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KNOWLEDGE AND ATTITUDE ON MENSTRUATION- A COMPARATIVE STUDY AMONG RURAL AND URBAN ADOLESCENT GIRLS IN CHENGALPATTU, TAMIL NADU

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ABSTRACT

INTRODUCTION : Adolescence in girls is marked by menstruation, which is surrounded by various psychological and religious barriers due to lack of knowledge about the process. The Menstrual Hygiene Programme in Tamil Nadu, implemented under the Rashtriya Kishor Swasthya Karyakram (RKSK), aims to promote menstrual hygiene among adolescent girls aged 10–19 years in rural areas. Without accurate understanding, menstruation can be distressing for a girl. Discussing this with a girl is important because the inaccurate and inadequate knowledge she acquires from peers and family members leads to a vicious cycle of misinformation. However, most adolescent girls in India have little knowledge on menstruation, reproduction and sexuality. Hence this study is attempted to compare the knowledge and attitude on menstruation among adolescent girls in rural and urban field practice areas of a tertiary care teaching hospital in Tamil Nadu.

METHODS : A community based analytical cross-sectional study was conducted during April 2018 to Oct 2018 among adolescent girls aged 10 to 19 years, residing at the rural and urban field practice areas of Karpaga Vinayaga Institute of Medical Sciences & Research Centre, Chengalpattu, Tamil Nadu. About 256 adolescent girls in rural and 137 girls in urban area were interviewed using a semi structured questionnaire. The knowledge section consisted of 5 questions. Those who scored ≤2 were considered to have poor knowledge, those who scored 3 were considered to have fair knowledge and who scored ≥4 were considered to have fair knowledge about menstruation. The attitude section consisted of 3 questions. The score ≤1 was considered unfavorable attitude and score ≥2 was considered as favorable attitude towards menstruation.

RESULTS : Overall, 38.28% and 54.74% girls in rural and urban respectively had good knowledge about menstruation. The attitude towards menstruation was favorable among 78.52% girls in rural and 64.23% girls in urban.

CONCLUSION : Overall, adolescent girls in urban had good knowledge compared to rural area. Overall attitude was better in girls in rural area than in urban area.

KEYWORDS : Menstrual hygiene, Knowledge, Attitude, Rural, Urban

INTRODUCTION

India has the largest adolescent population with 243 million adolescents. Adolescence is a phase of transition from childhood to adulthood, where an adolescent undergoes physiological, psychological and social changes. It is the time they become independent, establish new relationships, develop social skills and learn new behavior that will last for the rest of their lives.[1] This is a fascinating, yet, crucial, stressful period in an individual's life which requires special attention. However, they are often a neglected group because of the relatively low morbidity and mortality rates of this age group.[2]

Adolescence in girls is marked by menstruation, which is the periodic vaginal bleeding that occurs from menarche till menopause. Menstruation is surrounded by various psychological and religious barriers due to lack of knowledge about the process. Although menstruation is a natural process, it is still regarded as unclean in Indian society.[3] It is believed that menstruation contaminates the body and makes it unholy. This is linked with several perceptions and practices which might result in adverse health outcomes. Poor personal hygiene and unsafe sanitary conditions during menstruation

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increases the susceptibility for reproductive tract infections (RTI) and gynecological problems.[3] These infections when left untreated, can lead to several consequences like infertility, ectopic pregnancy, fetal wastage, prenatal infection, low birth weight babies and toxic shock syndrome.[4]

The Menstrual Hygiene Programme in Tamil Nadu, implemented under the Rashtriya Kishor Swasthya Karyakram (RKSK), aims to promote menstrual hygiene among adolescent girls aged 10–19 years in rural areas. As part of the program, each adolescent girl who has attained puberty receives three packs of sanitary napkins (each pack containing six pads) in six distribution rounds conducted every two months.

School-going adolescents receive the napkins from their school nodal teachers, while non-school-going adolescents receive them through ASHAs, VHNs, or AWWs. Health education is an integral part of the Menstrual Hygiene Programme in Tamil Nadu. Under this program, adolescent girls are educated about menstrual hygiene management, which includes raising awareness about the importance of maintaining proper hygiene during menstruation, dispelling myths and misconceptions, and providing information on how to use and dispose of sanitary napkins safely. These educational sessions are often conducted by school nodal teachers, ASHAs, VHNs, or Anganwadi workers, ensuring that both school-going and non-school-going adolescents benefit from the initiative.

Most adolescent girls in India have little knowledge on menstruation, reproduction and sexuality. Without accurate understanding, menstruation can be distressing for a girl. Discussing this with a girl is important because the inaccurate and inadequate knowledge she acquires from peers and family members leads to a vicious cycle of misinformation.

A vast information gap exists among adolescent girls living in rural and urban areas regarding awareness about menstruation and menstrual hygiene. Hence this study is attempted to compare the knowledge and attitude on menstruation among adolescent girls in rural and urban field practice areas of a tertiary care teaching hospital in Tamil Nadu.

METHODS

A community based analytical cross-sectional study was conducted during April 2018 to Oct 2018 among adolescent girls aged 10 to 19 years, residing at Pulipakkam and Anna Nagar, the rural and urban field practice areas respectively of Karpaga Vinayaga Institute of Medical Sciences & Research Centre, Chengalpattu, Tamil Nadu.

Sample size and sampling: Iswarya S et al5 in a study conducted at Coimbatore reported that 63% of the adolescent girls thought menstruation was a good process. Using this prevalence, 5% difference and 10% non-response, the sample size was estimated to be 410. Using Probability proportional to size, the sample size was calculated to be 273 adolescent girls in rural area and 137 adolescent girls in urban area. Eventually, the study was conducted among 256 adolescent girls in rural and 137 girls in urban area.

Study tool: A pre-tested and semi-structured questionnaire containing the details on demography, age at menarche, information about knowledge and attitude of menstruation.

Data collection: House-to house visits were made. After getting written informed consent from the mother and assent from the adolescent girl, the questionnaire was administered by in-person interview method.

Data analysis: The data obtained was entered in Microsoft Excel sheet and analyzed using SPSS. Knowledge and attitude related to menstruation was analyzed. The knowledge section consisted of 5 questions. Those who scored ≤2 were considered to have poor knowledge, those who scored 3 were considered to have fair knowledge and who scored ≥4 were considered to have good knowledge about menstruation. The attitude section consisted of 3 questions. The score ≤1 was considered unfavorable attitude and score ≥2 was considered as favorable attitude towards menstruation.

Ethical issues: Ethical clearance was obtained from the Institutional Ethical Committee (IEC) of Karpaga Vinayaga Institute of Medical Sciences and Research Centre, Chengalpattu, Tamil Nadu.

RESULTS

In the present study, the age of the participants ranged from 11-19 years, with the mean age of 15.58 ±2.22 years (15.83±2.30 years in rural area and 15.13 ±1.99 years in urban area). Most of the girls interviewed were unmarried in rural 255 (99.6%) and urban area 136 (99.3%).

Table 1 represents the demographic profile of participants. Majority of the participants, 327 (83.21%) were Hindus. In urban areas most of the girls belonged to upper 51 (37.2%) and upper middle class 49 (35.8%), while in rural areas, majority belonged to lower middle 96 (37.5%) and upper lower 69 (27%) socioeconomic class.

Awareness about menstruation before menarche was observed more among adolescent girls in rural areas 130 (50.78%) than in urban areas 59 (43.1%). However, this difference was not statistically significant (χ^2 =2.12; p 0.14).

Table 1. Demographic characteristics of study participants:

Variables	Rural (N= 256) n (%)	Urban (N=137) n (%)	Total N=393 n (%)
Education of the participants			
Middle school	32 (12.5)	21 (15.3)	53 (13.49)
High school	75 (29.3)	48 (35)	123 (31.3)
Intermediate or post high school diploma	149 (58.2)	68 (49.6)	217 (55.22)
Religion			
Hindu	222 (86.7)	105 (76.6)	327 (83.21)
Muslim	7 (2.7)	7 (5.1)	14 (3.56)
Christian	27 (10.5)	25 (18.2)	52 (13.23)
Socioeconomic status [Modified BG Prasad classification]			
Upper	27 (10.5)	51 (37.2)	78 (19.85)
Upper middle	53 (20.7)	49 (35.8)	102 (25.95)
Lower middle	96 (37.5)	32 (23.4)	128 (32.57)
Upper lower	69 (27)	4 (2.9)	73 (18.58)
Lower	11 (4.3)	1 (0.7)	12 (3.05)
Family type			
Nuclear	163 (63.67)	100 (73)	263 (66.92)
Joint family	55 (21.48)	35 (25.5)	90 (22.9)
Three generation family	38 (14.84)	2 (1.5)	40 (10.18)
Study place			
Government	51 (19.9)	15 (10.9)	66 (16.79)
Private	205 (80.1)	122 (89.1)	327 (83.21)

The major source of information about menstruation was from school teachers (49.23% rural, 53.22% urban), followed by mothers (25.84% in rural) and friends (20.97% in urban) (Fig 1).

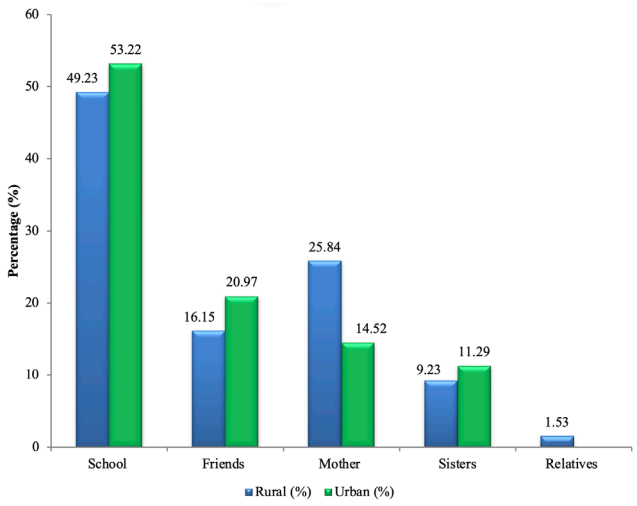

Figure1: Source of information about menarche among the study participants

Majority of the girls (82.43% in rural and 80.3% in urban) reported that ideal age at menarche was 12-14 years. Only 28.12% girls in rural and 39.42% girls in urban were aware of menstruation as a physiological process. Also 16.8% and 10.95% girls in rural and urban respectively were not aware of the cause of menstruation and this was found to be statistically significant (p 0.022). Only 41.8% and 52.5% girls in rural and urban respectively were aware that uterus was the source of menstrual bleeding and 31.6% girls in rural and 19.7% girls in urban were not aware of any source of bleeding. This difference was found to be statistically significant (p <0.05). Overall, 38.28% and 54.74% girls in rural and urban respectively had good knowledge about menstruation, which is statistically significant (p <0.01) [Table 2].

Table 2: Knowledge on menstruation among study participants

Variables	Rural (N= 256) n (%)	Urban (N=137) n (%)	Chi square (P value)
Ideal age at menarche (years)			
9 to 11	33 (12.89)	23 (16.8)	1.686 (0.430)
12 to 14	211 (82.43)	110 (80.3)	
15 to 16	12 (4.68)	4 (2.9)	
Cause of menstruation			
Physiological process	72 (28.12)	54 (39.42)	
To clean the body or remove dirty fluids	137 (53.52)	62 (45.25)	**9.60 (0.022)** *
For reasons of inner heat	4 (1.56)	6 (4.38)	
Don't know	43 (16.8)	15 (10.95)	
Source of menstrual bleeding			
Uterus	107 (41.8)	72 (52.5)	
Abdomen	20 (7.8)	6 (4.4)	**9.412 (0.024)** *
Urethra	48 (18.8)	32 (23.4)	
Don't know	81 (31.6)	27 (19.7)	
Frequency of menstrual cycles			
Once a month	228 (89.1)	125 (91.2)	
2-3 weeks	14 (5.5)	2 (1.5)	4.188 (0.242)
4-5 weeks	8 (3.1)	5 (3.65)	
Don't know	6 (2.3)	5 (3.65)	
Occurrence of menstruation during pregnancy			
Yes	16 (6.3)	11 (8)	
No	222(86.7)	116 (84.7)	0.464 (0.793)
Don't know	18 (7)	10 (7.3)	
Overall knowledge			
Poor	48 (18.75)	29 (21.17)	
Fair	110 (42.97)	33 (24.09)	**14.504 (0.001)***
Good	98 (38.28)	75 (54.74)	

Table 3 reveals that 24.6% girls in rural and 26.28% girls in urban area were of the opinion that menstruation is debilitating. Regarding the restrictions during menstruation, 73% girls in rural and 71% girls in urban believed that a girl need not follow restrictions during menstruation. Also 44.53% girls in rural and 61.3% girls in urban believed that

one should avoid eating certain foods during menstruation and this was difference was found to be statistically significant (χ^2 =10.054, p <0.01). The attitude towards menstruation was favorable among 78.52% girls in rural and 64.23% girls in urban. This was statistically significant (p <0.05).

Table 3: Attitude of adolescent girls towards menarche

Variables	Rural (N= 256) Frequency (%)	Urban (N=137) Frequency (%)	Chi square (P value)
What do you feel about menstruation?			
As debilitating/bothersome	63 (24.6)	36 (26.28)	0.131 (0.71)
As natural process	193 (75.4)	101 (73.72)	
Do you believe that one should follow restrictions during menstruation?			
Yes	69 (27)	39 (28.5)	0.102 (0.74)
No	187 (73)	98 (71.5)	
Do you believe that one should avoid certain foods during menstrual cycles?			
Yes	114 (44.53)	84 (61.3)	**10.054 (0.001)***
No	142 (55.47)	53 (38.7)	
Overall attitude towards menstruation			
Unfavorable	55 (21.48)	49 (35.77)	**9.354 (0.002)***
Favorable	201 (78.52)	88 (64.23)	

DISCUSSION

Awareness about menstruation before menarche:

Awareness about menstruation before menarche was 50.78% in rural and 43.1% in urban area in this study. Paria B6 in a study in West Bengal reported that 44.72% girls in urban area and 30.07% girls in rural area had awareness about menstruation prior to attainment of menarche, which is contrary to our study.

Source of information about menstruation:

In this study, school teachers were the main source of information in rural (49.23%) and urban area (53.22%) followed by mothers (25.84% in rural) and then followed by friends (20.97% in urban). On the contrary, Paria B6 reported that mother was the main source of information about menstruation in 73.98% urban girls and 81.25% of rural girls. Other studies by Barathalakshmi J7 in urban area of Chidambaram and Devi RU8 in rural area in Kancheepuram also report mothers as the first source of information.

Knowledge about menstruation:

About the physiological nature of pregnancy, in the present study 28.12% and 39.42% of the girls in rural and urban areas respectively were aware of menstruation as a physiological process, while Kumar P9 in Uttar Pradesh found that 66.2% girls in rural and 74.3% girls in urban were aware which was higher than the present study.

In an urban area at Coimbatore, Iswarya S5 reported that 88% girls were aware that menstruation was a physiological process, while in a rural area at Telengana, Chauhan P10 revealed that only 18.6% were aware, which was lesser than this study.

In context of source of menstrual bleeding, 41.8% girls in rural and 52.5% in urban were aware that it was uterus. Kumar P9 in Uttar Pradesh reported that, 24.3% and 41.9% of the girls in rural and urban respectively were aware that uterus was the source which was lower than the present study. On the contrary, Iswarya S5 found that 92.5% girls studying in a school in urban area, Coimbatore were aware of uterus as the organ from where bleeding occurs, which is higher than the current study.

Overall, 38.28% girls in rural area, 54.74% girls in urban had good knowledge about menstruation, while 42.97% girls in rural, 24.09% girls in urban had fair knowledge and 18.75% in rural, 21.17% in urban had poor knowledge on menstruation. Dillu R11, Haryana reported that 11% girls in urban had poor knowledge, 81% had fair knowledge and 8% had good knowledge about menstruation which was lower than the present study

Attitude towards menstruation:

In this study, menstruation was believed to be inconvenient by 24.6% girls in rural and 26.28% girls in urban, while Kumar P9, Uttar Pradesh reported that 48.1% girls in rural and 40.5% girls in urban considered it inconvenient. Regarding the restrictions during menstruation, 73% and 71% girls in rural and urban respectively in the present study felt that a girl need not follow restrictions, whereas in Andhra Pradesh Savanthe AM12 reported that 84.1% girls in urban believed that one should follow religious restrictions. In the present study, 44.53% in rural and 61.3% in urban believed that certain foods should be avoided during menstruation. Similarly, in Andhra Pradesh, Savanthe AM12 reported that adolescent girls in urban believed in avoiding curd (52.8%) and non-vegetarian foods (34.7%).

CONCLUSION

Although adolescent girls in rural area showed similar patterns to urban girls in most knowledge-related indicators, girls in urban areas exhibited better overall knowledge about menstruation. Awareness about menstruation before menarche and attitude towards the physiological nature of menstruation and imposed restrictions were more favorable among girls in rural areas than in urban areas. This suggests that, due to urbanization and greater

access to information, rural girls are gradually catching up with their urban counterparts. This study has identified gaps in knowledge and attitudes regarding menstrual hygiene, providing a valuable foundation for implementing corrective measures. Strengthening health education through Menstrual Hygiene Program with culturally sensitive communication strategies, particularly focusing on menstrual physiology, is essential in both urban and rural areas to bridge knowledge gaps. Addressing gaps in attitude requires multifaceted approach, including peer education, parental awareness programs, and broader societal initiatives. Efforts such as leveraging mass media, fostering political discourse, and promoting community dialogues are critical to normalizing menstruation and reducing associated stigma.

CONFLICT OF INTEREST

None

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