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RESEARCH ARTICLE

KNOWLEDGE AND PRACTICES REGARDING MENSTRUAL HYGIENE- AN OBSERVATIONAL ANALYSIS AMONG ADOLESCENT GIRLSVISITING MEDICAL COLLEGE DIFFERENT OUTPATIENT DEPARTMENTS AT JHANSI (U.P.)

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Abbreviations

AG- adolescent girls
MBBS- Bachelor of Medicine Bachelor of surgery
OPD- out patient department
RTI- reproductive tract infection
STI- sexually transmitted diseases

ABSTRACT

Background: Menstruation in women is a normal physiological process and key sign of reproductive health. Poor menstrual hygiene is a problem in many developing countries. Proper menstrual hygiene is essential for one's own wellbeing and development.
Objectives-to evaluate the knowledge and practice regarding menstrualhygiene among adolescent girls and to determine the co-relation of knowledge and practice levels among the adolescent girls.
Methods: It was an observational analytical study conducted at different OPD of medical college, Jhansi from July 2017 to June 2018 among adolescent girls aged (10-19 years). Information on demographic variables which include age, class, type of family, education of mother, family income, age of menarche was collected from the participants. Validity of questionnaire was checked by pilot testing. Knowledge and Practices level were categorized into good, fair and poor. Epi-info software was used for data analysis and chi-square test was used.
Results: 66% of girls belonged to late adolescent stage. 72% of participants had prior knowledge about menstruation, while the most common source of information was mother (62%), only 8.5% girls had good knowledge and 20 % girls had good practices. Education of mother had statistical significant effect on knowledge scores of the participants.
Conclusion: It was found that the awareness about menstrual hygiene was still poor, less than 10 percent have good knowledge. The girls should be educated about significance of menstruation and development of secondary sexual characteristics, selection of sanitary menstrual absorbent, and its proper sanitary disposal.

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INTRODUCTION

Adolescents belong to vital age group not only because they are the entrant population to parenthood but also because they are threshold between childhood and adulthood. The word "Adolescent" is derived from the Latin word "adolescere" which means to grow to maturity that indicates the defining features of adolescence (Adolescence, 2018). Every female in her reproductive life goes through menstruation for 3-5 days average each month. Maintenance of hygiene is important for wellbeing. Prevalent negative defiance of parents as well as the society at large blocks the admittance to information in adolescent girls which are paramount for preservation of menstrual hygiene. Lack of menstrual hygiene increases the susceptibility to Reproductive Tract Infection (RTI)/ STI. Women having better knowledge regarding menstrual hygiene and safe practices are less vulnerable to reproductive tract infections and its consequences. Therefore, increased knowledge about menstruation right from childhood may escalate safe practices and may help in mitigating the suffering of millions of women. The social stigma attached to menstruation causes many girls and women to carryout dangerous hygiene practices. Lacking a platform to share menstrual hygiene problems, girls and women often suffer from discomfort and infection, avoiding urination during menstruation, and using any kind of cloth available old (or) unwashed as an, but still girls are not visiting medical practitioners. Hence forth, the current study was premeditated to evaluate the knowledge and practice regarding menstrual hygiene among adolescent girls visiting OPD of medical college at Jhansi.

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MATERIALS AND METHODS

Study setting: Outpatient Departments of Medical college, Jhansi (U.P.)

Study design: It was an observational analytical study
Study duration: July 2017 to June 2018 (1 year)
Study population: Adolescent girls (10-19 years) attending various OPD of medical college.
Sampling technique: Convenience sampling
Inclusion Criteria: Girls aged 10-19 years visiting OPD.

Exclusion Criteria

- Girls who haven't attained menarche.
- Medical college MBBS and Nursing students.
- Girls who didn't give consent.

Sample Size calculation- considering the prevalence of knowledge on menstrual hygiene based on literature search was 29% (Mahajan *et al.,* 2017). The estimated sample size is calculated as follows;

The formula used for calculation of sample size (n) was:

$$n=\frac{z^2pq}{L^2}$$

Where in,z (at 95% confidence levels) =1.96~ 2

p = 29
q = 71 (1-p)
L = absolute error of 5%
So, sample size (n) = 330

Study tool: A self-administered, structured, pretested, closed ended anonymous questionnaire consisting of questions in English and Hindi on knowledge and practices regarding menstrual hygiene was used as a study tool. Participants were explained about the purpose of study and written informed consent was obtained. They were informed about confidentiality of information collected. Demographic information like parent's education, occupation, family monthly income, personal information like chronological age, age at menarche were collected. Questions on knowledge and physiology of menstrual hygiene, information before menarche and source of information about menstruation were also taken. To assess the menstrual hygiene practices, the questions were asked about the use of sanitary pads, number of pads per day and general hygiene during menstruation. Ethical clearance was also obtained from institutional ethical committee. A pilot study was conducted on 30 adolescent girls to test the validity of the questionnaire. Minor changes were made in the questionnaire after pilot testing. The questionnaire was self-administered, and adequate time was given to the participants to fill up the questionnaire. There were 7 numbered questions to assess the knowledge about menstruation and hygiene. Each correct response was awarded 1 mark and the remaining as 0. Hence the minimum and maximum score that can be acquired by the respondent were 0 and 10 respectively; as one question was multiple response type. Scores 0-4, 5-7, 8-10 points were graded as poor, fair, good knowledge respectively. There were 6 questions to assess the level of practice of menstrual hygiene.Here the minimum score that can be acquired by the respondent was 0 and maximum score 6. Scores 0-2, 3-4, 5-6 points were graded as poor, fair and good practice respectively. Following data collection, queries from the participants relating to menstrual and reproductive health were clarified by the investigator. The pretested questionnaire was administered under the supervision of the investigator to prevent the participants from sharing responses.

Data Analysis: The data were cleaned, and the responses were entered in Epi data software and the collected data were consolidated on Microsoft Excel sheets and further analysed in Epi-info 7.1.3.0 version. The results were expressed as proportions and percentages, quantitative variables using Chi square test, and Fischer exact test and Pearson's correlation coefficient to assess the correlation between the knowledge and practice scores. P-value ≤ 0.05 was used to indicate a statistically significant association.

RESULTS

Table 1 shows the frequency and proportion of the socio-demographic variables of study participants. It was observed that (66%) of girls belonged to late adolescent stage. Most common age group for attaining menarche was 12-14 years (54%). In educational status of the parents, mother's education was given paramount importance, and it was seen than 25% of mothers were graduates and around 14% were illiterate. Most of the girls belonged to joint family (64%). Table 2 depicts that around 72% of participants had prior knowledge about menstruation, while the most common source of information was mother (62%), followed by teachers in school (18%). Table 3 shows overall 47% of adolescent girls had fair knowledge, while 44% had poor knowledge about menstrual hygiene. Only 8.5% girls had good knowledge. According to Table 4 age at menarche, monthly income of parents & education of mother had statistical significant effect on knowledge scores of the participants. Table 5 shows overall 58% of adolescent girls had fair practices, while 22% had poor practices levels about menstrual hygiene. Only 20 % girls had good practices. There was a positive correlation exists between knowledge and practice among the study population as shown in the Table no 6.

Table 1. Demographic profile of the study participants (N=330)

Demographic variables	N (%) = 330
Age (in years)	
10-13 (early adolescent)	30(9)
14-16 (mid-adolescent)	83(25)
17-19 (late adolescent)	217(66)
EDUCATION LEVEL (CLASS)	
8	46(14)
9	33(10)
10	43(13)
11	30(9)
12	178(54)
Age at menarche (in years)	
9-11	40(12)
12-14	178(54)
15-16	112(34)
Monthly income of parents	
<5000	26(8)
5000-10,000	132(40)
10,000-15,000	150(45)
>15000	22(7)
Parent education (mother)	
Illiterate	46(14)
Primary	56(17)
Secondary	59(18)
Graduate	83(25)
Post graduate	63(19)
Profession / honours	23(7)
TYPE OF FAMILY	
Nuclear	118 (36)
Joint	212 (64)

Table 2. Sources of information regarding menstrual hygiene among study participants

Particulars	N (%) =330
Prior information about menstruation	
yes	238(72)
no	92(28)
Sources of information	
mother	205(62)
family member	33(10)
friend	20(6)
health worker	10(3)
mass media	2(0.52)
teacher (school)	60 (18)

Table 3. Knowledge levels regarding menstrual Hygiene

Level	N (%)
Poor (0-4)	145 (44)
Fair (5-7)	155(47)
Good (8-10)	30 (8.5)

Table 4. Association between Knowledge levels and demographic variables

Variables	Satisfactory knowledge	Unsatisfactory knowledge	χ^2, df, p-value
Age of menarche (in years)			
9-11	12	28	14.81, 2,
12-14	100	78	0.001*
15-16	73	39	
Type of Family			
Nuclear	73	45	2.5,1, 0.11
Joint	112	100	
Monthly income (Rs)			
<5000	9	17	37.2, 3,
5000-10,000	50	82	0.0001*
10,000-15,000	110	40	
>15,000	16	6	
Education of mother			
Illiterate	2	44	43.9,5,
primary	35	21	0.0001*
secondary	37	22	
graduate	52	31	
post graduate	43	20	
profession / honours	16	7	

*p<0.05 is considered statistically significant

Table 5. Practices level regarding Menstrual Hygiene

Level	N (%)
Poor (0-2)	73 (22)
Fair (3-4)	191 (58)
Good (5-6)	66 (20)

Table 6. Correlation between knowledge and practices levels of participants

Particular	Mean	Correlation (r)
Mean knowledge score	7.35	0.211*
Mean practices score	5.15	

*p<0.05 is considered statistically significant

DISCUSSION

The present study revealed that majority of girls (54%) attained menarche between 12-14 years. The mean age of menarche among the study participants 13.45 years. In a study by Sangeetha Balamurgan *et al.,* 2014 found that maximum number of girls attained menarche between 13-15yrs (60%) and mean age of menarche of the respondents was 13.15 yrs. Another study conducted by Vijayakeerthi *et al.* revealed majority of women 85.7% attained menarche at the age of 13-15yrs followed by 35(10.4%) at the age of 11-12yrs and 13(3.9%) at the age of 16 yrs. In the present study 47% of adolescent girls had fair knowledge, while 44% had poor knowledge about menstrual hygiene. Only 8.5% girls had good knowledge. 58% of adolescent girls had fair practices, while 22% had poor practices levels about menstrual hygiene. Only 20 % girls had good practices. As per Vijayakeerthi *et al.* It was observed among337 women majority 45.7% of the study participants had average knowledge about menstruation and menstrual hygiene. 29.7% and24.6% of women had good and poor knowledge respectively. In a similar study conducted by Mahajan (2017), composite practice scores showed that 19%, 69%, and 12% samples had poor, fair, and good score of practices regarding menstrual hygiene, respectively. Indeed, the findings showed a significant positive association between good knowledge of menstruation and educational status of the mother only which is similar to the results of our study. Half of the study participants had mother as the most common source of information. In contrast to the current finding, studies carried out by Jugal *et al.* 2012 (29.1%), Adhikari *et al.* 2009 (25.3%) and Adwitiya Das *et al.* 2014 12 (20.8%) showed that the study participants had low level of knowledge about the source of menstruation. Regarding the normal duration of menstruation 96.4% of women had given correct response and this is consistent with findings from the studies by Kamath *et al.* 2013 (92%) and Karthik *et al.* 2016 (92%).Other studies too show almost similar result as present study (Patil Sudha Rani, 2014; Kamakhya Kumar *et al.,* 2015). The above findings emphasize the need to encourage safe and hygienic practices among the adolescent girls and bring them out of traditional beliefs, misconceptions, and restrictions concerning menstruation. The use of sanitary napkins was promoted, and various schemes regarding menstrual health were briefed to the students. Early awareness can prevent students from suffering from the various reproductive tract infections. Pamphlets were distributed among the AGs regarding the do's and do not's during menses, and they were asked to show the same at home to their mothers to enhance their knowledge about menstruation, menstrual, and personal hygiene so that they can educate their daughters at home. The Government of India had launched a scheme for the promotion of menstrual hygiene among adolescent girls in rural areas of the country. The focus of the scheme is to increase awareness among adolescent girls on menstrual hygiene, built self-esteem and increase access and use of high quality sanitary pads by adolescent girls in rural areas (NRHM Newsletter, 2012). The pads were given at schools and in the community by anganwadi worker. This scheme of supply of sanitary pads at low cost by the Government had a great impact in improvement of menstrual hygiene by the adolescent girls and this practice makes them to carry through rest of their reproductive life.

Conclusion and Recommendation

Menstruation and puberty hygiene is rarely discussed at home as well as schools; especially in the regions, the current study was conducted. It was found that the awareness about menstrual hygiene was still poor, less than 10 percent have good knowledge. 27.79 percent of the respondents was not aware of menarche before its onset. Mothers played a vital role in informing them about menstrual hygiene prior to menarche. In this study, the role of teacher was found negligible in imparting awareness on various issues related to menstrual hygiene. Most of the respondents were using sanitary pads but still there are girls using old cloths and reusing pad/ cloth. Due

to some cultural and religious restrictions, many young girls in this country lack appropriate and sufficient information regarding menstrual hygiene causing incorrect and unhealthy behavior during their menstrual period. The girls should be educated about significance of menstruation and development of secondary sexual characteristics, selection of sanitary menstrual absorbent, and its proper sanitary disposal. So that she does not develop psychological upset and imparting education would indirectly wipe away the age old myths and make her feel free to discuss menstrual matters without any inhibition.

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