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MENSTRUAL HYGIENE: KNOWLEDGE AND PRACTICE AMONG SECONDARY SCHOOL GIRLS OF HOSAKOTE, RURAL BANGALORE

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ABSTRACT

Menstruation is a monthly occurrence that requires access to appropriate materials and facilities, without which females suffer from poor menstrual hygiene which restricts their movement and self confidence. The objectives behind the study were to assess the knowledge and practice regarding menstruation and menstrual hygiene among the secondary school girls. A Descriptive cross sectional study was done in girl's government high school using pretested semi structured questionnaire. Data was collected regarding the knowledge about menstruation, the source of information and practices followed to maintain menstrual hygiene, entered in Microsoft excel sheet and analyzed using SPSS version 16.0. Age of the respondents varied between 13-17years with the mean age of 14.36 ± 0.766 . Mean age of menarche was 13.06 with SD of 0.858. Only 166(43.9%) subjects knew that menstruation is a physiological process and only around 101(26.7%) subjects knew that menstrual blood comes from uterus. Out of 309 subjects who were menstruating, 268(86.7%) girls were using sanitary pads, 13(4.2%) cloth and 28(9.1%) were using both sanitary pad and cloth as absorbent during menstruation. It can be concluded that the knowledge regarding menstruation among secondary school girls is far from satisfactory which needs to be addressed and their practices during menstruation are often not optimal for proper hygiene

Keywords: *Menarche, Menstruation, Menstrual Hygiene, Practices, Sanitary Pad*

INTRODUCTION

Menstruation has often been dealt with secrecy in many cultures. As per Sharing simple facts useful information about menstrual health and hygiene, UNICEF (2008) report, menstrual hygiene is an issue that every girl and woman has to deal with once she enters adolescence around the age of 12 and until she reaches the menopause somewhere in her 40's. Menstruation is a monthly occurrence that requires access to appropriate materials and facilities, without which females suffer from poor menstrual hygiene which restricts their movement and self confidence. Good menstrual hygiene is therefore crucial for the health, education and dignity of girls and women.

According to Thakre *et al.*, (2011) good menstrual hygiene will directly contribute to achieve the MDG-2 on universal education and the MDG-3 on gender equality and women empowerment. Social prohibitions and negative attitudes of parents in discussing the related issues openly have blocked the access of adolescent girls to the appropriate information.

Unfortunately, the taboo surrounding menstruation in society prevents girls and women from articulating their needs and the problems of poor menstrual hygiene management have been ignored or misunderstood. There is lack of information on the process of menstruation, the physical and psychological changes associated with puberty and proper requirements for managing menstruation.

With this background the present study was undertaken to assess the knowledge and practice regarding menstruation and menstrual hygiene among the secondary school girls.

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MATERIALS AND METHODS

Study design Descriptive cross-sectional study.

Study duration Three months (June 2014 to August 2014).

Study participants Study was carried out in government girl's high school in Hosakote, Bangalore. All the secondary school (8th to 10th standard) students who were present at the time of study were included. A total 378 students were present at the time of study.

Study process

A pre-designed pre-tested semi-structured questionnaire was prepared in local language Kannada for collection of data. The purpose of the study was explained to the school authorities and permission was taken. The school was visited on a particular day, the study subjects were gathered in a hall and were made to sit at a fair distance from each other to avoid peeping and discussion. The study subjects were explained about the purpose of the study and were assured of confidentiality. A verbal consent was obtained from the girls before administering the questionnaire which included questions regarding the knowledge about menstruation, the source of information and practices followed to maintain menstrual hygiene. Investigators instructed on how to fill the questionnaire and adequate time was given to fill up the questionnaire. Any difficulties in answering the questionnaire were sorted out by the investigators. At the end of the data collection a session was conducted regarding educating the girls about the normal physiology of menstruation, the importance of maintaining hygiene and safe hygienic practices during menstruation. Questions and concerns of the participants were also addressed at the end of the session. Follow-up visit was not done to track the absentees, so as to maintain the confidentiality of the questionnaire and truthfulness of the responses.

Statistical Analysis

Data was entered in Microsoft excel sheet and analyzed using SPSS version 16.0. Descriptive statistics was used as basis for statistical analysis. Frequency and percentage was used for categorized variables and mean and standard deviation for continuous data.

RESULTS AND DISCUSSION

Results

The study showed that age of the respondents varied between 13-17 years with the mean age of 14.36 ± 0.766 . Majority 205(54.2%) of them were aged 14 years. Most of the study subjects 74.6% belonged to Hindu religion followed by Muslim 22.7%. Out of 378 study subjects, 178(47.1%) girl's mothers were educated till secondary school and 14% of mothers were illiterate. Around 81.5% of subject's mothers were house wives and 7.9% manual labourers. Around 63.8% of study subjects answered that their family has Below Poverty Line card, 8.7% Above Poverty Line card and 27.5% of them did not know (Table 1).

Mean age of menarche was 13.06 with SD of 0.858, range between 11-16 years and 69(18.3%) still not attained menarche. Only 271(71.7%) subjects were having awareness about menstruation out of which only 63(23.2%) knew about menstruation before menarche. Major source of information is from mothers (59.7%) followed by friends 20.2%. Out of 309 subjects who had attained menarche, 160(51.7%) had fear and 86(27.83%) were embarrassed during their menarche (Table 2).

Only 166(43.9%) subjects knew that menstruation is a physiological process and only around 101(26.7%) subjects knew that menstrual blood comes from uterus. Majority of the study subjects 244(64.6%) responded that menstrual blood is impure and 177(46.8%) answered that excessive bleeding can lead to anemia (Table 3).

Out of 309 subjects who were menstruating, 268(86.7%) girls were using sanitary pads, 13(4.2%) cloth and 28(9.1%) were using both sanitary pad and cloth as absorbent during menstruation. Majority 229(74.3%) of study subjects practice of cleaning of external genitalia during menstruation was satisfactory but 65(20.4%) study subjects used only water for cleaning external genitalia. Out of 296 study subjects who were using sanitary pads majority 206(69.5%) stored it in bathroom, 38(12.9%) along

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with routine cloths and 35(11.9%) did not stored pads in their home. Majority of the subjects disposed sanitary pad by burning (43.2%) followed by wrap in paper and throw it in routine dustbin (36.8%) (Table 4).

Majority (42%) of the study subjects felt that the advertisements about sanitary pads in television were informative, 16% were embarrassed, 12% felt shy, 19% no reaction and 11% felt that these advertisements should be banned. Out of 309 study subjects who were menstruating, 88(28.5%) study subjects restricted visiting to holy places during menstruation, 67(21.7%) not doing household work and 32(10.3%) restricted going to school during menstruation (Table 5).

Table 1: Demographic Characteristics of Study Subjects (N=378)

Characteristics	Number	Percentage
Age (years)		
13	33	8.8
14	205	54.2
15	115	30.4
16-17	25	6.6
Religion		
Hindu	282	74.6
Muslim	86	22.7
Others	10	2.7
Mother's education		
Illiterate	53	14
Primary	79	20.9
Middle	61	16.1
Secondary	178	47.1
PUC and above	7	1.9
Mother's Occupation		
Housewife	308	81.5
Manual Labourer	30	7.9
Tailor	15	4.0
Others	25	6.6
Socio economic status		
BPL	241	63.8
APL	33	8.7
Don't know	104	27.5

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Table 2: Information about Menstruation among study subjects (N=378)

Variable	Number	Percentage
Age at Menarche		
11-12	74	19.6
13-14	221	58.4
≥15	14	3.7
Not attained	69	18.3
Awareness about menstruation		
Yes	271	71.7
No	107	28.3
Awareness (n=271)		
Before Menarche	63	23.2
After Menarche	208	76.8
Source of information*		
Mother	162	59.7
Friend	55	20.2
Sister	26	9.5
Teacher	20	7.3
Health Worker	14	5.1
Others	14	5.1
Reaction to first menstruation(n=309)		
Fear		
Embarrassed	160	51.77
No Reaction	86	27.83
	63	20.38

*Multiple responses

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Table 3: Knowledge and Perception regarding Menstruation (N=378)

Variable	Number	Percentage
Cause of Menstruation		
Physiological	166	43.9
Curse of God	29	7.7
Disease	13	3.4
Don't know	170	45.0
From which organ menstrual blood comes?		
Uterus		
Urinary Bladder	101	26.7
Cervix	85	22.5
Don't know	33	8.7
	159	42.1
Duration of Menstrual Cycle		
<20 Days		
20-35 Days	47	12.4
>35 Days	158	41.8
Don't know	56	14.8
	117	31.0
Duration of Menstrual Flow		
<2 Days	57	15.1
2-7 Days	218	57.7
>7 Days	36	9.5
Don't know	67	17.7
Is menstrual blood impure		
Yes	244	64.6
No	128	33.9
Don't Know	6	1.5
Does excessive bleeding lead to anemia?		
Yes		
No	177	46.8
Don't know	175	46.3
	26	6.9
Does a woman have menses during pregnancy?		
Yes		
No	42	11.1
Don't Know	329	87.0
	7	1.9

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Table 4: Practice of Menstrual Hygiene among Study Subjects (309)

Menstrual hygiene practices	Number	Percentage
Absorbent used during menstruation		
Sanitary Pad		
Cloth	268	86.7
Both	13	4.2
	28	9.1
Cleaning of external genitalia		
Satisfactory*	229	74.3
Not satisfactory**	80	25.7
Medium used for cleaning genitalia		
Only water		
Water and Soap	65	20.4
	244	78.8
Place of storage of Sanitary pad (n=296)		
Bathroom		
With Clothes	206	69.5
Not Stored	38	12.9
Others	35	11.9
	17	5.7
Method of disposal of Sanitary pad(n=296)		
Burn		
Wrap in paper and throw in routine dustbin	128	43.2
Others	109	36.8
	59	20.0
Number of pads used during last menstrual period (n=296)		
1-6 Pads	132	44.5
>7 Pads	164	55.5

*Satisfactory - Cleaning of external genitalia more than two times in a day during menstruation

**Not satisfactory - Cleaning of external genitalia less than or equal to two times in a day during menstruation.

Table 5: Restrictions practiced during Menstruation (309)

Restrictions*	Number	Percentage
Visit to holy places	88	28.5
Household work	67	21.7
Sleep on routine bed	60	19.5
Touching stored food	49	15.9
Playing outside home	46	14.9
Touch family members	35	11.4
Going to school	32	10.3
Others	21	6.8

*Multiple responses

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Discussion

The present study showed that age of the study subjects ranged between 13-17 years with majority of the girls being between 13-14 years, similar findings were also observed by study done by Thakre *et al.*, (2011). In the present study, the mean age at menarche was found to be 13.06, whereas it was 12.85 in a study done by Thakre *et al.*, (2011) and 11.95 years in study done by Yasmin *et al.*, (2013). Awareness regarding menarche and menstruation among girls before attaining menarche is generally low in most of the cultures, present study revealed that only 23.2% girls were having awareness regarding menstruation, similar findings was also observed in study done by Thakre *et al.*, (2011) and Yasmin *et al.*, (2013). Another study conducted by Deo *et al.*, (2005) reported that 40 (42.5%) urban and 41 (55.4%) rural girls were aware about menstruation prior to attainment of menarche.

Menarche is an important event in girls at the threshold of adolescence and ideally, mothers should be the main informants at this tender age of the girls. However, mothers were the first informants for 59.7% of the girls, whereas study done by Thakre *et al.*, (2011), Mudey *et al.*, (2010) and Dasgupta *et al.*, (2008) it was 71.33%, 40.67% and 37.5% respectively but in a study conducted among 664 schoolgirls aged 14-18 in Mansoura, Egypt by El-Gilany *et al.*, (2005) mass media were the main source of information about menstrual hygiene.

It was observed in this study that 43.9% girls believed it to be a physiological process, whereas in a study done by Yasmin *et al.*, (2013) it was 72.8% and by Thakre *et al.*, (2011) it was only 18.35%. Study done by Drakshayani *et al.*, (1994) in Andhra Pradesh University detected that around 78.5% knew menstrual bleeding originated from the uterus. In this study it was only 26.7% and study by Thakre *et al.*, (2011) only 2.5% of the study girls stated that menstrual bleeding came from the uterus and 76.23% were unaware of the source of the menstrual bleeding. These findings were consistent with other study (2009).

The type of absorbent material which is used is of primary concern, since reuse of the material could be a cause for infection if it is improperly cleaned and poorly stored (2005). This study revealed that even though it was an rural area around 86.7% girls were using sanitary pads as absorbent during menstruation, whereas many other similar studies (Thakre *et al.*, 2011; Dasgupta *et al.*, 2008; Khanna *et al.*, 2005) in rural areas showed that majority of the girls preferred cloth pieces rather than sanitary pads as menstrual absorbent. Recent provision of sanitary pads at a concession rate by state government at all government schools might be a reason for increased use of sanitary pads in the present study. The place of storage of the pads/ napkins is equally important for their cleanliness; especially the practice of storing them in bathrooms is disturbing, since it could give rise to the harbouring of dust and insects. The proportion of the participants who used the bathroom as a storage place was as high as 69.5%, whereas study done by Omidwar *et al.*, (2010) showed that the practice of storing the absorbents in the bath room was as low as 21.1%. In the present study, the commonly practiced methods of disposal of the used absorbent were either burning it or wrapping it in paper and disposing it in a place which was used for solid waste disposal. The same findings were reported by other studies done by Thakre *et al.*, (2011), Mudey *et al.*, (2010) and Dasgupta *et al.*, (2008).

In the present study restrictions were practiced by most of the girls, visit to holy places and doing household activities being the most common restrictions, similar findings have been observed in a study done by Thakre *et al.*, (2011) and Mudey *et al.*, (2010).

Considering the limitations of this study in terms of sampling method, additional studies may be needed using a wider geographic scope, in order to produce sufficient and comprehensive results.

Conclusion

From the present study it can be concluded that the knowledge regarding menstruation among secondary school girls is far from satisfactory which needs to be addressed and their practices during menstruation are often not optimal for proper hygiene. Mothers and school teachers also to be educated and trained up so that either formally or informally the proper information regarding menstruation and menstrual hygiene can be imparted to the girls before attaining menarche. Hence an educated adolescent girl will

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take care of her girl child in the future and will maintain the cycle of spread of information to the next generation.

ACKNOWLEDGEMENT

The Authors wish to thank the Principal of Girl's Government High School, Hosakote and management of MVJ Medical College for giving permission for this study. Our sincere thanks to all the secondary school students who have been part of our study without whom the study would not have been possible.

Ethical Clearance

Permission was taken from institutional head, Girl's Government High School, Hosakote, Bangalore.

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