



Knowledge on Menstrual Hygiene and Health Status of Residential and Non-Residential School Girls: Socio-Economic Status (Ses)

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ABSTRACT

The study was conducted to know the influence of socioeconomic status on knowledge on menstrual hygiene and health status of 60 residential and 60 non-residential school age girls from rural and urban areas of Dharwad taluk during 2014-2015. The tools used were self-structured questionnaire to assess the knowledge and practices regarding menstrual hygiene and Socio-Economic Status Scale developed by Agarwal et al., (2005) and the PGI Health Questionnaire, N-1 developed by Verma et al. (2005). The results indicated that there was significant difference but highly significant association was found between the rural and urban school girls in terms of knowledge on menstrual hygiene. A majority of girls belonged to lower middle class of SES from both rural and urban residential and non-residential schools. There was no significant difference but still there was significant association found between the SES of rural and urban residential and non-residential school age girls. A majority of rural residential school girl had high knowledge on menstrual hygiene belonged to lower middle class. A similar trend was observed in non-residential rural girls. However, there was relationship between SES and knowledge level in rural and urban residential school age girls. There was significant relationship found between the health status and SES among rural residential and non-residential school girls and in urban, non-residential school girls.

Keywords: Health status, Knowledge on menstrual hygiene, and Socio-Economic Status (SES)

INTRODUCTION

The World Health Organization (WHO) has defined adolescence as the age group of 10-19 years. Today, 1.2 billion adolescents stand at the crossroads between childhood and the adult world. As they stand at these crossroads, so do societies at large – the crossroads between losing out on the potential of a generation or nurturing them to transform society. India has the largest population of adolescents in the world being home to 243 million individuals aged 10-19 years. India alone has 105 million adolescent girls who comprise one-fifth of the total Indian population.

The period between childhood and young adulthood is a period of rapid change – physical, emotional, cognitive and social. For girls, we see early physical changes from about 10 or 11 years. Menstruation is one such natural phenomenon which is an important indicator of women's

health. Although menstruation is a major significance event associated with bodily changes with hormones, psychological, cognitive and physical changes occur simultaneously and interactively making physiological development a challenge adolescents have to face, with emotional, social and behavioral dimensions.

The name "menstruation" comes from the Latin "menses" meaning moon, with reference to the lunar month and lasting also approximately 28 days long. The menstrual cycle is the cycle of natural changes that occurs in the uterus and ovary as an essential part of making sexual reproduction possible. Its timing is governed by endogenous (internal) biological cycles.

Menstruation has always been surrounded by different perceptions throughout the world. Nowadays, there is some openness toward



menstruation, but differences in attitude still persist between different populations. There are differences between countries, cultures, religions and ethnics. On the other hand, various factors such as socioeconomic status, nutritional and health status, family size, heredity, environmental conditions, body stature, level of education and psychological well being are known to influence the age of menarche and common menstrual problems, which are diagnosable and mostly treatable even at peripheral level in early stage. Hence the study was undertaken with an objective to know the influence of socioeconomic status on knowledge on menstrual hygiene and health status of residential and non-residential schools from rural and urban areas.

MATERIAL AND METHODS

The present study was conducted in Dharwad district, Karnataka state. The sample of the study were eighth and ninth standard girls studying in government residential and non-residential schools from rural and urban area. The list of schools in Dharwad district was obtained from Block Education Officer and two residential and non-residential schools from rural and urban areas were selected randomly. Among each school 15 girl students were selected in the age group of 13-16 years.

The Socio economic status of the family was assessed using socio- economic scale developed by Agarwal *et al.* (2005). PGI Health Questionnaire, N-1 developed by Verma *et al.* (2005) this scale consists of 38 items divided into two parts where part A indicates the physical distress and part B indicates the psychological distress section with 16 and 22 items respectively. The number of affirmative answers in section 'A' and 'B' indicates the respective scores which can

be then added up to obtain total scores. A self-structured questionnaire was used to elicit the information regarding knowledge and practice of menstrual hygiene during menstruation among girls. (reliability and validity of the tool 0.97) This tool consists of 36 questions divided into six categories like general information, school facility and information, history of menstruation, effects of menstruation, care and management of menstruation and myths and taboos.

RESULTS AND DISCUSSION

The table 1 shows the demographic characteristics of the school age girls, where 28.33 per cent belonged to 13-14 years, 43.33 per cent belonged to 14-15 years and 28.33 per cent belonged to 15-16 years. A major percentage of girls in residential (55%) and non-residential girls (43%) belonged to other backward castes (OBC), followed by upper caste, SC and ST. Whereas 51.67 per cent girls mothers completed SSLC, whereas 16.66 per cent of mothers were illiterate. The mothers of 92.5 per cent girls worked in their own petty shops and engaged in cultivation of their own lands. In case of fathers a large number that is 53.33 per cent of fathers completed their education till college level than while least were educated till primary. In case of fathers occupation majority of them were self- employed with income more than Rs 5000 and only 5.83 per cent worked at shops, home and had their own land cultivation. While overall 70 per cent belonged to poor middle class of socio-economic status.

In terms of rural and urban locality the knowledge on menstrual hygiene of school girls is indicated in Table 2. While 30 per cent of girls had medium and 70 per cent had high knowledge on menstrual hygiene among rural residential group. While from the non- residential school girls 33.33 per



cent showed medium and remaining 66.67 per cent of them had high knowledge on menstrual hygiene. Totally it indicated that 31.67 per cent girls had medium and 68.33 per cent exhibited high knowledge on menstrual hygiene.

In case of urban residential school girls ,60 per cent of them had medium and 40 per cent showed high knowledge on menstrual hygiene while in non-residential school girls, 40 per cent indicated medium and 60 per cent expressed high knowledge on menstrual hygiene. Overall equal proportion of respondents showed medium and high knowledge on menstrual hygiene. The mean was found high among residential school girls than non-residential school girls in rural area whereas in case of urban non-residential school girls had higher mean than residential school age girls. There was no significant difference but significant association between rural residential and non- residential school age girls. In case of urban school girls there was significant difference as well as significant association was found between residential and non- residential school age girls. Overall there was highly significant difference and highly significant association was found between the rural and urban school girls.

The Socio-Economic Status of school age girls from rural and urban residential and non-residential school age girls is indicated in Table 3. Among rural residential school age girls 63.33 per cent of girls belonged to lower middle class of SES followed by 23.33 per cent of them belonged to upper middle class of SES and only 6.66 per cent of them belonged to high class as well as poor middle class of SES. Whereas from non-residential school age girls 66.66 per cent of them belonged to lower middle class of SES followed by 33.33 per cent to upper middle class of SES. Overall 65 per cent belonged to lower middle

class of SES, 28.33 per cent of them found in upper middle class of SES and only 3.33 per cent belonged to high class as well as poor middle class of SES. None of them belonged to upper high and poor class of SES. The mean scores of non-residential school age girls (43.2 ± 5.69) was higher compared to residential school age girls. There was no difference but significant association found with SES between the residential and non-residential school age girls in rural area.

In case of urban residential school age girls 63.33 per cent of them belonged to lower middle class of SES followed by 20 per cent of them belonged to upper middle class of SES and only 16.66 per cent to poor middle class of SES. While in non-residential school age girls 86.66 per cent belonged to lower middle class of SES and remaining 6.66 per cent belonged to upper middle class as well as poor middle class of SES. Totally 75 per cent belonged to lower class of SES followed by 13.33 per cent to upper middle class of SES and other 11.66 per cent of them belonged to poor middle class. None of them belonged to upper high and poor class of SES. The mean scores of residential school age girls (38.73 ± 8.48) was higher compared to non-residential school age girls (37.66 ± 4.99). There was no difference but significant association found with SES between the residential and non-residential school age girls. Overall there was no difference but significant association found between the SES of residential and non-residential school age girls.

The relationship of knowledge on menstrual hygiene with socio-economic status is shown in table 4. A majority of rural residential having high knowledge on menstrual hygiene belonged to lower middle class. A similar trend was observed in non-residential rural girls. However, there was



significant relationship between SES and knowledge on menstrual hygiene among rural and urban residential school age girls. Gultie (2014) reported that majority of the participants (90.9%) practiced good menstrual hygiene and had high level of menstrual hygiene knowledge. The significant factors of menstrual hygiene were entered in to the multivariate model. It revealed that good menstrual hygiene was practiced among those participants who had high level of knowledge about menstrual hygiene. It was also observed that teachers as source of information and access for water and urban place of residence helped to have high menstrual knowledge.

Omidvar and Begum (2010) studies that socioeconomic status (SES) of the selected girls influenced choice of napkin/pads and other practices such as storage place of napkins; change during night and during school or college hours and personal hygiene. A study by Kumar *et al.* (2013) shows the evidence that socio-economic status and knowledge of respondents were also found to be significantly associated. Respondents from high socio economic status were having maximum percentage of awareness (68.9%) as compared to only 49.3% in low socio-economic status category (Dasgupta and Sarkar, 2008). There was significant relationship was found between the knowledge on menstrual hygiene and SES. Gupta and Sinha (2006) reported that socioeconomic factor significantly influenced source of information and level of awareness on menarche and reproduction among adolescent girls.

The table 5 pointed out that majority of the girls from the rural and urban residential and non-residential school girls had poor health status whobelonged to upper middle and lower middle class status of SES. There was significant relationship found between the health status and

SES among rural residential and non-residential school girls and in urban non-residential school girls. A study supported by Das *et al.* (2014) majority of the subjects belonged to either lower or middle class category. However, in case of rural areas 66.67 per cent in residential school had poor health status, while 63.33 per cent in non-residential school girls had normal health status. A similar trend was observed in urban areas with 50 per cent of girls in residential schools having poor health status and 66.67 per cent of girls in non-residential schools having normal health status. However, the results were found to be statistically significant between the health status and SES except in case of urban residential school girls. It was also found that higher the socio-economic status, higher was the health status. McLead *et al.* (2003) found some evidence that higher income inequality is associated with better health status

CONCLUSION

None of the girls had low knowledge on menstrual hygiene in both residential and non-residential school girls. Majority of the girls had poor health status belonging to lower middle and upper middle class of SES. Hence the study indicated the need to educate the school girls for enhancement of their health status and uplift their knowledge regarding care and management of menstruation.



Table 1: Demographic characteristics of school age girls

Sl. No.	Variables	Residential (n= 60)	Non-Residential (n=60)	Total (N=120)
1	Age			
	13-14 years	16 (26.66)	18 (30.00)	34 (28.33)
	14-15 years	26 (43.33)	26 (43.33)	52 (43.33)
	15-16 years	18 (30.00)	16 (26.66)	34 (28.33)
2	Caste			
	Upper caste	13 (21.66)	22 (36.66)	35 (29.16)
	OBC	33 (55.00)	26 (43.33)	59 (49.16)
	SC	13 (21.66)	11 (18.33)	24 (20)
	ST	1 (1.66)	1 (1.66)	2 (1.66)
3	Mother's Education			
	College	19 (31.66)	9(7.5)	28 (23.33)
	SSLC	27 (45.00)	35 (58.33)	62 (51.67)
	Primary	5 (8.33)	5 (8.33)	10 (8.33)
	Illiterate	9 (15.00)	11 (18.33)	20 (16.66)
4	Mother's Occupation			
	Government servant/private sectors/ Business	6 (10)	1 (1.66)	7 (5.83)
	Service at shops,home, own cultivation	53 (88.33)	58 (96.66)	111 (92.5)
	Self- Employment with income >Rs 5000	1 (1.66)	1 (1.66)	2 (1.67)
	Labores<Rs 5000 income	-	-	-
5	Father's Education			
	Post Graduation	33(55.00)	31(51.66)	53(53.33)
	SSLC	9(7.5)	14(23.33)	23(19.16)
	Primary	8(13.33)	5(8.33)	13(10.83)
	Illiterate	10(16.66)	10(16.66)	20(16.67)
6	Father's Occupation			
	Government servant/private sectors/Business	6(10.00)	15(25.00)	21(17.5)
	Service at shops, home, own cultivation	5(8.33)	2(3.33)	7(5.83)



Self- Employment with income >Rs 5000	36(60.00)	24(40.00)	60(50.00)
Labores<Rs 5000 income	13(21.67)	19(31.67)	32(26.67)
Socio-Economic Status			
Upper Middle	2 (3.33)	-	2 (1.67)
Lower Middle	15 (25.00)	12 (20.00)	27 (22.5)
Poor Middle	38 (63.33)	46 (76.66)	84 (70.00)
Very Poor	5 (8.33)	2 (3.33)	7 (5.83)

Figures in the parenthesis indicates percentage

Table 2: Knowledge on menstrual hygiene of school age girls from rural and urban areas

N=120

Sl. No.	Knowledge on Menstrual Hygiene	Rural			Urban			t-value	□2
		Residential (n=30)	Non residential n=30	Total n=60	Residential n=30	Non residential n=30	Total (n=60)		
1	Low	-	-	-	-	-	-	3.03**	29**
2	Medium	9 (30.00)	10 (33.33)	19 (31.67)	18 (60.00)	12 (40.00)	30 (50.00)		
3	High	21 (70.00)	20 (66.67)	41 (68.33)	12 (40.00)	18 (60.00)	30 (50.00)		
	Mean (±SD)	57.10 ± 3.38	56.43 ± 2.45	56.76±2.95	54.33 ± 3.05	55.93 ± 2.65	55.13± 2.94		
	t-value	0.87 ^{NS}			2.16 *				
	□2	21.00*			23.70*				

Figures in the parenthesis indicates percentage

NS – Non-Significant

* - Significant at 0.05 level

** Significant at 0.01 level

Table 3: Socio-Economic Status of school age girls from rural and urban areas

N=120

Sl. No.	Socio-Economic Status	Rural			Urban			t-value	□□□ 2
		Residential (n=30)	Non-Residential (n=30)	Total	Residential (n=30)	Non-Residential (n=30)	Total		
1	Upper High	-	-	-	-	-	-	0.14	30.23 *
2	High	2 (6.66)	-	2 (3.33)					
3	Upper Middle	7 (23.33)	10 (33.33)	17 (28.33)	6 (20.00)	2 (6.66)	8 (13.33)		
4	Lower Middle	19 (63.33)	20 (66.66)	39 (65)	19 (63.33)	26 (86.66)	45 (75.00)		
5	Poor Middle	2 (6.66)	-	2 (3.33)	5 (16.66)	2 (6.66)	7 (11.66)		
6	Poor	-	-	-	-	-	-		
Mean (±SD)		42.53±8.69	43.2±5.69	42.86±7.29	38.73±8.48	37.66±4.99	38.2±6.92		
t-value		0.35			0.59				
□□□2		28.70*			23.56*				

Figures in the parenthesis indicates percentage

NS – Non-Significant

* - Significant at 0.05 level

Table 4: Relationship between knowledge on menstrual hygiene and socio-economic status

N=120

Locality	School	Socio-Economic Status	Knowledge on menstrual hygiene			'r'	
			Low	Medium	High		
Rural	Residential n=30	High n=2	-	1 (3.33)	1 (3.33)	0.12*	
		Upper Middle n=7	-	1 (3.33)	6 (20.00)		
		Lower middle n=19	-	5 (16.67)	14 (46.67)		
		Poor Middle n=2	-	2 (6.67)	-		
		Total		9 (30.00)	21 (70.00)		
	Non Residential n=30	Upper Middle n=10	-	4 (13.33)	6 (20.00)	0.07 ^{NS}	
		Lower middle n=20	-	6 (20.00)	14 (46.67)		
		Total		10 (33.33)	20 (66.66)		
	Urban	Residential n=30	Upper Middle n=6	-	3 (10.00)	3 (10.00)	0.18*
			Lower middle n=19	-	14 (46.67)	5 (16.67)	
Poor Middle n=5			-	3 (10.00)	2 (6.67)		
Total				9 (30.00)	21 (70.00)		
Non Residential n=30		Upper Middle n=2	-	2 (6.67)	-	0.05 ^{NS}	
		Lower middle n=27	-	9 (30.00)	17 (56.67)		
		Poor Middle n=2	-	1 (3.33)	1 (3.33)		
		Total		12 (40.00)	18 (60.00)		

Figures in the parenthesis indicates percentage

NS – Non-Significant

*Significant at 0.05 level

**Table 5: Relationship between health status of school age girls and Socio-Economic Status
N=120**

Locality	School	Socio-Economic Status	Health Status			r	
			Normal	Poor	Very Poor		
Rural	Residential n=30	High n=2	—	2 (6.67)	—	0.31 *	
		Upper Middle n=7	3 (10.00)	4 (13.33)	—		
		Lower Middle n=19	5 (16.67)	12 (40.00)	2 (6.67)		
		Poor Middle n=2	—	2 (6.67)	—		
		Total	8 (26.67)	20 (66.67)	2 (6.67)		
	Non – Residential n=30	Upper Middle n=10	7 (23.33)	3 (10.00)	—	0.20 *	
		Lower Middle n=20	12 (40.00)	8 (26.67)	—		
		Total	19 (63.33)	11 (36.67)	—		
	Urban	Residential n=30	Upper Middle n=6	1 (3.33)	4 (13.33)	1 (3.33)	0.18 ^{NS}
			Lower Middle n=19	9 (30.00)	8 (26.67)	2 (6.67)	
Poor Middle n=5			1 (3.33)	3 (10.00)	1 (3.33)		
Total			11 (36.67)	15 (50.00)	4 (13.33)		
Non – Residential		Upper Middle n=2	—	2 (6.67)	—	0.23 *	
		Lower Middle n=26	19 (63.33)	7 (23.33)	—		
		Poor Middle n=2	1 (3.33)	1 (3.33)	—		
		Total	20 (66.67)	10 (33.33)	—		

Figures in the parenthesis indicates percentage

NS – Non-Significant

*Significant at 0.05 level



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