 (64%)	16 (36%)
Total (271)	$\chi^2=16.09, d.f=3, p=0.001$		$\chi^2=5.40, d.f=3, p=0.14$		$\chi^2=0.20, d.f=3, p=0.98$	

Table 4 shows association between various year of MBBS and knowledge, attitude and practices of menstrual hygiene. There is statistically significant association with knowledge(p=0.001).

Table 5: Factors associated with adequate knowledge among of female medical students

Year of MBBS	Frequency		p value
	Correct Knowledge	Incorrect knowledge	
First year	40 (53)	35 (47)	Reference
Second year	58 (57)	44 (45)	0.06
Third year	40 (80)	10 (10)	0.0084
Fourth year	35 (79)	9 (9)	0.018

(Fig in parenthesis are percentages)

Table 5: shows as compared to first year students third (p=0.008) and fourth year (p=0.018) female medical students have correct knowledge of menstrual hygiene.

Fig 1: Observation regarding various source of information about menstrual knowledge

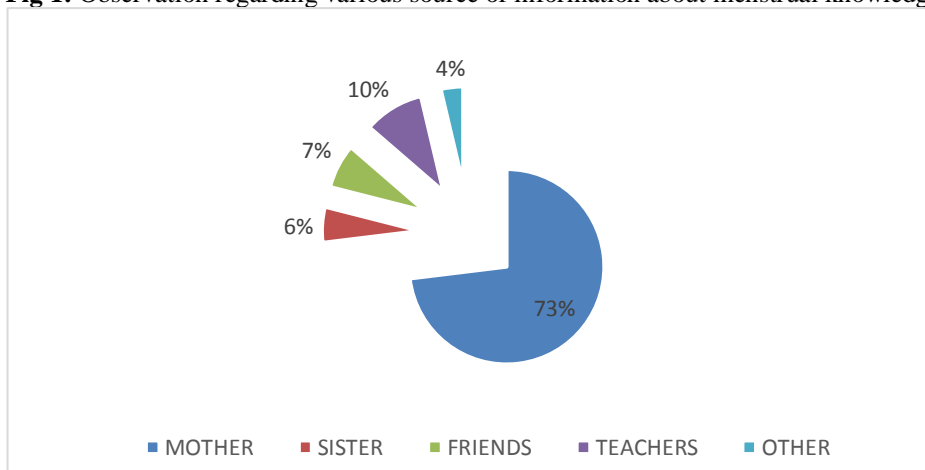


Fig 1 shows that among 73% of female medical students, mother was the source of information about menstrual hygiene followed by teachers(10%), friends(7%) and sister(6%). In 4% of female medical students source of information was book, TV, social media and radio.

Fig 2: Observation regarding various remedies followed during menstruation.

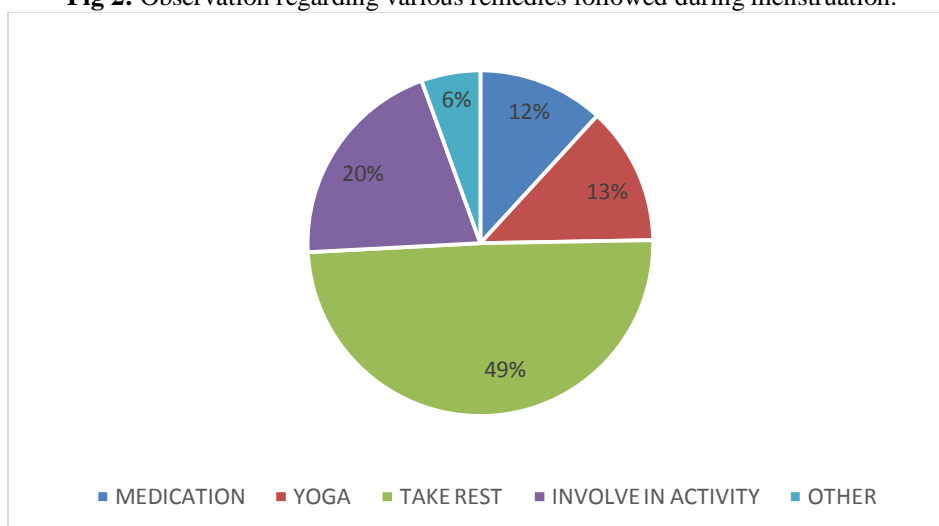


Fig 2 shows that 49% female medical students took rest for menstrual discomfort, followed by 20% involved in activity, followed by yoga (13%) and medication(12%). There were few (1.3%) who prayed.

IV. Discussion

In this study it is observed that mean age of participant was 20.63 ± 1.51 years. The study done by Singh M et al. found almost similar mean age of the participants which was 19.95 ± 1.41 years¹⁴. This study was conducted among female medical students. Majority of them had correct knowledge on menstruation which was 63.83%. 65.68% female medical students followed good menstrual practices. In contrast to this study done by Singh M et al¹⁴, where students had good menstrual hygiene knowledge which was found to be 82.31%. But in a study done in rural adolescent Nepal, the knowledge and practices were 40.6% and 12% respectively, according to Adhikari P et al 2007¹⁵. 67.89% female medical students knew about menstruation before attainment of menarche, similar to study conducted by Singh M et al¹⁴. In contrast to which, study conducted by Subhash B. et al showed only 36.95% of girls were aware about menstruation before menarche¹⁶. The reason for unawareness could be lack of educational background. 99.26% of female medical students were using sanitary napkin as menstrual absorbent, in other studies^{1,16} almost similar finding was present. But in older studies, a higher use of cloth as a menstrual absorbent material was found^{17,18}, which signifies that awareness and availability of menstrual hygiene products and information has now reached the masses.

In this study we found that about 98.25% participants believed it as a physiological process. Similar result were found in the study of Dasgupta et al, in which 86.25% girls believed it as a physiological process.

We found that source of information of menstruation was mothers in 73 % of female medical students. Results of Dasgupta A et al 2008¹⁸ in which mother was first informer in only 37.5% of girls and also by Subhash B. Thakre et al 2011¹⁶. Kalpana Katiyar et al 2013 documented that 66.9% of urban adolescent females of Meerut knew about menstruation from mother¹⁹. But in a study done by Juyal R et al 2012 in Uttarakhand, friends were the first source of information in 31.8% of girls¹⁸. In contradiction to this, S B Salve et al 2012 reported difference in first informer among rural (female teacher is the informant) and urban adolescent girls (mother is the informant)²⁰. These varied findings suggests that, the taboo regarding "Menstrual talk" is declining, which can be attributed to easy availability of information via internet and mass education, various government schemes, advertisements and also due to involvements of many female health orientes NGOS.

99.26% female medical students were doing vaginal wash. In contrast to this study conducted by Dr. Sharma N. et al shows only 42% girls were doing vaginal wash, whereas 94% of girls used to wash their genitalia as seen in a study in Uttarakhand¹⁸. In our study we found that knowledge about menstrual hygiene varies with different year of MBBS. As compared to first year of MBBS, significantly correct knowledge about menstruation was found in third and fourth year of MBBS female medical students. This can be attributed to correct knowledge obtained by studying subjects of anatomy and physiology. As compared to first year of MBBS, fourth year female medical students had significantly correct knowledge about menstrual hygiene, which might due to detailed study and clinical education in the subject of obstetrics and gynaecology.

V. Conclusion

Only 63.83% female medical students had correct knowledge about menstruation and only 65.68% followed good menstrual practices. This percentage is still very low even though sex education is started from

the schooling. This might be due to various cultural background followed by women belong to various cultural background and ethnicity.

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