

Original Research Article

A cross sectional study on the knowledge, attitudes and practices towards menstrual cycle and its problems: a comparative study of government and non-government adolescent school girls

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ABSTRACT

Background: Young girls up to 20 years of age comprise a quarter of Indian female population. A vast majority of adolescent girls in India are affected by reproductive health issues and menstrual problems are one of them. These problems arise mostly due to false beliefs & poor awareness regarding menstrual cycle. The objective of the study was to assess knowledge, attitude and practices towards menstrual cycle and its problems among school girls.

Methods: A cross sectional study among 250 girls (age 13-19 years) each from government and non-government schools of Jodhpur City was carried out by interviewing them with predesigned & pretested questionnaire.

Results: Most of the girls of non-government schools considered menarche as a different experience of life (34.8%) and unhygienic (27.6%) while 41.6% of government school girls were scared due to menarche and 30% considered it as unhygienic. 59.6% of non-government school girls knew about menstrual cycle before menarche while 48.8% of government school girls had such knowledge. Mother was the commonest channel of information in both study groups. 12-14 years was the most common age groups in which menarche occurred in both study groups. About 2/3 of non-government school girls were using sanitary pads while only 1/4 of government school girls had such practice. High cost was the major reason for not using sanitary pads in Govt. school girls. Pain Abdomen was the commonest complaint faced during menstrual cycle followed by backache. About 4/5th of non-government school girls and about 2/3rd of government school girls attended school during menstrual cycle. All subjects faced some kind of domestic restriction due to disbelief in relation to menstrual cycle. Irritability was reported as most common psychological problem during menstrual cycle

Conclusions: There is a need for adolescent girls to have accurate and adequate information about menstruation appropriate sanitary and hygienic management.

Keywords: Menarche, Menstrual cycle, Knowledge, Attitude, Practice, Hygiene

INTRODUCTION

Adolescence is characterized by physical, psychological, and social changes. WHO has defined adolescence as the age ranging from 10-19 years. It is the period between childhood and adulthood, marked by enhanced food requirement and basal metabolic activities and biochemical activities, endogenous processes like

hormonal secretions with their influence on various organ systems (WHO 2001).¹

India has one of the fastest growing youth populations in out of 1.2 billion adolescents worldwide. Young girls up to 20 years of age comprise one quarter of India's female population.²

Adolescent years have been recognized as a special period in the life cycle of adolescent women as it requires specific and special attention (Balsubramanian 2005).³ This transition phase makes them vulnerable to a number of problems for examples, psychosocial problems, general and reproductive health problems, and sexuality related problems. A vast majority of adolescent girls in India are suffering from reproductive health morbidities.

Traditionally in India from the beginning of their lives, girls are groomed to accept male domination and ignore their own needs. Menarche marks the beginning of women's menstrual and reproductive life and occurs during early adolescence. Thus, it is pertinent to examine various influencing factors of teenage girls' expectations of menarche to facilitate the understanding of their transition to womanhood, which may have significant implications for the overall promotion of their health.

Most commonly experienced problems include anxiety, depression and pain. Problems such as vomiting, diarrhoea, dizziness, sleep problems; headache and lowered performance fluctuate in occurrence, intensity and duration from individual to individual and from cycle to cycle.

Myths and mysteries have long enveloped the truth about menstruation. It is customary for some girls to restrict their activities during the periods as per their social customs and religious beliefs. She is not allowed to touch items of food, growing plants, flowers etc. According to Patel et al most women (73.6%) reported restrictions in their daily activities during the menstrual period.⁴

Isolation and restrictions imposed during menstruation may incorporate negative attitude towards this phenomenon in girls. Thus, menstrual problems are not a trivial complaint; as a result of its high prevalence and adverse impact, this complaint should be considered an important target for reproductive health programmers. It is worthwhile to mention that poor menstrual hygiene comes in the way of achieving the several millennium development goals like MDG 2, 3, 5, 7 and 8.

The present study is a moderate attempt to assess the source of information regarding menstruation; reaction to first and subsequent menstruation; taboos and restrictions as a result of menstruation; hygiene practiced during menstruation, the knowledge, practices and health seeking behaviour of adolescent girls regarding menstrual cycle.

Aims and objectives

- To evaluate & compare the Knowledge and Practice on different aspects of Menstruation among adolescent girls of government and non-government schools.

- To assess & compare the knowledge and sources of information of adolescent school girls about menstruation.
- To study the different health problems faced during menstruation.
- To study the hygiene practiced to manage the menstruation.
- To study the restrictions practiced during menstruation.
- To study the reasons of school absenteeism during menstruation.
- To propose specific measure to improve menstrual hygiene.

METHODS

The sample for the present study consisted of 500 adolescent girls between the age group of 13-19 years. The first five schools who gave permission for conducting the study from each group were included in the study.

An equal number of 50 subjects were drawn from each Government and non-government school. The sample of 50 subjects from each school was chosen on the basis of availability.

Inclusion criteria

All subjects in the age group of 13-19 years who had attained menarche were included in the study

Exclusion criteria

All subjects in the age group 13-19 years who had not attained menarche were excluded from the study.

Ethical approval

The agreement for participation of the subjects was taken after fully explaining the aim of the study to get their approval for participation in the study. Also, they were assured that the information would be confidential and used for the research purposes only.

Tools of data collection

The tool for data collection was a structured intervention questionnaire sheet consisting of two parts. The first part was developed to collect data.

Field work

The study was conducted during the period of January-August 2016.

Statistical analysis

The data obtained was compiled, stating the frequency of every response in each item and then transcribed on excel sheet. Chi-square test was used for find out association.

RESULTS

Almost 85% of all subjects were from age group 13-17 years. Mean age of non-government and government school subjects was 16.23 years and 15.1 years respectively.

Most common pattern of family composition was nuclear family in both government (71.2%) and non-government

(61.2%) school girls. Overall 1.8% girls were married but they were residing with their parents.

Majority of the study group from the non-government schools belonged to socio economic grade II (46%) while girls from government schools mostly belonged to socio economic grade IV (52.4%) , and this difference is statistically significant (p value <0.0001).

In non-government schools, majority of the subjects' mothers were literate upto graduation level (24.8%), while nearly half (43.6%) of government school subjects' mothers were illiterate. This difference is statistically significant (p value <0.0001).

Table 1: Comparison of mother's education between non-government and government school.

Education of mother	Non-government	Government	Total	Chi sq
Illiterate	19(7.6)	109.(43.6)	128(25.6)	d.f. 5; P=<0.0001
Primary(V)	53(21.2)	57(22.8)	110(22)	
Middle(VIII)	52(20.8)	48(19.2)	100(20)	
Secondary(X)	37(14.8)	23(9.2)	60(12)	
Higher Secondary (XII)	27(10.8)	9(3.2)	36(7.2)	
Graduation/Post graduation	62(24.8)	4(1.1)	66(13.2)	
Total	250(100)	250(100)	500(100)	

Table 2: Comparison of experience of first menstrual cycle between non-government and government school girls.

Experience of menarche	Non-Government	Government	Total	Chi-sq
Scared	54(21.6)	104(41.6)	158(31.6)	d.f. 6; P=<0.0001
Unhygienic	69(27.6)	75(30)	144(28.8)	
Guilty	12(4.8)	28(11.2)	40(8)	
Irritable	23(9.2)	39(15.6)	62(12.4)	
Different	87(34.8)	33(13.2)	120(24)	
Other	13(5.2)	2(0.8)	15(3)	
None	24(9.6)	32(12.8)	56(11.2)	

Table 3: Comparison of knowledge about menstrual cycle before menarche between non-government and government school girls.

Knowledge about menstrual cycle before menarche	Non-Government	Government	Total	Chi-sq
Yes	149(48.8)	122(48.8)	271(54.2)	d.f.-1; p~0.01
No	101(40.4)	128(51.2)	229(45.8)	
Total	250(100)	250(100)	500(100)	

Table 4: Comparison of source of information about menarche between non-government and government school girls.

Source of Information	Non-Government	Government	Total	Chi sq
Sister	42(28.18)	36(29.5)	78(15.6)	d.f.-6; p=0.007
Mother	67(44.96)	72(59.01)	139(27.8)	
Friend	46(30.87)	22(18.03)	68(13.6)	
T.V.	0(0)	4(3.27)	4(0.8)	
Print media	1(0.67)	0(0)	1(0.2)	
School teacher	18(12.08)	16(13.11)	34(6.8)	
Other (Relatives, Neighbours)	6(4.02)	0(0)	6(1.2)	

Most of the girls of non-government school took menarche as a different experience of life (34.8%) and considered it unhygienic (27.6%). Many of the government school girls also considered it to be unhygienic (30%), although majority of them described it as a horrible event, as they became scared due to menarche (41.6%). This difference was statistically significant (p value 0.0001).

As far as knowledge was concerned, 59.6% of non-government school girls and 48.8% of government school girls knew about the menstrual cycle before their menarche. Combined of both group subjects the knowledge about menstrual cycle seemed to be almost evenly divided. This difference was statistically significant (p value 0.01).

84% of non-government school girls responded that menstrual cycle is a normal phenomenon, while only 59.2% of government school girls were aware of this. 12.4% and 29.2% girls of non-government school and government school girls didn't know about menstruation. This difference was statistically significant (p value 0.0001).

The commonest source of information about menstrual cycle before menarche was mother in both study groups but the numbers varied in schools. 44.9% girls of non-government school and 59.01% girls of government school had acquired the said knowledge from their mothers. While the sisters were the informant of almost 30% girls in both study groups. TV and print media proved to be a very limited source of information regarding menstrual cycle. This difference was statistically significant (p value 0.007).

Most of the subjects attained their menarche at 12-14 years of age. 56.8% of non-government school girls and

54 % of government school girls came in this category.

Although most of the subjects from both groups had menstrual cycle duration of 3-5 days (59.2% in non-government school and 53.6% in government school), the successive forms varied between both types of schools. In the non-government school the next common patterns was 5-7 days (26.4%) and 7 days (12.8%), where as in government school girls the successive patterns were 7 days (22%) and <3 days (13.2%). This difference was statistically significant (p value 0.0001).

Almost 2/3 rd girls of non-government school were using sanitary pads while only about 1/4th government school girls had such practice.

During menstrual cycle 36.8% government school girls had practice of using clothes in comparison to only 9.6% of non-government school girls. This difference was statistically significant (p value 0.0001).

Almost 2/3rd girls both from nongovernment school and government school reused the cloth that they used in previous cycle. Almost 2/3rd (66.4% and 63.6%) girls from both study groups had practice of throwing the absorbent material with domestic waste. Burning was reported as second commonest method of absorbent disposal.

Half of the 92 government school girls were not using sanitary pads owing to its high cost and non-affordability. On the other hand of the 24 non-government school girls, 41.6% did not use sanitary pads due to other reasons such as discomfort and fear of leakage. Difficulty in disposing was reported by 8.33 % of non-government school and 20.6 % of government school non sanitary pad user girls. This difference was statistically significant (p value 0.0001).

Table 5: Comparison of practices during menstrual cycle between non-government and government school girls.

Practices during menstrual cycle	Non-Government	Government	Total	Chi sq
Cloth only	24(9.6)	92(36.8)	116(23.2)	d.f.-2; p=<0.0001
Sanitary Pad Only	163(65.2)	69(27.6)	232(46.4)	
Both Cloth & Sanitary Pad	63(25.2)	89(35.6)	152(30.4)	
Total	250(100)	250(100)	250(100)	

Table 6: Comparison of reasons for not using sanitary pads during menstrual cycle between non-government and government school girls.

Causes for not sanitary pad	Non-Government	Government	Total	Chi sq
Lack of knowledge	8(33.33)	13(14.1)	21(18.10)	d.f.-4; p= <0.0001
Lack of availability	1(4.16)	6(6.5)	7(6.03)	
High Cost	3(12.5)	46(50)	49 (42.24)	
Difficulty in disposing	2(8.33)	19(20.6)	21(18.10)	
Others (uncomfort, fear of leak, can't say)	10(41.6)	8(8.69)	18(15.51)	
Total	24(100)	92(100)	116(100)	

Table 7: Comparison of menstrual problems occurring menstrual cycle between non- government and government school girls.

Which menstrual problem occur most	Non-Government	Government	Total	Chi sq
Pain abdomen	156 (62.4)	173 (69.2)	329 (65.80)	d.f.-7; p= 0.013
Heavy bleeding	34 (12.8)	22 (8.8)	56(11.20)	
Backache	82(32.8)	72 (28.8)	154 (30.80)	
Nausea	5 (2.0)	5(2)	10(2)	
Headache	6 (2.4)	14 (5.6)	20 (4)	
Leg cramps	56 (22.4)	29 (11.4)	85 (19)	
Any other	3 (1.2)	1 (0.4)	4 (0.8)	
None	24 (9.6)	14 (5.6)	38 (7.6)	

Most common physical complaint associated with menstrual cycle was pain abdomen. Almost equal numbers from both study groups (62.4 % - non government school girls and 69.2%-government school girls) suffered from it. Second most common problem was backache in about 1/3rd (32.8% of non -government school girls and 28.8% of government school girls) in both study groups. This difference was statistically significant (p value 0.013).

Mother was the most common person whom the girls of both study groups (67.6% - non-government school and 68% - government school) found comfortable and

confidential to talk regarding their menstrual problems.

As far as health consultancy regarding menstrual problem was concerned, 56.6% of non-government school girls utilized the services of private hospital while 56 % of government school girls took health advice from Government dispensary. This difference was statistically significant (p value 0.0007).

About 4/5th (81.4%) of non-government school girls and 64.4% of government school girls attended the school during their menses. This difference was statistically significant (p value 0.0001).

Table 8: Comparison of school attendance during menstrual cycle between non-government and government school girls.

School attendance during menstrual cycle	Non-government	Government	Total	Chi sq
Present	204 (81.6)	161 (64.4)	365(73)	d.f.-2; p <0.0001
Absent	4 (1.6)	25 (10)	29 (5.80)	
Partial	42 (16.8)	64 (25.5)	106 (21.20)	
Total	250 (100)	250 (100)	500 (100)	

Table 9: Comparison of restriction during menstrual cycle between non-government and government school girls.

Restriction during menstrual cycle	Non-government	Government	Total
Not to worship	250 (100)	243 (97.2)	493 (98.6)
Restricted entry in kitchen	100 (40.0)	75 (30.0)	175 (35.0)
Sleep separately	27 (10.8)	22 (8.8)	49 (9.8)
Not to sleep on bed	7 (2.8)	8 (3.2)	15 (3.0)
Restriction on certain food items	30 (12.0)	39 (15.6)	69 (13.8)
No restriction	0(0)	0(0)	0(0)
Any other	0(0)	6 (2.4)	6 (1.2)

Most common cause for not attending school during menstrual cycle was health issues. Among the non-school attenders 89.13% from non-government school and 67.14% from government school shared this problem. Lack of water, toilet and privacy was documented as a cause for not attending school by 4.8% of government school girls. All non-government school had proper toilet with water facility as no girl in these schools mentioned these as a reason for not attending school during menses.

During their menstrual cycle all subjects faced some kind of restriction. Due to misbelief of impurity, almost all girls were restricted from worshipping. Entry in kitchen was seen as second most common prevalent restriction in 40% non-government school girls and 30 % government school girls.

Even though there are lots of psychological problems associated with menstruation, 42.4% of non-government

school girls and 35.6% of Government school girls didn't report any associated problem. About 1/3rd (30.8% and 32.4%) non-government school and government school girls felt irritability during menstrual cycle.

DISCUSSION

Mean age of study group in non-government and government school girl was 16.26 years and 15.1 years respectively. 18-19 year age group has the least participation, 16.8% and 7.6% from non-government and government school girls respectively. Similar results were seen in a study by Khanna A on adolescent girls in whom the girls were in the age group of 13 - 19 years with a mean age of 15.8 years.⁵ Study by Anju et al, RHTC Raichur showed similar observation to present study that 68% girls belong to 13 -15 year age group.⁶ Study done by Adrija Dutta observed that maximum number of girls in both Urban and rural area belong to the age group 14 to 16 years mean age of all participants was 13.9 years.⁷ Almost similar composition was shown in the study done by Shanbagh et al.⁸ A large proportion (58.7%) of the study population were in the age group of 14-15 years followed by 32.4% in the age group of 12-13 years.

Most common pattern of family composition was found in present study to be nuclear in both government (71.2%) and in non-government (61.2%) school girls. Similar finding were reported by Shubhangana Sharma on 112 rural adolescent girls of Himachal Pradesh, 82.1 % girls belong to nuclear family only 17.9% participants had joint family.⁹ Study done by Adrija Dutta observed that most of the study population lived in nuclear families both in urban 52.9% and rural areas 67.8%.⁷

Majority of the study group of the present study population from the non-government schools belong to socio-economic grade II (46%) while girls from the government schools mostly belong to socio-economic grade IV (52.4 %). This difference is statistical significant P value less than .0001. Study done by Adrija Dutta (2011) showed result similar to the government school that almost half of the respondents in both Urban and rural area belonged to lower socio economic status (class 4 and 5 of Prasad scale).¹⁰ Results seen in Asif Khan study are slightly different. 75% belong to lower class, 21% to lower middle class and 4% to upper middle class.¹⁰

In the present study education of mothers of non-government school girls had following pattern, graduate and above constituted 24.8% of the study population, higher secondary were 10.8% and below secondary were 20.8% while most mothers of government school girls were illiterate(43.6%) followed by secondary (9.2%) and higher secondary (3.2%). Only 1.6% mothers of government school girls were educated till graduation level. This difference is statistical significant P value 0.0001. Study done by Yasmeeen showed that the

education of mothers were mostly Madhyamik (39.5%), below Madhyamik were 11.6%, Higher Secondary were 19.7%, graduate and above were 29.2%.¹¹

Most of the girls of non-government school took menarche as a different experience of life (34.8%) and considered it unhygienic (27.6%). Many of the government school girls also considered it to be unhygienic (30%). Although majority of them described it as a horrible event; they became scared due to menarche (41.6%). Their experience was horrible due to the fact that they were not aware about the same prior to its occurrence and were not mentally prepared for it which worsened their experience. This difference was statistical of significance P value 0.0001. Similar result seen in study by Shashi Manhas at Jammu and Kashmir and Mudey et al that about 49.5% and 43.67% reported that they became scared at the moment when menarche happened.^{12,13} Also Shubha Dubey observed in her study that 42% of urban and 50% of rural respondent were scared when they had their first menstruation.¹⁴ Higher level of negative response shown in study done by Reddy PJ in Tirupati that 79.8 % of the menarcheal girls stated being frightened on the occasion of first menstruation.¹⁵ The reason for fear and anxiety may not be due to lack of prior knowledge regarding menstruation but may be attributed to inadequate and wrong knowledge and low levels of education especially among the mothers.

In the present study, 59.6% of non-government schools new about the menstrual cycle before menarche in comparison to 48.8% girls of Government schools. This may be due to better educational profile of mothers of non-government school girls. This finding is supported by many such studies conducted on adolescent girls. Study done by Shanbhag et al showed similar result to present study that 57.9% had prior knowledge of menstruation before attaining menarche.⁹ Although study done by Anju Ade and Rajni Dhingra show a slightly higher numbers; 69% and 64% respectively of adolescent girls were aware about menstruation prior to menarche.^{6,16} In the present study the percentage of girls who knew about menstruation before menarche is higher in comparison to the studies conducted by Deo et al (42.5%) and Kirti Jogdand (36.19%).^{17,18} This may be due to ignorance and lower level of education among mothers of adolescent girls. Higher level of unawareness was found in study done by Paul Dinesh in comparison to present study; 70.6% adolescent girls in that study was not aware about the Menstruation till it's onset.¹⁹ Very low level of information was found in study done by Reddy PJ et al. Only 13.8 % of the girls had prior knowledge of menses in comparison to present study.¹⁶

In present study it was found that 84% girls of non-government school knew that menstrual cycle was a physiological process or normal phenomena whereas only 59.2% government school girls were aware about this. The reason for this could be that even though there has been a positive influence of urbanisation there is still a

gap in the knowledge. Similar result with non-government schools was seen in the study done by Dasgupta where 86.25% girls believed it to be physiological process.²⁰ Shanbhag et al and Kamath et al showed that most (74.2%) of the adolescent girls felt that it was a normal phenomenon that is consistent with present finding.^{9,21} In the present study 1.6% girls believed that menstruation is a curse of God, and these figures are similar to those of Ray Sudeshna in which 2% believed it to be a curse.²²

In our study it was observed that the most common channel of information about menstrual cycle before menarche was mothers in both the groups but the percentage varied in the schools. 44.9% girls of non-government school and 59.01% girls of government school acquired this knowledge from their respective mothers. Close relation and better communication between mother and daughter maybe the reason for present study finding. This difference is statistically significant P value 0.007. Almost similar results were observed in the studies by Shanbhag et al, Kirti Jogdand and Reddy PJ et al.^{9,15,18} Mother was also the main source of information in studies conducted by Singh et al and Das Gupta; 64.9% and 67.5% respectively.^{23,20} Comparatively high level of flow of information was documented in study by Kamath R where mothers give information in 84.2% of the urban and 82.9% of the rural participants.²¹

In the present study the age of menarche was found to lie between 12-14 year age group in 56.8% and 54% in non-government and government school girls respectively. Mean age of Menarche was 13.5 year in non-government and 13.59 year in government school girls. Various studies done on adolescent girls had arrived at the same results as ours with the mean age of menarche comparable to the present study. Keerti Jogdand at Guntur found that maximum number of girls (72.77%) had attained menarche in the age range between 12-14 years.¹⁸ Study done by Kajal Jain at urban area of Meerut observed age of menarche as 10-12 year in 60.7% respondent that is lower than present study.²⁴ Dutta (2011) showed the mean age at menarche was 12.1 years among urban participants and 12.2 years among the rural participants there is an immediate necessity of early initiation and sensitization of young girls as early as 10-11 years of age especially in poor resource settings.⁷

The subjects in our study had menstrual cycle duration of 3-5 days. 59.2 % non-government school girls and 53.6% government school girls had this menstrual cycle pattern. This difference is statistically significant P value 0.0001. Similar results were seen in study by Salve in which 59% of urban girls had 5 days menstrual cycle duration.²⁵

Karthiga et al found that the two thirds (66.39%) of the girls had menses for the duration of 3-5 days that is a lot higher than present finding.²⁶ In the study by Beena

Sachan although majority of the school girls had menstrual flow of 3-5 days but the proportion of these girls was significantly more in comparison to our study; 91.6% rural school girls and 83.4% off urban school girls had this flow pattern.²⁷

In our study we found that the majority of girls of government school were using clothes (36.8%) or both clothes and sanitary pads (35.6%) as an absorbent material during their menstrual cycle. This situation was a little better in the non-government school girls where the percentage of girls using sanitary pads alone was 65.2%; though 25.2% girls were still making use of both clothes and sanitary pads. This difference is statistically significant P value 0.0001. In the study done by Ray Sudeshna only cloth was used as absorbent during Menstruation in 62.6 % girls, and only sanitary napkin in 13.2 % girls, whereas both cloth and sanitary napkin in 24.2% girls.²² These observations were about similar with practice patterns of government school girls. Shubha Dube et al reported that the proportion of urban subjects using sanitary napkins is a lot higher (80%).¹⁴ It was probably due to the fact that the availability was high in these areas and also due to the influence of television which had increased their awareness regarding the availability and use of sanitary pads. On the contrary only 14% of the rural population from the given sample used this type of napkins. 65% of the rural respondents used homemade disposable pads during menstruation which were made up of old torn out clothes. We found that the proportion of girls reusing clothes was almost similar between both the schools (63.2 % in non-government and 64.64 % in government school). The main reason observed in present study for using homemade napkins in spite of sanitary pads in 50% of the government school girls was the inability to buy costly readymade napkins. Similar results were seen in the study undertaken by Thakre among the adolescent school girls. He observed that in urban girls, the use of sanitary pads was 60.58% and in rural girls it was 30.82%; the use of old clothes was 62.33% in the rural girls and 35.68% in the urban girls.²⁸ Lower level of practice of sanitary pad was seen in the study done by Shanbhag et al in comparison to the present study. 44.1% used sanitary pad and 21.2% used both cloth and sanitary pad.⁸

In the present study the most common physical complaint associated with menstrual cycle was pain abdomen. 62.4% of non- government school girls and 69.2% girls of Government school suffered from it.

Similar results have been obtained by various researches in their studies. A study by Kumbhar et al showed similar prevalence of dysmenorrhoea i.e. 65.02% among adolescent girls of Kadappa district with present study.²⁹ Rajni Dhingra in her study found that majority (63.5%) of the girls reported experiencing stomach ache.¹⁶ Observation seen by P. Nair in his study that dysmenorrhea was prevalent in 63.75% girls.³⁰ A study conducted by Agarwal reported that majority (71.96%) of

the adolescent girls under study had experienced dysmenorrhoea.³¹ Agarwal et al in a study on adolescent girls in Gwalior had also observed that 79.6% girls were suffering with dysmenorrhoea.³²

CONCLUSION

Though the knowledge seems satisfactory; the practices were not optimal for proper hygiene. The issues of privacy affects the hygienic practices and daily lives, particularly school attendance, and the local customs and cultural and/or religious traditions and taboos concerning menstruation have added challenges to young girls to manage their period properly.

The study shows the need of the adolescent girls to have accurate and adequate information about menstruation and its appropriate management as well as sanitation facilities and affordable absorbent napkins/pads for them.

Recommendations

- Initiatives should be taken to develop adolescent-friendly health services (AFHS) and strengthening them.
- Reproductive and menstrual health and hygiene should be included in school curriculum. Teachers hardly talk and guide the girls about menstrual health and hygiene. There should be orientation programs for teachers and school counsellors.
- There should be counselling services for adolescent girls at government health facilities and schools.
- Local Health Committees should be involved in education and awareness program.
- Awareness program using flip chart, posters, and other behaviour change communication materials should be developed. A self-learning manual and handbook for adolescent girls may be developed explaining the menstrual health and hygiene. Specific handbook should be developed on menstruation and menstrual hygiene management clarifying myths, misconceptions and taboos.
- Health volunteers, Accredited Social Health Activists (ASHA), and Anganwadi workers should be oriented to disseminate knowledge about menstruation and promote menstrual health and hygiene among adolescent girls.
- Youth club or Adolescent Information Resource Centre should be formed.
- Mothers of adolescent girls should be an integral part of all programmes on adolescent health and especially on menstrual hygiene.
- Menstrual hygiene and self-care practice guide should be taught by teachers; which can be easily practicable at home.
- Campaigns and seminars to improve adolescent menstrual hygiene and self-care should be organized by teachers and parents association and Non-government organization.

- Sanitary pads should be made available by the government, the office of women affairs and at anganwadi center to all adolescent females at subsidized rate to make it affordable.
- Steps should be taken to improve female literacy so these future mothers will in turn be able to give correct information to their daughters regarding menstruation believing that "educated mothers will bring up educated daughters". Only then will we be able to break this vicious cycle arising due to illiteracy.
- Schools should be provided with fully equipped toilets with proper water facility and privacy especially Government schools as its lack is a major cause for school absenteeism and dropout.

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