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KAP STUDY ON MENSTRUATION AND MENSTRUAL HYGIENE AMONG COLLEGE GIRLS - A CROSS SECTIONAL STUDY

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Abstract

Background: In many developing countries, a culture of silence surrounds the topic of menstruation and related issues; as results many young girls having lack of appropriate and sufficient information regarding menstrual hygiene. This may result in incorrect and unhealthy behavior during their menstrual periods.

Objectives: To assess knowledge, belief, ideas, sources of knowledge and practice of menstrual hygiene among girls of GMERS Medical College, Valsad.

Methods: It is a cross sectional study conducted in GMERS Medical College, Valsad. The sample size was 203 girls (1st yr-61 girls, IInd yr – 82 girls, IIIrd yr – 60 girls) all girls those were present on the day of study were included in study sample. Data was collected by pre-designed Questionnaire. The obtained data was analyzed by using SPSS (Statistical Package for Social Science), Chi- Square test was used to associate various findings.

Results: During our study, we found that 84% girls had knowledge about menstruation before they experienced first and Mother was found to be the main source of information. Most of girls religious activities were restricted during periods in both Hindus (73%) and Muslims (90%) religion.86.7% girls use sanitary napkins where as 13.3% girls use clothes and reuse them.

Conclusion: Menstrual hygiene is a vital aspect of health education for girls. Significantly more number of girls in the urban area was using commercially available sanitary pads as compare to the rural girls. For improvement of menstrual hygiene, sanitary napkins should be made universally available and at affordable cost.

Key words: Menstrual hygiene, Sanitary napkin, Reproductive health, College girls, Myths.

INTRODUCTION

Adolescence is a phase of transition from girlhood to womanhood started and marks the onset of female puberty, this period of attaining reproductive maturity between the ages of 10-19 years is marked by a number of physiological and psychologicalbehavioral changes and most important one is the onset of menstruation.(1)Age at the menarche varies widely across the world and within the same region difference can be noted depending on nutritional and socioeconomic status. Implications of girls response to menarche are not only restricted to current and future health concerns but it also have religious and menstrual hygiene awareness significance. It is also helpful in collecting the data about its knowledge and social beliefs of menstruation in the society. Despite advancements in the understanding of its biology menstruation remains a phenomenon much surrounded by myths and taboos in certain section of our society. Menstrual hygiene is an important component of adolescent health as females having poor hygiene can be a cause of UTI, STD, RTI, cervical cancer, HIV and also influence infant health and survival by causing fatal wastage and prenatal infection.(2,3) Behavior and practices that a girl adapts during menstruation is largely influenced by a heterogeneous aura of socioeconomic, cultural and religious determinants couple with her education.

AIMS AND OBJECTIVES:

1) To assess knowledge, attitude and practice of menstrual hygiene.
2) To find out menstrual disorders experienced by girls.
3) To impart them health education regarding menstrual hygiene and practices.

MATERIALS AND METHODS:

STUDY AREA: GMERS Medical College, Valsad.

SAMPLE SIZE&STUDY PERIOD: 203 medical college students. Study done between March 2015 to August 2015.

DATA COLLECTION: : By using semi-structured , pre-tested questionnairewhich includes : questions regarding socioeconomic characteristics of the respondents knowledge, awareness about menstruation, source of information, attitutede towards menstrual hygiene and practices followed by them.

EXCLUSION CRITERIA: Girls who don't have menarche, Girls who were absent at the time of survey.

DATA ANALYSIS :Responses were compiled in Excel spreadsheet and was analyzed using statistical software and x^2 test was applied to test for significance of association.

RESULTS:

Total 203 girls from 1st year (61), 2nd year (82) and 3rd year (60) of GMERS Medical College, Valsad were participated in the study.

Table No. 1: SOCIO-DEMOGRAPHIC PROFILE OF THE STUDY POPUATION (n=203)

SR. NO.	SOCIO-DEMGRAPHIC PROFILE		FREQUENCY (n=203)	
			No.	%
	AGE	17	10	04.92
		18	53	26.10
		19	68	33.49
		20	55	27.09
		21	13	06.43
		22	4	01.97
2	M.B.B.S. STUDENT YEAR	1ST	61	30.04
		2ND	82	40.39
		3RD	60	29.57
3	RELIGION	HINDU	189	93.11
		MUSLIM	10	04.92
		OTHER	4	01.97
4	CASTE	SC	10	04.92
		ST	15	07.38
		OBC	51	25.12
		OTHER	127	62.58
5	AREA	RURAL	27	13.31
		URBAN	176	86.69
6	TYPE OF FAMILY	JOINT	48	23.64
		NUCLEAR	137	67.48
		THIRD GENERATION	18	08.88
7	LITERACY OF FATHER	PRIMARY	7	03.44
		SECONDARY	12	05.94
		HIGHER SECONDARY	26	12.84
		GRADUATE	96	47.29
		POST-GRADUATE	62	30.49
8	LITERACY OF MOTHER	PRIMARY	11	05.42
		SECONDARY	10	4.78
		HIGHER SECONDARY	38	18.74
		GRADUATE	96	47.29
		POST-GRADUATE	47	23.15

As shown in socio demographic profile (Table No. 1), their age ranges between 16-22 years. Maximum number of girls being between 19(33.49%) and 20(27.09%) years of age. Majority of girls were from Hindu religion (93.11%) followed by Muslims (4.92%). Out of 203 girls participated 176(86.69%) girls were from urban area and 27 (13.31%) girls were from from rural area. Most of girls 137(67.48%) belonged to the nuclear family while 48(23.64%) girls were from the joint family. Almost all the participant's parents were literate and having at least primary level of education.

Table No. 2: DISTRIBUTION GIRLS ACCORDING TO MENSTRUAL HISTORY (n=203)

SR. NO.	MENSTRUAL HISTORY		FREQUENCY (n=203)	
			No.	%
1	AGE OF MENARCHE	11	3	01.48
		12	33	16.25
		13	55	27.09
		14	63	31.03
		15	38	18.72
		16	9	04.44
		17	1	00.49
		18	1	00.49
2	DURATION OF MENSTRUAL BLEEDING	<4 DAYS	55	27.09
		5 DAYS	108	53.20
		6 DAYS	25	12.32
		7 DAYS	11	05.42
		8 DAYS	4	01.97
		>9 DAYS	0	00.00
3	MENSTRUAL CYCLE PERIOD	REGULAR	158	77.84
		IRREGULAR	45	22.16
4	IF IRREGULAR, IT IS?	BEFORE DATE	17	08.37
		AFTER DATE	47	23.15
		NOT ANSWERED	139	68.48
5	BLEEDING BETWEEN PERIODS	YES	20	09.85
		NO	173	85.22
		NOT ANSWERED	10	04.93
6	INTTERPTUD/ MISSED PERIOD	YES	23	11.34
		NO	166	81.77
		NOT ANSWERED	14	06.89
7	IF YES, TOOK MEDICINE FOR IT?	YES	12	05.92
		NO	64	31.52
		NOT ANSWERED	127	62.56
8	IF NO, WAS IT CURED WITHOUT MEDICINE?	YES	39	19.22
		NO	14	06.89
		NOT ANSWERED	150	73.89

Table no. 2 shows the Age of menarche ranges between 11 to 18 years of age, the maximum number of girls age of menarche between 14(31.03%) and 13 (27.09%) years of age. Majority of girls menstrual [[duration for around 5 days around i.e, 57% and out of the total studied participants 22% had irregular periods. Around 10% of the participants had history of bleeding between the periods.

Figure No. 1: SOURCE OF PRE-MENARCHAL KNOWLEDGE OF STUDY PARTICIPANTS (n=203)

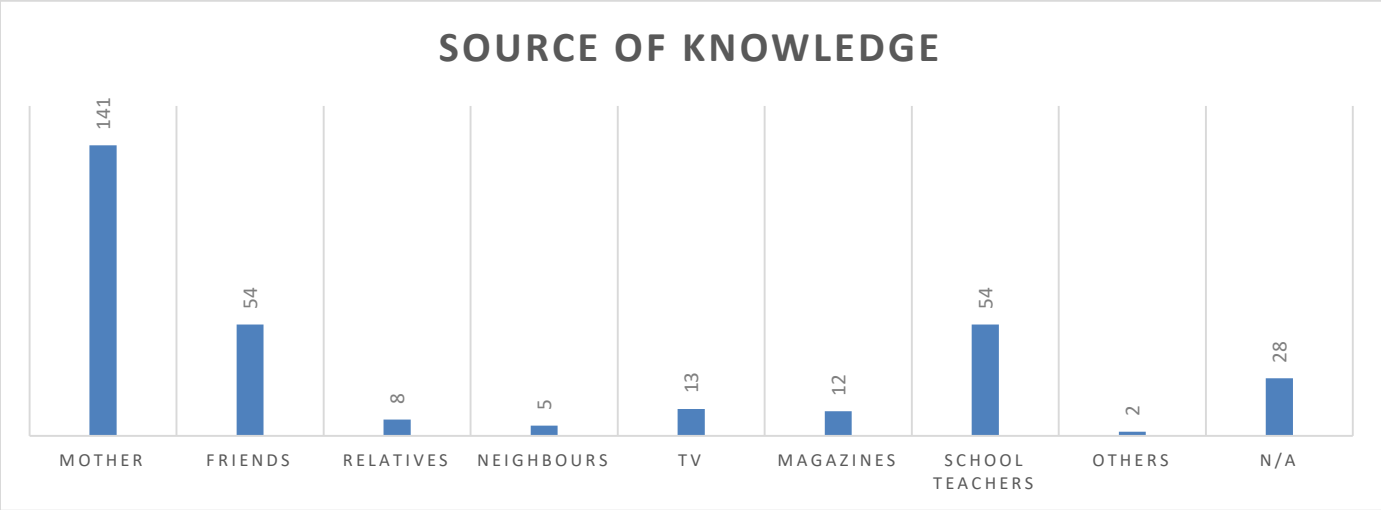

Figure No. 2 shows that in the present study, Mother was found to be the main source of information for girls followed by friends and school teachers, while rest said that they have information from other sources like TV, magazines, relatives and neighbors.

Table No. 3: ASSOCIATION BETWEEN THE PRE-MENARCHAL KNOWLEDGE AND MOTHER'S LITERACY STATUS OF STUDY PARTCIPANTS. (n=203)

MOTHER'S LITERACY	PRE-MENARCHAL KNOWLEDGE						TOTAL		
	YES			NO					
	No.	Percentage (%)		No.	Percentage (%)		No.	Percentage (%)	
		(↓%)	(→%)		(↓%)	(→%)		(↓%)	(→%)
PRIMARY SCHOOL EDUCATION	11	06.43	91.66	1	03.12	8.34	**12**	05.91	100
MIDDLE SCHOOL EDUCATION	**9**	05.26	90.00	**1**	03.12	10.00	**10**	04.92	100
HIGHER SECONDARY EDUCATION	**32**	18.74	84.21	**6**	18.75	15.79	**38**	18.74	100
GRADUATE	**76**	44.44	79.16	**20**	62.50	20.84	**96**	47.29	100
POST-GRADUATE	**43**	25.14	91.48	**4**	12.51	08.52	**47**	23.15	100
TOTAL	**171**	100	84.24	**32**	100	15.76	**203**	100	100

(P=4.4693, X^2=0.35)

Table No. 3 shows the association between the pre-menarche knowledge and mother's literacy status in which it was found that girls those mothers were graduate having the pre menarche knowledge were good which was around 45% followed by the literacy status of mother up to higher secondary level. While the association statistically not significant.

Table No. 4: ASSOCIATION BETWEEN DIFFERENT RELIGIONS AND THE TYPE OF RESTRICTIONS DURING MENSTRUATION TIME. (Multiple choice answer table)

TYPE OF RESTRICTIONS	RELIGION						TOTAL	
	HINDU		MUSLIM		OTHERS			
	No.	%	No.	%	No.	%	No.	%
HOUSEHOLD CHORES	**22**	**95.66**	**1**	04.34	**0**	**00.00**	**23**	100
RELIGIOUS ACTIVITIES	**138**	92.62	**9**	06.04	**2**	**01.34**	**149**	100
ATTENDING MARRIAGES	**8**	88.88	**1**	11.12	**0**	**00.00**	**9**	100
SLEEPING SEPARATELY	**6**	85.72	**1**	14.28	**0**	**00.00**	**7**	100
FOOD	**13**	100.0	**0**	00.00	**0**	**0.000**	**13**	100
NO RESTRICTIONS	**36**	92.30	**1**	02.58	**2**	**05.12**	**39**	100

(P=0.734,X^2=6.912)(Multiple choice answer table)

Table No. 4, shows the association between the participants belongs to different religious and type of restriction in activities. It was found that in majority of the girls, religious activities were restricted during periods in both Hindus (73%) and Muslims (90%) and others (110%), while sleeping separately were observed significantly higher in Hindu religion compare to Muslim which were 85 % and 14.28% respectively. Other restrictions like House hold chores, attending marriages and food was not as much restricted. The association between religions and the types of restrictions is not statistically significant (p=0.734).

Table No. 5: DISTRIBUTION OF GIRLS AS PER THE SYMPTOMS DURING MENSTRUATION.(n=203) (Multiple choice answer table)

SR. NO.	SYMPTOMS DURING MENSTRUATION		FREQUENCY	
			No.	%
1	MIND DISTURBANCES (MOOD SWINGS, ANGER, IRRITATION)	YES	121	59.62
		NO	76	37.43
		NOT ANSWERED	6	02.95
2	ASSOCIATED SYMPTOMS	PAIN IN ABDOMEN	171	84.23
		HEADACHE	46	22.66
		NAUSEA, VOMITING	27	13.30
		WEAKNESS	97	47.78
		EXCESSIVE BLEEDING	23	11.33
		BREAST PAIN	8	03.94
		ITCHING AROUND GENITILIA	17	08.37
		NOT ANSWERED	14	06.89
3	RELIEF MEASURES	MEDICINES,OTC	85	41.87
		HOT WATER BAG	22	10.83
		EXERCISE	5	02.46
		OTHERS	23	11.33
		NOT ANSWERED	80	39.40
4	TYPE OF RESTRICTIONS	HOUSEHOLD CHORES	23	11.33
		RELIGIOUS ACTIVITES	149	73.39
		ATTENDING MARRIAGES	9	04.43
		SLEEPING SEPERATELY	7	03.44
		FOOD	13	06.40
		OTHER	5	02.46
		NOT ANSWERED	39	19.21

(Multiple choice answer table)

Table No. 5 shows symptoms associated with menstrual bleeding. Most common symptom among all these is pain in abdomen 171(84.23%), followed by weakness 97(47.78%), headache 46(22.66%) nausea, vomiting, excessive bleeding, itching at genitalia and breast pain. 171(84.23%) girls suffers from mind disturbances. 84(41.87%) girls take medicine or OTC pills for relief of these symptoms.

Table No. 6: ASSOCIATION BETWEEN THE PRACTICES DURING MENSTRUATION AND THE LOCALITY OF GIRLS (RURAL AND URBAN). (n=203)

SR. NO.	PRACTICES DURING MENSTRUATION		AREA		TOTAL (n=203) (No.) (→%) (↓%)	P VALUE
			RURAL (n=27) (No.) (→%) (↓%)	URBAN (n=176) (No.) (→%) (↓%)		
1	ABSORBENT USED DURING MENSTRUATION	SANITARY NAPKIN ONLY	20 (11.49) (74.08)	154 (88.51) (87.50)	174 (100.0) (85.72)	P=0.13 X^2=2.25
		OTHERS (CLOTH, MIXED)	7 (24.14) (25.92)	22 (75.86) (12.50)	29 (100.0) (14.28)	
		TOTAL	27 (13.31) (100.0)	176 (86.69) (100.0)	203 (100.0) (100.0)	
2	NO.OF TIMES CHANGED (PER DAY)	1	3 (12.50) (11.12)	21 (87.50) (11.93)	24 (100.0) (11.82)	P=0.364 X^2=2.02
		2-4	24 (14.38) (88.88)	143 (85.62) (81.25)	167 (100.0) (82.26)	
		5-6	0 (00.00) (00.00)	12(100.0) (06.82)	12 (100.0) (05.92)	
		TOTAL	27 (13.31) (100.0)	176 (86.69) (100.0)	203 (100.0) (100.0)	
3	REUSE OF ABSORBENT	YES	3 (23.08) (11.12)	10 (76.92) (05.68)	13 (100.0) (06.40)	P=0.721 X^2=0.654
		NO	22 (12.22) (81.48)	158 (87.78) (89.78)	180 (100.0) (88.66)	
		NOT ANSWERED	2 (20.00) (07.40)	8 (80.00) (04.54)	10 (100.0) (04.94)	
		TOTAL	27 (13.31) (100.0)	176 (86.69) (100.0)	203 (100.0) (100.0)	
4	PLACE OF STORAGE OF ABSORBENT	BATHROOM	1 (16.67) (03.70)	5 (83.33) (02.84)	6 (100.0) (02.96)	P=0.00 X^2=31.95
		CUPBOARD	9 (10.58) (33.33)	76 (89.42) (43.18)	85 (100.0) (41.88)	
		SEPARATE BAG	12 (11.32) (44.44)	94 (88.68) (53.40)	106 (100.0) (52.22)	
		OTHER	2 (66.67) (07.40)	1 (33.33) (00.58)	3 (100.0) (01.47)	
		NOT ANSWERED	3 (100.0) (11.13)	0 (00.00) (00.00)	3 (100.0) (01.47)	
		TOTAL	27 (13.31) (100.0)	176 (86.69) (100.0)	203 (100.0) (100.0)	
5	DISPOSAL OF ABSORBENT	BATHROOM	1 (11.12) (03.70)	8 (88.88) (04.54)	9 (100.0) (04.43)	P=0.085 X^2=9.675
		BURY IN GROUND	3 (25.00) (11.12)	9 (75.00) (05.12)	12 (100.0) (05.91)	

		PUBLIC DUSTBIN	18 (13.04) (66.66)	120 (86.96) (68.18)	138 (100.0) (67.98)	
		WITH DOMESTIC REEFUSE	1 (03.84) (03.70)	25 (96.16) (14.20)	26 (100.0) (12.81)	
		OTHER	1 (14.28) (03.70)	6 (85.72) (03.42)	7 (100.0) (03.44)	
		NOT ANSWERED	3 (27.28) (11.12)	8 (72.72) (04.54)	11 (100.0) (05.43)	
		TOTAL	27 (13.31) (100.0)	176 (86.69) (100.0)	203 (100.0) (100.0)	
6	**DRYING OF USED ABSORBENT**	INSIDE WITH SUNLIGHT	2 (14.28) (07.40)	12 (85.72) (06.81)	14 (100.0) (06.89)	P=0.012 X^2= 12.81
		INSIDE WITHOUT SUNLIGHT	5 (41.66) (18.53)	7 (58.33) (03.97)	12 (100.0) (05.92)	
		OUTSIDE WITH SUNLIGHT	8 (20.51) (29.63)	31 (79.48) (17.63)	39 (100.0) (19.22)	
		OUTSIDE WITHOUT SUNLIGHT	0 (00.00) (00.00)	2 (100.0) (01.14)	2 (100.0) (00.98)	
		NOT ANSWERED	12 (08.82) (44.44)	124 (91.18) (70.45)	136 (100.0) (66.99)	
		TOTAL	27 (13.31) (100.0)	176 (86.69) (100.0)	203 (100.0) (100.0)	
7	**CLEANING OF GENITILIA**	DON'T CLEAN	0 (00.00) (00.00)	3 (100.0) (01.71)	3 (100.0) (01.47)	P=0.415 X^2=2.85
		DURING BATHING	7 (12.28) (25.92)	50 (87.72) (28.42)	57 (100.0) (28.07)	
		EVERYTIME WITH TOILET	19 (13.48) (70.37)	122 (86.52) (69.31)	141 (100.0) (69.45)	
		NOT ANSWERED	1 (50.00) (03.71)	1 (50.00) (00.56)	2 (100.0) (00.99)	
		TOTAL	27 (13.31) (100.0)	176 (86.69) (100.0)	203 (100.0) (100.0)	
8	**AGENT USED FOR CLEANING OF GENITILIA**	WATER	11 (17.18) (40.74)	53 (82.82) (30.11)	64 (100.0) (31.52)	P=0.288 X^2=2.491
		SOAP AND WATER	15 (11.02) (55.55)	121 (88.98) (68.75)	136 (100.0) (66.99)	
		NOT ANSWERED	1 (33.33) (03.71)	2 (66.67) (01.14)	3 (100.0) (01.49)	
		TOTAL	27 (13.31) (100.0)	176 (86.69) (100.0)	203 (100.0) (100.0)	

Table No. 6 shows the association between practices during menstruation between the girls comes from locality urban and rural. Out of the total 203 girls majority of them using sanitary napkin that are 154 (184%). Around 88% girls using sanitary napkins are from the urban locality. Mostly sanitary napkins are used as absorbent and around 84% girls changed 2-4 times per day during periods. Only few girls i,e , 8% are reusing the same cloths/napkins. Most of the girls store these absorbents in separate bags and cupboard. The association of disposal of these absorbents and girls from urban and rural locality

which shows statistically not significant. Most of girls uses public dustbin for the disposal of the used absorbent followed by domestic refuse. Drying of absorbent is also significant (p=0.005). Mostly girls dried outside in sunlight. Cleanliness of genitalia also the important part in hygiene. Most of girls clean it every time with toilet. Most of them use soup and water as cleaning agent.

DISCUSSIONS:

In present study the age of menarche ranges between 11 to 18 years of age, the maximum number of girls age of menarche between 14 (31.03%) and 13 (27.09%) years of age while the study done by Das gupta et al[4], age of menarche in girls ranges from 14-17 years of age with the maximum number of girls between 14-15 years of age. Deo et al[5]reported the range between 12-17 years where maximum girls were between 13-15 years of age. Drakshayani Devi et al[6] also reported 12-13 years of range in maximum number of girls. In the present study, the mean age of menarche is 14.5 years. Adinma et al[7] shows the mean age of 14.2 years. Khanna et al[8]reported 13.2 years as a mean age. Sandhya Rani PM et al[9] study shows that 13.1 is the mean age of menarche in girls. Duration of menstrual period in most of girls 108(53.2%) was 5 days .158 (77.83%) girls have regularity in periods whereas 45(22.7%) girls have irregular periods. Agarwal AK [10] study shows 71.96 girls suffer from dysmenorrhoea after menarche. Suresh k kumbhar et al[11]reported 65.02% girls suffer from dysmenorrhoea while 11.8% girls have irregular periods. Studies in our project have shown mean age at menarche to vary from time to time in girls of 1st 2nd and 3rd years of girls.Deo et al[5] shows 42.5% girls from urban area, while 55.4% girls from rural area were aware about menarche. . Parvathy Nair et al[12] and Dasgupta et al[4] reported that in case of 41% and 37.5% girls, mother is main source of information respectively. Deo et al[5] shows that in urban area 27.5% girls have information from mother whereas in rural area 27% girls have information from teachers. This type of similar result was reported in rural Bengal and urban adolescents of Rohtak.[13]Study of Adrija et al [13] shows 60.3% girls in urban area and 43.7% girls in rural area have cleaned genitalia every time with toilet. Which was more than that found by Mudey et al[14] soap and water used as cleaning agents by 57% urban and 50% rural girls which was similar to the findings by Mudey et al[14] but much differed from the study of Dasgupta[4] and Sarkar.[9] Adrija et al [13] shows similar result.

CONCLUSION:

Most common age of menarche is 13-14 years. In most of the girls, duration of menstrual period is 5 days. Mothers are the most common source of information and most of the girls were aware before menarche. Pain in the abdomen is the most common symptom during menstruation. As they are medical students, knowledge about menstruation and hygiene is good. Most of the girls are using sanitary napkins and cleaning the genitalia with soap and water after every use of toilet. But the religious activities are restricted during periods with some myths. So some awareness activities to bring the society out from the myths should be done.

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