

COMPARATIVE STUDY ON MENSTRUAL HYGIENE IN RURAL AND URBAN ADOLESCENT

Rupali Patle¹, Sanjay Kubde²

¹ Department of Community Medicine, Shri Vasantrao Naik Government Medical College, Yavatmal, Maharashtra, India

² Department of Community Medicine, Indira Gandhi Government Medical College, Nagpur, Maharashtra, India

Correspondence to: Rupali Patle (drrupali_patle@rediffmail.com)

DOI: 10.5455/ijmsph.2013.161020133

Received Date: 26.09.2013

Accepted Date: 19.01.2014

ABSTRACT

Background: Lack of knowledge and poor personal hygienic practices during menstruation can lead to various gynecological problems in the reproductive life of girls. There is difference in prior awareness about menstruation and menstrual hygiene among rural and urban adolescent girls.

Aims & Objective: To study and compare knowledge, attitude and practices of menstruation and menstrual hygiene in rural and urban adolescent girls.

Material and Methods: This was a community based cross-sectional study in rural and urban field practice area of Indira Gandhi government medical college, Nagpur on the 310 adolescent girls in the age group of 10-19 years from each area.

Results: Awareness regarding menstruation was more in urban adolescent girls (63.38%) as compared to rural (47.57%). 62.03% of urban girls were using commercially available sanitary pads as compared to 43.4% of rural girls.

Conclusion: Awareness regarding menstruation and menstrual hygiene was unsatisfactory in rural area as compared to urban area.

Key-Words: Menstrual Hygiene; Awareness of Menstruation; Adolescent Girls; Menarche

Introduction

Adolescence is a phase of turbulent growth when large number of physical and psychological changes occurs. Menstruation is a milestone event in a girl's life and the beginning of reproductive life.^[1] So all aspects of menstruation needs to be understood by adolescent girls. Large number of girls has scant knowledge about menstruation until their first experience because menstruation is something that is not frequently talked off in homes. The information is passed from mother to daughter which is often not sufficient, sometimes even incorrect. This lack of knowledge and poor personal hygienic practices can lead to various gynecological problems including reproductive tract infections. Research indicates that a vast information gap exists among rural as well as urban adolescent girls regarding prior awareness about menstruation and menstrual hygiene which do have impact on the practices during menstruation. Hence this study was done compare knowledge, attitude and practices of menstruation and menstrual hygiene in rural and urban adolescent girls.

Materials and Methods

This was cross-sectional, community based study was conducted in rural and urban field practice area of Indira Gandhi government medical college, Nagpur. Study subjects included adolescent girls in the age group of 10-19

years. Pilot study was done on 100 girls initially. Awareness about menstruation was found to be 55.57%. Taking 95% of the confidence interval and 80% power of the study, sample size was estimated to be 310. Out of these, 295 girls in the urban and 288 girls in the rural area had achieved menarche. Rest 15 girls in the urban and 22 girls in rural area were enquired for awareness. Girls were interviewed by house to house survey. Girls who had achieved menarche were interviewed by using pre-formed questionnaire. Information included awareness regarding menstruation prior to menarche, source of information regarding menstruation. Their Knowledge, attitude regarding menstruation as well as hygienic practices during menstruation were assessed. Statistical analysis was done by percentages, chi-square test. Statistical significance of differences between groups was tested. P value<0.05 was taken as statistically significant.

Results

Awareness about menstruation those who had not attained menarche (Table 1): 15 (4.84%) in urban and 22 (7.10%) in rural area had not attained menarche and it was found that only 6 (40%) in urban area and 2 (9.09%) in rural area were partially aware of menstruation. Main source of information in these girls were mother. Those who were aware of menstruation, none was able to identify the source of menstrual bleeding. 187(63.38%) in urban area and 137 (47.57%) in rural area were aware of

menstruation before menarche (Table 1). The difference in the awareness regarding menstruation in urban and rural area was highly significant. ($\chi^2=46.80$, $df = 2$, $P=0.0001$). Mother was main source of information. In 31.02% girls in urban and 17.51% in rural area were informed by teacher. Doctor or health worker was not a source of information in either rural or urban area.

Reaction to first menstruation (Table 2): Reaction to menstruation depends upon knowledge and awareness regarding menstruation. It was found that 187 (63.39%) and 137 (47.57%) girls in urban and rural area considered menarche as normal phenomenon. The difference in the reaction to first menses in urban and rural area was statistically significant. ($\chi^2=14.77$ $p=0.0000$, statistically significant). More number of the girls in urban area considered menstruation as a normal phenomenon. When girls were asked about the source of origin of menstrual bleeding, 235 (79.66%) girls in the urban and 246 (85.42%) girls in the rural area did not know about the source of menstrual bleeding. for 96.95% girls in urban and 81.25% girls in rural area it was completely normal phenomenon in subsequent cycles and was statistically significant. ($\chi^2=37.26$, $p=0.000$).

Attitude, Knowledge and Practices of adolescent girls towards menstrual hygiene (Table 3, 4): Equal number of girls in both areas accepted importance of maintaining cleanliness during menstruation. Significantly more number of girls in the urban area were using commercially available sanitary pads as compared to girls in the rural area ($\chi^2=20.30$, $df = 1$, $p=0.0000$). 112 (37.97%) girls in the urban and 163 (56.60%) girls in the rural area were using homemade sanitary pads and reused the same in the subsequent period. For 63 (21.36%) girls in urban and 69 (23.96%) rural girls frequency of changing the pads was only once per day. This difference was not significant in urban and rural girls. ($\chi^2=0.10$, $p=0.7575$, not significant).

Total 112 in urban and 163 girls in rural area reused the pads in subsequent period so hygienic practices in these girls were assessed. 57 (50.90%) in urban and 34 (20.86%) in rural area used antiseptic for cleaning of material. Only 20 (17.86%) in urban and 41 (25.15%) in rural area dried it in sunlight which is important for the destruction of micro-organisms. Cleaning of external genitalia was 2 times per day in 94 (31.86%) of the urban and 48 (16.67%) of the rural girls, thus satisfactory. 201(68.14%) of the urban and 240 (83.34%) of the rural girls used to clean genitalia only once, during bathing, thus unsatisfactory. Present study found differences in hygienic practices followed by adolescent girls in urban and rural

area. Hygienic practices are more satisfactory in urban area as compared to rural area.

Table-1: Distribution of urban and rural adolescent girls according to awareness/ knowledge regarding menstruation

Characteristics	Urban (N=295) (%)	Rural (N=288) (%)	Total (N=583) (%)	
Awareness	Aware	63 (21.35)	47 (16.32)	110 (18.86)
	Partially aware	124 (42.03)	90 (31.25)	214 (36.71)
	Not Aware	108 (36.62)	151 (52.43)	259 (44.43)
Source of Information	Mother	60 (32.09)	50 (36.50)	110 (33.95)
	Elder Sister	42 (22.46)	41 (29.93)	83 (25.62)
	Friend	27 (14.43)	22 (16.06)	49 (15.12)
	Teacher	58 (31.02)	24 (17.51)	82 (25.31)

Table-2: Distribution of urban and rural adolescent girls according to awareness/ knowledge regarding menstruation

Reaction	Urban (n=295)	Rural (n=288)	Total (n=583)	
Menarche	Normal	187 (63.39)	137 (47.57)	324 (55.58)
	Scared	102 (34.57)	144 (50.00)	246 (42.20)
	Depressed	6 (2.04)	7 (2.43)	13 (2.22)
Subsequent Menstruation	Normal	286 (96.95)	234 (81.25)	520 (89.19)
	Scared	8 (2.71)	10 (3.47)	18 (3.09)
	Depressed	1 (0.34)	44 (15.28)	45 (7.72)

Table-3: Attitude of adolescent girls towards menstrual hygiene

Attitude	Urban (n=295)	Rural (n=288)	Total (n=583)
It is important to maintain cleanliness during menstruation	152 (51.53)	192 (66.67)	344 (59.00)
Not maintaining cleanliness during menstruation can lead to genital infections	143 (48.47)	138 (47.92)	281 (48.20)
This can have subsequent effect on reproductive life of girl	56 (18.98)	52 (18.06)	108 (18.52)

Table-4: Distribution of adolescent girls as per hygienic practices during menstruation

Hygienic Practices During Menstruation	Urban (n=295)	Rural (n=288)	Total (n=583)	p value	
Use of Sanitary Pads	Homemade	112 (37.97)	163 (56.60)	275 (47.17)	$\chi^2=20.30$ $df = 1$ $p = 0.0000$
	Commercially Available	183 (62.03)	125 (43.40)	308 (52.83)	
Frequency of Changing Pads	1	63 (21.36)	69 (23.96)	132 (22.64)	$\chi^2=0.10$ $df=1$ $P=0.7575$
	2	158 (53.56)	154 (53.47)	312 (53.52)	
	>3	7 (2.37)	8 (2.78)	15 (2.57)	
Disposal of Sanitary Pads	Throw it off	183 (62.03)	125 (43.40)	308 (52.83)	$\chi^2=20.30$ $df=1$ $p=0.0000$
	Reused in Subsequent Period	112 (37.97)	163 (56.60)	275 (47.17)	
	Washing with Water Soap & Water	49 (43.75)	101 (61.96)	150 (54.55)	
Use of Anti-septic	57 (50.90)	34 (20.86)	91 (33.09)	$\chi^2=27.05$ $p=0.0000$	
Cleaning Practices	Yes	57 (50.90)	34 (20.86)		91 (33.09)
	No	55 (49.10)	129 (79.14)	184 (66.91)	
	Drying in Sunlight	92 (82.14)	122 (74.85)	214 (77.82)	$\chi^2=8.52$ $p=0.0035$
Storage Place	Clean	85 (75.90)	96 (58.89)	181 (65.82)	
	Unclean	27 (24.10)	67 (41.11)	94 (34.88)	

Discussion

Awareness regarding menstruation: Present study found that 187 (63.38%) girls in urban area were aware of menstruation before menarche as compared to 137(47.57%) girls in rural area. The variation in the

awareness may be due to socio-economic status and also literacy status of the adolescent girls and their mothers. Overall 55.57% of the girls in both the areas were aware of menstruation. Main source of information was mother which was 32.09% in urban and 36.95% in rural area. In urban area, teacher was also a source of information in 31.02% of girls as compared to 17.51% in rural area which suggest need to have teachers in rural area imparting health education. Nair P et al^[2] found 45.7% of the girls who had attained menarche and 29% of the pre-pubertal subjects said that they had prior knowledge about menstruation and the main source of information was mother. Dhingra et al^[3] found that 64% of girls were partially aware of menstruation and Gupta S et al^[4] found that 63.77% of the girls belonging to upper social class and 60% belonging to lower class were partially aware of adolescent physical change and menarche.

On the contrary Gupta J et al^[5] found that 68% of adolescent girls were not aware about menses. So the dominant feeling was shock and anxiety similar to the study by Deo DS et al.^[6] Main source of information were friends, sister and mother.

Hygienic practices during menstruation: Present study found differences in hygienic practices followed by adolescent girls in urban and rural area. Hygienic practices are more satisfactory in urban area as compared to rural area. Also 62.03% in urban area and 43.40% in rural area were using sanitary pads. Use of old piece of cloth was higher among rural group (52.43%) With frequency of changing of the pads being 2-3 times per day. Similar to findings of Report by Water-aid.^[7] 33% used disposable sanitary pad. The use of sanitary pad was higher among girls in urban schools (50%) in comparison to rural (19%), findings contradictory to the study by Narayan KA et al^[8] who found that only 1.7% girls in the rural area and 8.3% girls in the urban areas used commercially available sanitary pads. Singh AJ et al^[9] found that only 0.4% women used sanitary napkins. Reuse of cloth pad was reported by 4% respondents. Drakshayani DK et al^[10] found that almost all the girls were using old cloth as menstrual absorbent, 38.46% reused the material. The other studies in Nepal by Adhikari et al^[11] and in India Narayan KA et al^[8], by Dasgupta et al^[12] and Khanna A et al^[13] showed that large majority of the participants used re-usable cloth piece and only about 10% used sanitary pads. Nair P et al^[13] found 74.8% of the girls used homemade sanitary pads and 24% used ready-made sanitary pads. So in the present study use of commercially available sanitary pads was higher than those observed in other studies. Report by Wateraid^[6] found that the use of old piece of cloth was

higher among rural group with frequency of changing the pads 2-3 times per day. Use of antiseptic for cleaning of the reused cloth was more in the urban girls than the rural girls (50.90% in urban and 20.86% in rural area) and was statistically significant. Washing and drying of the reused cloth was done in hidden places like bathroom. This finding was present in both the areas. Similar Finding was seen by Narayan KA et al^[7] who found that 42% girls had changed their pads 2 times per day. 42% had dried it in the sun and 45.6% had stored it in the bathroom.

Conclusion

Awareness regarding menstruation was more in urban adolescent girls (63.38%) as compared to rural (47.57%). Doctor had never been a source of information. Significantly more number of girls in the urban area were using commercially available sanitary pads as compared to the rural girls. ($\chi^2=20.42$, $P=0.0000$, statistically significant). Hygienic practices during menstruation were unsatisfactory in the rural area as compared to the urban area.

RECOMMENDATIONS

As the mother, elder sister as well as teacher were main source of information in both the urban and the rural areas, health professional should involve mothers in general discussions about issues related to menstruation and how to deal with them. Other sources can also be involved in discussion. As hygienic practices during menstruation are unsatisfactory more in rural girls, these girls should be educated about importance of hygiene during menstruation through focused group discussion, with demonstrations.

References

1. Paul D. A report of an ICMR funded research project: Knowledge and practices of adolescent girls regarding reproductive health with special emphasis on hygiene during menstruation. New Delhi: National Institute of Public Cooperation and Child Development (NIPCCD); 2007. p. 1-98.
2. Nair P, Grover VL, Kannan A. Awareness and practices of menstruation and pubertal changes amongst unmarried female adolescents in a rural area of East Delhi. *Indian J Community Med.* 2007; 32(2):156-7.
3. Dhingra R, Kumar A, Kaur M. Knowledge and practices related to menstruation among tribal (gujar) adolescent girls. *Ethno-Med.* 2009; 3(1):43-8.
4. Gupta S, Sinha A. Awareness about reproduction and adolescent changes among school girls of different socioeconomic status. *J Obstet Gynecol India.* 2006; 56(4):324-8.
5. Gupta J, Gupta H. Adolescence and menstruation. *J Family Welfare.* 2001; 47(1):1-13.
6. Deo DS, Chattargi CH. Perception and practices regarding menstruation: A comparative study in urban and rural adolescent girls. *Indian J Community Med.* 2005; 30(1):33-4.
7. WaterAid -Kathmandu. Is menstrual hygiene and management an issue for adolescent school girls- A comparative study of four schools in different settings of Nepal. Report Water-Aid in Nepal Publication.

2009. p. 1-32.
8. Narayan KA, Srinivasa DK, Pelto PJ. Puberty rituals, reproductive knowledge and health of adolescent school girls in South India. *Asia Pac Popul J*. 2001; 16(2):225-38.
 9. Singh AJ. Place of menstruation in the reproductive lives of women of rural north India. *Indian J Community Med*. 2006; 31(2):10-4.
 10. Drakshayani DK, Venkata Ramaiah P. A study on menstrual hygiene among rural adolescent girls. *Ind J Med Sci*. 1994; 48:139-43.
 11. Adhikari P, Kadel B, Dhungel SI, Mandal A. Knowledge and practice regarding menstrual hygiene in rural adolescent girls of Nepal. *Kathmandu Univ Med J (KUMJ)*. 2007; 5(3):382-6.
 12. Dasgupta A, Sarkar M. Menstrual hygiene: how hygienic is the adolescent girl? *Indian J Community Med*. 2008; 33 (2):77-80.
 13. Khanna A, Bhavsar R. Menstrual practices and reproductive problems: A study of adolescent girls in Rajasthan. *J Health Manag*. 2005; 7(1):91-107.

Cite this article as: Patle RA, Kubde SS. Comparative study on menstrual hygiene in rural and urban adolescent. *Int J Med Sci Public Health* 2014;3:129-132.

Source of Support: Nil

Conflict of interest: None declared