

A study of knowledge, attitudes and practices of menstrual hygiene among adolescent girls

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Abstract

Background: Menstrual hygiene management is an important issue for adolescent girls. Lack of education and communication regarding reproductive system further adds to the problem. Good menstrual hygienic practices such as the use of sanitary pads and adequate washing of genital area are essential during menstruation.

Aims and objectives: To assess the knowledge, attitude and practice of menstrual hygiene among adolescent girls in Southern Rajasthan India.

Materials and Method: A cross sectional study was conducted among 185 school going adolescent girls of southern Rajasthan. A pre formed pre-tested questionnaire was used. Data were analyzed statistically by simple proportions.

Result: Most of the girls (84.3%) attaining menarche in the age group of 12-13 years. 74.6% girls residing at rural area, 56.2% belonged to joint family and 58.4% was lower socio-economic class. Knowledge of menstruation before menarche was found in 39.5% of girls. 84.3% menstrual habits were inculcated by their mothers. 76.7% girls were using sanitary napkins as absorbent material during their menstrual cycle. 82.7% were doing vaginal wash daily. 64.6% of girls were having good menstrual practice.

Conclusion: The knowledge about menstrual cycle is found to be very poor. The practices related to menstrual hygiene were satisfactory but need improvement.

Keywords: Menstruation, menstrual hygiene, adolescent girl, KAP

Introduction

Adolescent girls constitute a vulnerable group not only with respect to their social status but also in relation to their health. In this regard, menstruation is regarded unclean or dirty in society ^[1]. 16% of world population belongs to Adolescent (10-19) age group and 21.5% or 1/5 of population of India. 18% of total population of Adolescent suffering from serious diseases and a large group of adolescent is neglected & belongs hard-to-reach population in that area needs of adolescent girls are particularly ignored ^[2]. It is very important now days to educate young girl parents regarding the menarche, difference between normal & abnormal menstruation, what is normal cycle length, menstrual hygiene ^[3, 4]. Menstruation is a normal

process but young girls and their parents are most of time unaware about normal menstrual patterns^[5]. To promote awareness on menstruation and hygiene, WHO and UNICEF are lending their hands to the members of the nation to spread knowledge and improve society's attitudes towards puberty and menstruation with the aim of removing social stigma. Various MHH activities and programs are promoted by these organizations to promote awareness related to menstruation. UNICEF also works exclusively to improve girl's menstrual health and hygiene in four different areas like social support, knowledge and skills, and access to absorbent material and other facilities^[6]. Though menstruation is a normal physiological process, it is still surrounded with social taboos, supernatural beliefs, misconceptions, and malpractices, which is very challenging for girls in developing countries, due to these social stigmatic, cultural, and religious restrictions, menstrual practices are regarded as big limitation for menstrual hygiene management^[7, 8]. It is advised that good menstrual hygiene practices are essential during menstruation; the practices include: 1) regular change of clothing and underwear; 2) change of hygienic pads every three to four hours; 3) daily showering, especially in instances of dysmenorrhea; 4) adequate washing of genitalia after each voiding of urine and/or feces; 5) continuing normal routine and daily activities (e.g. going to school, doing physical exercise), and 6) maintaining a balanced diet with plenty of fruits and vegetables rich in iron and calcium^[9, 10]. The practice of good menstrual hygiene reduces the incidence of reproductive tract infection (RTI). Thus, the consequences of RTIs are severe and may result in significant negative impact to a woman's health including chronic pelvic pain, dysmenorrhea (painful periods) and in severe cases infertility. Reproductive tract infections, which have become a silent epidemic that devastates women's lives is closely related to poor menstrual hygiene^[11]. Special health care needs and requirements of women during monthly cycle of menstruation are collectively given the term "Menstrual hygiene"^[12].

Aims & objective

To assess the knowledge, attitude and the practice (KAP) of menstrual hygiene among adolescent girl in Rajasthan, India

Materials and Methods

The present study is a cross-sectional study conducted in the Medical College, a tertiary health care set up of Rajasthan, under the department of community medicine. The study duration was 3 months. The study subjects were selected by purposive sampling technique method.

Inclusion criterion

The purpose of the study was explained and those willing to participate were included in the study. All the adolescent girls (12-19 years) were willing and gave consent for the study.

Exclusion criteria

Those girls not willing to participate in the study were excluded from the study.

Data were collected using a pre-designed pre tested schedule. Participants were interviewed for basic socio-demographic variables as well as questions related to hygienic practices during menstrual period. Positive responses towards practices like use of absorbent, type of absorbent material (sanitary pads or others), reuse of the pads, frequency of changing of the material, cleaning of genitalia with soap and water or plain water, frequency of washing per day, proper disposal of the absorbent material, changing of material during sleep, availability of separate toilet/bathroom facility at home, access to water, hand washing etc. were considered as good hygienic practices. The questionnaire was prepared on local language

based on literature review.

Statistical analysis: The data collected was compiled, tabulated and subjected to statistical analysis wherever applicable. The analysis of the data was carried out by using SPSS version 20. P value less than 0.05 considered statistically significant.

Results

A total of 185 adolescent school going girls ranged from 12 years to 19 years were interviewed, 93 (41.2%) were from private and 133 (58.8%) were from government school. The average age at menarche was 12.6 years. 156 (84.3%) girls had attained their menarche between 12 and 13 years [Table 1].

Maximum girls (77.8%) were in the age group of 12–15 years. Joint family was the most common family pattern observed (56.2%), 74.6% residing at rural area, 58.4% were belong to lower socio-economic class and most of the girl's mother were illiterate (48.1%) [Table: 2].

Majority of the girls (60.5%) don't have knowledge of menstruation before menarche, primary source of menstrual awareness was mother (84.3%), most of them (85.9%) think menstruation is a physiological process [Table:3].

Majority of the girls (64.6%) having good menstrual hygiene practice [Figure: 1]

Most of the used sanitary pads (76.7%), discard material in dustbin (74.1%), cleaning of genitalia regularly (82.7%) and Frequency of changing the material <2 times a day [Table: 4]

Table 1: Age of menarche in adolescent girls

Age of menarche in years	Number of girls	Percentage
< 12	14	7.6%
12-13	156	84.3%
>13	15	8.1%

Table 2: Socio-demographic profile of the study subjects (n=185)

Demographic profile		Frequency	Percentage (%)
Age group (in years)	12-15	144	77.8%
	15-19	41	22.2%
Religion	Hindu	154	83.3%
	Muslim	22	11.9%
	Others	9	4.8%
Nature of Family	Joint	104	56.2%
	Nuclear	81	43.8%
Resident	Rural	138	74.6%
	Urban	47	25.4%
Socioeconomic class	Lower class	108	58.4%
	Middle class	67	36.2%
	Upper class	10	5.4%
Educational status of mother	Higher Secondary	15	8.1%
	Middle	22	11.9%
	Primary	59	31.9%
	Illiterate	89	48.1%
Mother occupation	House wife	173	93.5%
	Working	12	6.5%

Table 3: Knowledge of adolescent girls regarding menstrual cycle

Knowledge regarding menstruation		Frequency (%)
What do you think about menstrual process	Physiological	159 (85.9%)
	Curse of God/ disease	26 (14.1%)
What was your reaction to first menstruation	Scared	37 (20%)
	Usual	23 (12.4%)

	Discomfort	125 (67.6%)
Who was the primary source of information	Mother	156 (84.3%)
	Sister	10 (5.4%)
	Relatives	4 (2.2%)
	Neighbor/ friend	15 (8.1%)
Normal duration of menstrual cycle	Know correctly	105 (56.8%)
	Incorrect information	63 (34%)
	Don't know	17 (9.2%)
Organ of menstruation	Uterus	66 (35.7%)
	Some other organ (stomach, bladder etc.)	15 (8.1%)
	Don't know	104 (56.2%)
Knowledge of menstruation before menarche	Knew	73 (39.5%)
	Didn't know	112 (60.5%)

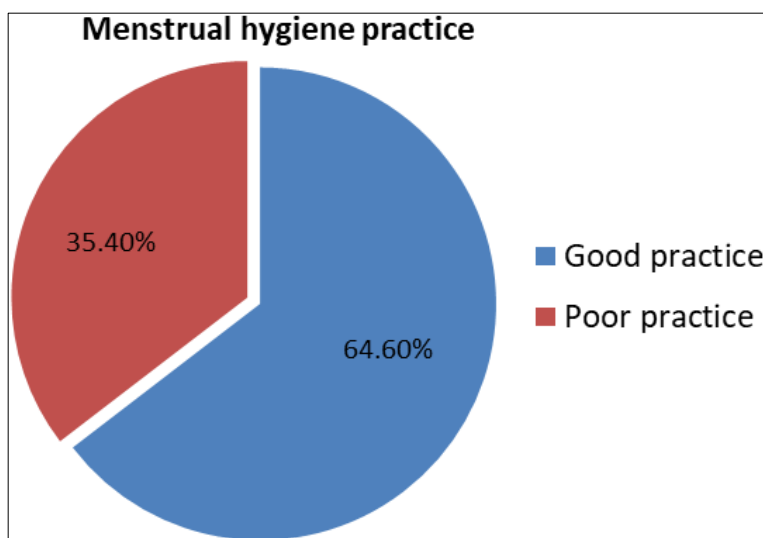


Fig 1: Distribution of adolescent girls' practice on menstruation hygiene

Table 4: Questions related to hygiene practices and their responses

Variables	Frequency	Percentage
Materials used as an absorbent	Sanitary pad	142 (76.7%)
	Cloth	39 (21.1%)
	Both pad and cloth	4 (2.2%)
Reuse of the material	Yes	65 (35.1%)
	No	120 (64.9%)
Drying of cloth in sunlight if re-used after washing	Yes	171 (92.4%)
	No	14 (7.6%)
Use antiseptic lotion for cloth/underwear	Yes	168 (90.8%)
	No	17 (9.2%)
Frequency of changing the material	<2 times/day	155 (83.8%)
	≥2 times/day	30 (16.2%)
No of material requires/day	<2	24 (13%)
	≥2	161 (87%)
Cleaning of private parts	Yes	153 (82.7%)
	No	32 (17.3%)
Materials used for cleaning private parts	Both water and soap	115 (62.2%)
	Water	70 (37.8%)
Separate toilet/bathroom facility at home	Yes	177 (95.7%)
	No	8 (4.3%)
Method of disposal	Burning	23 (12.4%)
	Dustbin	137 (74.1%)

	Open field	15	8.1%
	Washing	10	5.4%
Changing material at night	Yes	149	80.5%
	No	36	19.5%
Regular hand washing	Yes	162	87.6%
	No	23	12.4%

Discussion

“Adolescence” is a transitional period of a human being where emotional, psychological and physical changes come in the body & psyche. Menarche is a very important landmark of adolescence age group which prepares a girl for the future motherhood. Adolescent girls have many problems regarding menstrual abnormalities and it was seen that they were very shy to discuss their problems and proper hygiene during menstruation.

In our study only 39.5% of Adolescent girls had previous knowledge of menstrual practices before attaining menarche and this result is in accordance with other studies done by Adhikari P *et al.*^[13], Katiyaret *al.*^[14] and Thakreet *al.*^[15] reported awareness regarding menstruation 40.6% 38.5% and 36.9% respectively.

Present study reported 64.6% Adolescent girls had good menstrual hygiene practice; our results were similar to Abita Z, *et al.*^[16] and Bacha K *et al.*^[17].

Majority of the respondents reported age at menarche at 12-13 years (84.3%), our finding was comparable with the Mudeyet *al.*^[18] and V. G. *et al.*^[19].

In our study most of the adolescent girls were belonged to joint family and residing at rural areas, our finding were constant with the P. Meena *et al.*^[20] and Bhusalet *al.*^[21].

Majority of the adolescent girls belonged to low socio-economic class, accordance to the Rasheed TO, *et al.*^[22] and Deshmukh V, *et al.*^[23].

About 48.1% of the mothers were illiterate in our study whereas 31.9% were primary educated. Most of them were house wife; concordance finding also reported by Shumie ZS *et al.*^[24] and Das DK, *et al.*^[25]. The education status of mother can hinder from overcoming traditional beliefs, misconceptions and restrictions regarding menstruation.

Majority of the participant (85.4%) belief that menstruation is a physiological process, similar to the Upasheet *al.*^[26].

We found that inculcation of menstrual habits was mainly done by mothers in 84.3% of students which is in accordance with results of N Sharma *et al.*^[27] and Srivastava S, *et al.*^[28].

In our study only 35% adolescent girls know about this fact that bleeding takes place from uterus, concordant to a study done by Prajapati and Patel *et al.*^[29] that only 17% of girls are aware about uterus as the organ of menstrual bleeding similar to our study.

In this study, 56.4% of girls were able to tell the correct duration of cycle and menstrual flow which is very low as compared to the study done by Srivastava and Chandra^[28] where it is found to be 80%

Overall, we can see that the knowledge regarding menstrual cycle is unsatisfactory and there is need for improvement.

Regarding practices related to menstrual hygiene, in our study the use of sanitary pads was 76.5%, 74.1% of girls dispose their pads in dustbin, most of the adolescent girls changes pads <2 times/day, bath regularly during menstruation and regular hand washing during changing the pads, our finding were correlate with the study conducted by Pal M, *et al.*^[30], Kandpal J *et al.*^[31] and Malhotra A, *et al.*^[32].

Conclusions

Most women and young girls in India experience reproductive tract infections as a result of poor menstrual hygiene. Adolescent girls can be protected from various health issues and suffering during their regular menstruation. This can be avoided by educating girls at the school level and conducting awareness programs on physiological changes, hygienic

practices, disposal of absorbent materials, sex education, etc., which would help remove social stigma in the society. Home is the first source of information for every girl. Every mother should educate their daughter about menarche before they reach puberty.

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References

1. Dasgupta A, Sarkar M. Menstrual hygiene: How hygienic is the adolescent girl? *Indian J Community Med.* 2008;33(2):77–80.
2. Dambhare DG, Wagh SV, Dudhe JY. Age at menarche and menstrual cycle pattern among School Adolescent girls in central India. *Global Journal of health science.* 2012;4(1):105-111.
3. Shanbhag D, Shilpa R, D' Souza N, Josephine P, Singh J, Goud BR. Perception regarding menstruation and practices during menstrual cycles among high school going adolescent girls in resource limited settings around Bangalore city, Karnataka, India. 2012;4(7):1353-1362
4. House S, Mahon T, Cavill S. Menstrual hygiene matters. A resource for improving menstrual hygiene around the world. London: Water Aid, 2012.
5. Kotecha PV, Sangita Patel, Baxi RK, Mazumdar VS, Shobha Mishra, Ekta Modi, *et al.* Reproductive health awareness among rural school going adolescents of Vadodara district. 2009;30(2):94-99.
6. UNICEF. Guide to menstrual hygiene materials First edition Supply Division / Water, Nations Plaza New York, USA. 2019.
7. Belayneh, Mekuriaw B. Knowledge and menstrual hygiene practice among adolescent school girls in southern Ethiopia: A cross-sectional study, *BMC Public Health.* 2019;19(1):1595.
8. Kaur R, Kaur K, Kaur R. Menstrual hygiene, management, and waste disposal: practices and challenges faced by girls/women of developing countries, *Journal of Environmental and Public Health,* 2018.
9. Narayan KA, Srinivasa DK, Pelto PJ, Veerammal S. Puberty rituals, reproductive knowledge and health of adolescent schoolgirls in South India. *Asia-Pac Popul J.* 2001;16(2):225–38.
10. Sarkar I, Dobe M, Dasgupta A, Basu R, Shahbabu B. Determinants of menstrual hygiene among school going adolescent girls in a rural area of West Bengal. *J Fam Med Prim Care.* 2017;6(3):583.
11. Ten VA. Menstrual Hygiene: A Neglected Condition for the Achievement of Several Millennium Development Goals, European Commission -Europe Aid. 2007.
12. Lawan UM, Nafisa Wali Yusuf, Aisha Bala Musa. Menstruation and menstrual hygiene amongst adolescent school girls in Kano, northwestern Nigeria. *African journal of reproductive health.* 2010;14(3):201-208.
13. Adhikari P, Kadel B, Dhungel SI. Knowledge and practice regarding menstrual hygiene in rural adolescent girls of Nepal. *Kathmandu Univ Med J (KUMJ).* 2007 Jul-Sep;5(3):382-6.
14. Kalpana Katiyar, Harivansh Chopra, Sunil Kumar Garg. KAP study of menstrual problems in adolescent females in an urban area of Meerut. *Indian J Community Health.* 2013;25(3):217-220.
15. Subhash B Thakre, Sushma S Thakre, Monika Reddy. Menstrual hygiene: knowledge and practice among adolescent school girls of Saoner, Nagpur district. *Journal of Clinical and Diagnostic Research.* 2011;5:1027-103.
16. Abita Z, Ali R, Admassu B. Menstrual hygiene management practice and associated factors among secondary school girls in finotselam town. 2021.

17. Bacha K, Getahun T, Wako K. Assessment of Knowledge and Practice of Adolescent In-School Girls Towards Menstrual Hygiene Management and Determining Factors in Lucy Village of Ethiopian Great Rift Valley. *Int J Immunol.* 2016;4:52-63.
18. Mudey AB, Keshwani N, Mudey GA, Goyal RC. A cross-sectional study on the awareness regarding safe and hygienic practices amongst school going adolescent girls in the rural areas of Wardha district. *Global Journal of Health Science.* 2010;2(2):225-231.
19. Jisha VG, Rupashree R, Soma Sundaram T. Empirical Analysis on Knowledge, Attitudes and Practices (KAP): Puberty and Menstrual Hygiene. *Journal of International Women's Studies.* 2021;22(6):113-128.
20. Pragati Meena, Poonam Bhojwani, Gajendra Singh Verma. A Kap study on menstrual hygiene in adolescent girls, *International Journal of Clinical Obstetrics and Gynaecology.* 2018;2(2):63-68.
21. Chet Kant Bhusal. Practice of Menstrual Hygiene and Associated Factors among Adolescent School Girls in Dang District, Nepal, *Hindawi Advances in Preventive Medicine.* 2020; Article ID 1292070:7.
22. Rasheed TO, Afolabi WA. Maternal and Adolescent Factors Associated with Menstrual Hygiene of Girls in Senior Secondary Schools in Lagos, Nigeria. *J Matern Child Health.* 2021;6(01):35-45. <https://doi.org/10.26911/thejmch.2021.06.01.04>
23. Deshmukh V, Sandhu GK, Rachakonda L, Kakde M, Andurkar SP. Knowledge, attitudes and practices (KAP) regarding menstruation among girls in Aurangabad, India and their correlation with sociodemographic factors. *Int J Reprod Contracept Obstet Gynecol.* 2019;8:979-87.
24. Shumie ZS, Mengie ZA. Menstrual hygiene management knowledge, practice and associated factors Among School Girls, Northeast Ethiopia. *PLoS ONE.* 2022;17(7):e0271275.
25. Das DK, Chakraborty T, Chakraborty S, Tripura K, Datta A, Pal A. A cross sectional study on menstrual hygiene practices among the village women attending a primary health centre, Tripura. *Int J Community Med Public Health.* 2019;6:3332-8.
26. Shivaleela P Upashe, Tesfalidet Tekelab, Jalane Mekonnen. Assessment of knowledge and practice of menstrual hygiene among high school girls in Western Ethiopia, *BMC Women's Health.* 2015;15:84.
27. Dr. Neelima Sharma, Dr. Pooja Sharma, Dr. Neha Sharma, Dr. RR Wavare, Dr. Bishal Gautam, Dr. Madan Sharma. A cross sectional study of knowledge, attitude and practices of menstrual hygiene among medical students in north India, *The Journal of Phytopharmacology.* 2013;2(5):28-37.
28. Srivastava S, Chandra M. Study on the knowledge of school girls regarding menstrual and reproductive health and their perceptions about family life education program. *Int J Reprod Contracept Obstet Gynecol.* 2017;6:688-93.
29. Prajapati J, Patel R. Menstrual hygiene among adolescent girls: A cross sectional study in urban community of Gandhinagar. *J Med Res.* 2015;1:122-5.
30. MDevi S, Taywade M. Experiences of menstruation with factors influencing menstrual hygiene practices among adolescent girls attending outpatient department of secondary care hospital setting: A cross-sectional study. *Amrita J Med.* 2022;18:20-5.
31. Kandpal J. A study to assess the practice to menstrual hygiene among adolescent girls in selected area, Dehradun, Uttarakhand. *IOSR J Nurs Health Sci.* 2018;7:1-5.
32. Malhotra A, Goli S, Coates S, Mosquera-Vasquez M. Factors associated with knowledge, attitudes, and hygiene practices during menstruation among adolescent girls in Uttar Pradesh. *Waterlines.* 2016;35:277-305.