

Research Article

Awareness and Practices Related to Menstrual Hygiene and Associated Problems in Adolescent Girls Residing in Tea Garden Areas of Jorhat, Assam, India

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A B S T R A C T

Introduction: In India, menstrual hygiene practices are clouded by underlying taboos and socio-cultural restrictions for adolescent girls and women. Evidence suggests that limited access to sanitary hygiene products and a lack of safe hygienic facilities decrease school attendance and contribute to local infections. The awareness regarding various health aspects among the population in tea garden areas in Assam is still poor. Considering the above, this study was conducted among adolescent girls in tea garden areas of Assam.

Objective: To assess the awareness and practices of menstrual hygiene and its related health problems in adolescent girls in tea garden areas.

Method: A community-based cross-sectional study was carried out from October 2019 to March 2020 in the tea gardens of Jorhat, Assam. The sample size of 333 was taken from 9 tea gardens randomly.

Results: Awareness of menstruation before attainment of menstruation was found in 35.14%. The majority (77.48%) of girls were using sanitary pads during their menstruation; 36.90% experienced abdominal pain, 24.90% had clot blood, and 19.80% had excessive bleeding. A significant association ($p < 0.050$) was found between awareness and use of sanitary pads and the educational qualification of adolescents.

Conclusion: The awareness regarding menstruation and sanitary practice was unsatisfactory among adolescent girls. The adolescents must be made aware to adopt proper ways to maintain menstrual hygiene. Literacy needs to be increased among adolescent girls in tea garden areas in Jorhat, Assam to achieve better menstrual hygiene.

Keywords: Adolescent Girls, Awareness, Menstrual Hygiene, Practices, Sanitary Pad, Tea Garden Dwellers

Introduction

In India, menstrual hygiene practices are still clouded by underlying taboos and socio-cultural restrictions for adolescent girls and women. Various evidence suggests that besides having limited access to hygienic sanitary products and a lack of safe sanitary facilities which results in a decrease in their school attendance,¹ they also cause local infections; of which, the serious ones may even lead to infertility.² The awareness regarding various health aspects among the population in tea garden areas is still poor in Assam, India. Therefore, the main objective of this study is to assess the knowledge regarding practices of menstrual hygiene among adolescent girls in tea garden areas of Jorhat, Assam, India.

Menstruation is a natural biological process but it is still a taboo in many societies including the Indian society as it is considered an unclean and dirty process. This is one of the biggest problems faced by adolescent girls and it is still a neglected issue in lower socio-economic groups of the society.

Culturally in many parts of India, menstruation is still considered to be dirty and impure.³ Being a dirty occurrence, a menstruating girl is isolated or forced to drop out of school as access to sanitary napkins in rural areas is low. This cycle is handed over from mother to daughter but the taboo on menstruation remains among them. Lack of awareness resulted in a major problem in India's menstrual hygiene scenario. However, in cities, the availability of sanitary napkins and their use by women has improved. Sanitary napkins are easily available in pharmacies and grocery stores in cities, it is also commercialised via advertisements so that they can be treated as any other product. In rural areas, sanitary napkins are found with difficulty. Most girls rely on homegrown or other readily available materials which often being unhygienic. According to one estimate, only 2–3% of women in the slums of India are using sanitary napkins.⁴ The lack of demand could be one reason for storekeepers to not stockpile sanitary pads. In some cases, women are adopting unhygienic practices during their menstrual cycles, such as filling up socks with sand and tying them around the waist to absorb menstrual blood. Such methods increase the chances of infection and hinder the day-to-day tasks of women during their menstrual periods. It has been seen in rural areas that two or three women of the same family use the same cloth during menstruation, after washing and drying it. This is an extremely unhealthy practice and brings numerous health risks. Sanitary napkins are thought to be a luxury in rural areas, especially in interior places. Even if available, women are discouraged from spending money on sanitary napkins as old clothes or sand is thought to be good enough for something dirty like menstruation.⁵

Other health problems associated with menstrual hygiene are anaemia, prolonged or short periods, infections of the reproductive tract, as well as psychological problems such as anxiety, embarrassment, and shame. Menstruation is considered taboo by many women who feel ashamed even to seek medical advice if they face any health problems related to menstruation. Unhygienic menstrual condition often results in women developing health problems which are further aggravated due to their inability to seek medical help on time. Educating adolescent girls regarding menstrual hygiene is necessary so that their needs are taken into account.⁶ This study aimed to know what the awareness and practices regarding menstrual hygiene and its related health problems among the adolescent girls in tea garden areas of Assam, India.

Materials and Method

A community-based cross-sectional study was carried out from October 2019 to March 2020 among adolescent girls aged 10 to 19 years in tea garden areas of Jorhat, Assam, India. Jorhat, also known as the "tea capital", is located on the southern bank of the river Brahmaputra where one can discover splendid tea estates and research institutes. There are 88 registered tea gardens in the Jorhat district (Government of Assam, India). Most of the tea garden dwellers are tea garden labourers.

According to a study conducted in 2017 at Dibrugarh town, Assam, India, the prevalence of awareness regarding menstruation prior to attainment of menarche was 27%.⁷ So, considering a 27% prevalence of awareness with a 95% confidence interval, 5% absolute error and 10% non-response, the sample size was calculated to be 333.

Using simple random sampling technique, 9 tea gardens were selected from 88 registered tea gardens in Jorhat district. The sample size of 333 was allocated equally among the selected tea gardens namely Bagsong Tea Estate (TE), Boidehat TE, Chenijan TE, Chinamora TE, Harochapori TE, Lohpohia TE, Mohbondha TE, Puranimati TE, and Rajabari TE. The data was collected in a pre-designed pre-tested proforma by interviewing the adolescents after obtaining informed consent from their guardians or parents. The study received clearance from the Institutional Ethics Committee. The selection of the houses in the tea garden areas was done by picking up a random number and then every house was visited until the required sample in each garden area was obtained. If there were two or more eligible adolescent girls in one household, then either one was selected.

Data were presented in the form of tables and figures. Percentages were calculated and also chi-square test and Fisher's exact test were performed to test the associations.

Results

A total of 333 adolescent girls were included in the study, out of which, 28.83% belonged to the age group of 10–13 years, 54.35% belonged to the age group of 14–16 years and 16.82% belonged to the age group of 17–19 years. The majority (72.97%) of the study subjects had studied up to class 10 followed by those who had studied beyond 10th standard (15.32%) and those who were illiterate (11.71%). According to religion, the majority of our study subjects 54.35% were Hindus, 41.74% were Christians, and only 3.90% were Muslims. The majority of adolescents (53.75%) were students, 36.04% were working in gardens, and 10.21% were staying at home. As per socio-economic classification, 63.06% of study subjects were from class IV, 23.72% from class III, and 13.21% from class V (Table 1). Out of 333 study subjects, 117 (35.14%) had awareness of menstruation prior to attainment of menarche and 87.69% had awareness about the use of sanitary pads during menstruation (Table 2). In our study, the majority of study subjects (77.48%) were using sanitary pads during their menstruation followed by 22.52% using cloth and 10.81% using both sanitary pads as well as cloth. Amongst the cloth users, 17.33% of participants were not using sanitary pads as they could not afford them, 28% did not disclose the reason, and 54.67% were not using them due to a lack of awareness about them. In our study, it was found that 58.30% of study subjects washed their genitalia regularly after using the toilet, 14.40% washed sometimes and 27.30% never washed their genitalia after using the toilet. The majority (68.99%) were using pits or burning as disposal methods for the pads, 5.81% used dustbins and 25.19% indiscriminately threw them. Among the cloth users, 81.33% washed their reusable cloth with soap and water and 18.67% washed with water only (Table 3). Regarding menstruation-related problems, 36.90% had experienced abdominal pain, 24.90% mentioned clotted blood during menstruation, 19.80% mentioned excessive bleeding, 14.70% mentioned weakness during menstruation, 6% mentioned irregular cycle, and 1.20% had less bleeding during the period (Figure 1). Among them, 66% of adolescents took advice from elder family members and 34% took advice from health professionals.

In our study, it was found that awareness regarding menstruation before attainment of menarche was more among the higher age groups (60.71%) as compared to lower age groups of adolescent girls. This association between awareness and age group of adolescents was significant ($p < 0.001$). Similarly, awareness was found more (90.19%) among the adolescents having educational qualification (10th or more) as compared to those below 10th and

illiterate which was statistically significant ($p < 0.001$). We also found statistically significant ($p < 0.001$) results between awareness and occupation where awareness was more (48.60%) among the students as compared to other groups. Table 4 shows that there was no association ($p > 0.05$) between awareness and socioeconomic class of the adolescents.

Usage of sanitary pads was maximum (92.15%) among the participants who had an education qualification of 10th or more as compared to those below 10th and illiterate groups. We found a statistically significant ($p < 0.050$) association between educational status and sanitary napkin use. Similarly, the proportion of sanitary napkin users among the higher socio-economic class was more as compared to the lower class which is statistically significant ($p < 0.001$). As with awareness, the use of sanitary napkins was more common among the students (90.50%) as compared to other occupational groups; this association was found to be statistically significant ($p < 0.001$). Table 5 shows that there was no association ($p > 0.050$) found between age groups and the use of sanitary napkins.

Table 1. Socio-Demographic Profile of Adolescent Girls

N = 333

Socio-Demographic Profile	Number	Percentage	
Age group (years)	10–13	96	28.83
	14–16	181	54.35
	17–19	56	16.82
Education	Illiterate	39	11.71
	Below 10th	243	72.97
	10th or higher	51	15.32
Religion	Hindu	181	54.35
	Christian	139	41.74
	Muslim	13	3.90
Socio-economic status	Class I	0	0.00
	Class II	0	0.00
	Class III	79	23.72
	Class IV	210	63.06
	Class V	44	13.21
Occupation	Students	179	53.75
	Garden worker	120	36.04
	Others	34	10.21

Table 2. Awareness about Menstruation Prior to Attainment of Menarche

Awareness about Menstruation		Number	Percentage
Awareness about menstruation prior to attainment of menarche (N = 333)	Aware	117	35.14
	Not aware	216	64.86
Sources of information about menstruation prior to attainment of menarche (N = 117)	Sister	31	26.50
	Mother	49	41.88
	Friends	37	31.62
Awareness about sanitary pad	Aware	292	87.69
	Not aware	41	12.31

Table 3. Menstrual Hygiene Practices among Adolescent Girls

Menstrual Hygiene Practices		Number	Percentage
Type of pad used during menstruation (N = 333)	Sanitary pad	258	77.48
	Cloth	75	22.52
	Both	36	10.81
Reasons for not using sanitary pads (N = 75)	Not affordable	13	17.33
	No reason	21	28.00
	Not aware	41	54.67
Methods of disposal of pads (N = 258)	Dustbin	15	5.81
	Pit/ burning	178	68.99
	Indiscriminately throwing	65	25.19
Washing of reusable cloth (N = 75)	Soap & water	61	81.33
	Water	14	18.67
Cleaning external genitalia after using the toilet (N = 333)	Regularly	194	58.30
	Sometimes	48	14.40
	Never	91	27.30

Table 4. Association of Menstrual Awareness and Practices with Socio-Demographic Variables

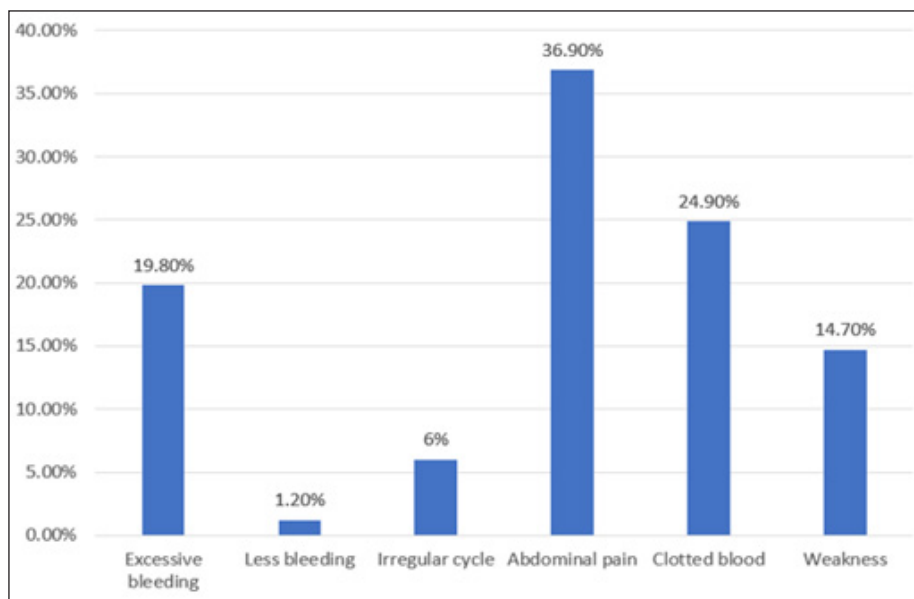
N = 333

Socio-Demographic Variables	Total (n)	Awareness Present (n)	p Value
Age group (years)			
10–13	96	17	< 0.001
14–16	181	66	
17–19	56	34	
Education			
Illiterate	39	4	< 0.001
Below 10th	243	67	
10th or higher	51	46	
Socio-economic status			
Class III	79	33	> 0.050
Class IV	210	68	
Class V	44	16	
Occupation			
Students	179	87	< 0.001
Tea garden worker	120	18	
Household work	34	12	

Table 5. Association of Sanitary Pad Usage with Socio-Demographic Variables

N = 333

Socio-Demographic Variables	Total (n)	Sanitary Pad Used (n)	p Value
Age group (years)			
10–13	96	78	> 0.050
14–16	181	143	
17–19	56	37	
Education			
Illiterate	39	28	< 0.050
Below 10th	243	183	
10th or higher	51	47	
Socio-economic status			
Class III	79	79	< 0.001
Class IV	210	165	
Class V	44	14	
Occupation			
Students	179	162	< 0.001
Tea garden worker	120	73	
Household work	34	23	

**Figure I. Menstruation-Related Problems Faced by Participants**

Discussion

The present study was undertaken with the objective of assessing awareness and practices of menstrual hygiene and its related problems in adolescent girls residing in the tea garden areas of Jorhat, Assam, India.

In this study, it was observed that among the study subjects, 28.83% belonged to the age group of 10–13 years, followed by 54.35% and 16.82% in the age groups of 14–16 and 17–19 years, respectively. In a study conducted by Mathiyalogen

et al., in a union territory in 2017, it was found that 72% of adolescents belonged to the age group of 15–19 years and 28% to 10–14 years. This study mentioned that 96.30% of subjects followed Hinduism and 3.70% followed Islam, whereas our study revealed that 54.35% followed Hinduism, 41.74% followed Christianity, and 3.90% were Muslim.⁸ In our study, 72.97% of adolescents were qualified up to the 10th class, 15.32% above the 10th class, and 11.71% were found to be illiterate. According to socioeconomic status, 23.72% were from the middle class (Class III), 63.06%

from the lower middle class (Class IV) and 13.21% from the lower socio-economic class (Class V) as per the BG Prasad classification. Most (53.75%) of the adolescents in our study were students, followed by 36.04% who worked in gardens and 10.21% staying at home.

Regarding the awareness about menstruation prior to menarche, 35.14% of study subjects were aware similar to another study where 37% were aware among 8th and 9th standard students in Saoner, Nagpur district, Maharashtra, India.⁹ Our study showed that 77.48% of adolescents used sanitary napkins, 22.52% used cloth, and 10.81% used both sanitary napkins and cloth during menstruation, which is similar to the results reported from a union territory in India where 78.10% used sanitary napkins and 21.90% used both old cloth and sanitary napkins.⁸ According to another study conducted in Dibrugarh in 2017, it was found that 68.60% of study subjects used sanitary napkins, 22.30% used cloth and 9.10% used both which shows results similar to that of our study.⁷

Among the study subjects who used sanitary napkins, 5.81% used dustbins for disposal, 68.99% used pits or burning, and 25.19% threw indiscriminately. Similarly, a study in Puducherry reported that 60.80% of girls disposed of their used napkins by burying or burning them.¹⁰ In our study, 81.33% of cloth users washed their reusable cloth with soap and water and 18.67% washed with water only. Regarding the cleaning of the external genitalia, 58.30% washed their genitalia regularly, 14.40% washed sometimes, and 27.30% never washed their external genitalia after using the toilet. According to a study in Dibrugarh in 2017, 1.10% used to throw pads in dustbins after wrapping them in paper, 59.80% used to throw them indiscriminately, and 39.10% used to burn them. The same study also reported that washing external genitalia more than 2 times a day was followed by 53.20% of participants.⁸

Conclusion

From this study, it was observed that awareness regarding menstruation and sanitary practice was not satisfactory among adolescent girls in tea garden areas. Adolescent girls were not using sanitary napkins due to their lack of awareness rather than economic factors. Cleanliness during menstruation was also found low which could be due to a lack of awareness and lack of infrastructure in educational institutions as well as working places. As literacy was found to have a strong association with awareness of menstrual hygiene and practices, there is a need to increase literacy among adolescent girls in tea garden areas in Jorhat, Assam, India.

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Conflict of Interest: None

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