Knowledge and Practice of Menstrual Hygiene and Reproductive Tract Infection in Adolescent Girls in Doda District of Jammu and Kashmir Territories, India

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Abstract

Objective: To assess knowledge and practices regarding menstrual hygiene and reproductive tract infection in adolescent girls in Doda District of Jammu and Kashmir Territories, India.

Method: This cross-sectional study was performed on adolescent girls attending schools in Doda district of Jammu and Kashmir territories, India. Data were collected through interviews using a predesigned semi-structured questionnaire and results were analyzed using MS Excel.

Results: A total of 450 adolescent girls from public and private schools of Doda district of Jammu and Kashmir were included in this study. Most participants were in the 14–16 years of age. The most common source of information about menstruation identified in this study was mother (56.2%), sister (13.1%), teacher (12.7%), and friends (9.6%). In terms of menstrual hygiene, 53.1% girls used sanitary pads, 24% girls used dry cloths/towel and 10.7% girls used homemade and sanitary pads during their menstrual period. About 42% of the participant were absent from school during their menses and most participants take daily bath during their menses.

Conclusion: Awareness regarding menstruation and menstrual hygiene needs to be improved with the emphasize on providing accurate and adequate information on this topic to adolescent girls. Information and provision on affordable absorbent napkins or pads during menstrual period are also important for these girls.

Keywords: Attitudes, clothing, health knowledge, menstrual hygiene, reproductive tract infection

Introduction

In females, menstruation is a universal and natural process during the reproductive age. Yet, often when a girl sees blood first time (menarche) from her vagina, can be shocking and frightening[1]. In India, the physiological bases of menstruation, biological changes at puberty, and infection risks by poor practices are hardly ever discussed openly.

Around 40–45% of adolescent girls have less knowledge and unsafe hygienic practice regarding their menstrual flow.[2] This might have a clinical implication to integrate the promotion of menstrual hygienic practice in the health care system and comprehensive efforts including policy implication are needed to improve girls' knowledge and safe hygienic practices towards menstruation right from their adolescent period.[3] In this community, menstrual hygiene remains considered a taboo subject; many females feel uncomfortable discussing it in public.[4]

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Reproductive tract infections (RTIs), both sexually transmitted infections (STIs) and non-Sexually transmitted infections (non-STIs) of the reproductive tract, are accountable for major illhealth throughout the world. The WHO estimates that every year, there are over 340 million new instances of STIs wherein 75–85% arise in growing countries. In India alone, forty million new cases emerge every year. A majority of women suffering from RTIs have complications like pelvic inflammatory disease (PID), infertility, cervical cancer, puerperal sepsis, chronic pelvic pain, and ectopic pregnancy. Among women, RTIs in lots of cases are asymptomatic, making their detection and prognosis difficult.[2] Several types of research carried out amongst adolescent and pretertiary college students internationally, have shown insufficient knowledge of menstruation and poor menstrual hygiene practices.[5, 6]

So, it becomes an important area of study to evaluate the knowledge and the menstrual hygiene practices that female comprehends and rectify by educating them. Hence the present study aimed to assess the knowledge regarding menstruation among school-age adolescents and to find out the practice related to the maintenance of menstrual hygiene among them.

Methods

This school-based cross-sectional study was carried out at Rural Health Training Centre (RHTC), Department of Community Medicine, and Government Medical College in Doda district of Jammu & Kashmir (J & K), from August 2019 to January 2020. A total of 6 schools (3 Government and 3 private) were selected nearby of the rural health center. Approval from Institution Ethical Committee (13/GMCD/C-MED/2019), Government Medical College, Doda, Jammu & Kashmir, was taken prior to the study.

After the selection of the schools, the respective principals explained the purpose and procedure of the study. A list of female students studying in 8th to ^{10th} grade was obtained from each of the 6 selected schools. A total of 75 students were selected from each school by stratified random sampling to obtain a total sample size of 450. 25 students were selected from each standard in every school thus allowing equal participation of all age groups.

Female students of 8th to 10th grade who had attained the menarche at the time of the study were included in this study. Students not willing to take part were excluded from the study.

Data were collected from the adolescent girls by two trained female field assistants in a private room on the school grounds. A semi-structured questionnaire was implemented for the students after obtaining informed written consent. The knowledge of the students on menstruation was based on 10 questions relating to menstrual physiology, female anatomy, and menstrual hygiene. Menstrual hygiene practice was assessed using 6 questions. The overall maximum scores for knowledge and menstrual practice were 10 and 6 points, respectively.

The questionnaire consisted of questions related to socio-demographic characteristics (religion, participant's education, parent's education, parent's occupation), and knowledge and practice regarding menstruation and menstrual hygiene (knowledge of menarche, absorbent used and practiced during menstruation). All the participants were divided into the age group of 12–13 years, 13–15 years, and more than 15 years of age. Questionnaires were distributed to the children for self-administration and care was taken that no consultations were made with fellow students with the help of school teachers.

The Data were collected using hard copy questionnaires and were entered in Microsoft Excel, coding of the variables was done and thereby interpretation and analysis of the collected data were done by using graph pad prism software. The results were expressed mostly in frequencies, percentages, and means. Associations between some variables were tested using Chi-square statistical tests.

Results

A total of 450 adolescent girls were included.

Table 1 Classification of the Participant Based on Age and Religion

Variables	n (%)
Ages (years)	
12–13	157 (34.9)
13–15	232 (51.6)
>15	61 (13.6)
Religion	
Hindu	180 (40)
Muslims	270 (60)

Table 2 Classification of the Participants According to Parent Education and Occupation

Education and Occupation	Father n (%)	Mother n (%)
Education		
No formal education	105 (23.3%)	123 (27.3%)
Primary school	93 (20.7%)	75 (16.7%)
Middle school	108 (24%)	86 (19.1%)
High school	90 (20%)	123 (27.3)
Graduate and above	54 (12%)	43 (9.6%)
Occupation		
Daily wager	153 (34%)	36 (8%)
Private job	135 (30%)	91 (20.2%)
Goverment job	87 (19.3%)	44 (9.8%)
Businessman	75 (16.7%)	-
Housewife	-	279 (62%)

Most of the adolescent girls were in the age group of 13–15 years and more than 50% of participants belonged to Muslim families. Most of the participant's parents were educated. In this study, the main sources of information about menstruation in more than 50% of participants were from the participant's mothers. About half of the participants of the present study did not have prior knowledge of menstruation before menarche.

The present study showed that only 53.1% of the participants were using sanitary pads during menstruation, 24% of the participants were using dry clothes, or towels during their menstruation and 10.7% of adolescent girls were used sanitary as well as homemade pads like dry clothes, sponges, etc. About half of the studied participants changed their pad or cloth twice a day and about 28.4% of participants cleaned their external genitalia by only using water. The hygienic practice of adolescent girls was about 12.2%.

Discussion

Adolescence is considered to be a particularly important period for women, during which significant hormonal and emotional changes occur, including the first onset of menstruation. Menstruation is a very normal physiological process at the female reproductive age, but it is surrounded by taboo and supernatural perceptions.

Menstruation is the cyclical shedding of the inner layer of the uterus and this process is controlled by the hormones secreted by the hypothalamopituitary axis.[7] Alterations in hormones during puberty initiate the transformation of a girl into a sexually mature woman, which is accompanied by psychological, cognitive, and physical changes.[8] Better appreciation and attitude towards menstruation are achieved when the adolescent girl knows about menstruation.[7] Many adolescent girls, particularly in rural regions, lack access to basic information about menstruation and related hygiene practices, and frequently join their menarche without preparation. Adolescent school girls' health and academic performance may suffer due to poor knowledge and practice of menstruation. For women and girls to manage their periods with confidence and dignity, and to make informed decisions about their menstrual health, accurate knowledge of menstruation and menstrual hygiene management is essential. In the present study was found that females having more knowledge of menstruation were better at practicing good menstrual hygiene. This study is in accordance with the many previous published articles.[2, 7, 9]

In this study were observed that the age of menstruating girls ranged from 12 to 20 years and most of the female were in the age group of 14–16 years of age. Nair *et al*.[2] in their study found the same results.In this study half of the studied participant's mother was the primary source of information about menstruation in adolescent girls. These findings are consistent with Damor *et al*.[10] Different from this study

Table 3 Participant's Knowledge of Menstruation

Variable	n (%)
Source of information about menstruation	
Mother	253 (56.2)
Sister	59 (13.1)
Teacher	57 (12.8)
Friends	43 (9.6)
Doctor	26 (5.8)
Television/radio	12 (2.7)
Age (years)	
<15	442 (98.2)
>15	8 (1.8)
Knowledge of menstruation before menarche	
Yes	212 (47.1)
No	238 (52.9)
Knowledge of menstruation (Normal process or not)	
Yes	276 (61.3)
No	135 (30)
Do not know	39 (8.7)
Knowledge of the cause of menstruation	
Disease	60 (13.3)
Hormones	147 (32.7)
Past sins	18 (4)
Curse	17 (3.8)
Do not know	208(46.2)
Sources of bleeding	
Stomach	5 (1.1)
Uterus	171 (38)
Urinary tract	159 (35.3)
Ovary	42 (9.33%)
Do not Know	73 (16.22%)

Table 4 Menstrual Hygiene Practices of Adolescents Girls

Variable	n (%)
Type of absorbent used during menstruation	
Sanitary Pad	239 (53.1)
Clean cloth/towel	108 (24)
Both cloth & sanitary Pad	48 (10.7)
Did not any absorbent	55 (12.2)
Cleans external genitalia	
With soap and water	322 (71.6)
Only with water	128 (28.4)
Frequency of changing pads and cloth during menstruation?	
≤2	255 (56.7)
3–4	150 (33.3)
≥5	45 (10)
Dispose of the sanitary pad	
Dustbin	316 (70.2)
Open space	122 (27.1)
Flush it	12 (2.7)
Practiced during menstruation	
Restrict sour foods	185 (41.1)
Restrict religious activities	98 (21.8)
Avoid sports activity	90 (20)
Restrict wearing washed clean clothes	6 (1.3)
No restrictions	71 (15.8)
Bath regularly	
Yes	436 (96.9)
No	14 (3.1)
Absent from school during menstruation	
Yes	189 (42%)
No	261 (58%)

Yasmin *et al.*[11] and Juyal *et al* [12] reported that friends and sisters became the participant's source of information.

In this study, about half of the participants did not know the cause of menstruation. The study showed, 38% of the participants know that bleeding takes place from the uterus. Chauhan *et al.*[9] in their study observed that menarche awareness was very low in adolescent girls and only very few girls considered the menstrual cycle as a physiological process. Only 11.9% of girls know that bleeding takes place from the uterus.In contrast to this study, Srivastava *et al.*[13] studied 537 adolescents in Madhya Pradesh, India, and observed that 73.7% of adolescent girls know that bleeding takes place from the uterus.

In this study, 46% of adolescent girls know the importance of sanitary hygiene and 71.7% know the risk for genital infection in unhygienic conditions during menstruation. 53% of girls use sanitary pads, 24% use dry cloth/towel, and 10.7% use a dry cloth as well as a sanitary pad. 56.7% of participants change their pads once a day, 33.3% change their pads at least twice a day and 10% changed their pads more than five times a day. This study showed that 12.2% of participants did not use any absorbent during their menstruation and most of these participants belong to the government school. 70.2% of participants wrapped their pads and disposed of a pad in a dustbin, 27% dispose of their pads in an open space and 2.7% of participants flushed their used pads. 71.7% of girls clean their external genitalia with soap and water daily while 28.3% of adolescent girls used only water for cleaning their external genitalia. Many different studies showed that menarche awareness ranges from 29% to 80% in different parts of the country and the highest seen in Chandigarh.[14-17] There are many different doubts about menstruation and they have been influenced by social myths and taboos about menstrual practices.[17]

The provision of safe, private, clean, sanitary, and hygienic facilities for dressing change, rinsing and drying materials, discreet handling options, and soap for hygiene Personalization is essential for good management of menstrual hygiene in schools. Lack of appropriate and adequate sanitation and hygiene facilities can lead to feelings of shame, embarrassment, and discomfort in girls, and may cause girls to miss school during menstruation. Even when girls go to school during their menstrual period, due to poor sanitation, they are often forced to leave school early to change the tampons used at home.[1] In this study, during menstruation, 41% of the participants did not take sour food in their diet, 21.7% avoid religious activity, 20% avoid sports activity, 1.3% of adolescents did not wear washed and clean clothes, and 16% adolescent girls did not have any restriction in any activity. The study showed, most of the participants (97%) take a daily bath during menstruation. In this study, during menstruation, 42% of adolescent girls were seen absent from school and the reason behind this was pain and discomfort.

The study results underscore that misconceptions, taboos, and myths still exist about menstruation. Reproductive tract infections, which have become a silent epidemic devastating women's lives, are closely related to poor menstrual hygiene. Unhealthy practices and social taboos during menstruation are issues that need to be addressed at all levels. A sustained public health awareness program on the physiological basis of menstruation and the adaption of good hygiene practices should be promoted with the selection of disposable sanitary napkins.

It is challenging to determine a cause-and-effect link between research variables because this is a cross-sectional study. Because this study used a self-administered questionnaire rather than an interview, the reliability of responses could not be confirmed. Again, as some respondents may claim to practice safe menstrual hygiene but do differently, the menstrual hygiene practice score may contain some social desirability biases.

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