



COMPARATIVE STUDY OF KNOWLEDGE AND PRACTICES OF MENSTRUAL HYGIENE AMONG ADOLESCENTS' GIRLS OF URBAN AND RURAL AREAS IN FARIDABAD.

Community Medicine

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ABSTRACT

Background: Menstrual hygiene refers to promotion of hygienic practices and prevention of serious health conditions such as infections of genital tract, poor pregnancy outcomes and cancers. This study was planned with an objective to determine socio-demographic associates of awareness regarding menstruation and genital hygiene among adolescent girls in rural and urban areas of Faridabad. In Faridabad, as per census 2011, total female population is 843623 and in rural, it is 172775 while in urban it is 67048.

Methodology: A community based observational survey was conducted in urban and rural areas of Faridabad among 2100 adolescent girls aged 10-19 years. Data was collected using a pre-tested, semi-structured interview schedule containing items to assess socio-demographic profile like age, sex, knowledge and practices regarding menstrual hygiene etc. Data was analyzed using Statistical Package for Social Sciences software 25 version. Chi-square and fisher's exact tests were used and accepted statistically significant if *P* value was less than 0.05.

Findings: The education status of mothers in urban areas was significantly better than those in rural areas but there was no difference in working status ($p < 0.05$). In both rural and urban areas, majority of study participants knew that 12-14 years is most common age for menarche. Higher number of urban girls felt comfortable in changing sanitary pads in schools as compared to rural girls ($p < 0.05$).

Conclusion: Improved knowledge and practices of menstrual hygiene, as well as a better environment in terms of facilities and services for its proper management is required.

KEYWORDS

Menstrual hygiene, adolescents, India

INTRODUCTION

About one fifth of the global population is constituted by adolescents and approximately 85% of them reside in developing countries.¹ Adolescence is critical phase in one's life as it is a transition period from childhood to adulthood. This phase brings numerous sensitive changes in the form of physical, mental and social developments. Menstruation is one of them among females.² Menstrual hygiene refers to the effective management of menstrual process by females. It includes promotion of hygienic practices and prevention of serious health conditions such as infections of genital tract, poor pregnancy outcomes and cancers.³

Menstruation initiates with menarche during adolescence and ends with menopause. It is essential for females to understand the physiological process of menstruation and its relationship with reproductive health. However, despite menstruation being a part of human physiology; it is linked with several misconceptions and malpractices which may result in adverse health outcomes. Unwanted pregnancies, urinary tract infections and pelvic inflammatory diseases are some of the serious consequences of poor menstrual hygiene practices which are still clouded by taboos and socio-cultural restrictions.^{2,4}

In a majority of developing countries, menstruation is dealt with in secrecy due to socio-cultural barriers related to sexuality and reproductive health. The probable reasons are inadequate knowledge about reproductive health and the possible outcomes of inadequate menstrual hygiene amongst adolescent females.⁵ Despite the immense importance of menstrual hygiene, there is little attention paid to adolescent girls' specific reproductive health needs and addressing the barriers associated with them. Good menstrual practices would lay down a foundation for their sound physical and mental wellbeing. Furthermore, it will strengthen their ability to cope with the reproductive health issues that might arise later in life.⁶

In India, females in rural areas belonging to lower socio-economic

status commonly use old clothes, rags and tissue of any kind during menstruation in place of sanitary pads. They are washed often with inadequate and unsafe water and without soap and used repeatedly. Moreover, the gender - insensitive infrastructure, especially in educational institutions, and the lack of inexpensive alternatives in terms of clean, safe and private sanitation facilities for girls is a big barrier to achieve safe reproductive health among females.^{7,8}

Additionally, lack of open communication is a major challenge as depicted by Warenius et al. which found that gender norms and values related to culture and religion are influential barriers to communication on reproductive health issues among adolescents.⁹

With the above background, this study was conducted with an objective to determine socio-demographic associates of awareness regarding menstruation and genital hygiene among adolescent girls in rural and urban areas of Faridabad.

MATERIALS AND METHODS

A community based observational survey was conducted in urban and rural areas of Faridabad among adolescent girls aged 10-19 years. The sample size was calculated on the basis of a previous study which recorded prevalence of 21%²¹. Taking 95% confidence interval and 9% allowable error with 10% of Design effect, the required sample size came out to be 2100.

Systematic random sampling method was used to select study subjects. For data collection, a pre-designed, pre-tested, semi-structured interview schedule containing items to assess socio-demographic profile like age, sex, knowledge and practices regarding menstrual hygiene etc. was used. Pilot testing was done in a similar representative population and modifications were done in data collection tool. Data analysis was done using SPSS version 25. The results were explained in simple percentage. Differences between groups were assessed using chi square test for qualitative data and "p" value less than 0.05 was considered statistically significant.

RESULTS

Table 1: - Distribution of demographic variables among study participants (urban n1 = 1050; rural n2 = 1050; total n = 2100)

Urban (%)	Rural (%)	Total (%)	Chi-square value	P- value
Age(years)				
10-13	219(20.9)	138(13.1)	357 (17.0)	22.14 0.0001
14-19	831(79.1)	912(86.9)	1743 (83.0)	
Study Class				
6 – 8	354(33.7)	375(35.7)	729(34.7)	0.926 0.335
9 – 12	696(66.3)	675(64.3)	1371(65.3)	
Education status of mother				
Illiterate	104(9.9)	327(31.1)	431(20.5)	214.71 5 0.0001
Primary	284(27.0)	343(32.6)	627(29.9)	
Secondary	324(30.9)	220(21.0)	544(25.9)	
Higher secondary	182(17.3)	112(10.7)	294(14.0)	
Graduate	134(12.8)	42(4.0)	176(8.4)	
Post graduate	22(2.1)	6(0.6)	28(1.3)	
Working status of mother				
Working	687(65.4)	321(30.6)	1008(32.6)	254.56 0.0001
Not working	363(34.6)	729(69.4)	1092(67.4)	

Table 1 shows that there was a significant difference in the age group distribution in urban and rural areas. The education status of mothers in urban areas was significantly better than those in rural areas but there was no difference in working status and class of education among them.

Table 2: - Knowledge about the age of menarche among the adolescent girls (urban n1=1050; rural n2 =1050; total n=2100)

Urban (%)	Rural (%)	Total (%)	Chi-square value	P- value
Menarche age				
10 – 11	399(38)	375(35.7)	774(36.9)	44.65 0.0001
12 – 14	636(60.6)	597(56.9)	1233(58.7)	
>14	15(1.4)	78(7.4)	93(4.4)	
Regularity of menstrual cycle				
Regular	606(57.7)	663(63.1)	1269(60.4)	6.47 .0109
Irregular	444(42.3)	387(36.9)	831(39.6)	
Duration of menstrual cycle days				
< 3 day	287(27.3)	231(22.0)	518(24.6)	19.067 .00001
(3 – 5) day	551(52.5)	650(61.9)	1201(57.2)	
>5day	212(20.2)	169(16.1)	381(18.2)	
Interval between menstrual cycle days				
<21 days	168(16.0)	101(9.6)	269(12.8)	19.42 0.00001
21 – 28 days	684(65.1)	726(69.2)	1410(67.2)	
>28 days	198(18.9)	223(21.2)	421(20.0)	

Table 2 shows knowledge about the age of menarche among adolescent girls in rural and urban areas. In both rural and urban areas, majority of study participants knew that 12-14 years is most common age for menarche. Likewise, a majority of them responded that menses are regular with 3-5 days duration and there is 21-28 days interval between 2 cycles.

Table 3:- Knowledge about the genital hygiene among the adolescent girls (urban n1=1050; rural n2 =1050; total n=2100)

Urban (%)	Rural (%)	Total (%)	Chi-square value	P- value
Genital wash with the use of				
Water only	192(18.3)	512(48.8)	704(33.5)	301.319 0.0001
Soap & water	669(63.7)	518(49.3)	1187(56.5)	
Water & Antiseptic	189(18)	20(1.9)	209(10.0)	
Use of pads during menstrual cycle days				
Pad	1011(96.3)	879(83.7)	1890(90.0)	92.80 0.001
cloth	15(1.4)	81(7.7)	96(4.6)	
Both	24(2.3)	90(8.6)	114(5.4)	
Average used of number of pads per days during menstrual cycle				
1 – 2	264(25.1)	246(23.4)	510(24.3)	0.852 0.653
3 – 4	564(53.7)	579(55.1)	1143(54.4)	
> 4	222(21.2)	225(21.5)	447(21.3)	
Comfortable changing at school				
Yes	249(23.7)	111(10.6)	360(17.1)	63.84 0.0001
No	801(76.3)	939(89.4)	1740(82.9)	

Missed period					
Worry	924(66.0)	861(82.0)	1785(85.0)	14.823	.0001
No worry	126(12.0)	189(18.0)	315(15.0)		

Table 3 depicts knowledge of adolescent girls regarding menstrual hygiene. Significantly higher proportion of urban girls knew that genitals should be washed with soap and water than rural girls. Similarly, use of sanitary pads was more known to the urban girls than rural girls. Higher number of urban girls felt comfortable in changing sanitary pads in schools as compared to rural girls.

Table 4:- Perception about the role of iron tablet among the adolescent girls (urban n1=1050; rural n2 =1050; total n=2100)

Urban (%)	Rural (%)	Total (%)	Chi-square value	P- value
To prevent anaemia				
Yes	96(9.1)	144(13.7)	240(11.4)	10.838 0.0001
No	954(90.9)	906(86.3)	1860(88.6)	
Pain killer to prevent anaemia				
Yes	573(54.6)	423(40.3)	996(47.4)	42.97 .00001
No	477(45.4)	627(59.7)	1104(52.6)	

Table 4 shows perception of adolescent girls regarding possible role of iron tablets in menstruation. In both urban and rural areas, they were not aware about the fact that it reduces the possibility of anemia among them. Significantly higher proportion of urban girls thought iron tablets as pain killer during menses.

Table 5:- Perception about the menstruation among the adolescent girls (urban n1=1050; rural n2 =1050; total n=2100)

Urban (%)	Rural (%)	Total (%)	Chi-square value	P- value
I was given helpful information about periods before I got my first one				
Yes	525(50.0)	705(67.14)	1230(58.6)	63.582 0.001
No	525(50.0)	345(32.86)	870(41.4)	
I understood what was happening to my body when I got my first period				
Yes	774(73.71)	645(61.43)	1419(67.57)	36.16 0.001
No	276(26.29)	405(38.57)	681(32.43)	
I had enough stuff (like pad or cloth) when I got my first period				
Yes	573(54.6)	423(40.3)	996(47.4)	42.9708 0.001
No	477(45.4)	627(59.7)	1104(52.6)	
I knew how to use pad or cloths when I got my first period				
Yes	627(59.72)	672(64.0)	1299(61.86)	4.087 0.432
No	423(40.28)	378(36.0)	801(38.14)	
When I am having my periods, I am scared boys will find out				
Yes	522(49.7)	435(40.3)	957(45.57)	14.146 0.0001
No	528(50.3)	615(59.7)	1143(54.43)	
I was scared when my first period started				
Yes	570(54.28)	417(39.71)	987(47.0)	44.749 0.001
No	480(45.71)	633(60.29)	1113(53.0)	
I am embarrassed to ask questions about periods				
Yes	300(28.57)	282(26.86)	582(27.71)	0.7701 0.3801
No	750(71.42)	768(73.14)	1518(72.28)	
I feel ugly when I have my period				
Yes	309(29.43)	339(32.26)	648(30.86)	2.0087 0.1563
No	741(70.57)	711(67.74)	1452(69.14)	
Whether pain killer to be taken during period				
Yes	378(36.0)	276(26.28)	654(31.14)	23.1033 0.001
No	672(64.0)	774(73.72)	1446(68.86)	
It is ok if I go to holy place while having periods				
Yes	261(24.86)	345(32.86)	606(28.86)	16.366 0.0001
No	789(75.14)	705(67.14)	1494(71.14)	

Table 5 shows social aspects of menstrual hygiene among study population. Significantly higher proportion of urban girls were prepared regarding use of sanitary pads than rural girls. In both areas, they were uncomfortable in attending schools.

DISCUSSION

In the present study, there is a significant difference between educational status of the mother in rural and urban areas. The families in urban areas are better educated as compared to rural areas. However, there is no significance regarding the working status among them. This is consistent with the findings reported by Paria B et al in which mothers of adolescent girls in urban areas achieved higher educational status than in rural area.¹¹ Data was collected regarding perception about menarche from study participants. A majority of participants

knew of 10-12 years as age of initiation of menstruation. This is similar to observations reported by Jain R et al where same age was known as age of menarche to most of the adolescent girls.¹² Regularity of menses was known only to two-fifth of the population. About half of the study participants responded that interval between two menstrual cycles is 21 -28 days. This is consistent with results reported by Kamath R et al in a study conducted in Manipal.¹³

Knowledge regarding genital hygiene was higher among urban girls than rural girls. Similarly, use of sanitary pads was known more in urban areas than rural area. This is similar to findings stated by Paria B et al where use of sanitary napkins was 64% in urban area as compared to 45% in rural area.¹¹ In both rural and urban areas, girls were not comfortable in changing sanitary napkins in schools due to lack of adequate facilities. Another study reported that similar analysis that washing and changing facilities in schools were insufficient, with overall just 51% of girls reporting washing was possible to maintain hygiene.¹⁴

Weekly Iron Folic Acid Supplementation (WIFS) initiative was implemented by Government of India which targeted 108 million adolescent girls and boys. School going adolescent girls and boys (6th to 12th classes) and adolescent girls who are not in school are the target groups. The adolescent girls and boys are reached by teachers in the schools and o by the anganwadi workers out of school . Iron and folic acid tablets are given on a fixed day in a week for the 52 weeks in a year to be consumed under direct supervision.¹⁵ In the present study, only one-tenth of the study participants knew that iron tablets are given to prevent anemia which point towards poor knowledge. This emphasizes on generating awareness regarding importance of Iron and Folic Acid tablets in prevention and management of anemia.

CONCLUSION

This study has shown that there significant difference among rural and urban areas regarding knowledge and practices regarding menstruation. Ignoring adequate menstrual hygiene could have a negative impact on the health of girls. Therefore, improved knowledge and practices of menstrual hygiene, as well as a better environment in terms of facilities and services for its proper management should be made available.

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