

Menstrual hygiene and Associated Factors among Adolescent Girls

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Abstract

It is known fact that women are the creators who give birth to next generation. Hence, the woman who preserves humankind must be preserved. Women are most precious that they must be safeguarded. In the life of women, menstruation is the process through which women brings new life on to earth. During this process she needs to manage hygiene to protect her health. This process starts from adolescent age, WHO defines adolescence as the period of life between 10-19 years. During this period of women's life she finds prominent physical and invisible biological changes, which leads to confusion, anxiety, disturbance, and feeling of insecurity. Adolescence is a prime time for health promotion and to encourage them to establish healthy patterns of behavior that will influence their development and health in later years. Many serious diseases in adulthood have their roots in adolescence.

Women and girls all over the world are facing numerous challenges in managing their menstruation, which should be a straightforward issue of privacy and health. Pads and other supplies may be unavailable or unaffordable, they may lack access to safe toilet facilities with clean water where they can clean themselves in privacy and they face discriminatory cultural norms or practices that make it difficult to maintain good menstrual hygiene. Together, these challenges may result in women and girls being denied basic human rights.

Poor menstrual hygiene caused by a lack of education on the issue, continued taboos and stigma, inadequate access to hygienic menstrual products and poor sanitation infrastructure undermines the educational opportunities, health and overall social status of women and girls around the world. As a result, millions of women and girls are kept from reaching their full potential.

Menstrual Hygiene and Human Rights

International human rights law is a binding, and therefore enforceable, legal framework that defines the relationship between a state as 'duty-bearers' of human rights and people living in that state as 'rights-holders'. The Convention on the Rights of the Child (CRC), Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), and the Convention on the Rights of Persons with Disabilities (CRPD) are examples of international human rights treaties that are particularly relevant to MHH. Understanding

MHH within the context of human rights requires a holistic approach to women's and girls' human rights. The biological fact of menstruation, the necessity of managing menstruation, and society's response to menstruation is linked with women's and girls' human rights and gender equality. Women and girls encounter difficulties in managing hygiene during menstruation when they lack the enabling environment to do so. Notably when they have difficulty exercising their rights to water, sanitation and education, they will likely have difficulty managing their menstruation. When women and girls cannot manage their menstrual hygiene, it can

negatively impact their rights, including the rights to education, work and health. Framing MHM in the context of human rights and gender equality may engage local, municipal, provincial and national government actors not typically attuned to MHM concerns, and can support policy arguments for government action

Need for the Study

Various studies on MHM also found that about 70% of girls in India having no knowledge of menstruation before their first period. Of the 113 million adolescent girls, 68 million attend about 1.4 million schools, with poor MHM practices and cultural taboos considered to be impediments to their school attendance. Adolescence in girls has been recognized as a special period marked with the onset of menarche. Even though menstruation is a natural process, it is associated with misconceptions, malpractices and challenges among girls in developing countries. Menstruation is part of the menstrual cycle, which helps in preparing woman's for the possibility of pregnancy each month. In spite of improved standard of living, better access to information and Government's and Nongovernmental organization's initiatives, a large number of adolescent girls are unaware of the MHM which has great impact on their health. Even in digital era, girls are missing up to 5 days of school a month or drop out entirely due to insufficient access to water, sanitation and hygiene (WASH) facilities and menstrual hygiene products. In low-income countries, girls' choices of menstrual hygiene materials are often limited by the costs, availability and social norms. Women in the workplace also often miss work because they don't have access to adequate sanitary conditions.

Inadequate menstrual hygiene management is connected with several problems that females face, in particular in developing countries. The current silence about menstruation limits women's and adolescent girls' access to relevant and important information about their bodies, directly affecting their health, education, dignity and human rights include the right to non-discrimination, equality, bodily integrity, privacy and the right to freedom from inhumane and degrading treatment from abuse and violence. Stigmatizing adolescent girls and women through misguided beliefs and age old

cultural practices, contributes to gender inequity and undermines basic rights.

Together, these challenges may result in women and girls being denied basic human rights. Women's and girls' ability to manage their menstruation hygienically, and with normalcy and dignity, enables women and girls to enjoy certain human rights like right to education, health, and water and sanitation, and they relate to menstrual hygiene management. The poor policy and programmatic support for managing menstruation have a negative impact on women's and girls' human rights. Human rights are negatively impacted when women and girls cannot manage menstruation with dignity, but rights should also be at the heart of any solution.

Healthy women can build happy society. The women are first mentors and teachers especially to girl children. Children usually are more inquisitive and with full of curiosity. The child during her development to adolescence from childhood would face many dilemmas and are chaotic situations, to overcome this, the children need to be made aware of so as to bring all round development in them.

With this back drop, an interdisciplinary study has been initiated with the financial assistance of Center for Translational Research (CTR), SPMVV. This significant project has been undertaken by the faculty from Women's Studies and the Law with the following objectives:

- To assess the knowledge about menstrual hygiene and Child protective legislations among school going adolescent girls.
- To find out the factors associated with menstrual hygiene.

Hypothesis

- Adolescent girls have limited knowledge on Menstrual hygiene and legislations

Methodology

Menstruation and menstrual hygiene are still issues which are insufficiently recognized in Indian society and influenced by misconceptions and socio-cultural restrictions. Tirupati being the education hub, having abundant number of Government and private institutions, there is a lot of scope to examine

the issues related to menstrual management among adolescent girl of different socio economic backgrounds.

Study Population:

The population of study is govt. Schools in Tirupati. To analyze whether the area of living has any influence on the knowledge and practice of MHM, the study included the schools of both Urban and Rural Mandals of Tirupati. Sri Pandit Jawarharlal Nehru Municipal (SPJNM) High School falls in Urban and Zilla Parishad (Z.P) High School, M.R Palli in Rural Mandal.

Tools for data collection

In order to meet its intended objectives, Questionnaire and observation methods were used for data collection. Initially the questionnaire was

drafted in English and then translated into Telugu. After finalisation of the tool, the baseline survey was conducted by the PIs. The baseline survey with the help of a pre designed pretested questionnaire was done to find out the socio-demographic information, existing knowledge, attitude and practice of menstrual hygiene and knowledge regarding child protecting legislations of the respondents etc

Respondent's knowledge relating to physical changes during adolescent period is compared between urban and rural school. The questionnaire consists of 6 units relating to social, economic, knowledge on menstruation, reproductive system & health and child protective legislations. The awareness of girls is tested to know the extent of knowledge. The statistical data of the filled questionnaire during pre-interventional study has been analyzed.

Table 1: Demographic profile of the Respondents

Details		Z.P.H. SCHOOL		S.P.J.N.M HIGH SCHOOL	
		Frequency (58)	Percent	Frequency (60)	Percent
Age	13	14	24.1	26	43.3
	14	25	43.1	21	35.0
	15	15	25.9	12	20.0
	16	4	6.9	1	01.7
Class	8 th	23	39.7	37	61.7
	9 th	35	60.3	23	38.3
Caste	OC	11	19.0	8	13.3
	BC	29	50.0	25	41.7
	SC	16	27.6	23	38.3
	ST	2	3.4	4	06.7
Religion	Hindu	50	86.2	56	93.3
	Muslim	2	3.4	2	03.3

	Christian	6	10.3	2	03.3
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A total of 118 adolescent girls participated in this study. Majority of adolescent girls were between 13-16 years of age, studying 8th and 9th classes. Half of the respondents belong to backward category, 31% belong to scheduled castes and scheduled Tribes and 20% of them are open category. 90% of them belong to Hindu religion. Since caste and religion which are the cultural institutions which has great influence on the attitudes practices and behaviours during menstruation. Hence the data is

collected and presented in the above table. With regard to the age at menarche, most of participants had their menarche between 12-14 years. There is no definitive answer to why the age of puberty among girls has dropped so dramatically but it has been decreasing from the recent past. It is said that early puberty in girls has been associated with increased risk of breast cancer, ovarian cancer, obesity and even diabetes in adult life and causes to stress.

Table 2: Education of Respondent's Mothers

Education	Z.P.H. SCHOOL (Rural)		S.P.J.N.M HIGH SCHOOL (Urban)	
	Frequency	Percent	Frequency	Percent
Illiterate	17	29.3	13	21.7
Primary	14	24.1	18	30.0
Higher	27	46.6	29	48.3
Total	58	100.0	60	100.0

Elders in the family or particularly the mother have the most important role in educating the girl and transforming appropriate information and healthy behaviours. Menarche is an important milestone in a girl's life and role of mother is crucial

in providing required information about reproductive health & safe practices. Hence data is collected on this aspect. Here in this study it is learnt that, about one fourth of the respondent's mothers are illiterates.

Table 3: Knowledge relating to Physical Changes during Adolescent Period

Details		Z.P.H. SCHOOL (Rural)		S.P.J.N.M HIGH SCHOOL (Urban)	
		Frequency	Percent	Frequency	Percent
Physical Changes during Adolescent Period	Height, Weight gain	40	69.0	12	20.0
	Growth in breasts	1	1.7	26	43.3
	Growth of hairs on the genital	-	-	5	8.3
	No Idea	17	29.3	17	28.3
	Hormones	3	5.2	15	25.0

Causes for physical changes during Adolescent Period	Food	-	-	12	20.0
	Family	2	3.4	8	13.3
	No Idea	53	91.4	25	41.7
Growth of the breasts begins at what age	1 – 5	-	-	9	15.0
	9-15	33	56.9	20	33.3
	20-25	-	-	2	3.4
	No Idea	25	43.1	29	48.3

Most girls know very little about menarche or menstruation before they experience it. The information that girls receive is often inaccurate, in many settings socio-cultural norms and taboos are a major barrier to addressing these knowledge gaps. The adolescent girls need to know the changes that will be developed in their bodies. Hence related

knowledge is collected and tested among rural and urban adolescent girls. More than one fourths of the respondents do not have proper idea about the basic physiological changes that accrues during puberty. Not much difference is observed among rural and urban girls with regard to the Knowledge relating to Physical changes during adolescent period.

Table 4: Awareness on Menarche and Menstruation

Details		Z.P.H. SCHOOL (Rural)		S.P.J.N.M HIGH SCHOOL (Urban)	
		Frequency(58)	Percent	Frequency(60)	Percent
Knowledge on Menarche	Aware	18	31.0	16	26.7
	Not aware	40	69.0	44	73.4
Causes for bleeding during Menstruation	Aware	18	31.0	15	25.0
	Not aware	40	69.0	45	75.0
Person created awareness on Menstruation	Friends	16	27.6	19	31.7
	Mother/ Family members	38	65.5	16	26.7
	Media	04	06.9	25	41.7

length of Menstrual Cycle	15-20	01	01.7	35	58.3
	20-25	02	03.4	09	15.0
	28-30	06	10.3	12	20.0
	No Idea	49	84.5	04	6.7
Amount of bloodshed during menstruation	40 ml	1	1.7	4	6.7
	100 ml	-	-	1	1.7
	No Idea	57	98.3	55	91.7
Contents of Menstrual blood	Normal blood	-	-	2	3.3
	Cervical Mucus Tissue	-	-	5	8.3
	Genital Secretions	-	-	-	-
	No Idea	58	100.0	53	88.3

The present investigation was aimed at studying the awareness levels of menstruation and related aspects among adolescent girls in the study area. Its very clear that, majority (about three fourths) of the girls do not know what exactly the menarche is. As the uterus sheds its lining, this tissue leaves the body as a natural part of the menstrual cycle. But vast majority of the respondents not aware of the reason for bleeding which creates lot of confusion as they are hardly informed. It is quite interesting to note that more than half (65%) of the girls from rural background get menstruation related information

either from mother or other members in the family, in contrast, girls from urban backdrop acquiring knowledge through media. With regard to the length menstrual or gap between cycle to cycle girls belongs to rural area no idea. Significant difference can be seen among rural and urban girls with regard to the length of cycle. Almost nil knowledge with regard to the contents of menstrual blood and amount of bloodshed during menstruation. Girls need to be educated on the science behind periods many of them reported significant gaps in their knowledge about menstruation

Table 5: Menstruation Related Challenges experienced

Details	Challenges	Z.P.H. SCHOOL (Rural)		S.P.J.N.M HIGH SCHOOL (Urban)	
		Frequency (58)	Percent	Frequency (60)	Percent
Regularity of Menstrual cycle	Regular	30	51.7	12	20.0
	Irregular	4	6.9	10	16.7
	Occasional	8	13.8	3	5.0
	No Idea	16	27.6	35	58.3
Physical problems	Stomach pain	39	67.2	15	25.0
	Vomiting Feeling	-	-	12	20.0
	Fatigue	3	5.2	18	30.0
	others	4	6.9	10	16.7

	No problem	12	20.7	5	8.3
Solution for Physical problems	Medicine	5	8.6	12	20.0
	Rest	13	22.4	11	18.3
	Tolerate suffering	31	53.4	19	31.7
	No Idea	9	15.6	18	30.0
Psychological Problems Encountered	Feel pressure	10	17.2	26	43.3
	Getting annoyed	17	29.3	6	10.0
	Lack of concentration	11	19.0	13	21.7
	Other like depressed mood, Irritation	20	34.5	15	25.0
Attendance to school during menstruation	Attend	41	70.7	20	33.3
	Absent on first day	8	13.8	11	18.3
	Absent for three days	9	15.4	29	48.3

Menstruation frequently poses physical, psychological, social, and health challenges for young girls. Its very surprising to know that more than half of the girls belong to urban area does not know when do they get their period. Except few, almost all the girls experiencing the problems like stomach pain, fatigue, vomiting feeling, stress etc. But girls from rural background tend to bear all these challenges and do not escape from schools during their monthly period. But about half of the girls from

urban background tend to absent for about 3 days due to various inconveniences during periods. This poses lot of difficulty for girls to compete with boys. Girls have their own issues which need to be addressed by the school authorities. Privacy, separate toilets with running water and dustbins or incinerators to dispose the sanitary waste need to be arranged. On the whole the statistical data show that all the girls are required awareness on the process that occurs in our body.

Table 6: Mother Education in Relation with Knowledge of the Respondents

S.No	variables	Education of Mother in relation with Respondents knowledge						Chi-square		
		Illiterate		Primary		Higher		Cal	p val (<0.05)	
		F	%	F	%	F	%			
1.	Physical Changes during Adolescent Period	Height, Weight gain	8	19.0%	15	12.6%	19	45.2%	3.152	0.533 NS
	Growth in breasts	0	0.0%	0	0.0%	1	100.0%			
	Growth of hairs on the genital	-	-	-	-	-	-			
	No Idea	5	29.4%	3	17.6%	9	52.9%			

2.	Causes for physical changes	Hormones	0	0.0%	2	66.7%	1	33.3%	3.077	0.545 NS
		Food								
		Family	0	0.0%	1	50.0%	1	50.0%		
		No Idea	13	23.6%	15	27.3%	27	49.1%		
3.	Age of Menarche	10-16	10	32.3%	9	29.0%	12	38.7%	4.570	0.102 NS
		No Idea	3	10.3%	9	31.0%	17	58.6%		
4.	Causes for bleeding during Menstruation	Aware	4	22.2%	10	55.6%	4	22.2%	9.229	0.010 S
		Not aware	9	21.4%	8	19.0%	25	59.5%		
5.	Causes of Menarche	Social process	1	50.0%	0	0.0%	1	50.0%	2.531	0.639 NS
		Physical process	2	22.2%	4	44.4%	3	33.3%		
		Psychological process	-	-	-	-	-	-		
		No Idea	10	20.4%	14	28.6%	25	51.0%		
6.	Length of menstrual cycle	15-20	0	0.0%	1	100.0%	0	0.0%	5.554	0.475 NS
		20-25	0	0.0%	2	66.7%	1	33.3%		
		28-30	2	33.3%	2	33.3%	2	33.4%		
		No Idea	11	22.0%	13	26.0%	26	52.0%		
		No Idea	2	12.5%	3	18.8%	11	68.8%		
7.	Physical challenges experienced	Stomach pain	10	24.4%	15	36.6%	16	39.0%	7.635	0.266 NS
		Vomiting Feeling	-	-	-	-	-	-		
		Fatigue	0	0.0%	1	33.3%	2	66.7%		
		Miscellaneous	0	0.0%	0	0.0%	4	100.0%		
		No problem	3	25.0%	2	16.7%	7	58.3%		
8.	Psychological Problems Encountered	Feel pressure	4	36.4%	2	18.2%	5	45.5%	10.133	0.256 NS
		Getting annoyed	4	22.2%	8	44.4%	6	33.3%		
		Lack of concentration	4	36.4%	2	18.2%	5	45.5%		

	During Menstruation	Other like depressed mood Irritation	1	9.1%	6	36.4%	13	54.5%		
9.	Attendance to school during menstruation	Attend	12	27.9%	11	25.6%	20	46.5%	10.237	0.249 NS
		Absent on first day	1	12.5%	6	82.5%	8	85.0%		
		Absent for three days	0	0.0%	1	50.0%	1	50.0%		
10.	Awareness on using of sanitary napkin	Aware	6	54.5%	3	27.3%	2	18.2%	12.030	0.061 NS
		Partially aware	2	8.7%	8	34.8%	13	56.5%		
		No Idea	5	20.8%	7	29.2%	14	50.0%		
11.	Change of sanitary napkin	Once	0	0.0%	3	60.0%	2	40.0%	10.572	0.227 NS
		Twice	1	8.3%	4	33.3%	7	58.3%		
		Thrice	10	31.2%	10	31.2%	12	37.5%		
		More than once	2	20.2%	1	9.0%	8	70.8%		
12.	Disposal of sanitary napkin	Throwing	6	41.1%	6	41.1%	14	50.0%	5.820	0.667 NS
		Burning	7	20.6%	12	35.3%	15	44.1%		
		Burn it	3	12.0%	10	40.0%	12	48.0%		
		Not using fabric	7	28.0%	5	20.0%	13	52.0%		
13.	Precautions to prevent genital infection	Cleaning of genital organs with water	-	-	-	-	-	-	13.328	0.038 S
		Cleaning of Undergarment	0	0.0%	3	100.0%	0	0.0%		
		Change of the sanitary napkin	2	28.6%	4	57.1%	1	14.3%		
		All of the above	5	29.4%	4	23.5%	8	47.1%		
		No idea	6	18.2%	7	21.2%	20	60.6%		
14.	Reason for pregnancy of woman	Sexual intercourse	3	30.0%	4	40.0%	3	30.0%	4.142	0.387 NS
		Kissing	1	100.0%	0	0.0%	0	0.0%		
		Hugging	-	-	-	-	-	-		
		No idea	10	20.4%	13	26.5%	26	53.1%		
15.	Opinion on menstruation	Happy event	0	0.0%	0	0.0%	1	100.0%	8.518	0.203 NS
		Irritating experience	6	24.0%	11	44.0%	8	32.0%		
		No opinion	7	25.0%	7	25.0%	20	50.0%		

S – significant at 0.05 level, N S – Not significant at 0.05 level

From the above table it is observed that the p value is less than the chosen significance level $\alpha = 0.05$ and can be concluded that there is a statistically significant association between mother education and knowledge of respondent relating to physical changes and its causes during adolescent period.

It can be noted that from the above table the significant value of p is less than our chosen significance level $\alpha=0.05$. And can be concluded that

there is a statistically significant association between mother education and knowledge relating to menstrual hygiene.

From the above table the significant aspects were taken and chi square test was again conducted and presented in table 10 to find the significant aspect which has influence of mother education on respondent's knowledge. it is also observed through the analysis that there is a statistically significant association between education of mother and knowledge relating menstrual hygiene management

Table 7: Assessment of awareness on MHM between the Selected Schools

This table provides the actual results from the independent t-test

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Z.P.H School	Equal variances assumed	.003	.955	.032	78	.974	.00675	.20828	-.40791	.42141
S.P.J.N.M School	Equal variances not assumed			.032	77.996	.974	.00675	.20828	-.40791	.42141

From the above table, it is observed that the significant value of p is 0.974. This value is greater than 0.05. So it is concluded that there is no statistically significant difference between menstrual knowledge of students in the urban area as compared to rural area. The findings showed that the respondents are aware that girls would menstruate on attaining certain age. But they are ignorant of scientific knowledge of menstruation, its management and hygiene.

Conclusion

Menstruation and menstrual practices still face many social, cultural, and religious restrictions which are a big barrier in the path of menstrual hygiene management. According to the World Health Organization, the availability of adequate clean water and hygiene in schools is essential for nearly all the Millennium Development Goals, especially in the achievement of universal primary education, reduction of child mortality, and the

promotion of gender equality. As adolescents transit from childhood to adulthood, adolescents undergo a number of physical, emotional and social changes. Studies demonstrate that they are often unprepared for these changes. In many parts of the country especially in rural areas girls are not prepared and aware about menstruation so they face many difficulties and challenges at home, schools, and work places. Girls in many countries have knowledge gaps and misconceptions about menstruation that cause fear and anxiety and leave them unprepared when they begin menstruating. . Menstruation was strongly associated with school attendance. Large number of the girls in the present study are also absenting for school due to poor knowledge and confidence in effective Menstrual Hygiene Management and even lack of proper basic facilities at schools. Fulfilling these gaps in all schools can enhance girl students' school attendance and their academic performance. Further research on the impact of menstruation and its management on the academic performance of adolescent schoolgirls is recommended.

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