



KNOWLEDGE OF MENSTRUAL HYGIENE AND ITS CORRELATES: A STUDY OF BENEFICIARIES OF ANGANWADI CENTRES OF CHANDIGARH

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Abstract

Background: Knowledge on maintaining menstrual hygiene is of great importance for being safe and healthy. This study aimed at assessing socio-cultural profile and mass media as a source of menstrual hygiene knowledge. This study also assessed knowledge on menstrual hygiene and its correlates.

Method: In-school and out-school adolescent girls of age between 14 and 18, who were enrolled at Anganwadi Centres of Chandigarh, were taken up for study. Sample was selected randomly. Total sample size was 50 (19 out-school and 31 in-school). Data was collected using interview schedule. *p*-value was calculated at 95% confidence interval using chi square tests. *p*-value of < 0.05 was considered statistically significant.

Result: 66% adolescent girls comprising both groups knew the importance of taking bath daily as well as change of undergarment whenever gets stained. 100% knew about hand wash after changing pad/cloth and also knew that soap is the best agent for washing hands. 57.9% out-school and 93.5% in-school had knowledge regarding use of sanitary napkins. 26.3% out-school and 35.5% in-school had knowledge regarding frequency to change pad thrice in a day. Menstrual hygiene knowledge level was found to be statistically significant. No significant association was found between knowledge level and socio-cultural profile and mass media as source of knowledge.

Conclusion: Out-school adolescent girls lack knowledge regarding menstrual hygiene. Therefore, there is a need to provide proper education on reproductive health through Anganwadi Centres.

Key words: Adolescent Girls, Chandigarh, Knowledge, Menstrual Hygiene, Menstruation.

Introduction

The first occurrence of menstruation also known as menarche¹, is a unique phenomenon associated with females. With the initiation of menstruation, physiological changes such as increase in height and weight occur among adolescent girls and they become capable of bearing a child.²

Menstruation is a biological process in the women wherein each month body sheds the lining of the uterus. Menstrual blood flows from the uterus through the small opening in the cervix and passes out of the body through the vagina.³ Age at which menstruation occur varies from person to person and adolescent girls may experience menarche between the ages of nine to fourteen.⁴

At this tender age, knowledge about maintaining hygiene during menstruation is of utmost importance. Menstrual hygiene includes proper care of genital area, change of sanitary napkins on regular intervals, taking care of personal hygiene, that is, take bath daily in order to control the odor, wear clean undergarments and change them regularly.^{5,6} If the menstrual hygiene is not properly taken care of, it may make females vulnerable to reproductive tract infections and urinary tract infections.⁷

With the above background, the study was conducted with following objectives:

- To assess the social and cultural profile of in-school and out-school adolescent girls in Anganwadi centres of Chandigarh.
- To assess the mass media as a source of menstrual hygiene knowledge.
- To assess the knowledge regarding menstrual hygiene.
- To correlate their knowledge level with social profile, cultural profile and mass media as a source of knowledge.

Methods

This study was conducted in Chandigarh among adolescent girls comprising in-school and out-school of age between 14 and 18 who were enrolled at Anganwadi Centres. For the purpose of study, school going girls were represented as in-school and those who were either not taken admission further to continue education or left schooling in between or never attended school were represented as out-school adolescent girls.

Two stage sampling procedure was followed. At first stage, Anganwadi Centres were selected randomly. At second stage, out of those selected Anganwadi Centres a sample belonging to target groups were selected by proportionate stratified random sampling procedure. Final sample size came out to be 31 in-school and 19 out-school adolescent girls. Total sample size came out to be 50.



For the purpose of this study, data was collected by using interview schedule. Interview schedule was divided into two sections. In first section, questions regarding social profile, cultural profile and mass media as a source of knowledge were asked. In second section, question on assessing knowledge on menstrual hygiene were asked. p-value was calculated at 95% confidence interval using chi square tests. p-value of < 0.05 was considered statistically significant.

Results

Both groups, comprising in-school and out-school adolescent girls, were analyzed by proportion tests and found to be homogeneous on all variables considered for assessing social profile except education.

Table 1: Social profile of Adolescent Girls

Variables	Groups		Total n=50	X ² value	df	p value
	Out-school n=19	In-school n=31				
Age				1.145 [#]	2	0.639
14	0 (0%)	0 (0%)	0 (0%)			
15	8 (42.1%)	12 (38.7%)	20 (40.0%)			
16	9 (47.4%)	12 (38.7%)	21 (42.0%)			
17	2 (10.5%)	7 (22.6%)	9 (18.0%)			
Religion				1.385 [#]	2	0.538
Hindu	15 (78.9%)	26 (83.8%)	41 (82.0%)			
Muslim	1 (5.3%)	3 (9.7%)	4 (8.0%)			
Sikh	3 (15.8%)	2 (6.5%)	5 (10.0%)			
Education				16.839 [#]	3	0.000*
Illiterate	2 (10.5%)	0 (0%)	2 (4.0%)			
Primary	8 (42.1%)	1 (3.2%)	9 (18.0%)			
Middle	7 (36.9%)	17 (54.8%)	24 (48.0%)			
Matriculation	2 (10.5%)	13 (42.0%)	15 (30.0%)			
Type of Family				0.051 ^s	1	0.822
Nuclear	14 (73.7%)	25 (80.6%)	39 (78.0%)			
Joint	5 (26.3%)	6 (19.4%)	11 (22.0%)			

[#]Fisher's Exact Test/^sContinuity Correction*/Significant

Table 1 present social profile of both the groups, comprising in-school and out-school adolescent girls. Among in-school and out-school adolescent girls, maximum concentration of respondents was in the age group of 15 and 16. There was predominance of Hindus in the sample as more than four fifth of the adolescent girls comprising both in-school and out-school were Hindus. Majority of the in-school adolescent girls had completed either middle or matriculation whereas majority of out-school adolescent girls drop schooling or discontinued schooling after completing primary education. Among out-school adolescent girls 10.5% were found to be illiterate as they never attended school. Educational profile of the respondents was found to be statistically significant. More than 70% of out-school adolescent girls and little more than 80% in-school adolescent girls belonged to nuclear family.

Table 2: Cultural profile of Adolescent Girls

Grading	Groups		Total n=50	X ² value	df	p value
	Out-school n=19	In-school n=31				
Profile				9.391 [#]	2	0.003*
Modern	0 (0.00%)	3 (9.70%)	3 (6.0%)			
Transitional	14 (73.70%)	28 (90.30%)	42 (84.0%)			
Traditional	5 (26.30%)	0 (0.00%)	5 (10.0%)			

[#]Fisher's Exact Test*/Significant

Table 2 reveals cultural profile of respondents. Cultural profile was assessed on the basis of adolescent girls' responses to three statements. The first statement was, during menstruation do they go to worship place; second statement was during menstruation do they work in kitchen and third statement was during menstruation do they participate in any ritual ceremony. After calculating, the scores were divided into three grades- modern, transitional and traditional. None of out-school adolescent girl came out to be modern and none of the in-school adolescent girl came out to be traditional on cultural profile. Data was found to be statistically significant (p-value 0.003).



Table 3: Mass Media as Source of Knowledge for Adolescent Girls

Sources	Groups		Total n=50	X ² value	df	p value
	Out-school n=19	In-school n=31				
Radio				0.195 ^s	1	0.659
	Yes	2 (10.5%)	1 (3.2%)	3 (6.0%)		
	No	17 (89.5%)	30 (96.8%)	47 (94.0%)		
Television				0.000 ^s	1	1.000
	Yes	17 (89.5%)	29 (93.5%)	46 (92.0%)		
	No	2 (10.5%)	2 (6.5%)	4 (8.0%)		
Mobile Phone				0.062 ^s	1	0.803
	Yes	18 (94.7%)	31 (100.0%)	49 (98.0%)		
	No	1 (5.3%)	0 (0%)	1 (2.0%)		
Internet				-	-	-
	Yes	0 (0%)	0 (0%)	0 (0%)		
	No	19 (100%)	31 (100%)	50 (100%)		

^sContinuity Correction

Table 3 shows that most important source of knowledge in mass media among in-school and out-school adolescent girls was mobile phone followed by television. Negligible respondents considered radio as important source for obtaining knowledge whereas none of the respondent considered internet as source for obtaining knowledge. This could be because none of the respondent had access to internet facility.

Table 4: Knowledge on Menstrual Hygiene among Adolescent Girls

Menstrual Hygiene Knowledge	Group		Total n=50	X ² value	df	p value
	Out-school n=19	In-school n=31				
Bathing				3.159 [#]	2	0.199
Daily	10 (52.6%)	23 (74.2%)	33 (66.0%)			
Alternate days	5 (26.3%)	6 (19.3%)	11 (22.0%)			
Twice in a week	0 (0%)	0 (0%)	0 (0%)			
When periods get over	4 (21.1%)	2 (6.5%)	6 (12.0%)			
Change Of Under Garments				2.441	1	0.118
Whenever get stained with spot of blood	10 (52.6%)	23 (74.2%)	33 (66.0%)			
Daily	9 (47.4%)	8 (25.8%)	17 (34.0%)			
Hand Wash During Menses Whenever Change Pad/Cloth				-	-	-
Yes	19 (100.0%)	31 (100.0%)	50 (100.0%)			
No	0 (0%)	0 (0%)	0 (0%)			
Agent Used To Wash Hands				-	-	-
Soap	19 (100.0%)	31 (100.0%)	50 (100.0%)			
Water	0 (0%)	0 (0%)	0 (0%)			
Clay	0 (0%)	0 (0%)	0 (0%)			
Use Of Material				8.970 [#]	2	0.005*
Sanitary Napkins	11 (57.9%)	29 (93.5%)	40 (80.0%)			
Cotton	2 (10.5%)	0 (0.0%)	2 (4.0%)			
Any cloth	6 (31.6%)	2 (6.5%)	8 (16.0%)			
Frequency Of Change Cloth/Pad				2.358 [#]	2	0.315
Thrice in a day	5 (26.3%)	11 (35.5%)	16 (32.0%)			
Twice in a day	14 (73.7%)	17 (54.8%)	31 (62.0%)			
Once in a day	0 (0.0%)	3 (9.7%)	3 (6.0%)			



#Fisher’s Exact Test /*Significant.

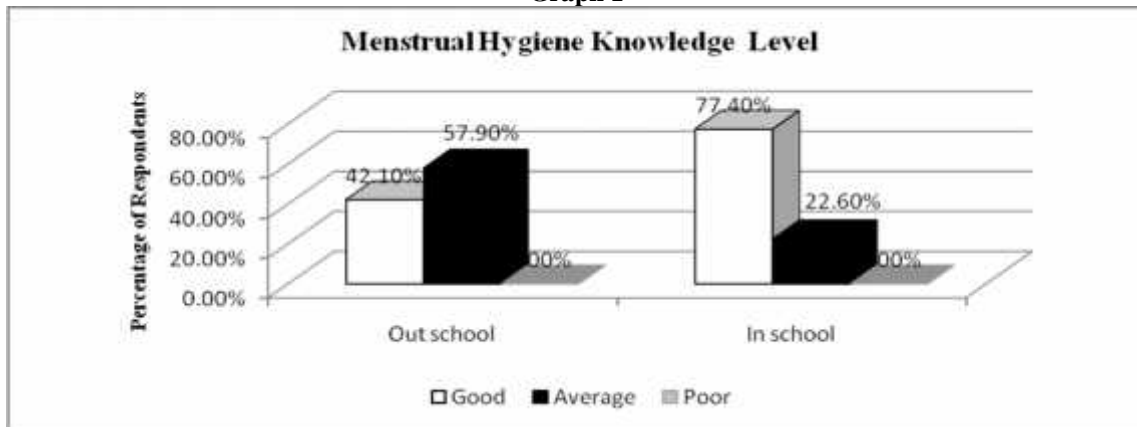
Table 4 depicts that little less than three fourth in-school adolescent girls and little more than half of out-school adolescent girls knew that one should take bath daily during menstruation. Little less than one fifth in-school adolescent girls and little more than one fourth out-school adolescent girls thought one should take bath on alternate days. Negligible respondents among in-school adolescent girls and one fifth respondents among out-school adolescent girls believed that one should take bath when periods get over.

47.4% out-school adolescent girls and 25.8% in-school adolescent girls were found to be ignorant about change of undergarment whenever get stained with spot of blood. 100% respondents in both the groups knew that one should wash hands during menses whenever need to change pad/cloth and soap is the best agent to wash hands.

More than 90% in-school adolescent girls knew that use of sanitary napkins as menstrual absorbent is hygienic whereas 31.6% out-school adolescent girls who were found to be ignorant as they considered cloth shall be used. Data on use of material as menstrual absorbent was found to be statistically significant (p-value 0.005). 73.7% out-school adolescent girls and 54.8% in-school adolescent girls considered changing pad/cloth twice in a day is sufficient whereas negligible number of respondents among in-school adolescent girls believed in changing pad/cloth once in a day.

Menstrual hygiene knowledge level

Graph 1

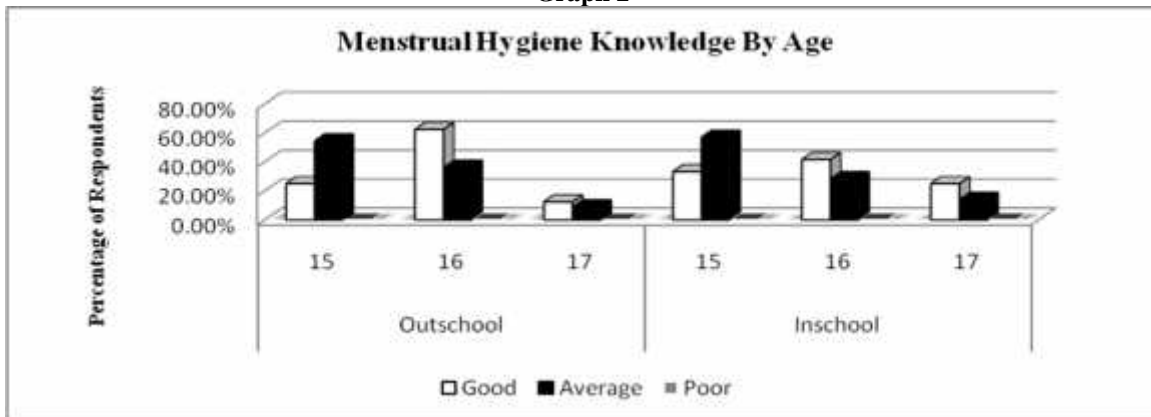


Chi-square 6.376, df 1, p value 0.012 (Significant).

Graph 1 reveals that little more than 42% out-school adolescent girls and little more than 77% in-school adolescent girls had good level of knowledge. More than half of out-school adolescent girls and little more than one fifth in-school adolescent girls had average knowledge. None of the respondent in both groups falls in poor level of knowledge. Data was found to be statistically significant (p value 0.012).

Association between knowledge level and social profile

Graph 2

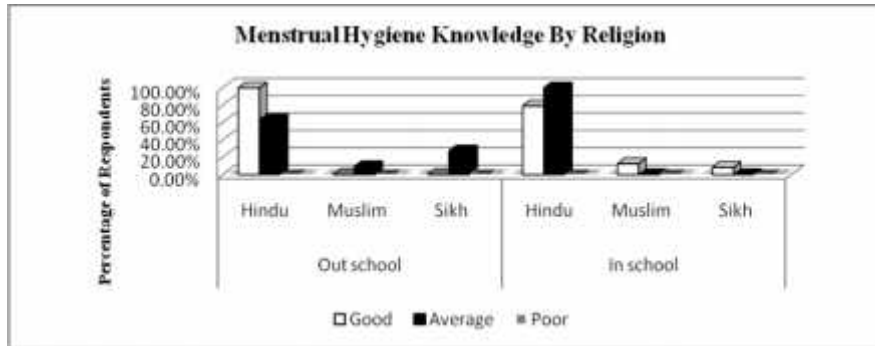


Out-school-Fisher’s Exact Test 1.865, df 2, p value 0.541 (Not significant)

In-school- Fisher’s Exact Test 1.215, df 2, p value 0.639 (Not significant)



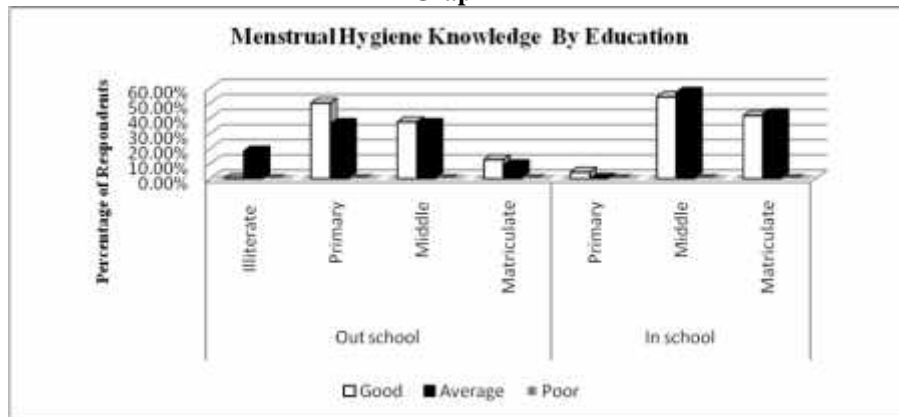
Graph 3



Out-school-Fisher's Exact Test 3.212, df 2, p value 0.228 (Not significant)

In-school- Fisher's Exact Test 0.968, df 2, p value 0.737 (Not significant)

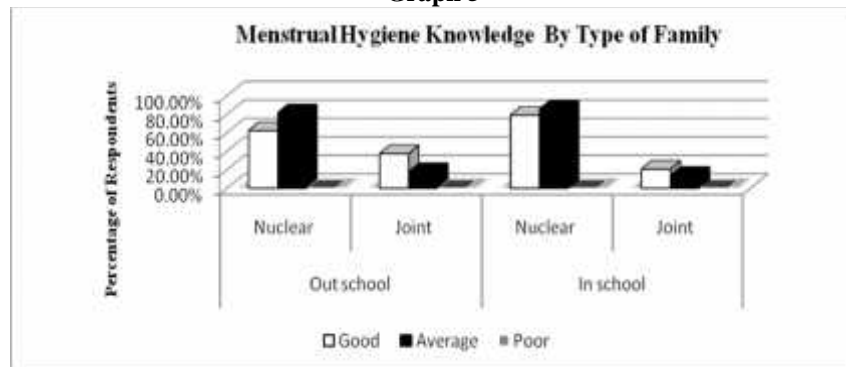
Graph 4



Out-school-Fisher's Exact Test 1.726, df 3, p value 0.818 (Not significant)

In-school- Fisher's Exact Test 0.551, df 2, p value 1.000 (Not significant)

Graph 5



Out-school-Continuity Correction 0.173, df 1, p value 0.677 (Not significant)

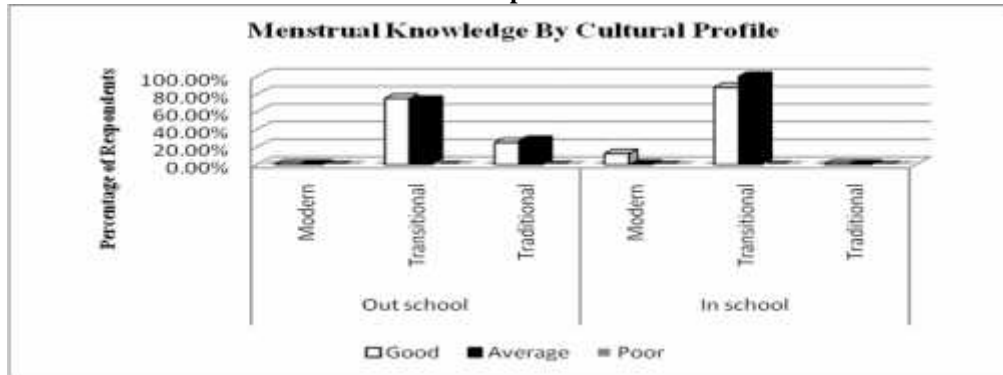
In-school- Continuity Correction 0.000, df 1, p value 1.000 (Not significant)

Association between menstrual hygiene knowledge among in-school and out-school adolescent girls and social profile reveals that there was no significant association between knowledge level and components of social profile namely age, religion, education and type of family. Though there was no significant association but it is apparent from Graph 2 on age that knowledge level at the age of 16 and 17 was better than at the age of 15 in both the groups comprising in-school and out-school adolescent girls. Graph 3 reveals that among out-school adolescent girls 100% Hindus had good level of knowledge and among in-school adolescent girls little less than 80% Hindus and all the respondents who belonged to Muslim and Sikh were found to be on good level of knowledge. The impact of education was clearly exposed by those who had completed education for primary, middle and matriculation among out-school adolescent girls in Graph 4 as they had good level of



knowledge where as illiterates fall in average level of knowledge. Graph 5 depicts that in both the groups those who stay in joint family, less number of respondent fall in average level of knowledge.

Association between knowledge level and cultural profile
Graph 6

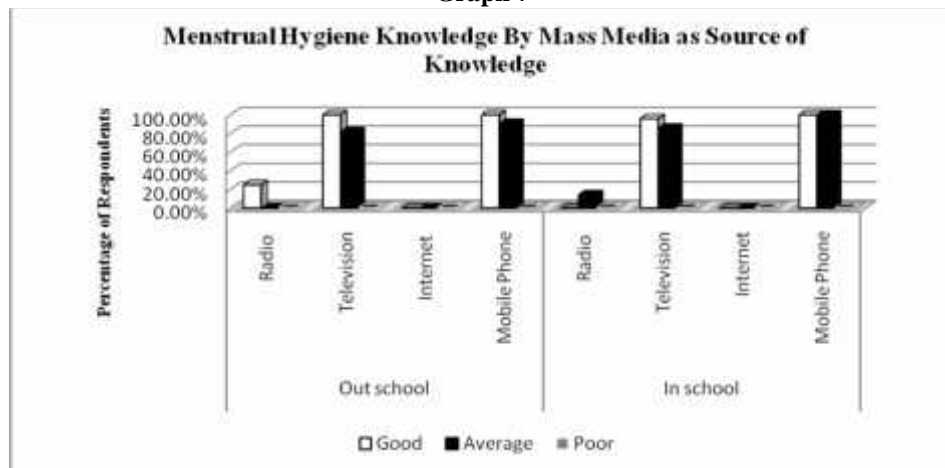


Out-school- Continuity Correction 0.000, df 1, p value 1.000 (Not significant)

In-school- Continuity Correction 0.066, df 1, p value 0.797 (Not significant)

Graph 6 reveals that knowledge level is good among those who fall in the category of modern among in-school adolescent girls. In both the groups, comprising in-school and out-school adolescent girls, majority of the respondents are in transitional phase of cultural profile in both good and average level of knowledge. Perhaps they are into the transitional phase of their life from childhood to adulthood where they are learning new things and shedding old beliefs.

Association between knowledge level and mass media as source of knowledge
Graph 7



Radio- Out-school- Continuity Correction 0.992, df 1, p value 0.319 (Not significant)

In-school- Continuity Correction 0.444, df 1, p value 0.505 (Not significant)

Television-Out-school- Continuity Correction 0.268, df 1, p value 0.604 (Not significant)

In-school- Continuity Correction 0.007, df 1, p value 0.933 (Not significant)

Internet- Out-school- Not applicable

In-school- Not applicable

Mobile phone-Out-school- Continuity Correction 0.000, df 1, p value 1.000 (Not significant)

In-school- Not applicable

Graph 7 reveals mass media as a source of knowledge plays a very important role. It is evident from the graph that those who had television and mobile phone had good level of knowledge. In case of radio, only out-school adolescent girls made use of this mass media for obtaining right knowledge.



Discussion

In the present study, none of the respondent was found to be in poor level of knowledge regarding menstrual hygiene. This could be because both groups of adolescent girls, that is, in-school and out-school, were enrolled at their respective Anganwadi Centres. They had been provided information regarding menstrual hygiene by Anganwadi workers.

Little less than half of out-school adolescent girls and little more than one fourth of the in-school adolescent girls were found to be ignorant regarding daily bathing. Those respondents who considered one shall take bath only when periods get over, they believed daily bathing during menstruation may aggravate the pain, increase the flow of blood, periods may become irregular etc. This result contradicts the study conducted in tribal area of Meghalaya on school going girls, which found that 67% respondents considered having bath twice a day during periods⁸. This difference may be because the present study had also taken out-school girls in sample, whose data visibly showed a difference on knowledge regarding bathing during menstruation.

When inquired about the change of undergarments, the findings disclosed that in-school adolescent girls had better knowledge as compared to out-school adolescent girls. Respondents who believed in not changing undergarment whenever get stained with spot of blood, justified their response by saying “spotting with blood is common during menstruation therefore no need to change again and again.” All the respondents in both groups knew the importance of washing hands to maintain hygiene and also knew that soap is the best agent to wash hands during menstruation.

57.9% out-school adolescent girls and 93.5% in-school adolescent girls were found to have knowledge about use of sanitary napkins during menstruation. It was observed by Lawan et al.⁹ that 86.5% school girls knew correctly that sanitary pad is the best menstrual absorbent to be used. This study is in concurrence with the present study that majority of the school going girls had good level of knowledge about the use of sanitary napkins. The percentage of correct knowledge among out-school adolescent girls is less as compared to in-school adolescent girls. This could be due to the reason that in-school adolescent girls got more exposure for attaining knowledge through books, interaction with teachers and peer group.

62% respondents comprising both in-school and out-school adolescent girls considered one shall change pad/cloth twice in a day whereas 32% respondents comprising both in-school and out-school adolescent girls had correct knowledge that pad shall be changed thrice in a day. The results of the present study differ from the one conducted by Nagar and Aimol⁸ who found that 28% of the adolescent girls consider it is necessary to change pad twice in a day and 70% thought pad shall be changed more than two times in a day.

Conclusion

In-school adolescent girls were found to be better on knowledge level where as majority of out-school adolescent girls were on average level. This clearly shows that education has had impact on in-school adolescent girls where they got many opportunities to attain knowledge by different means. Out-school adolescent girls lack this exposure. Therefore, there is a need to provide proper education on reproductive health through Anganwadi Centres as these girls were enrolled at these centres. Anganwadi workers needs to be more interactive with out-school adolescent girls and need to maintain rapport so that these girls should not hesitate in enquiring and discussing regarding menstruation.

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