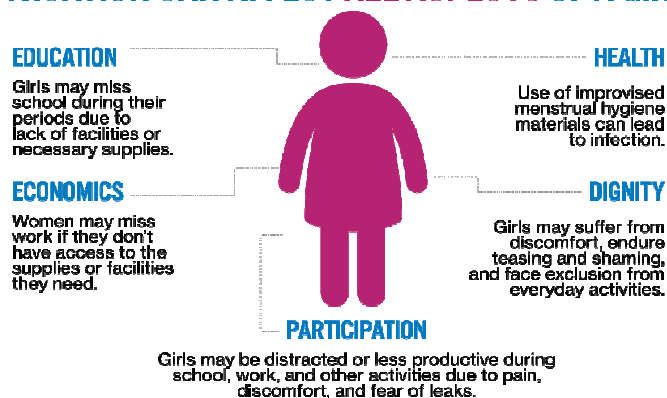


Knowledge and Management of Menstrual Hygiene among Adolescent School and College Girls of Sagar District

MENSTRUATION CAN AFFECT ALL ASPECTS OF A GIRL'S LIFE:



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Acronyms

ARSH	Adolescent Reproductive and Sexual Health
ASHA	Accredited Social Health Activist
AWC	Anganwadi Centre
AWW	Anganwadi Worker
FP	Family Planning
MH	Menstrual Health
MHM	Menstrual Health Management
RKSK	Rashtriya Kishori Swasthya Kariyakram
SN	Sanitary Napkin
WASH	Water Sanitation Hygiene
WIFS	Weekly Iron and Folic Acid Supplementation

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Knowledge and Management of Menstrual Hygiene among Adolescent School and College Girls of Sagar District

Executive Summary

Menstrual hygiene management (MHM) is an integral part of the Swachh Bharat Mission. To fully address MHM in schools and colleges, it is pertinent to understand the level of awareness among school and college going students girls about menstrual hygiene and practices adopted for a safe and enabling learning environment, skills-based learning and community and policy support. A clearly defined package of evidence-based interventions is required.

The reproductive health implications of menstruation, its management, and its effect on quality of life permeating school and other social activities are many for the adolescent school/college girls. The knowledge and beliefs experiences during menstruation seclusion, exclusion and absenteeism and hygiene practices are areas which have been focused upon. MP has 22 percent adolescent population in the age group 10-19 years and girls comprise of half of it. Such studies can provide data relevant for the development of MHM packages which support girls' menstrual needs. Hence this small scale descriptive cross-sectional study was proposed to understand the knowledge, attitude of menstrual health and hygiene and practices towards management of menstrual hygiene.

The major objectives of the study were to assess the prevailing knowledge and sources of information of adolescent school/college girls about menstrual hygiene and management, to elaborate the experiences and factors that determine the prevailing practices of adolescent school/college girls vis-à-vis menstrual hygiene and management, to identify issues and challenges faced (including health) by adolescent school/college girls due to their menstruation, to explore unmet needs for menstrual hygiene practices among adolescents and to propose specific measures to improve menstrual hygiene knowledge and management.

This study is a descriptive cross-sectional study in which mixed methods (quantitative as well qualitative) was used to collect information regarding different aspects of menstrual health and hygiene. A self-administered, structured, close-ended questionnaire

survey (quantitative), and focus group discussions (FGD), were applied to collect the information. The tools, survey questionnaire and guide checklist for FGD were prepared in both hindi and english.

The study population included 554 adolescent girls, 313 girls studying in grade 10th - 12th and 241 under graduates studying in 1st, 2nd and 3rd year of college at the time of study. Girls from different classes who attended the school/college on the day of survey and were willing to participate in the study were included. Girls who had not yet had menarche were excluded from the study. Six FGDs on MHM were conducted one with school teachers, three with students of different colleges and two of these in urban slum wards of Sagar city with school drop outs.

The mean age of respondents was 16.8 years. More than half of them were OBCs (54 percent), and more than one-fourth belonged to 'other' category. The survey indicated that about 71% of the respondents had heard about menstruation before their menarche. It was reported mostly by respondents in the younger age group, studying in rural areas and those studying in private schools. Mean age at first menstruation was 13.9 years (rural: 14.2; urban: 13.7 years).

Mother or female family member was the principal source of information for younger adolescents across different age groups, by type of institutions, and locality of institution. Majority adolescents stated that they felt physical, mental and emotional changes although they said that menstruation is a normal physiological process and it happened because of uterus contractions, which was affirmed by adolescents in the age group 18 years and above affirmed this more explicitly. More than two-third girls agreed that lack of menstrual hygiene causes menstrual health problems, but those studying in private schools and in the higher age group showed greater agreement about it. It was observed that as girls progressed in age they were more informed about menstrual health issues.

The findings in the study pertaining to its objectives, makes it evident that menstrual hygiene and management is an issue for adolescent school and college girls both in rural and urban settings. Some factors that directly or indirectly influence menstrual hygiene and management have been identified for discussion. Knowledge about menstruation that large

majority of girls participating in this study had before attaining menarche, and later too, was not correct or complete. In view of the limited information that the girls are equipped with, usually from mothers, family members and peers, it is not surprising that majority do not have a scientific knowledge on all aspects of menstruation and menstrual hygiene except for a few science students. Many aspects of personal menstrual hygiene have been neglected by two-fifths respondents, where as more than three-fourths of them felt discomfort, and reported one or the other menstrual health problem.

Their perceptions were influenced by socio-cultural beliefs which they have attained from mothers/ family elders. Mothers have been identified as an important source of information on menstruation for the adolescent girls. However, information on menstruation given by mothers is often incomplete and incorrect, usually being based on cultural myths, and therefore probably perpetuating negative and distorted perceptions and practices of menstruation.

In spite of the phenomenon of restrictions however it was encouraging to note in this study the changing attitude of the adolescent schoolgirls in terms of challenging the restrictions that limit their daily lives and routines. Restrictions on attending school/ college during menstruation were minimum.

Dysmenorrhoea manifesting as abdominal pain or discomfort has been found as the commonest medical problem, majority of the girls have reported discomfort. As is evident in the study, girls many times have very limited interactions with health workers, feel shy and feel clueless whom to approach. Health workers such as ANM, ASHA have not proved effective in terms of providing essential advice and counselling.

One important aspect highlighted in discussions with the school/ college girls regarding the attendance in school suggests that, further studies are needed to explore more about inhibiting or facilitating factors, which particularly affect school attendance, privacy issues in schools/ colleges regarding menstrual practices and waste disposal system. Availability of SNs and lack of proper waste disposal are issues which act as barriers.

This study also reflects that teachers do not sufficiently impart the knowledge, and are themselves lacking in confidence and hesitate in correct information sharing, especially

in co-educational schools and colleges. They have received no separate orientation on different aspects of menstrual health management which emerged from discussions.

Lack of privacy has been pointed out by other studies also as a major problem (El-Gilany et al, 2005) and there's conclusive evidence that girls' attendance at school is increased through improved sanitation (Bhardwaj and Patkar, 2004).

The study has pointed out that the lack of information about disposable sanitary pad, its high cost and limited availability are the main reasons for school girls not using them and focuses on their unmet need. Menstrual absorbent should be changed at least three to five times a day, and more frequent may be necessary (Salem and Setty 2006).

The cleaning should also be at least equal to the number of times the pad is changed. Though the practice of cleaning and changing have been reported by girls they have pointed out that at co-educational school and college this is not always possible. Fortunately, all the schools in which the study was undertaken had provision of toilet, which may not be the case in all schools/ colleges across the district.

Recommendations

- The study has highlighted the critical needs of the adolescents to have accurate and adequate information about menstruation and its appropriate management. Informal channels of communication, such as mothers and peers, need to be properly oriented by associating them with menstrual health programme for correct and effective delivery of such information.
- Requisite skills through training should be imparted to the teachers, who may have hesitations and lack necessary skills to communicate reproductive health education including menstrual hygiene to their student, to be given. Teachers must be trained to provide information on menstrual and reproductive health correctly, by using effective communication tools.
- Menstrual Health Management requires for urgent attention of stakeholders – family, school, community, civil society, and service providers to implement correct menstrual perceptions and enable proper hygiene practices amongst this segment of the population.
- Adolescent girls have shown an urgent need and interest to use sanitary pads, innovative ways have to be identified for making the pads available and affordable to

school girls belonging to all segments of society. The use of locally produced sanitary pads could be cost effective.

- Schools and colleges with adolescent girls need to be made to address lack of privacy, which is an important determinant for proper practice of menstrual hygiene and also school attendance. Through small efforts like placing dustbins in toilets for safe disposal of sanitary pads and soap for washing, could go a long way in ensuring school/ college attendance.
- There is an urgent need to sensitize boys and men to menstrual health issues. Menstrual health management should be part of regular school/ college health curriculum.
- It is essential to integrate menstrual hygiene and management be integrated effectively in overall hygiene promotion interventions in Sagar district. Health workers, school/college authorities, NGOs in the district need inter-sectoral coordination for effective implementation of the programme.

Knowledge and Management of Menstrual Hygiene among Adolescent School and College Girls of Sagar District

1. Introduction

Over the past decade, Menstrual Health Management (MHM) has gained more attention from researchers and development practitioners. Although menstruation is a natural, normal biological process experienced by all adolescent girls and women, yet it is not spoken about openly causing unnecessary embarrassment and shame. For girls, menarche and menstruation is the physical, highly visible, and at times erratic, marker of this transition. Many adolescents, especially girls, will experience a severe drop in self-confidence during puberty. All of these factors, and more, contribute to the increased rates of risky social and health-related behaviours that many adolescents practice. Interventions that target younger adolescents, before these risky behaviours and norms are fully engrained, are more effective at mitigating the behaviours and negative health and education outcomes that ensue.

Formative research across the world has shown that girls in low-resource settings face many challenges managing menstruation in school. These challenges have numerous causes but can include inadequate water and sanitation facilities at school, limited access to effective, hygienic materials for menstrual management and inaccurate information about menstruation and the biology of puberty. Research-supported recommendations have been proposed on how to address these challenges; however, the international development community is lacking proven program interventions. Key MHM stakeholders have come to consensus that a clearly defined package of evidence-based interventions is required.

Status of MHM in India

India's 113 million adolescent girls are particularly vulnerable at the onset of menarche. At this time they need a safe environment that offers protection and guidance to ensure their basic health, well-being and educational opportunity is realised. Yet a recent survey found that in 14,724 government schools only 53 percent had a separate and usable girl's toilet. At home the situation also needs to improve as 132 million households do not

have a toilet (2015), leaving adolescent girls and women to face the indignity of open defecation.

Menstruation is still a taboo in India and it is common for people across society to feel uncomfortable about the subject. The taboos surrounding this issue in the society prevents girls and women from articulating their needs and the problems of poor menstrual hygiene management have been largely ignored or misunderstood. Good menstrual hygiene is crucial for the health, education, and dignity of girls and women. Equipping adolescent girls with adequate information and skills on menstrual hygiene and its management helps in empowering them with knowledge which enhances their self-esteem and positively impacts academic performance.

Menstruation, though a natural process, has often been dealt with secrecy in many parts of India. Hence, knowledge and information about reproductive functioning and reproductive health problems amongst the adolescent is poor (Adhikari, 2007). A great deal of women's and girl's scant knowledge is informed by peers and female family members. A study of Indian women shows that young girls are generally told nothing about menstruation until their first experience (Narayan et al, 2001). Several traditional norms and beliefs, socio-economic conditions and physical infrastructure can and do influence the practices related to menstruation. For example, a Hindu woman abstains from worship, cooking and stays away from her family as her touch is considered impure during this time. Women and girls in poor rural areas can't afford sanitary napkins. Poor water, sanitation and hygiene (WASH) facilities in schools, inadequate puberty education and lack of hygienic MHM items (absorbents) cause girls to experience menstruation as shameful and uncomfortable. Menstrual Hygiene Management (MHM) is a problem for adolescent girls in low and middle income societies where cultural taboos also add to girls' difficulties, imposing restrictions on their diet and activities and preventing them from seeking help. Insufficient MHM may result in health symptoms involving the urinary and genital tracts.

To ensure that adolescent girls and women have the necessary support and facilities, it is important that the wider society, communities and families must challenge the status quo and break the silence around menstruation. It is therefore the responsibility of those with influence – including government officials and teachers, to find appropriate ways to

talk about the issue and take necessary actions. However, menstrual hygiene management is a social issue that cannot be addressed by working in schools alone. In order to ensure that adolescent girls and women have the necessary support and facilities, it is important that the wider society, communities and families must challenge the status quo and break the silence around menstruation. There is a need to change family and community norms and beliefs in this regard. Not being able to talk about their experience and having limited information means that menstruation becomes something to be ashamed of and to hide, and is consequently ignored in families, schools and communities. In many families, the mother has limited experience in explaining the management of menstruation with regard to schooling, mobility or outdoor activities. Communities should be aware of the barriers to menstrual hygiene management that girls face in school, as well as their role in enabling girls to successfully manage menses in school and at home. It is therefore the responsibility of those with influence – including government officials and teachers, to find appropriate ways to talk about the issue and take necessary actions.

However, safe and effective menstrual hygiene management, or ‘MHM’ is a trigger for better and stronger development for adolescent girls and women. At this stage of MHM evidence building and with more girls in school, we know girls often lack the tangible and social-emotional support that they need during this critical transition. While MHM interventions are being evaluated, comprehensive education and health approaches are always needed.

Swachh Bharat Mission and MHM

Menstrual hygiene management is an integral part of the Swachh Bharat Mission. To fully address MHM in schools, it is pertinent to understand the level of awareness among school and college going students girls about menstrual hygiene and practices adopted for a safe and enabling learning environment, skills-based learning and community and policy support. A clearly defined package of evidence-based interventions is required.

Menstrual hygiene and management is yet to be integrated effectively in overall hygiene promotion interventions. Evidences from the field are imperative to emphasize the issues that focus on the need for dignity and privacy, on raising awareness to break the

silence and stigma, making safe and effective MHM absorbents accessible, and improving the school environment which includes separate toilets for girls, water and cleansing materials, and safe disposal of soiled materials.

A survey in Uttar Pradesh found that adolescent girls know too little about menstruation and menstrual hygiene management. Therefore, in addition to making sure that every household has a toilet, governments and all stakeholders must make sure that, every adolescent girl and woman, and their families, including men and adolescent boys, must have awareness, knowledge and information so that menstruation is understood and can be managed safely with confidence and dignity. Every adolescent girl and woman must have easy access to sufficient, affordable and hygienic menstrual absorbents during menstruation. Every adolescent school girl must have access to a separate toilet with private space for cleaning, washing. This includes access to adequate and sustained water supply and soap. Every adolescent girl must have access to infrastructure for disposal of used menstrual absorbent, and should know how to use it.

Scheme for Promotion of Menstrual Hygiene and Sanitation (MHS)

Over sixty percent rural women cannot afford sanitary napkins, sixty eight percent rural women cannot afford sanitary napkins available in the market due to their high costs and unavailability reveals a survey conducted by some NGOs, including Water Aid, seventy percent rural women lack adequate knowledge on menstrual hygiene and care.

Most rural women use alternative sanitary measures, like clothes, etc which make women susceptible to infections and diseases, say gynaecologists. One- fourth adolescent rural girls discontinue studies due to inadequate sanitary facilities in schools, another survey finds girls in rural India miss schools for about 50 days a year due to inadequate menstrual care.

The Ministry of Health and Family Welfare has introduced a scheme for promotion of menstrual hygiene among adolescent girls in the age group of 10-19 years in rural areas. The scheme is being implemented in 152 districts across 20 states in the country, wherein supply in 107 districts have been initiated through central procurement, and in 45 districts production with quality assurance guidelines through local Self Help Groups is being done.

The sanitary napkin packs (containing 6 pieces each) is branded as 'Freedays'. Bhind, Morena, Sheopur, Datia, Shivpuri, Guna, Vidisha, Sagar are the eight districts where SNs are being provided in M.P. (Press Information Bureau, 2013).

Madhya Pradesh and MHM

Madhya Pradesh is an EAG state and is lagging behind in some of the health parameters at the national level and hardly any data is available for the development of MHM packages which support girls' menstrual needs. Another initiative the V-care project a joint Initiative of Healthy Living Development Society (HLDS) and Women and Child Development (WCD) Indore, which had taken in 2011 by establishing sanitary napkin production unit under SABLA scheme of Government of India.

As one of the leading community based brand of rural and semi-urban region of MP the mission was to provide beneficiaries with affordable, hygienic and convenient sanitary napkins. To improve the sanitary health in rural areas, the department of women and child development took steps to sell sanitary napkins to rural women and girls in MP through anganwadis and encourage its production through self help groups (SHGs). These napkins are made by SHGs of Madhya Pradesh and are cheaper by about 30 to 40 percent as compared to other branded varieties available in the market.

Under a pilot project, called 'Project Uditā', more than 50 sanitary napkins vending machines were first installed at girls' hostels, schools and colleges in the Indore division with plans for augmentation in other districts. Uditā Project was launched to create awareness around safe menstrual hygiene management. Project Uditā trains anganwadi workers to talk about menstrual hygiene with the rural girls and clear the general misconceptions about menstruation that is culturally considered a taboo. Through the Uditā Corners, adolescent girls and women are being apprised of hygiene and proper health management during menstruation. The key focus of the project is to raise awareness of menstrual hygiene management and provide access to sanitary pads. Presently, Sanitary napkins are being supplied in more than 22 districts of MP (Afridi, 2015).

These invariably call for an urgent address by all stakeholders – family, school, community, civil society, and service providers to entrench correct menstrual perceptions and enable proper hygiene practices amongst this segment of the population (Water Aid, 2009).

Rationale

The reproductive health implications of menstruation, its management, and its effect on quality of life permeating school and other social activities are many for the adolescent school/college girls. The knowledge and beliefs experiences during menstruation seclusion, exclusion and absenteeism and hygiene practices are areas which have been focused upon. MP has 22 percent adolescent population in the age group 10-19 years and girls comprise of half of it. Such studies can provide data relevant for the development of MHM packages which support girls' menstrual needs. Hence this small scale descriptive cross-sectional study is proposed to understand the knowledge, attitude of menstrual health and hygiene and practices towards management of menstrual hygiene.

1.1 Objectives: The primary objectives of the study were:

- Assess the prevailing knowledge and sources of information of adolescent school/college girls about menstrual hygiene and management.
- Elaborate the experiences and factors that determine the prevailing practices of adolescent school/college girls vis-à-vis menstrual hygiene and management.
- Identify issues and challenges faced (including health) by adolescent school/college girls due to their menstruation.
- Explore unmet needs for menstrual hygiene practices among adolescents.
- Propose specific measures to improve menstrual hygiene knowledge and management.

1.2 Study Design and Tools

This study is a descriptive cross-sectional study in which mixed methods (quantitative as well qualitative) was used to collect information regarding different aspects of menstrual health and hygiene. A self-administered, structured, close-ended questionnaire survey (quantitative), and focus group discussions (FGD), were applied to collect the information. The tools, survey questionnaire and guide checklist for FGD were prepared in both hindi and english.

The questionnaire explored several areas, like awareness and knowledge about adolescence and menstruation, beliefs and attitudes towards menstruation and menstrual health, practices in menstrual health and hygiene, disposal of menstrual waste, menstrual health and hygiene infrastructure facilities in schools and colleges and need for menstrual health education.

The selection of respondents was purposive. A total of five schools and four colleges located in both urban and rural areas of Sagar district were selected for the study. These included two government senior secondary girls' schools, one government high school, two private senior secondary girls' schools and four girls colleges representing both rural and urban students were selected in the district. The study population included 554 school and college going students, 313 adolescent girls studying in grade 10th - 12th and 241 under graduates studying in 1st, 2nd and 3rd year of college at the time of study. Girls from different classes who attended the school/college on the day of survey and were willing to participate in the study were included. Girls who had not yet had menarche were excluded from the study.

Six FGDs on MHM were conducted one with school teachers, three with students of different colleges and two of these in urban slum wards of Sagar city with school drop outs. The key issues identified from these students are presented in the following sections for understanding ways in management of menstrual hygiene. FGDs were carried out in groups of 6-8 students who could articulate on issues pertaining to MHM.

The tools were pre-tested in schools of Sagar district (Pathariya Jat village) and revised accordingly before using it for the study population.

Data collection

Data collection was carried out at the school site during school hours with due verbal consent from respective school and college Principals. The self administered survey was carried out in a classroom in the absence of male students in coeducational schools and colleges. Female member(s) from the research team explained the purpose of the study and the method of completing the questionnaire and took verbal affirmation from the respondents to participate in the study. To make the respondents feel at ease and express

freely on the little discussed issue of menstrual practices, only female member(s) were involved in conducting FGD and interviews.

Field Work: The field work was carried out in the month of September, 2017 in different schools and colleges of Sagar district.

Presentation of Report

This report is presented in eight sections. The first introductory section comprises of a background and objectives of the study, study design, study tools and a brief profile of respondents interviewed. The second section presents the student's, awareness and knowledge about adolescence and menstruation, the third section ascertains the beliefs and attitudes towards menstruation and menstrual health. Section four explores practices in menstrual health and hygiene, section five deals with disposal of menstrual waste in homes and institutions, section six provides details of menstrual health infrastructure facilities in institutions. Section seven highlights menstrual health education and its need. The last section presents conclusions and recommendations for MHM.

1.3 Student profile of Sagar District

Total number of schools in Sagar district is 4136, with fairly large number of

Table 1: Total schools in Sagar district			
NUMBER OF SCHOOL	RURAL	URBAN	TOTAL
GOVERNMENT	3214	260	3474
PRIVATE	324	338	662
TOTAL	3538	598	4136
DEO, Sagar, Sept, 2017			

government schools (3214) located in rural areas. For sample selection adolescent girls studying in class tenth, eleventh and twelfth were considered for this study (Table 1.).

Total enrolment in classes 10th-12th is 93803, including enrolment in both government and

Table 2: Students enrolled in classes 10 th -12 th in Sagar district							
Type of School	10 th		11 th		12 th		Total
	Boys	Girls	Boys	Girls	Boys	Girls	
Government	14794	15005	10974	10609	8561	8206	68149
Private	8498	5808	3200	2594	3065	2489	25654
Total	23292	20813	14174	13203	11626	10695	93803
DEO, Sagar, Sept, 2017							

private schools. Out of the total enrolments 48 percent are girls (Table 2). Total 26381 students are enrolled in different government colleges of Sagar district.



Table 3: Total under graduate students enrolled in government colleges in Sagar district in 2017

Courses	BOYS	GIRLS	TOTAL
Arts	6646	7423	14069
Science	2754	4764	7518
Commerce	2144	2592	4736
Other	31	27	58
TOTAL	11575	14806	26381

Dept . of Higher Education, September, 2017

Table 4: Schools and colleges from which study sample selected

Selected schools	Location Of Schools/Colleges	Sample
Maharani Laxmi Bai Higher Secondary School (Girls) Sagar	Urban	134
St. Joseph's Convent Higher Secondary School (Co-Ed.) Sagar	Urban	77
Army Public School (Co-Ed.)Sagar	Urban	26
Government Secondary School (Co-Ed.) Barodasagar, Jaisinagar Block	Rural	43
Government Senior Secondary School (Co-Ed.),Karpapur, Banda block	Rural	33
Selected colleges		
Deendayal Govt. Arts and Commerce PG College(Co-Ed.), Sagar	Urban	35
Government PG Excellence Girls College, Sagar	Urban	90
Government PG College(Co-Ed.), Rahatgarh	Rural	61
Rajeev Gandhi Govt.PG College (Co-Ed.), Banda	Rural	55

Out of these 56 percent are girls enrolled in different courses in government colleges (Table3). Total sample of adolescent students were selected from five schools (3: government; 2: private) and four colleges in the district (Table 4).

1.4. Socio Demographic Profile of Respondents

The study was carried out with adolescent girls studying in both government and private, secondary, senior secondary schools and government colleges in Sagar district. Out of total 554 respondents, 313 students (57 percent) were studying in 10th, 11th and 12th classes whereas (43 percent) were studying in undergraduate classes at the time of survey.

The age of the respondents ranged between 13 to 22 years, with mean age being 16.8 years. More than half of them were OBCs (54 percent), and more than one-fourth (29 percent) belonged to 'other' category. Nearly one-fifth fathers of respondents were post-graduates (9 percent) or had technical education (9 percent), but more than two-fifths (45 percent) were upto high school pass. Fathers of about one-third respondents (32 percent) were working as labourers and little more than one-fourth (26 percent) as farmers. Mothers were mostly housewives (71 percent) but around ten percent mothers were in either government (6 percent) or private service (6 percent). Nearly two-fifths respondents (38 percent) reported fathers' income to be less than Rs. 5000 per month, whereas nearly one-fourth reported their father's income to range between Rs. 26000 to 50000.

2. Awareness about menstruation and menstrual processes

The survey indicates that about 71% of the respondents had heard about menstruation before their menarche as seen in Table 5. It was

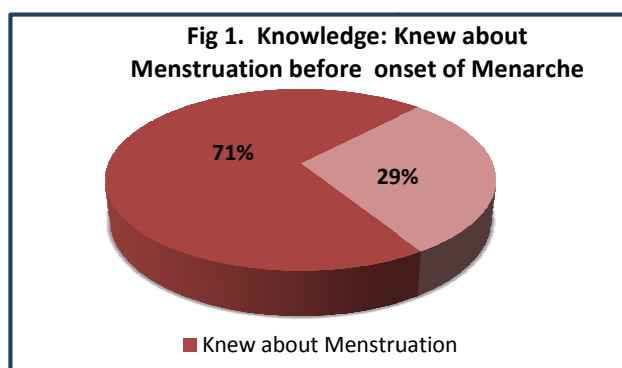


Table 5: Heard about menstruation before the onset		
Age of Respondent	Knew (%)	Didn't know (%)
13-14	81.8	18.2
15-16	70.6	29.4
17-18	68.3	31.7
>18	73.4	26.6
Place of Institution		
Rural	82.1	17.9
Urban	64.2	35.8
Type of Institution		
Government School	68.4	31.6
Private School	80.4	19.6
Government College	68.5	31.5
Total	70.7	29.3

reported most by respondents in the younger age group (82 percent), studying in rural areas (82 percent) and those studying in private schools (80 percent). Age at first menstruation ranged between 10-18 years, mean age at first menstruation being 13.9 years (rural: 14. 2; urban: 13.7 years).

Source of information: Table 6 shows mother or female family member was the principal source of information for younger adolescents in the age 13-14 years (96 percent). It was also observed that with increase in age friends became more important for sharing this type of information. Internet/ mobile, TV and radio have been reported as source of knowledge about menstruation by (13-14 percent adolescents in the age 18 and above). Adolescents

irrespective of the type of institution unanimously preferred mother and female family

Table 6: Source of information about menstruation by age of respondent (n=554)					
Source of Information	Age of Respondent				Total* (%)
	13-14	15-16	17-18	>18	
Magazine or book	3.7	16.6	12.0	10.7	10.0
News paper	3.7	4.0	6.6	8.9	5.8
TV/ Radio	11.1	11.2	11.4	14.3	12.0
Internet or Mobile	3.7	9.6	8.4	12.5	8.6
Mother or Female family member	96.3	83.2	80.1	89.3	87.2
Friends	37.0	48.0	45.2	41.1	42.8
Other	3.7	8.0	3.0	3.6	4.6

*Total may add to more than 100% due to multiple responses.

member (84 percent) as the main source of information about menstruation before menarche. Along with this for more than two-fifths adolescents friends have also emerged as a vital source of information by age, location of institution, and type of institution. Some sources like TV /radio, magazine or book, news paper, internet or mobile. are relatively less

Table 7: Source of information about menstruation by type of institution (n=554)				
Source of information	Type of Institution			Total* (%)
	Govt. School	Pvt. School	Govt. College	
Magazine or book	14.9	8.8	10.6	11.4
News paper	9.0	1.3	5.6	5.3
TV /Radio	14.9	8.8	10.6	11.4
Internet or Mobile	10.4	7.5	8.8	8.9
Mother or Female family member	81.3	88.8	83.1	84.4
Friends	39.6	61.3	41.3	47.4
Other	3.0	12.5	2.5	6.0

*Total may add to more than 100% due to multiple responses.

Table 8: Source of information about menstruation by location of institution(n=554)			
Source of information	Location of Institution		Total* (%)
	Urban	Rural	
Magazine or book	6.8	18.7	12.8
News paper	3.7	9.0	6.3
TV/ Radio	9.6	14.8	12.2
Internet or Mobile	7.3	11.6	9.5
Mother or Female family member	83.1	84.5	83.8
Friends	49.3	38.7	44.0
Other	5.5	3.9	4.7

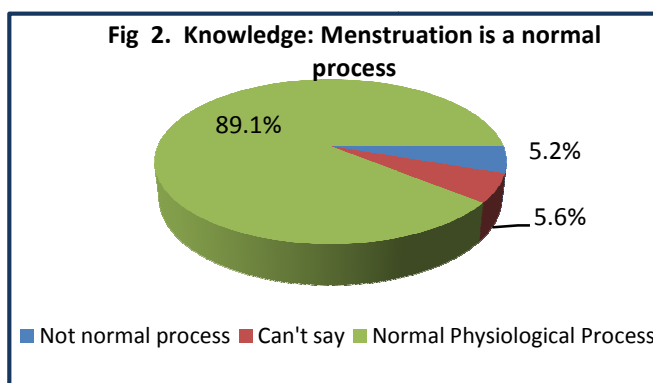
*Total may add to more than 100% due to multiple responses.

preferred by adolescents (5-12 percent), which indicates that adolescents prefer information on menstruation from their near ones (Tables 7 & 8).

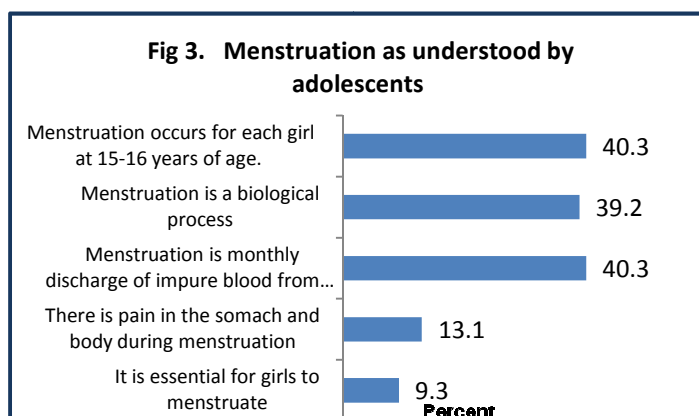
Some respondents in the slum wards who visited AWCs shared that, “*Hum anganwadi didi se iske bare me charcha karte hain*”.

The reason why a teacher is not the main source of information is highlighted by the science teacher from Barodasagar school in her words “*as a teacher I usually avoid teaching lessons related to menstrual reproductive health. It is very difficult to discuss male and female anatomy in the class*” Reason given by the teacher was, “*In co-educational school it is difficult to discuss these issues in front of boys and I feel uncomfortable and ask them to study these things on their own.*”

Knowledge about Menstruation: In the survey majority (89 percent) adolescents reported that menstruation is a normal physiological process (Figure2.) Two-fifths respondents reported that menstruation occurs at 15-16 years of age (Figure 3). Two-fifths also defined menstruation as a monthly discharge of impure blood from the body, and that menstruation is a biological process (39 percent). During FGD it became evident that girls are aware that menstrual blood flows out of the vagina.



Some of the respondents said, “*Menstruation is essential for all girls. Our mothers have told us that if we do not menstruate, then we cannot give birth*”.



Knowledge that pain during menstruation is a normal process and it happened because of uterus contractions was mostly commonly stated by respondents. Adolescents in the age group 18 years and above affirmed this more explicitly

(Table 9 and Fig 4). The girls

studying at high school level could hardly recount anything about menstruation. At early ages girls felt extremely shy in asking questions as their responses indicated.

Table 9: Knowledge about menstruation by age of respondent (n=554)				
Knowledge about menstruation	Age of Respondent in Years (%)			
	13-14	15-16	17-18	>18
Menstruation is a normal process	94.3	83.4	91.8	91.3
Menstruation may start between 10 and 15 years of age	82.8	76.8	77.4	90.0
Menstruation happens every 25 to 35 days, depending on the physical qualities of girl/woman	68.6	79.6	84.4	87.6
A girl/ woman can bathe without worry if she is menstruating	71.4	61.3	50.2	52.5
Pain during menstruation is normal; it happens because the uterus contracts	57.2	64.1	59.3	73.8
Menstruation ends between 45 and 55 years age	74.3	75.1	80.1	77.6
Menstruation is a sign that a girl can get pregnant if she has sexual relations with a man	57.2	65.6	76.5	77.6
Menstrual blood makes the inside of the vagina dirty and it should be washed after menstruating	71.4	70.2	83.6	80.1
If a girl uses menstrual cloth, she has to wash them with detergent and dry them in the sun	54.3	68.0	77.7	80.0
Washing the area around the vagina at least once a day is essential when menstruating	62.9	73.5	75.7	75.0
During menstruation one must change sanitary pads or menstrual cloth 3 to 6 times a day	54.3	58.6	49.2	61.3
Menstruation is the lining of the uterus and blood leaving the body and it is not dirty	45.7	56.9	47.6	53.8
Lack of menstrual hygiene causes menstrual health problems	51.4	70.2	69.2	71.3

Figure 5 indicates that washing and drying menstrual cloth in the sun was considered essential by adolescents which was affirmed comparatively by more girls in the age group 17-18 years and above (78-80 percent). Figure 6 shows that 69-71 percent girls agreed that lack of menstrual hygiene causes menstrual health problems, but only half the girls in the

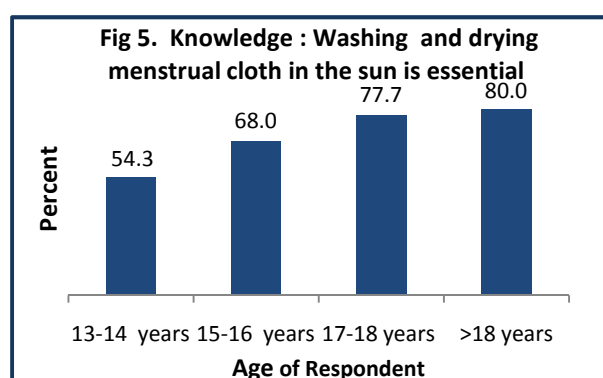
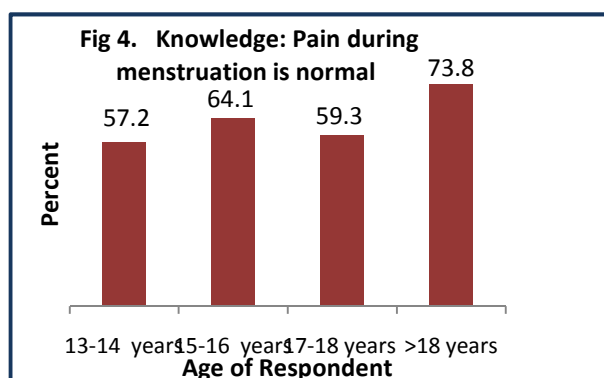
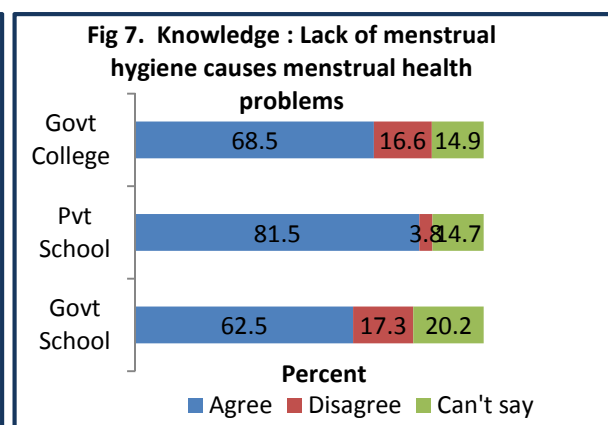
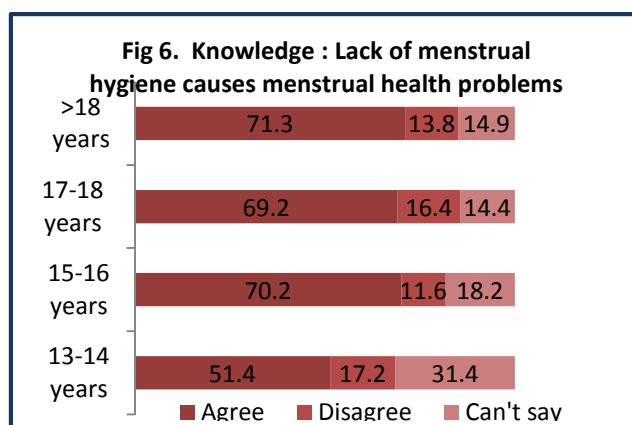
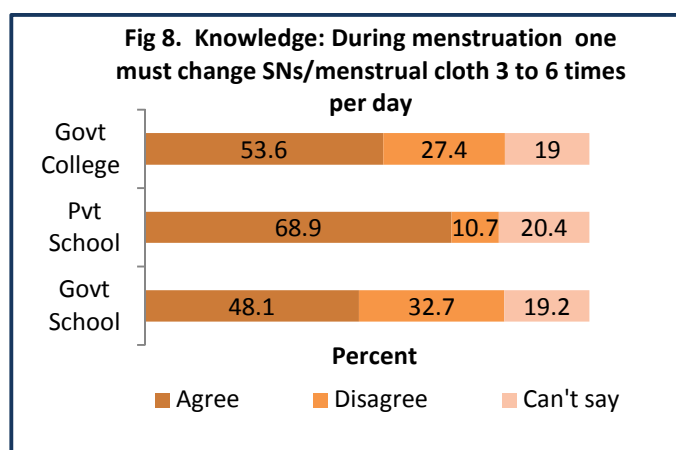


Table 10: Knowledge about menstruation by type of institution (n=554)			
Knowledge about menstruation	Type of Institution (%)		
	Govt. School	Pvt. School	Govt. College
Menstruation is a normal process	88.5	87.4	90.4
Menstruation may start between 10 and 15 years of age	71.2	90.3	81.8
Menstruation happens every 25 to 35 days, depending on the physical qualities of girl/woman	76.9	82.5	86.7
A girl/ woman can bathe without worry if she is menstruating	62.3	63.1	46.4
Pain during menstruation is normal; it happens because the uterus contracts	59.6	71.9	61.8
Menstruation ends between 45 and 55 years age	67.8	92.2	80.1
Menstruation is a sign that a girl can get pregnant if she has sexual relations with a man	60.2	81.5	77.6
Menstrual blood makes the inside of the vagina dirty and it should be washed after menstruating	82.2	56.3	83.4
If a girl uses menstrual cloth, she has to wash them with detergent and dry them in the sun	83.7	37.9	79.6
Washing the area around the vagina at least once a day is essential when menstruating	65.2	89.3	75.1
During menstruation one must change sanitary pads or menstrual cloth 3 to 6 times a day	48.1	68.9	53.6
Menstruation is the lining of the uterus and blood leaving the body and it is not dirty	51.0	63.1	46.9
Lack of menstrual hygiene causes menstrual health problems	62.5	81.5	68.5



age 13-14 years agreed about it. Most adolescents (82 percent) studying in private schools also agreed about this issue (Figure 7). It was observed that as girls progressed in age they were more informed about menstrual health issues. Table 10 above illustrates that majority girls (84 percent) from government schools confirmed that if a girl uses menstrual cloth, she has to wash them with detergent and dry them in the sun as compared to only 38

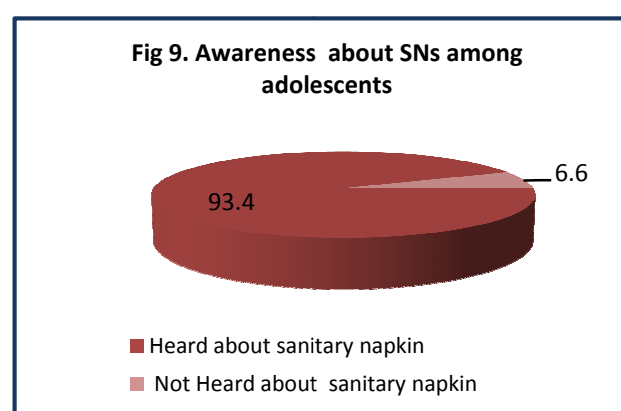


percent from private school, because use of cloth was not reported by majority of them. One must change sanitary pads /menstrual cloth three to six times a day was agreed upon by more than two-thirds girls of private school as compared to only 48 percent girls studying in government

schools (Fig 8). Significantly, majority adolescent girls are aware of sanitary napkins as observed in Table 11 and Figure 9.

Awareness of sanitary napkin among adolescents is highest among students studying

Table 11: Knowledge of sanitary napkins among adolescents(n=554)		
Age of Respondent	Knew about SN (%)	Didn't Know about SN (%)
13-14	91.2	8.8
15-16	94.9	5.1
17-18	92.6	7.4
>18	93.6	6.4
Place of Institution		
Rural	94.1	5.9
Urban	93.1	6.9
Type of Institution		
Government School	91.0	9.0
Private School	100.0	0.0
Government College	92.6	7.4
Aware of menstruation before onset		
Aware	96.1	3.9
Not Aware	86.4	13.6
Total	93.4	6.6



in private schools (100 percent) and those aware of menstruation before onset(96 percent), and those in the age group > 18 (96 percent) and above.

3. Beliefs and attitudes towards menstruation and menstrual health

Section 3, highlights the common beliefs and attitudes towards menstrual health amongst parents, adolescents and community at large. Table 12 & Fig 10 below shows that adolescents

demonstrated lack of preparedness, when asked about preparedness before onset of menstruation, especially among those who had an early menarche below 13 years of age. Nearly three-fourths (73 percent) of them expressed their unpreparedness, which gradually

decreased with progress in age especially those whose menstruation started later after 14 years of age (46 percent).

Table 12: Common beliefs and attitudes on MH by age of respondent (n=554)

Common beliefs and attitudes on MH	Age of Respondent (%)			
	13-14	15-16	17-18	>18
Completely unprepared before onset of menstruation	51.4	56.9	52.7	55.0
Felt physical, mental and emotional changes	68.6	77.3	78.8	87.5
Lack of communication/ sharing of information by mother/family elders	34.3	39.8	39.5	60.0
Mother did not agree about knowing before onset of menstruation	37.1	38.1	46.5	51.3
There was lack of communication/ sharing of information by teachers	25.7	39.2	45.7	40.1
Lack of self confidence about self	37.2	46.4	37.5	37.6
Advised that body becomes impure	51.4	48.6	46.9	45.1
Felt shame and embarrassment about talking of sexual reproduction	57.1	58.1	50.4	57.6
Advised that cloth if is seen by others may be cursed	54.3	45.3	41.4	41.3
Advised that girls become impure	42.9	55.8	46.5	52.6
Felt scared/afraid	40.0	37.6	34.0	36.3
Advised girls to stay at home	48.5	38.6	34.0	38.8
Advised girls not attend to school/college during menstrual days	28.6	23.2	17.2	30.0
Advised to stop going to school/college once they start menstruating	20.0	21.0	12.5	21.3
Advised to hide menstrual cloth	51.4	55.8	55.4	55.1
Advised to stop playing all types of sports once they start menstruating	31.4	32.6	31.3	32.6
Advised not do puja & attend religious functions during menstruation	80.0	84.5	85.5	87.5
Advised not to touch any male member during menstruation	34.3	45.9	51.9	46.3
Felt embarrassed and humiliated over restrictions	34.3	55.2	41.0	45.1
Advised to keep mustard seeds in handkerchief	42.8	30.9	38.3	41.3
Advised not to stand under the tree	37.2	42.0	36.9	41.3

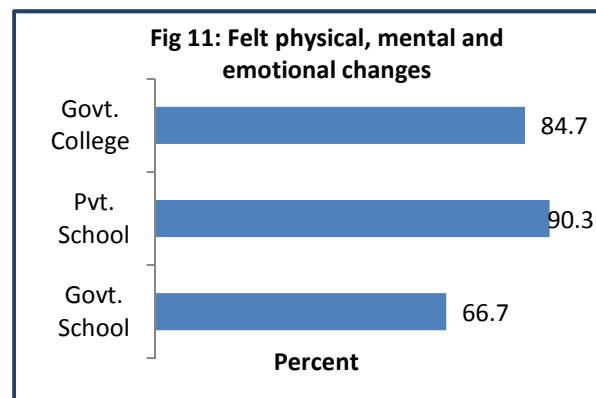
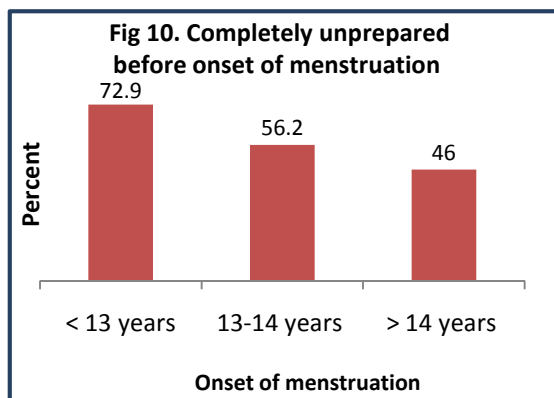


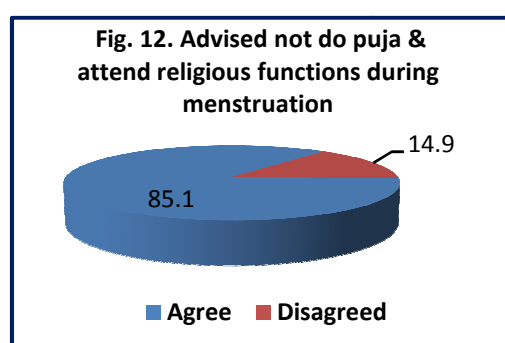
Table 13 and Figure 11 illustrates that adolescents have also expressed feelings of physical, mental and emotional changes during puberty. These were most strongly felt and expressed

by adolescents in the higher age group of 18 and above (88 percent) and among adolescents

Table 13: Common beliefs and attitudes on MH by type of institution (n=554)			
Common beliefs and attitudes on MH	Type of Institution (%)		
	Govt. School	Pvt. School	Govt. College
Completely unprepared before onset of menstruation	46.6	68.9	54.8
Felt physical, mental and emotional changes	66.7	90.3	84.7
Lack of communication/ sharing of information by my mother/family elders	39.4	22.3	53.1
Mother did not agree about knowing before onset of menstruation	48.1	24.3	47.3
There was lack of communication/ sharing of information by teachers	35.1	27.2	53.6
Lack of self confidence about self	41.8	28.1	33.2
Advised that body becomes impure	55.8	38.9	51.0
Felt shame and embarrassment about talking of sexual reproduction	47.6	53.4	65.1
Advised that cloth if is seen by others may be cursed	47.1	25.3	45.7
Advised that girls become impure	59.1	41.7	59.4
Felt scared/afraid	43.0	30.1	32.8
Advised girls to stay at home	51.5	13.6	36.5
Advised girls not attend to school/college during menstrual days	28.4	1.0	19.0
Advised to stop going to school/college once they start menstruating	24.0	1.9	13.6
Advised to hide menstrual cloth	62.5	47.6	64.8
Advised to stop playing all types of sports once they start menstruating	38.0	11.7	31.1
Advised not do puja & attend religious functions during menstruation	80.8	88.3	87.6
Advised not to touch any male member during menstruation	47.6	6.8	46.5
Felt embarrassed and humiliated over restrictions	43.7	52.4	39.0
Advised to keep mustard seeds in handkerchief	19.3	3.8	22.0
Advised not to stand under the tree	29.5	22.4	27.4

studying in private schools (90 percent).

Three-fifths of adolescents who are 18 years and above also expressed that their



mother did not agree about knowing before onset of menstruation. However, a positive attitude adopted toward adolescents by their families was that most of them were not restricted from going to school/college once they start menstruating (12-21 percent). However, more than one-third to two-fifths girls reported

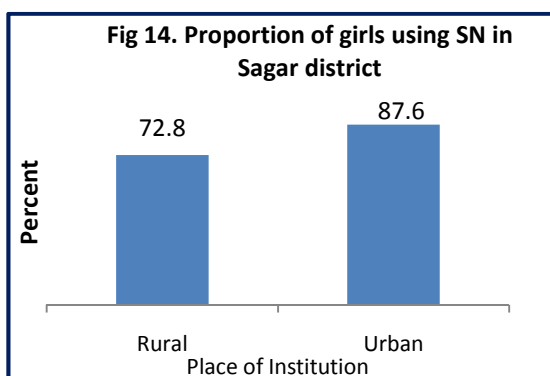
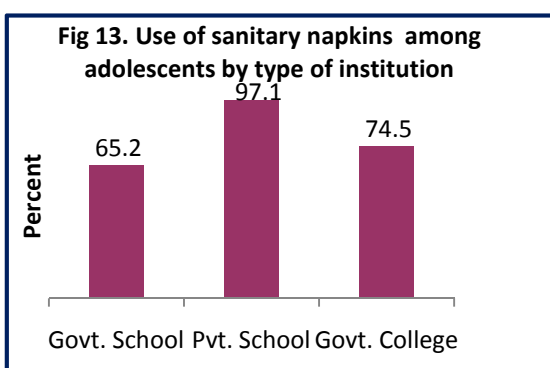
that they felt scared /afraid and were advised to stay at home. Advice not to touch males was seen more explicitly expressed by adolescents studying in government schools and colleges (47.6 and 46.5 percent respectively) and least by students of private schools (6.8 percent).

Advice to hide menstrual cloth was expressed by more than three-fifths adolescents studying in government schools and colleges (62.5 and 64.8 percent respectively). The belief of not performing of puja rituals and attending religious ceremonies during menstruation is still a widely accepted fact (85 percent) as seen in Figure 12. This belief persists across adolescents in different age groups and uniformly in private and government schools and government colleges.

Across all the age groups one-third to two-fifths (34-45 percent) girls felt embarrassed and humiliated over restrictions imposed, but this was most evident in the age group of 15-16 years (56 percent). Findings clearly indicate that there are still large number of traditional beliefs and restrictions surrounding menstruation.

One college adolescent stated, *“Mahawari bheeshan cheez hai. Issi se maan me halchal/ uthal puthal hota aur sharir me tootan aur thankan rehti hai. Kuch accha nahi lagta.”*

Another respondent a school dropout during FGD at the anganwadi centre asked innocently, *“achhar khana kyon mana hai? Mummy mana karti hain. Ped ke neeche khade rehne ko mana karti hain, aur kheti hain phool murjha jayenge. Kya yeh sacch hai?”*



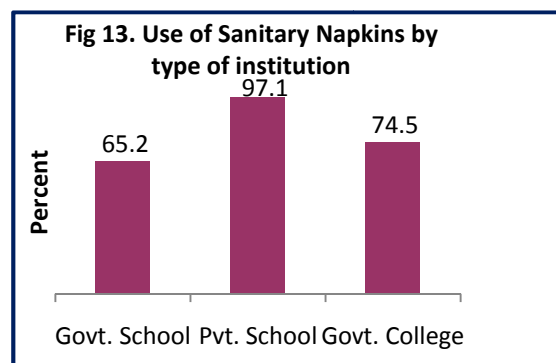
4. Menstrual Health Practices & Hygiene

Menstrual Health practises among adolescent students are presented in this section. Significantly, use of sanitary napkins is high among adolescents in the district with nearly four-fifths respondents using it (79 percent) as seen in Figure 13 and 14 and those studying in private schools (97 percent). However, in the lower age group of 13-14 years, only 51 percent girls are using sanitary napkins. (Table 14). As expected adolescents studying in schools and colleges in urban locations (88 percent) have reported using SNS more than

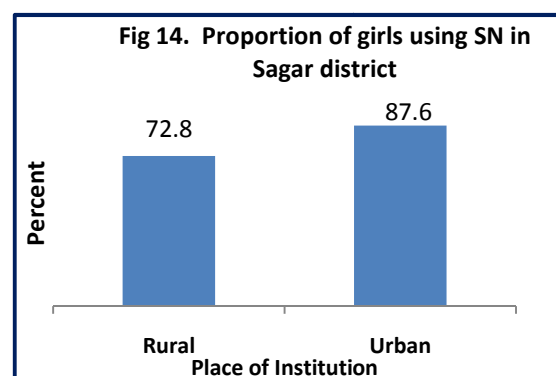
those studying in institutions located in rural areas. The reason could be related to availability of SNs in rural areas and accessibility in obtaining it by adolescents. Regarding hygiene practices it was observed that nearly half (48 percent) the girls changed sanitary napkins twice a day and more than one-third (37 percent) said that

Table 14: Sanitary napkin used by adolescents (n=554)

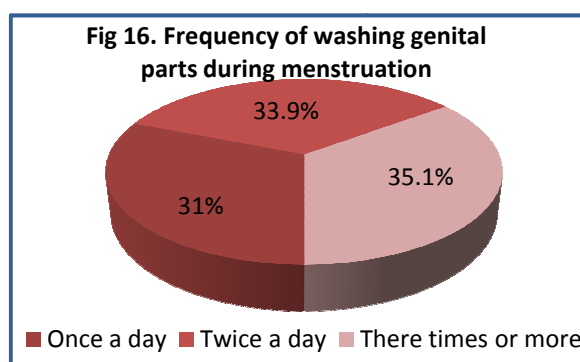
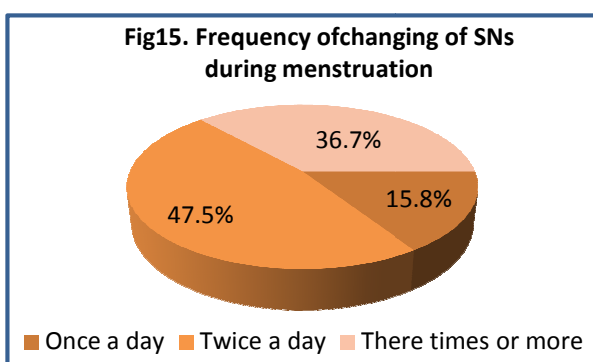
Use of SNs	SNs (%)	Other (%)
Age of Respondent		
13-14	51.4	48.6
15-16	78.9	21.1
17-18	76.9	23.1
Above 18	78.8	21.2
Present Class		
Class 10 th	72.6	27.4
11-12 th	92.3	7.7
Undergraduate	81.9	21.1
Place of Institution		
Rural	72.8	27.2
Urban	87.6	12.4
Type of Institution		
Government School	73.5	26.5
Private School	97.1	2.9
Government College	83.7	16.3
Total	78.9	21.1



they changed it three or more than



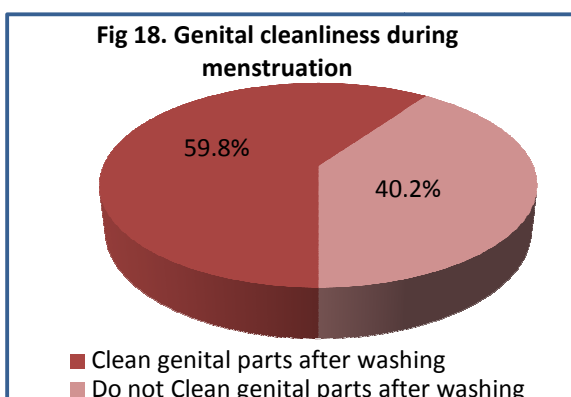
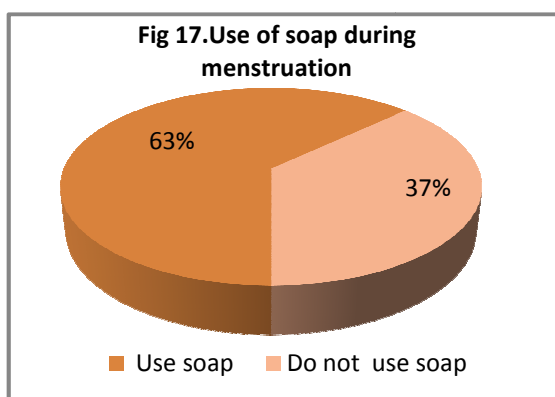
three times a day as seen in Figure 15. Girls washed themselves up twice (34 percent) or more than three times a day (35 percent). Use of soap for washing genital parts was reported by three-fifths (63 percent) girls and three-fifths spoke



about cleaning genital parts after washing (Figs. 16, 17 & 18).

More than two thirds girls studying in private schools (68 percent) and those studying in 11th class changed sanitary napkins at least twice a day as compared to other girls.

Relatively, girls from private schools practised better menstrual hygiene like frequency of



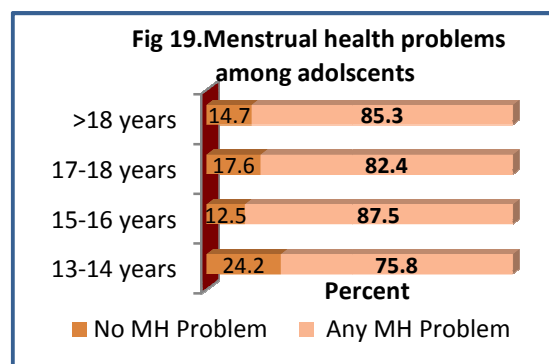
washing and washing genital parts with soap (78.4), in comparison to girls studying in government schools and colleges (Table not given). Menstrual hygiene practices are limited among girls in the lower age. Majority of the girls reported about having a clean place in the house for storing menstrual cloth.

4.1 Menstrual Health Problems

This section discusses menstrual health problems among adolescents as stated by them. More than four-fifths of the survey respondents mentioned experiencing some kind of abnormal physical condition during the menstrual episode (76-88) percent as seen in Figure 19.

Abdominal pain or discomfort is the commonest medical problem experienced by the respondents, like pain in the stomach during menstruation (70 percent) followed by frequent or irregular menstruation (15.6),

itching in genital area (14 percent). However, 17 percent respondents reported no menstrual problems (Table 15). Respondents in the age group 15-16 years (81 percent) studying in private schools (88 percent) and studying in urban schools/ colleges (74 percent) reported maximum about pain in stomach.



During FGD, some girls shared that in addition to these physical symptoms they feel acute mental anxiety during menstruation. They become very cautious about their mobility especially in the classroom. One FGD participant in Banda college consistently shared the effects of the pain on regular attendance in the college as emphatically expressed by one of the participants' *"Menstruation badly affects studies. Mere samajh se school nahi jaana chahiye"*.

Table 15: Menstrual health problems reported by adolescents by age of respondent(n=554))				
Menstrual health problem	Age of Respondent (%)			
	13-14	15-16	17-18	Above 18
Itching in genital area	6.1	18.8	16.3	13.3
Burning during urination	12.1	4.5	6.1	12.0
Pain in stomach	57.6	81.3	70.6	69.3
Coloured and odour discharge	6.1	8.5	9.0	8.0
Blisters in genitals	6.1	2.8	2.4	6.7
Frequent or irregular menstruation	6.1	23.3	21.1	12.0
None of these	24.2	12.5	17.6	14.7
<i>*Total may add to more than 100% due to multiple responses.</i>				

4.2 Restrictions felt during menstruation

It is evident from Table 16 that there are still societal taboos and restrictions imposed like

Table 16: Restrictions felt during menstrual cycle by age of respondent (n=554)				
Restrictions during menstrual cycle	Age of Respondent (%)			
	13-14	15-16	17-18	>18
Use separate bed	36.4	22.9	34.2	28.3
Use separate utensils	4.5	8.5	13.9	15.0
Cooking prohibited	36.4	33.1	58.8	60.0
Restriction on food	4.5	19.5	13.4	13.3
Restriction on movement	22.7	25.4	26.2	26.7
No Restrictions	9.1	17.8	19.8	30.0
<i>*Total may add to more than 100% due to multiple responses</i>				

restriction on movements of girls during menstruation, advise to use separate beds and restrictions from entering the kitchen were reported most by adolescent students. Girls in the age group of 17-18 years and above (59 and 60 percent

respectively), reported restrictions on cooking food. Respondents in different age categories also reported restrictions on movements (23-27 percent).

Table 17 and 18 present the type of restrictions perceived and reported by respondents. Those respondents representing rural area (57 percent) and

studying in government college (62 percent) were most likely to report restrictions. Three-fifths (61 percent) girls said that were advised by parents and family elders to follow these restrictions. However, significantly majority of the girls were not restricted from going to school during menstruation except for a small proportion of girls (9-15 percent). The restrictions on attending school during menstruation were lowest among girls studying in

Table 17: Restrictions felt during menstrual cycle by location of institution(n=554)		
Restrictions during menstrual cycle	Location of Institution (%)	
	Urban	Rural
Use separate bed	28.3	32.9
Use separate utensils	12.3	11.2
Cooking prohibited	45.9	56.6
Restriction on food	14.8	14.7
Restriction on movement	26.2	25.2
No Restrictions	21.3	18.2
<i>*Total may add to more than 100% due to multiple responses</i>		

Table 18: Restrictions felt during menstrual cycle by type of school (n=554)			
Restrictions during menstrual cycle	Type of Institution(%)		
	Govt. School	Pvt school	Govt College
Use separate bed	27.5	25.9	33.3
Use separate utensils	7.8	11.1	15.6
Cooking prohibited	43.1	27.8	62.2
Restriction on food	7.8	38.9	13.3
Restriction on movement	23.5	35.2	25.0
No Restrictions	24.2	5.6	21.1
<i>*Total may add to more than 100% due to multiple responses</i>			

private schools.

4.3 Source of getting sanitary napkins

Sagar district is among those eight districts where supply of sanitary napkin packs branded as 'freedays'(containing 6 pieces each) was proposed in the year 2013, and are being supplied through Aaganwadi Centres.

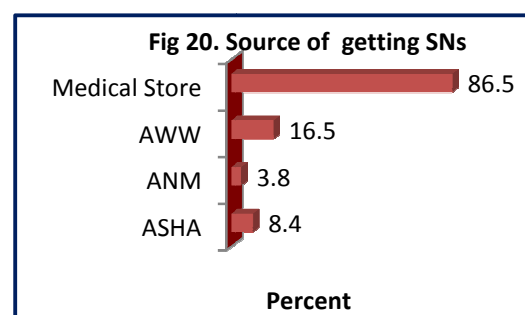
Table 19 & Figure 20 shows that sources of sanitary napkins for majority of the respondents (87 percent) were, medical store in the vicinity. AWCs (28 percent) and ASHAs

(17 percent) as source of SNs were reported mainly by respondents studying in schools/colleges in rural than urban areas. However, only 17 percent respondent received sanitary napkins from anganwadi centres. All girls studying in private schools purchased sanitary napkins from medical or provision store.

4.4 Availability of sanitary napkins for adolescents in schools/ colleges

Source of getting SNs	Location of Institution (%*)	
	Urban	Rural
ASHA	3.5	17.6
ANM	1.7	7.7
AWW	7.0	28.0
Medical/provision store	94.8	70.9

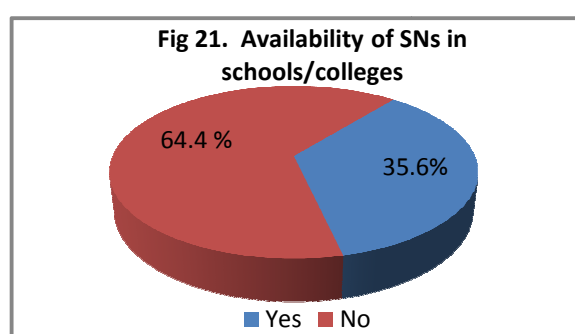
*Total may add to more than 100% due to multiple responses



Out of the nine surveyed schools and colleges, two private schools St Josephs convent, and Army Public School located in urban area and one government school located in rural area (government school Barodasagar)

are providing sanitary napkins at the rate of Rs. ten, five and two respectively. Two institutions, MLB girls' college hostel and army public school are have a vending machine, where girls can pay and get sanitary napkins (Fig 21).

Whereas 36 percent girls said that SNs were available on payment basis, two-thirds girls said that the schools did not have any provision of SN napkins. As seen in Figure 20, those respondents who said that SNs were available in the school reported that they had to pay upto Rs. five (53 percent) and two-fifths (42 percent) paid upto Rs.10. Health workers or ASHA workers did not provided sanitary napkins in their areas for school or college going adolescent girls which was confirmed by teachers.



Some girls studying in government colleges who received SNs from anganwadi centres narrated, "Quality of SNs obtained from AWCs are poor, it is better to purchase it from a medical store. At times AWCs run out of SNs. Continuous availability is not ensured"

5. Disposal of menstrual waste at home and institution

All the respondents were asked about toilet facilities at home and in their schools and colleges. More than two-thirds respondents said that they had flush toilet facilities at home and four-fifths reported that flush toilets were available in the schools.

Table 20: Disposal of menstrual waste at home by location of institution (n=554)

Disposal of menstrual waste	Location of Institution (%)	
	Urban	Rural
Throw unwrapped in open field	2.3	7.2
Wrap in paper throw outside	34.4	31.7
Dry wrap throw in dustbin	59.4	22.8
Throw in toilet	0.3	2.8
Burn it	16.8	60.6

*Total may add to more than 100% due to multiple responses

Regarding disposal of menstrual waste at home respondents in urban areas dry wrapped

and threw SNs and menstrual cloth in dustbin and those living in rural

areas preferred to burn menstrual waste at home (Table 20). Probably dustbins are not available in rural households. Respondents studying in private schools have reported a greater preference for dry wrapping and throwing SNs in dustbins (75 percent), followed by wrapping in paper and throwing it outside (36 percent). Respondents from government schools and colleges dry wrapped SNs/menstrual cloth and threw in dustbin, and also wrapped in paper and threw it outside and even preferred to burn it at home (Table 21). Many of the girls in Sagar city reported that there is a waste collection vehicle which daily collects waste from different wards, and they dispose it off in the 'kachra gaadi'.

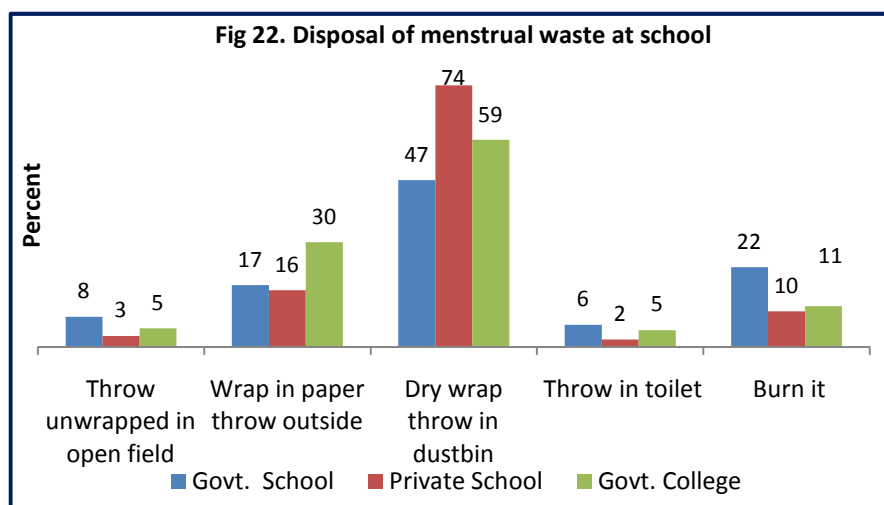
Table 21: Disposal of menstrual waste at home by type of institution (n=554)

Adolescents Disposal of Menstrual waste	Type of institution (%)		
	Govt School	Pvt School	Govt College
Throw unwrapped in open field	6.5	1.9	2.6
Wrap in paper throw outside	24.1	35.9	40.4
Dry wrap throw in dustbin	36.2	74.8	43.9
Throw in toilet	1.0	0.0	1.7
Burn it	40.2	6.8	35.2

*Total may add to more than 100% due to multiple responses

Three-fifths students disposed menstrual waste at school by dry wrapping and throwing in dustbin at school. This was reported mainly by students of private schools (74 percent), followed by adolescents studying in government colleges (59 percent). Wrapping in paper

and throwing it outside was also reported by them as a means of menstrual waste disposal (Fig 22).



During FGD girls from the Banda co-ed government college stated *“It is difficult to dispose sanitary napkins, therefore we try to avoid coming to the college. We feel uncomfortable because there is no proper dustbin or waste disposal system in this co-ed college”*.

In fact girls studying in government excellence girls college expressed urgent necessity of dustbins, *“A few dustbins must be placed in the college wherever there are toilets and one near the common room.”*

The teachers conveyed helplessness that no support staffs was available for cleaning of toilets in their schools, and *“there is a taboo prevailing that menstrual cloth should not be touched by males and they refuse to dispose it”*.

6. Availability and need of MH infrastructure in schools and colleges

As seen in Table 22, all the surveyed schools and colleges in the district, both private as well as government have separate toilets for girls. There is sufficient and regular water supply for hand wash, but adequate soap for hand wash was not observed in any of the school/ college toilets. Space for washing and drying SNs is not properly available in the government schools/ colleges. Respondents studying in co-educational schools and colleges mostly expressed lack of privacy and the need for privacy. A huge demand for free availability of

napkins in schools and colleges, and method of safe disposal of sanitary napkins, was seen (Table 23).

Table 22: Availability of infrastructure for MH at school/ college by type of institution (n=554)			
Availability of Infrastructure for MH	Type of institution (%)[*]		
	Govt. School	Pvt. School	Govt. College
Separate toilet for girls	90.4	97.1	94.8
Regular water supply for hand wash	93.8	93.2	98.7
Adequate soap for hand wash	50.0	35.0	70.4
Space for washing drying cloth	37.1	22.3	55.8
Facility for safe disposal of used menstrual cloth	64.0	61.2	79.0
Private unit for changing SN	71.9	57.3	88.0
Adequate availability of SN	41.6	79.6	60.9

Table 23: Infrastructure required for MH at school/ college by type of institution (n=554)			
Infrastructure required for MH	Type of institution (%)[*]		
	Govt. School	Pvt. School	Govt. College
Separate toilet for girls	88.3	84.7	79.7
Regular water supply for hand wash	83.3	80.6	76.9
Adequate soap for hand wash	85.8	89.8	83.9
Space for washing drying cloth	65.8	49.0	81.8
Facility for safe disposal of used menstrual cloth	80.8	63.3	78.3
Private unit for changing SN	86.7	70.4	79.7
Adequate availability of SN	79.2	72.4	78.3

Respondents from all the visited schools and colleges said that adequate soap for hand wash was urgently required and supply of SNs should be readily available. One respondent from a private school confided *“If we don’t have money SNs are not provided. We should be given SNs free of cost in schools in case of sudden emergency. Some of us cannot afford to pay”*.

Non availability of SNs in colleges was stated as a reason for absenteeism amongst adolescents students during menstruation.

Respondents from all the visited schools and colleges said that adequate soap for hand wash was urgently required and supply of SNs should be readily available. One respondent from a private school confided *“If we don’t have money SNs are not provided.*

We should be given SNs free of cost in schools in case of sudden emergency. Some of us cannot afford to pay”.

7. Menstrual health education

Questions regarding menstrual health education and information sharing, and discussions on menstruation, menstrual hygiene and menstrual health problems, elicited a vast array of responses. Nearly, two-thirds (65 percent) respondents said menstrual health management issues were discussed in schools, although most teachers from government schools said information sharing on these issues is not much. Half of the respondents stated that they knew about Rashtriya Kishori Swasthya Kariyakram (RKSK) and Adolescent

Table 24: Menstrual health education & counseling in institutions (n=554)	
Menstrual health education & counseling	Percent
MHM related issues discussed in school/college	64.8
Counseling on RKSK and ARSH in School	49.5
Anemia control programme WIFS	38.2
Counseling on MH in school/ college by teacher	57.1
Counseling on MH in school/ college by health personnel	57.0
<i>*Total may add to more than 100% due to multiple responses</i>	

Reproductive and Sexual Health (ARSH). Weekly Supply of Iron Folic Supplementation (WIFS) for anaemia control was reported by nearly two-fifths respondents. Most of the respondents stated that they get WIFS from anganwadi centres (Table 24).

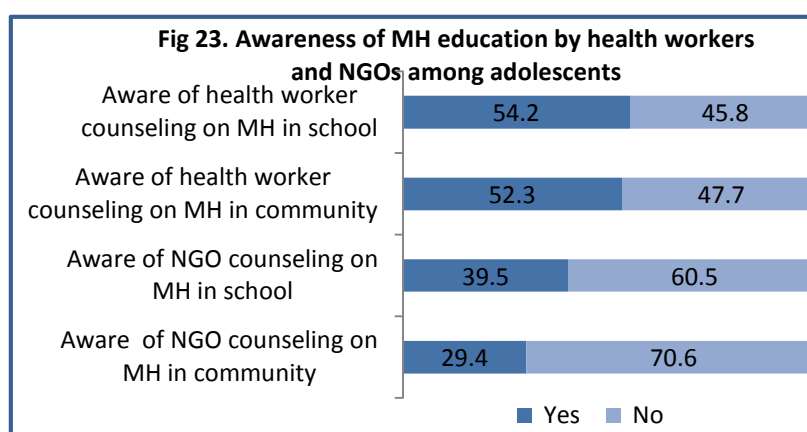
7.1 Adolescent MH health activities

Table 25: Menstrual health activities in institutions by location of institution (n=554)		
Adolescent health activities in school/college	Location of Institution(% *)	
	Urban	Rural
Counseling on improved diet	51.5	69.4
Weekly iron & folic acid supplementation	22.5	36.3
Safe FP counseling	20.1	31.8
ARSH counseling	24.9	14.0
Regular health checkup	24.9	24.2
Distribution of Sanitary Napkins	19.8	17.2
<i>*Total may add to more than 100% due to multiple responses</i>		

As seen from Table 25 and 26 adolescent health activities were minimal in the school and colleges. Teachers also shared that sometimes health workers came and provided WIFS but it was not a regular affair. ARSH counselling was reported most by students (62 percent)

from private schools and counselling on improved nutrition was reported by respondents of rural areas (69 percent) and those studying in government colleges (63 percent), followed by students of government schools.

Table 26: Menstrual health education & counseling in institutions by type of institution (n=554)			
Adolescent health activities in school/college	Type of institution (%)		
	Govt. School	Pvt. School	Govt. College
Counseling on improved diet	55.6	50.5	63.4
Weekly iron & folic acid supplementation	40.8	8.4	24.7
Safe FP counseling	18.9	21.1	30.6
ARSH counseling	5.9	62.1	14.0
Regular health checkup	16.6	29.5	29.6
Distribution of Sanitary Napkins	14.2	31.6	16.7
<i>*Total may add to more than 100% due to multiple responses</i>			



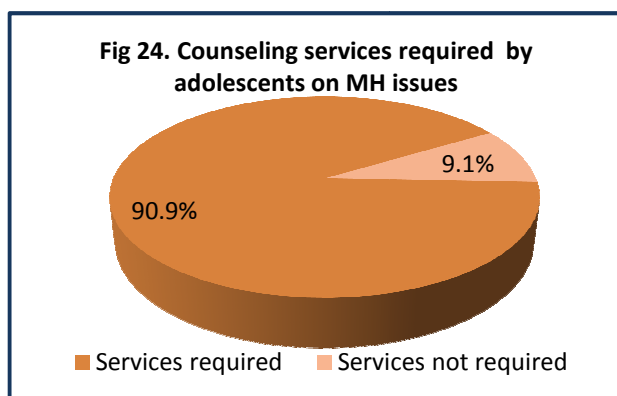
During FGD many of the young adolescents expressed ignorance and surprise that such programmes have been initiated for them by the government. Even teachers were unaware that such programmes were running (Fig.23).

These findings indicate a need for better communication and coordination among educational institutions and local health workers. Young adolescents in private schools could only identify some doctors who visited them for providing information on nutrition

7.2 Need for MHM Education / Counselling

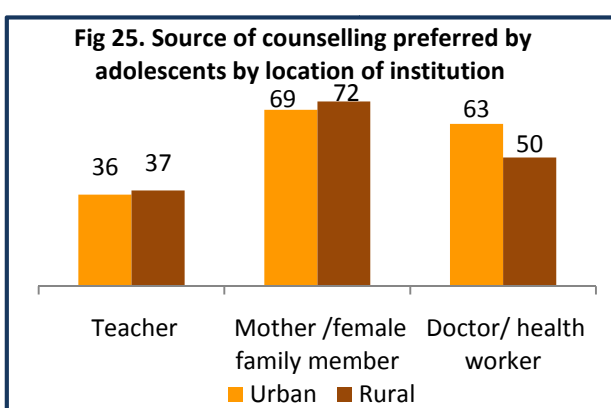
A huge demand of information was observed among adolescents. This indicates the unmet need for menstrual health education. Need for MHM education and counselling was explored in this section.

Figure 24 indicates a huge demand for counselling on menstrual health issues. Majority, of

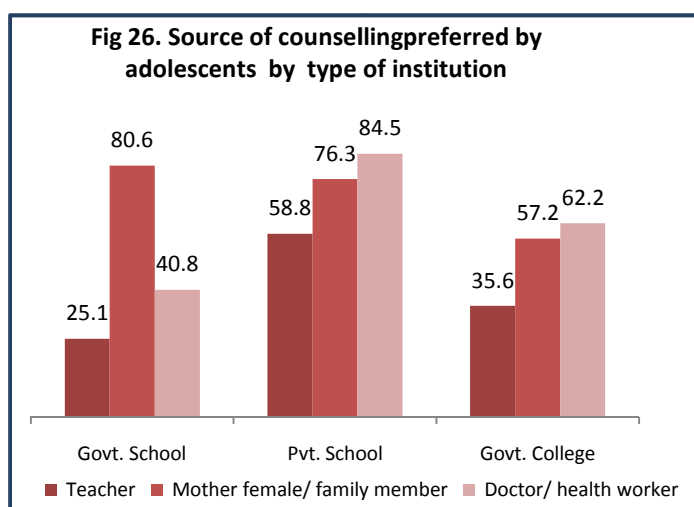


the respondents (91 percent) stated that counselling was urgently required by them to have a scientific knowledge of menstruation. When asked about by whom respondents would like to be counselled, mother/ female family member ranked first in order of

preference (rural: 72 percent; urban: 69) followed by doctor/ health worker (rural: 50 percent; urban: 63, Figure 25). Students from private college were most explicit about their need and willingness for counselling either by doctor, mother, or health worker. Both respondents from government schools and colleges would like advice from mother/ female family member (govt. school: 81 percent; govt. college: 57 percent) followed by doctor / health worker (Figure 26).



About contents of counselling it is evident from Tables 27, 28 and 29 that menstrual hygiene is the topic about which respondents are eager to learn most, followed by menstrual health problems



and source of treatment of menstrual health problems. Girls from Excellence College stated noticeably, *"We wish to know about lady doctors who can counsel us on dysmenorrhoea and other menstrual issues. They can both counsel us and give proper*

treatment".

Table27: Contents of MH education by location of institution (n= 554)		
Contents of MH education	Location of Institution (%*)	
	Urban	Rural
Menstruation	28.4	20.9
Menstrual hygiene	68.3	75.1
Menstrual health problem	45.2	33.3
Source of treatment of MH problem	40.1	24.3
Reproductive and Sexual Health	20.1	16.9

**Total may add to more than 100% due to multiple responses*

Table 28: Contents of MH education by type of institution (n= 554)			
Contents of MH education	Type of institution (%*)		
	Govt. School	Pvt. School	Govt. College
Menstruation	16.4	58.3	19.9
Menstrual hygiene	67.7	84.4	67.3
Menstrual health problem	24.9	69.8	42.5
Source of treatment of MH problem	27.5	56.3	31.4
Reproductive and Sexual Health	10.6	45.8	14.6

**Total may add to more than 100% due to multiple responses*

Table 29: Contents of MH education by faculty (n= 554)			
Contents of MH education	Type of Faculty (%*)		
	Science	Commerce	Arts
Menstruation	21.7	40.0	18.0
Menstrual hygiene	73.2	75.0	68.0
Menstrual health problem	45.6	42.5	42.0
Source of treatment of MH problem	34.2	45.0	42.0
Reproductive and Sexual Health	18.0	25.0	24.0

**Total may add to more than 100% due to multiple responses*

8. Conclusion

The findings in the study pertaining to its objectives, makes it evident that menstrual hygiene and management is an issue for adolescent school and college girls both in rural and urban settings. Some factors that directly or indirectly influence menstrual hygiene and management have been identified for discussion. Knowledge about menstruation that large majority of girls participating in this study had before attaining menarche, and later too, was not proper or complete. In view of the limited information that the girls are equipped with,

usually from mothers, family members and peers, it is not surprising that majority do not have a scientific knowledge on all aspects of menstruation and menstrual hygiene except for a few science students. Many aspects of personal menstrual hygiene have been neglected by two-fifths respondents, where as more than three-fourths of them felt discomfort, and reported one or the other menstrual health problem.

Their perceptions were influenced by socio-cultural beliefs which they have attained from mothers/ family elders. Mothers have been identified as an important source of information on menstruation for the adolescent girls, as also shown by some other studies to a varying degree (Dasgupta and Sarkar, 2008; El-Gilany et al, 2005). However, information on menstruation given by mothers is often incomplete and incorrect, usually being based on cultural myths, and therefore probably perpetuating negative and distorted perceptions and practices of menstruation (Adinma and Adinma, 2008).

In spite of the phenomenon of restrictions however it was encouraging to note in this study the changing attitude of the adolescent schoolgirls in terms of challenging the restrictions that limit their daily lives and routines. Restrictions on attending school/ college during menstruation were minimum.

Dysmenorrhoea manifesting as abdominal pain or discomfort has been found as the commonest medical problem, majority of the girls have reported discomfort. As is evident in the study, girls many times have very limited interactions with health workers, feel shy and feel clueless whom to approach. Health workers such as ANM, ASHA have not proved effective in terms of providing essential advise and counselling.

One important aspect highlighted in discussions with the school/ college girls regarding the attendance in school suggests that, further studies are needed to explore more about inhibiting or facilitating factors, which particularly affect school attendance, privacy issues in schools/ colleges regarding menstrual practices and waste disposal system. Availability of SNs and lack of proper waste disposal are issues which act as barriers.

This study also reflects that teachers do not sufficiently impart the knowledge, and are themselves lacking in confidence and hesitate in correct information sharing, especially

in co-educational schools and colleges. They have received no separate orientation on different aspects of menstrual health management which emerged from discussions.

Lack of privacy has been pointed out by other studies also as a major problem (El-Gilany et al, 2005) and there's conclusive evidence that girls' attendance at school is increased through improved sanitation (Bhardwaj and Patkar, 2004).

The study has pointed out that the lack of information about disposable sanitary pad, its high cost and limited availability are the main reasons for school girls not using them and focuses on their unmet need. Menstrual absorbent should be changed at least three to five times a day, and more frequent may be necessary (Salem and Setty 2006).

The cleaning should also be at least equal to the number of times the pad is changed. Though the practice of cleaning and changing has been reported by girls they have pointed out that at co-educational school and college this is not always possible. Fortunately, all the schools in which the study was undertaken had provision of toilet, which may not be the case in all schools/ colleges across the district.

The selection of study units and respondents was purposive and may not reflect the population distribution of the whole district. So, the findings of this study should not be generalized, however the key issues identified from the schools/ colleges will be an asset for management of menstrual hygiene. Dialogue with mothers is of up most import to gauge their views on menstrual health and hygiene which has been a limitation of this study.

Recommendations

- The study has highlighted the critical needs of the adolescents to have accurate and adequate information about menstruation and its appropriate management. Informal channels of communication, such as mothers and peers, need to be properly oriented by associating them with menstrual health programme for correct and effective delivery of such information.
- It is also essential for the teachers, who may have hesitations and lack necessary skills to impart reproductive health education including menstrual hygiene to their student, to be given requisite skills through training. Teachers must be trained to provide information on menstrual and reproductive health correctly by using effective communication tools.

- Menstrual Health Management requires for urgent attention of stakeholders – family, school, community, civil society, and service providers to implement correct menstrual perceptions and enable proper hygiene practices amongst this segment of the population.
- Adolescent girls have shown an urgent need and interest to use sanitary pads, innovative ways have to be identified for making the pads available and affordable to school girls belonging to all segments of society. The use of locally produced sanitary pads could be cost effective.
- Schools and colleges with adolescent girls need to be made to address lack of privacy, which is an important determinant for proper practice of menstrual hygiene and also school attendance. Through small efforts like placing dustbins in toilets for safe disposal of sanitary pads and soap for washing, could go a long way in ensuring school/ college attendance.
- There is an urgent need to sensitize boys and men to menstrual health issues. Menstrual health management should be part of regular school/ college health curriculum.
- It is essential to integrate menstrual hygiene and management be integrated effectively in overall hygiene promotion interventions in Sagar district. Health workers, school/college authorities, NGOs in the district need intersectoral coordination for effective implementation of the programme.

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Annexure-1

Infrastructure available for menstrual health services in government and private schools of Sagar District

Infrastructure in schools/ colleges	MLB SSS (girls) Sagar	SJSS Convent (co- ed) Sagar	APSS school (co- ed) Sagar	Govt.SS (co- ed) Barodasagar	Govt. SSS (co- ed) Kharrapur
Regular Water supply for hand washing available	Yes	Yes	Yes	Yes	Yes
Adequate soap for hand washing	No	No	Yes	No	No
Separate toilets for girls	Yes	Yes	Yes	Yes	Yes
Space for washing / drying menstrual cloth	No	Yes	No	No	No
Facilities for safe disposal of used menstrual cloth	No	Yes*	Yes	No	No
A private changing unit SNs/ Cloth	No	Yes	Yes	No	No
adequate availability of SNs/Cotton	No	Yes ⁵	Yes [%]	Yes [#]	No
Other Services					
Counselling services by teachers	No	Yes	Yes	Yes	No
Adolescent menstrual health and hygiene counselling	No	No	No	No	No
Nutrition Counselling	No	Yes	No	No	No
Medical Checkup facilities	No	No	Yes	No	Yes ^{&}
Supply of Iron Folic Medicines	No	No	No	No	Yes
[*] Incinerator available ⁵ SN available for Rs 10 per piece in convent [%] SN available Rs. 5 per piece in Army Public through vending machine [#] Red cross funds available for SNs ^{&} de worming and vitamin A tablets given by school, eye testing by health workers					

Annexure-2**Infrastructure for menstrual health services in government colleges of Sagar District**

Infrastructure in Schools/ Colleges	Deendayal Arts and Commerce PG College (Co-ed), Sagar	Excellence Girls PG College, Sagar	Govt. PG College (Co-ed), Rahat garh	Rajeev Gandhi PG College (Co-ed), Banda
Regular Water supply for hand washing available	Yes	Yes	Yes	Yes
Adequate soap for hand washing	No	No	No	No
Separate toilets for girls	Yes	Yes	Yes	Yes
Space for washing / drying menstrual cloth	No	No	No	No
Facilities for safe disposal of used menstrual cloth	No	No	No	No
A private changing unit SNs/ Cloth	No	No	No	No
adequate availability of SNs/Cotton	No	No	No	No
Other Services				
Counselling services by teachers	No	No	No	No
Adolescent menstrual health and hygiene counselling	No	No	No	No
Nutrition Counselling	No	No	No	No
Medical Checkup facilities	No	No	No	No
Supply of Iron Folic Medicines	No	No	No	No

Glimpses of adolescents, teachers in visited schools and colleges & AWC for MHM study



Glimpses of adolescents, teachers in visited schools and colleges & AWC for MHM study

