

A study to Assess Knowledge, Attitude, and Practices related to Menstrual Hygiene Management among school going Adolescent girls in Sithyankottai and Sitharevu Govt. Higher Secondary Schools, Dindigul District

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ABSTRACT

Background: The onset of menstruation is the most important physical change that occurs among girls during adolescence. Menstrual hygiene management is an important issue for adolescent girls. Lack of education and communication regarding reproductive system further adds to the problem. Several studies have shown that the knowledge regarding menstrual cycle is not sufficient. Insufficient management of menstrual hygiene may result in symptoms involving genitourinary tracts infection. Adolescent girls' health is more important in the context of production and reproduction as future mothers. With this background, the present study was conducted.

Objectives

To assess the Knowledge, Attitude and Practice (KAP) level of Adolescent girls about **Menstrual Hygiene Management (MHM)**.

To identify the determinants of Menstrual Management with specific emphasize on **school attendance**.

Materials and Methods

The study design is an exploratory and descriptive study conducted in two Government Higher Secondary Schools in rural villages of Sithayankottai and Sitharevu in Dindigul District. A structured questionnaire was used as study tool to collect data from the respondents. Universal sampling method was adopted to the study. All the 606 adolescent girls in the age group of 10-18 years of the selected two schools of the study area were the respondents of the study. The questionnaire was pretested to verify the clarity, absence of ambiguity, objectivity, sequence and simplicity. The questionnaire had been pretested among 10 adolescent girls of another school. Based on pretest necessary corrections and modifications were carried out accordingly before administering for data collection. **Data Analysis:** The collected data were computed and tabulated in Microsoft excel and analyzed. The findings were described in terms of proportions and percentage. Period of the study was from June 2019 to August 2019.

Results: A total of 606 adolescent girls were studied to measure their level of KAP on menstruation and menstrual hygiene practices. Overall, percentage of knowledge about menstrual cycle among them is very low. 18.7% of girls had menstrual awareness and the source of knowledge for most of the girls was teachers, followed by relatives and friends. Out of the total sample universe only 11.1% of girls received information from their mothers. Menstrual hygienic practices among the surveyed population were found to be satisfactory but needs improvement in disposal of menstrual waste. **Conclusion:** The knowledge about menstrual cycle is found to be very poor among the respondents as schools are playing little role in educating about menstruation. Schools need to be encouraged in imparting right information and encouraging girls to speak out and to practice right Menstrual Hygiene Management.

KEY WORDS: Knowledge, Attitude, and Practices; Menstrual Cycle; Menstrual Hygiene Management; Adolescent Girls.

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I. INTRODUCTION

Adolescence is a transitional phase of growth and development between childhood and adulthood, which is not only physical but also emotional and psychological. According to WHO, adolescent is defined as any person between the ages of 10 to 19 years. 1.2 billion Adolescents stand at the crossroads between childhood and the adult world. Around 243 million of them live in India. The onset of menstruation is the most important physical change that occurs among girls during adolescence. It is not uncommon for the girl to have

many questions and concerns related to menstrual cycle. Menstrual hygiene management is an important issue for adolescent girls as they do not have experience. Even most of the parents lack the required information about the menstrual cycle and issues related to its management. Lack of education and communications regarding reproductive system further adds to the problem. Several studies have shown that the knowledge regarding menstrual cycle is not sufficient and correct. The religious practices, restrictions, and myths related to menstrual cycle create more confusion about the correct practice and very little information is given to adolescent girls, in such culture. Studies done to assess the practices related to menstrual hygiene had also indicated the need for improvement. Menstruation and menstrual hygiene are still shadowed by taboos, cultural and social restrictions, myth, and misconceptions and resulted for the embarrassment of girls, and preventing them to seek for information and even for hiding their menstruation. Insufficient management of menstrual hygiene may result in symptoms involving genital and urinary tract infections. Many girls who attain menarche are totally unaware of its physiological nature, as a menarche change and its role in reproduction. **Prajapati and Patel** reveal in their study that only 17% of girls are aware about uterus as the organ of menstrual bleeding which correlate to our study. Menstruation creates a lot of stress and anxiety among adolescent girls to know about the menstrual cycle and hygiene management, particularly in schools where proper facilities such as separate washrooms, water, and privacy is an issue. The source of information for most of girls was the mother as seen in different studies (**Srivastava and Chandra** - 75%, **Kumar et al.** - 50.8%, **Shanbhag et al.** - 55.1%, and **Thakur et al.** - 35.7%). Although it is expected to have a school teacher or a health worker to be the first source of information ensuring that right knowledge has been imparted. Good menstrual hygiene practice is very crucial for health of girls. The use of sanitary pads ranged from as low as 11.25% to 76%. **Srivastava and Chandra** in their study found that 9.3% of girls take bath only on the 5th day of menstrual flow. Different studies reveal that daily bathing habit ranges from 83.7% to 95.5% and maintenance of personal hygiene ranges from 41%, to 90.9%. Right menstrual hygiene practices of the adolescent girls depend upon the source from which they receive information. Media, internet, teachers, friends, relatives and mothers in particular, can play an important role in providing correct knowledge on menstruation and hygiene; for every young girl. It is estimated that 40% to 45% of female adolescents in the world are suffering from menstrual adverse effects; the majority is due to psycho-social stress and emotional changes. In fact, young girls with better knowledge and practice towards menstrual hygiene are less vulnerable to adverse health outcomes. Normally, a culture of silence surrounds the menstruation and related issues, especially in less developed countries that cannot help young girls to manage their menstruation. Several studies report that girls' fear and humiliation from leaking of blood and body odor, inadequate water and sanitation facilities in school, and unhealthy and unsupportive environments are leading to school absenteeism during menstrual period of girls.

1. General Objective

To improve the Menstrual Hygiene Management (MHM) among school going Adolescent girls (10-18 years) in Athoor Block of Dindigul District, Tamil Nadu.

2. Specific Objectives

- 1) To assess the KAP level of Adolescent girls about **Menstrual Hygiene Management** (MHM).
- 2) To identify the determinants of Menstrual Management with specific emphasize on **school attendance**.

Need of the study

Adolescent girls are going to be the future productive and reproductive group. Improper menstrual hygiene management and practice of adolescent girls due to unawareness of right menstrual hygiene management and practice will affect the genitourinary tracts and leads to school absenteeism and sometime for infertility. Hence this study was taken up to assess the Knowledge, Attitude, and Practice (KAP) level related to menstrual hygiene management among school going adolescent girls (10-18 yrs) and to improve their Menstrual Hygiene Management, knowledge and practices.

II. MATERIALS AND METHODS

Study design and sampling

The study design is an exploratory and descriptive study conducted in two Government Higher Secondary Schools in rural villages of Sithayankottai and Sitharevu in Dindigul District. A structured questionnaire was used as study tool to collect data from the respondents. Universal sampling method was adopted to the study. All the 606 adolescent girls in the age group of 10-18 years of the selected two schools were the respondents of the study. The questionnaire was pretested to verify the clarity, absence of ambiguity, objectivity, sequence and simplicity. The questionnaire had been pretested among 10 adolescent girls of another school. Based on pretest necessary corrections and modifications were carried out accordingly before administering for data collection.

Data Analysis: The collected data were computed and tabulated in Microsoft excel and analyzed. The findings were described in terms of proportions and percentage. Period of the study was from June 2019 to August 2019.

Definitions

KAP means

K: Knowledge is information and skills acquired through experience or education, theoretical or practical understanding of a subject.

A: Attitude is a manner of thinking, behaving and feeling about particular problem.

P: Practice is related to skill of a person and practical refers to the way in which they demonstrate their knowledge and attitude through their action.

III. Analysis and Results

Particulars about Adolescent Girls and their Family Members

Table 1 – General particulars of the Respondents (n=606)

Age of Respondents	Sithayankottai School	Sitharevu School
	Numbers (%)	Numbers (%)
10-12	117 (38.4)	115 (38.2)
13-15	133 (43.6)	135 (44.9)
16-18	55 (18)	51 (16.9)
Present Accommodation Status		
Home	298 (97.7)	288 (95.7)
School Hostel	2 (0.7)	3 (1.0)
Govt. Hostel	5 (1.6)	10 (3.3)
Type of the Family		
Joint Family	81 (26.6)	54 (17.9)
Nuclear Family	224 (73.4)	247 (82.1)

Out of the 606 respondents 44.2% respondents were in the age group of 13-15 years. 96.7% of the respondents were attending school from home and the rest were staying in hostels. 77.8% of the respondents were living in nuclear family.

Table 2 – House with Toilet Facility (n=606)

Toilet Facility	House status	Type of House in Sithayankottai village				Type of House in Sitharevu village			
		Concrete	Tiled	Hut	Others	Concrete	Tiled	Hut	Others
Yes	Own house	61(20)	84(27.5)	2(0.7)	0	70(23.3)	106(35.2)	3(1)	2(0.7)
	Rental/Leasing	16(5.2)	34(11.1)	6(2)	1(0.3)	8(2.7)	16(5.3)	12(4)	0
	Total	77(25.2)	118(38.7)	8(2.6)	1(0.3)	78(25.9)	122(40.5)	15(5)	2(0.7)
No	Own house	32(10.5)	43(14.1)	10(3.3)	2(0.7)	18(6)	54(17.9)	2(0.7)	0
	Rental/Leasing	1(0.3)	12(3.9)	1(0.3)	0	1(0.3)	8(2.7)	1(0.3)	0
	Total	33(10.8)	55(18)	11(3.6)	2(0.7)	19(6.3)	62(20.6)	3(1)	0
Total	Own house	93(30.5)	127(41.6)	12(3.9)	2(0.7)	88(29.2)	160(53.2)	5(1.7)	2(0.7)
	Rental/Leasing	17(5.6)	46(15.1)	7(2.3)	1(0.3)	9(3)	24(8)	13(4.3)	0
	Total	110(36.1)	173(56.7)	19(6.2)	3(1)	97(32.2)	184(61.1)	18(6)	2(0.7)

The above table indicates that 54.2% of the respondents live in own house with toilet facility, 26.6% of the respondents have own house without toilet facility and 15.3% live in rental/leasing house with toilet facility and 3.9% of the respondents live in rental/leasing house without toilet facility.

Table 3 – Type of Toilet facilities used and water supply in their home (n=606)

Toilet Facility used	Sithayankottai School	Sitharevu School
	Numbers (%)	Numbers (%)
Separate (Home)	204 (66.9)	217 (72.1)
Public (Community toilet)	103 (33.8)	98 (32.6)
OAD	110 (36.1)	106 (35.2)
Water facility in toilets		
Yes	142 (46.6)	127 (42.2)
No	163 (53.4)	174 (57.8)

33.2% of the respondents were using public (Community) toilets and 35.7% of the respondents were practicing OAD in both villages. 55.6% of the respondents had no water facility in their home toilet. Non availability of water facilities is a drawback to the adolescent girls to adopt proper menstrual hygiene management.

Table 4 – Educational Status of parents (n=606)

Educational Status of parents	Sithayankottai School		Sitharevu School	
	Father	Mother	Father	Mother
Illiterate	39 (13.2)	45 (15.1)	41 (13.9)	51 (17.2)
1-5	70 (23.6)	89 (29.9)	74 (25.2)	74 (25)
6-8	71 (24)	76 (25.5)	75 (25.5)	92 (31.1)
9-10	68 (23)	53 (17.8)	72 (24.5)	62 (21)
11-12	34 (11.5)	24 (8)	21 (7.1)	14 (4.7)
UG	14 (4.7)	11 (3.7)	11 (3.7)	3 (1)
Total	296 (100)	298 (100)	294 (100)	296 (100)

From the above table, it could be inferred that out of the total respondents' (606) parents 28.3% were illiterates in Sithayankottai and 31.1% of parents were illiterates in Sitharevu. The illiteracy level is higher among mothers when compared to Fathers of the respondents.

Table 5 – Summarized Family Income (n=606)

Summarized Family Income	Sithayankottai village	Sitharevu village
	Numbers (%)	Numbers (%)
< 5,000	52 (17)	29 (9.6)
5,001 – 10,000	183 (60)	215 (71.4)
10,001 – 15,000	48 (15.7)	38 (12.6)
15,001 – 20,000	7 (2.3)	8 (2.7)
20,001 & above	15 (5)	11 (3.7)
Total	305 (100)	301 (100)

As per the above table, majority of parents of the respondents (79%) fall under the lower income group of below Rs.10,000/- per month. Only 4.3% of parents fall under the income group of Rs.20001 and above income group. We could infer from this table that majority of adolescent girl students belong to lower income family.

Menstrual Pattern in Adolescent Girls

Table 1: Menstrual pattern in Adolescent girls (n=606)

Pattern	Sithayankottai School	Sitharevu School
Age at menarche attained	Numbers (%)	Numbers (%)
10-12	77 (36.8)	95 (44)
13-15	130 (62.2)	121 (56)
Above 16	2 (1)	0 (0)
Not attained menarche	96 (31.5)	85 (28.2)
Duration of blood flow in days		
<3	43 (20.6)	26 (12)
4-6	127 (60.8)	117 (54.2)
>6	32 (15.3)	48 (22.2)
Do not know	7 (3.3)	25 (11.6)
Length of cycle in days		
25-27	45 (21.5)	22 (10.2)
28-30	157 (75.1)	172 (79.6)
Do not know	7 (3.3)	22 (10.2)

59.1% of the respondents attained menarche in the age group of 13-15 years. 18.8% of girls have reported blood flow more than 6 days. Among 77.4% of girls, the length of menstrual cycle was 28-30 days. 7.5% of the respondents had answered that they were not aware of the duration of blood flow during menstrual period and 6.8% of answered that they were not aware of their length of menstrual cycle.

Distribution of respondents according to their knowledge about menstruation

Table 1: Knowledge about menarche before Menstruation (n=606)

Knowledge about menarche	Sithayankottai School	Sitharevu School
	Numbers (%)	Numbers (%)
Know	119 (39)	113(37.5)
Don't know	186 (61)	188 (62.5)
Source of knowledge of menstrual cycle before menarche		
Mother	30 (9.8)	37 (12.3)
Sisters	45 (14.8)	51(16.9)
Friends	51(16.7)	45(15)
Relatives	55 (18)	53(17.6)
Teachers	58 (19)	55(18.3)
Others	37 (12.1)	42(14)

The above table reveals that majority of the adolescent girl respondents (61.7%) had responded that they did not have knowledge about menarche before they attained menstruation cycle. 38.3% of girls knew about menstruation before menarche. Teachers were the source of information for 18.7% girls followed by relatives 17.8%, friends 15.9%, mother 11.1% and 13.1% had answered that they received information regarding menstruation from other sources. It could be inferred, from the above table, that mothers are not the major source of information to their girl children regarding menstruation.

Table 2 – Knowledge on organ from where bleeding occurs (n=606)

Knowledge on organ from which bleeding occurs	Sithayankottai School	Sitharevu School
	Numbers (%)	Numbers (%)
Yoni Hole	2 (0.7)	0 (0)
Urine passing part	129 (42.3)	113 (37.5)
Stools passing part	2 (0.7)	8 (2.7)
Do not know	168 (55)	147 (48.8)
Others	4 (1.3)	33 (11)
Is menarche a part of women's life		
Accepting	258 (84.6)	266 (88.4)
Not Accepting	31 (10.2)	13 (4.3)
Do not Know	16 (5.2)	22 (7.3)

The above table exhibits that only 0.3% of the respondents had the right knowledge regarding the organ from where bleeding occurs. Nearly 51.9% of the respondents answered that they do not know the organ from which the blood flow occurs while 86.5% of the respondents accepted that menarche is a part of women's life.

Distribution of respondents according to their hygienic practices during menstruation

Table 1 – How many times do you take bathing in a day during menarche (n=606)

Bathing frequency	Sithayankottai School	Sitharevu School
	Numbers (%)	Numbers (%)
One time	131 (62.7)	151 (69.9)
Two times	73 (34.9)	61 (28.2)
Three times	5 (2.4)	4 (1.9)
Not attained	96 (31.5)	85 (28.2)
To clean genital organs is necessary		
Yes	111 (53.1)	129 (59.7)
No	98 (46.9)	87(40.3)

Regarding hygienic practices 66.3% girls had responded that they bath once a day during menarche and 31.6% only twice. 56.4% girls had said that keeping genital organs clean is necessary. From the above table we could infer that nearly half of the respondents (43.6%) did not consider that keeping genital organ clean is necessary.

Table 2 – Napkin Disposal method in Schools (n=606)

Napkin Disposal method in Schools	Sithayankottai School	Sitharevu School
	Numbers (%)	Numbers (%)
Dumping in Latrine	128 (61.2)	119 (55.1%)
Separate waste	66 (31.6%)	55 (25.5%)
Common waste	93 (44.5%)	72(33.3)
Incinerator	83 (39.7%)	0
Not attained	96 (31.5)	85 (28.2)

From the above table it could be interpreted that majority of the respondent girls (70.1%) who attained menarche do not know to properly dispose the used sanitary napkins. Only 39.7% respondent girls who attained menarche had said that they burned the used sanitary napkins through incinerator in Sithayankottai school.

Table 3 – Improper Menstrual Hygiene leads to infections (n=606)

Improper Menstrual Hygiene leads to Infections	Sithayankottai School	Sitharevu School
	Numbers (%)	Numbers (%)
Itching	142 (67.9)	146 (67.6)
Irritation	137 (65.6)	148 (68.5)
Rashes	27 (12.9)	24 (11.1)
Bad smell	121 (57.9)	139 (64.4)
Not attained	96 (31.5)	85 (28.2)
Eating Sweets, Papaya, Pineapple will lead to over bleeding		
Accept	87 (41.6)	95(44)
Not accept	122 (58.4)	121 (56)

Not attained	96 (31.5)	85 (28.2)
Is it necessary to take Iron rich food during menstruation		
Accept	101 (48.3)	92 (42.6)
Not accept	108 (51.7)	124 (57.4)
Not attained	96 (31.5)	85 (28.2)

67.5% girls said that unhygienic practices during menstruation lead to itching and irritation. 42.8% girls of the respondents had accepted that eating Sweets, Papaya, and Pineapple will lead to over bleeding. 54.6% accepted that taking iron rich food is not necessary during menstruation.

Table 4 - Menstruation period affects their studies (n=606)

Menstruation period affects their studies	Sithayankottai School	Sitharevu School
	Numbers (%)	Numbers (%)
Not able to study	96 (46)	92(42.6)
Stomach Pain	91(43.5)	89 (41.2)
No Appetite	93 (44.5)	91(42.1)
Not able to go school	87 (41.6)	84 (38.9)
Not attained	96 (31.5)	85 (28.2)

The above table depicts that out of 425 respondent girls 44.3% of the respondent girls responded that they could not concentrate on study during the menstrual period and 40.3% had expressed that they could not able to go schools during menstrual period.

IV. DISCUSSION

Current study examined KAP towards MHM among school going adolescent girls in Sithayankottai and Sitharevu Govt. Higher secondary school, Athoor Block of Dindigul District. The age group of 606 respondents was in between 10-18 years of age. Around 96.7% of the respondents were coming from home for higher secondary schooling; nearly 77.8% of them were from nuclear families that might be a reason for not having proper knowledge on menstrual management; it was surprising to see 69.5% of the respondents were having toilet facility at their house. Around 33.2% of the respondents still depend on the public (community) toilets. Around 55.6% of them were not having water facility at their toilets; 16.2% of their mothers are illiterates who must have lacked in menstrual hygiene and sanitation related issues. Nearly 79% of their parents were having income of less than 10,000/- per month. Almost 100% of the respondent girls (except 0.3%) did not know the organ of menstrual bleeding. Majority of the respondent girls (70.1%) who attained menarche do not know to properly dispose the used sanitary napkins. Only 39.7% respondent girls who attained menarche had said that they burn the used sanitary napkins through incinerator. Around 43.6% of respondents feel that keeping genital organ clean during menstrual period is not necessary. 61.2% of them were feeling a bad smell during menstruation along with 67.5% of them were having a common infections like itching and irritation. Around 42.8% of the respondents believed that eating sweets, papaya, and pineapple would lead to over bleeding. 54.6% of the respondents not accepted that taking iron rich food is necessary during menstruation. 44.3% of the respondent girls responded that they could not concentrate on study during the menstrual period and 40.3% of respondent girls had expressed that they could not attend schools during menstrual period.

School health education should be developed to empower adolescent girls with proper and correct knowledge on MHM, so that they may adopt appropriate personal health practices. Educating adolescent girls about the myths and misconceptions on menstruation should be removed completely right at their young age so that a menstrual hygiene can be developed and practiced throughout their life term. It would be wonderful if the teachers and research organizations take up the responsibility of providing healthier workable menstrual hygienic practices to all young girls in the school so that it might turn into a blossoming and healthy society in India.

V. CONCLUSION

This study was conducted to assess the Knowledge, Attitude and Practices among school going adolescent girls. The study revealed that menstrual hygiene was not very much satisfactory among the adolescent girls. Lack of knowledge and awareness on MHM can be due to lower level of formal education among their family members. MHM practices should be oriented towards all adolescent girls in the school and be made compulsory as a part of school curriculum.

It is also important to inform and train the male persons in the family and male teachers in schools and made aware of the practical problems that the adolescent girls are facing during menstruation so that they may be of supportive and helpful during the menstrual period of their family girls. The mothers must be really encouraged to provide a nutritious meal to their daughters. Finally the community members and Panchayat

Presidents should be oriented towards providing water and sanitation facility in the community that might give a facelift to total sanitation and environment of villages.

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