



**MENSTRUAL HYGIENE MANAGEMENT PRACTICE AND ITS ASSOCIATED FACTORS AMONG SECONDARY SCHOOL GIRLS IN FINOT SELAM TOWN, NORTHWEST ETHIOPIA, 2019**

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## **Abstract**

**Background:** Menstrual hygiene is vital to the health, well-being, dignity and productivity of women and girls. There is a problem about menstrual hygiene management especially among communities in which discussing about menstrual hygiene is taboo in their culture. Women and girls in rural settings and particularly girls in schools suffer most from stigma and lack of services and facilities to help them cope with the physical and psychological pains they undergo during their menstrual periods.

**Objective:** This study was aimed to assess menstrual hygiene management practice and associated factors among secondary school girls in Finot Selam town, Ethiopia 2019.

**Method:** School based cross-sectional study was conducted among school girls in Finot Selam town from March 20 to March 30. Data were collected using pre-tested structured self-administered questionnaires. Data were checked, coded and entered in to Epi-data version 3.1 software, and then exported to Statistical package for social sciences version 20 for statistical analysis. Variables with a p-value<0.25 in bivariate analysis were candidate for multivariable logistic regression and those with a p-value<0.05 in multivariable analysis were considered as having statistically significant association with menstrual hygiene practice. Thematic analysis was employed for the qualitative one. Wealth index was computed by Principal component analysis.

**Result:** A total of 442 school girls were participated in the study, with response rate of 99.1%. About 68 % of adolescent girls had good practice of menstrual hygiene management and 71.5 % of girls use commercial made disposable sanitary pads. The odd of good practice was 3.4 times higher [AOR=3.40; 95% C.I: (1.16, 9.97)] among girls whose fathers' education was colleges and above compared to those whose father was illiterate. Adolescent girls who heard about menstruation before menarche were 3.95 times [AOR=3.95; 95% C.I: (2.13 ,7.33)] more likely to have good practice compared to those who didn't heard. It was also found that the odd of good practice among those who discuss about menstrual hygiene with their parents was 2.75 [AOR =2.75 ;95% CI: (1.71, 4.43) times higher than those who didn't discuss. The odd of good practice among those who know sanitary pads in the market was 2.1 [AOR =2.10 ;95% CI: (1.18, 3.28)] times higher than those who didn't know about sanitary pads. Findings from in-depth interview found that inadequate sanitation facility was reported as a problem for girls to manage their menstrual hygiene in school.

**Conclusion and recommendation:** Most of girls in this study have good practice of menstrual hygiene management. Paternal education, discussion with parents about menstruation, knowledge on sanitary pads and prior information were the factors identified that affect the practice of menstrual hygienic management. Inadequate sanitation facilities in schools was the major challenge to manage menstruation for students at school. It is important that Program designers and stakeholders should setup health education program to adolescent on menstrual hygiene at all levels starting from the elementary schools.

**Keywords:** Menstruation, Menstrual Hygiene, Practice, school girls.

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## **List of Abbreviations**

IDI	In-depth interview
MHM	Menstrual Hygiene Management
NGO	Non-Governmental Organization
OR	Odds Ratios
PCA	Principal Component Analysis
RTIs	Reproductive Tract Infections
SNV	Sanitary napkin vendor
SPSS	Statistical package for social sciences
UNICEF	United Nations International Children's Emergency Fund
WASH	Water, Sanitation and Hygiene
WI	Wealth Index
WHO	World Health Organization



## **Chapter one: Introduction**

### **1. 1 Background**

Menstruation is the periodic shedding of the inner lining of the uterus under the control of the hormones of the hypothalamus-pituitary-ovarian axis(1). Women begin menstruation at an average age of 13 and on average continue menstruating till age 51. Menarche, or the onset of menstruation, is a landmark feature of female puberty and signals reproductive maturity (2).

Adolescence is a transitional phase of growth and development between childhood and adulthood that manifest among girls and boys between the age of 10 and 19 years. Early adolescence is a time of physical, intellectual, emotional, and social development during which physical and sexual maturation occurred. And it is the period under the influence of hormones when the child experiences physical and sexual changes and confront the questions like; self-concept and social relationship (3).

Globally, approximately 52% of the female population (26% of the total population) is of reproductive age. Most of these women and girls menstruate each month for between two and seven days, with some lighter flow and some heavier flow days. The cycle is often irregular for the first year or two after menstruation begins (3,4).

Menstrual hygiene management is the practice of using clean materials to absorb menstrual blood that can be changed privately, safely, hygienically, and as often as needed throughout the duration of the menstrual cycle. Managing menstruation is essentially dealing with menstrual flow and also in continuing regular activities like going to school, working etc. (5).

Globally women and girls have their own personal strategies to cope with menstruation with great variation from country to country, and within countries, depending on an individual's personal preferences, available resources, economic status, local traditions and cultural beliefs and knowledge or education (6).

The subject of menstruation is too often taboo and has many negative cultural attitudes associated with it (7). For Example, in Egypt because of cultural and religious beliefs, menstruation is not considered an appropriate topic of discussion that lead to lack of accurate information for girls to

manage their menstruation hygienically (8). Similarly in Ethiopia most of adolescent girls didn't discuss on menstrual issues, due to fear, shame ,taboos ,religious reasons and the fact that it is not customary to talk about it(9).

Due to the misconception associated with menstruation, most adolescents do not have adequate information about how to maintain hygiene during menstruation (10). In order for women and girls to live healthy, productive and dignified lives, it is essential that they are able to manage menstrual bleeding effectively. This requires access to appropriate water, sanitation and hygiene services, having somewhere private to change clothes or disposable sanitary pads, facilities to dispose used cloths and pads, and access to information to understand the menstrual cycle and how to manage menstruation hygienically (11).

Schools, particularly those in developing countries, often completely lack drinking-water and sanitation and hand washing facilities; even, where such facilities exist they are often inadequate in both quality and quantity. The available sanitation facilities in most secondary schools are poor in construction design and not convenient. Girls are more likely to be affected in different ways from inadequate water, sanitation and hygiene conditions in schools, because of the lack of such facilities they cannot attend school during menstruation (12,13).

Menstruation is part of the female reproductive cycle that starts when girls become sexually mature at the time of puberty. It is a natural process in a women's life and needs special care from a physical and psychological point of view. In order for women and girls to live healthy, productive and dignified lives, they should be able to manage menstrual bleeding hygienically(14).

## **1.2 Statement of the problem**

Menstruation is a normal biological process and a key sign of reproductive health, yet in many cultures it is treated as something negative, shameful or dirty. The continued silence around menstruation has been a global phenomenon, even in the context of international attention to the human rights of women and girls (9).

Constrained by social norms that stigmatize girls' sexuality, girls experience menarche with shame and fear and are often left to manage menstruation with neither instruction nor hygienic supplies. This can make their daily lives difficult and limit their freedom (15).

According to World Health Organization (WHO), globally, 2.3 billion people lack safely managed sanitation. Further, owing to high cost and ignorance, women and girls often use old rags, clothes or other unhygienic materials as menstrual absorbents, which may lead to ascending infections and many other health problems (16).

UNICEF estimates that 1 in 10 school age African girls do not attend school during menstruation(17).Unavailability of sanitation facilities including menstrual hygiene facilities will obviously influence the attendance of girls in school and the inability to have affordable sanitary napkins force the girls and women to use insanitary rag which is leading for the development of bad odor, RTI and skin problems. This leads to young girls to be anxious, restless and absent from school (18).

In Ethiopia 17% of girl miss class due to menstruation with a roughly equal proportion of urban and rural girls missing school. The most common reasons for missing class are pain/discomfort, fear of having an accident at school, embarrassment, and having nothing to manage their periods. The likelihood of absenteeism seemed to vary based on girls' method for managing their periods (19).

Menstruation is not something to be proud of. It is surrounded by silence, shame and social taboos that are further manifested in social practices that in many cultures restrict mobility, freedom and access to normal activities and services. Menstruating women and girls are considered impure, unclean, and unfit for the public sphere. This perception is exacerbated by the lack of washing and bathing facilities, materials and spaces that can help women and girls manage the menstrual discharge with dignity and safety(20).

Unhygienic practice of menstrual hygiene management can increase the incidence of reproductive tract infection (RTI). Thus, the consequences of RTIs are severe and may result in significant negative impact to a woman's health including chronic pelvic pain, dysmenorrhea (painful periods) and in severe cases infertility. Every year approximately 10 % of women worldwide are exposed to genital infections including urinary tract infections and bacterial vaginosis, and 75 % of women have a history of a genital infection (21). Women and girls in rural settings and adolescent girls in schools suffer most from stigma and lack of services and facilities to help them cope with the physical and psychological pains they undergo during their menstrual periods (9).

In Ethiopia, Studies have found that 25% of girls in Ethiopia do not use any MHM products to manage their periods and isolate themselves during menstruation. And only 25% of schoolgirls had learned about menstruation and hygienic management in school(22).

Different studies indicate that good menstrual hygiene is practiced among those girls whose mothers were literate, girls studying in more than grade 10 in school, older girls, having prior knowledge about menstruation before menarche, presence of proper sanitary latrine at home, exposure to advertisements regarding usage of sanitary napkins (23).

Various sectors—the Ethiopian government, international donors, local NGOs, and social enterprises—are making efforts to improve MHM. Most of the efforts to date focus providing products to manage menstruation and limited interventions to increase MHM awareness. Though a number of NGOs have started to address the issue, there is no national-level policy direction or program focused on menstrual hygiene management(9).

However, much attention is not given to this problem and studies on menstruation and its hygienic management and factors associated with it are limited in the study area. Therefore, this study was designed with the aim of assessing menstrual hygiene management practice and associated factors among secondary school adolescent girls at both private and public schools in Finot selam town.

### **1.3 Significance of the study**

Addressing menstrual hygiene management among adolescent girls has multidimensional effect on sustainable development of a nation such as reduction of school absenteeism ensuring quality of education, prevention of related RTIs, and gender equality and women empowerment.

Access to water and sanitation in Ethiopia is among the lowest in the world and needs greater effort and resource to access these basic rights for the society. And much attention is not given to this problem and studies on menstruation and its hygienic management as well as factors influencing hygiene practice of school girls are limited in the study area.

The finding of this study will be helpful for school related health policy makers in understanding menstrual hygiene practice and factors affecting among high school female students and most critical measures will be taken by policy makers, program planners, managers, donors, field workers and beneficiaries to counter act the cruel impact on day to day health, education, and dignity of adolescent school girls by designing the possible interventions.

## **Chapter two: Literature review**

### **2.1 overview of menstruation**

Menstruation is a phenomenon unique to the females. The onset of menstruation is one of the most important changes occurring among the girls during the adolescent years. The first menstruation (menarche) occurs between 11 and 15 years with a mean of 13 years(2). Among all the developmental milestones associated with the adolescent years, menarche may be the most important. The onset of the first menstrual period is a qualitative event of major significance in a woman's life, denoting the achievement of a major functional state.

### **2.2 Menstrual hygiene management**

Different studies on menstrual hygiene revealed that access to adequate information on menstruation and reproductive health can help girls and women in understanding their menstrual cycle and in practicing proper menstrual hygiene (7).

Comparative cross –sectional study conducted in India, Mangalore found that only 56.55% (49.24% in rural and 65.17% in urban) of adolescent girls actually use absorbent material during menstruation (25). Another cross-sectional study among rural adolescent girls in India showed that 89.2 %of girls uses sanitary pads as a menstrual absorbent and the remaining 7.2% and 3% uses fresh cloth and reusable cloth respectively (24).

Interventional study conducted in Bangladesh found that only 24% of girls use menstrual pad even after the health intervention with 16% baseline. The remainder used poor quality cloths dyed with toxic pigments, which might make them susceptible to uterine pain(25) . School based cross sectional study in Iran showed that More than half of adolescents have moderate practice and 95.6% of the participants were using disposable pads during menstruation(26).

A study in Nepal showed that only 40% of school adolescent girls have good menstrual hygiene practice. Among these 30% use factory made sanitary pads followed by 76% of them using homemade and reusable pads(27). However, only 39% of them change their pad in every 4 –6-hour period. 68% of the respondents washed hands after changing a sanitary pad. Similar study in Nigeria found that 93.8% of the school girls that have commenced menstruation use sanitary pads as absorbent during their menstruation. The remaining uses any available piece of cloth that they discarded after use (28).

According to a study done in Swaziland about 99.9 % of school girls use sanitary napkins to contain menstrual blood during menstruation. Flush toilets were found to be the only type of sanitary facility used in all schools (20). The major difficulty implicated in this finding is that toilet blockage problems are more likely to occur in the flush toilets in schools. The use of sanitary napkins also implies that used napkins are more likely to be disposed of in the general waste rubbish bins in the school's premises if a proper and effective management program of such waste is not put in place and implemented.

A descriptive cross-sectional study in South Africa also showed that majority of adolescent girls use sanitary pads to manage their menstruation. But when there is shortage of money to purchase pad, they resorted to using newspaper, toilet paper and old cloths (29). However, these methods of management are not only ineffective and uncomfortable but also may expose them to risk of urogenital infections.

A cross sectional study done in rural areas of Bangalore shows that personal practices and hygiene play a very important role during menstruation. It was found that during menstruation 34.7% of the study population use cloth, 44.1% use sanitary pad and 21.2% use both cloth and sanitary pad. The frequency of change during the time of menstruation revealed that 39.8% changed sanitary pad or cloth twice a day, 29.5% three times a day and 21.7% once a day. 43.2% of girls uses only water and 88.8% of the girls took bath every day during menstruation (30).

A quantitative survey in rural Uganda found that only 36% of schoolgirls use sanitary pads as their primary absorbent. The remaining most uses cloth. Half of those who use reusable absorbents hid them to dry after washing, most commonly under the bed. But No girls were found disposing at community rubbish heaps, burning or burying pads (31).

A Cross- sectional study among school girls in Ethiopia, Addis Ababa shows that around 52 % of school adolescents utilize napkins and the rest one uses homemade cloth and underwear as menstrual soak-up during their mensuration. This study also evidenced that the prevalence of menstruation related school absenteeism at least once in a month is 64.3%. Pain was the major reason for school absenteeism during menstruation (79.03%) followed by lack of washing facility at school (78.49%) and absence of private place to change sanitary pad (48.12%) (32).

School based study in western Ethiopia also found that 60.1% of school adolescent girls have a poor practice on menstrual hygiene. Around 66.2 % of girls use commercial made sanitary pads as absorbent material during menstruation, but only 20.2 % of girls dispose their used sanitary pads in dustbin(33). A Similar study in Adama town shows that 43% of adolescent school girls have poor level of menstrual hygiene practice (34).

A cross -sectional study in eastern Shoa zone Boset woreda revealed that 70.2% of girls have good practice on menstrual hygiene management and 46.3% use commercially made disposable sanitary pad. While 33.0% of girls change their used pad three times and above per day ,more than half of the girls change used pad only once per day. On the other hand, 65.3% of adolescent girls throw used menstrual pads in the open field(35). Similar study in North Wollo zone habru woreda shows that only 35.38% of students use sanitary napkins for hygienic management of their menstruation and the remaining one uses homemade cloth and underwear as a menstrual soak-up. Most of students who uses soak-up other than sanitary napkins reuse the materials used before (22).

School based cross-sectional study conducted in Amhara region North Shoa zone also found that all adolescents use menstrual absorbent during menstruation and from total 70.9% of them use commercially made sanitary pad, 26.01% homemade sanitary pad and 3.4% use underwear and sponge. It is also evidenced that 51.4% of girls dispose used menstrual soaking materials in the toilet pan and 45(9.1%) throw used pad in the open field and only 37.4% participants wash their genitalia twice per day(3). Another study in this region in Bahirdar town shows that only 15.7% of adolescents have poor practice of menstrual hygiene management. Although most of them wash their genitalia during menstruation, 52.6% use only water and 47.4% use soap and water to wash their genitalia and only 71.3% take bath during menstruation (36).

## **2.2 Factors associated with menstrual hygiene practice**

Several traditional norms and beliefs, socio-cultural conditions can and do influence the practices related to menstruation. For example, in some cultures, girls are told that during their menstrual cycle they should not bathe (or they will become infertile), touch a cow (or it will become infertile), look in a mirror (or it will lose its brightness), or touch a plant (or it will die) (37).

According to a comparative cross-sectional study in India there is statistically significant difference in utilization of sanitary pads between of urban and rural area residents with 49.24% in



rural and 65.17% in urban area. There is also significant difference in frequency of change sanitary pads as 80.35% girls in urban school change their pad every 8 hours and only 25% in case of rural girls(38). Another study in India found significant association between the age group and type of absorbent they use (39).

The study conducted in Iran among school girls revealed that being in second class, having a father with elementary education or illiterate, living in undesirable economic status, having peer group and friends as the source of main information, having insufficient information about puberty have negative relationship with practice, while there is a positive relationship between age at menarche and practice (26). Similarly a quantitative survey in India indicated that the odds of using sanitary napkins is highest among women belonging to the highest wealth quintile and the college educated women as compared to women in poorest quintile and non-educated one respectively (40).

A study done in Uganda revealed that menstruation is taboo, shameful and embarrassing issue. It is manifested by girls' nervous laughs, avoidance of eye contact, and the fact that they often turned their faces towards the floor when speaking drew attention to the fact that menstruation is a shameful and embarrassing experience and topic of conversation, even in a private, confidential, female-only environment (31).

Study on menstrual hygiene management and its determinants among school girls in Addis Ababa found that girls aged fifteen and above are 2.283 times more likely to have good practice than those aged less than fifteen. Maternal education, paternal occupation and wealth quintile are the other factors identified in the study which have statistically significant association with menstrual hygiene practice. This study also found that girls whose age at first menarche greater than thirteen are 2.572 times more likely to have good practice about menstrual hygiene compared to those who were less than thirteen years old (32).

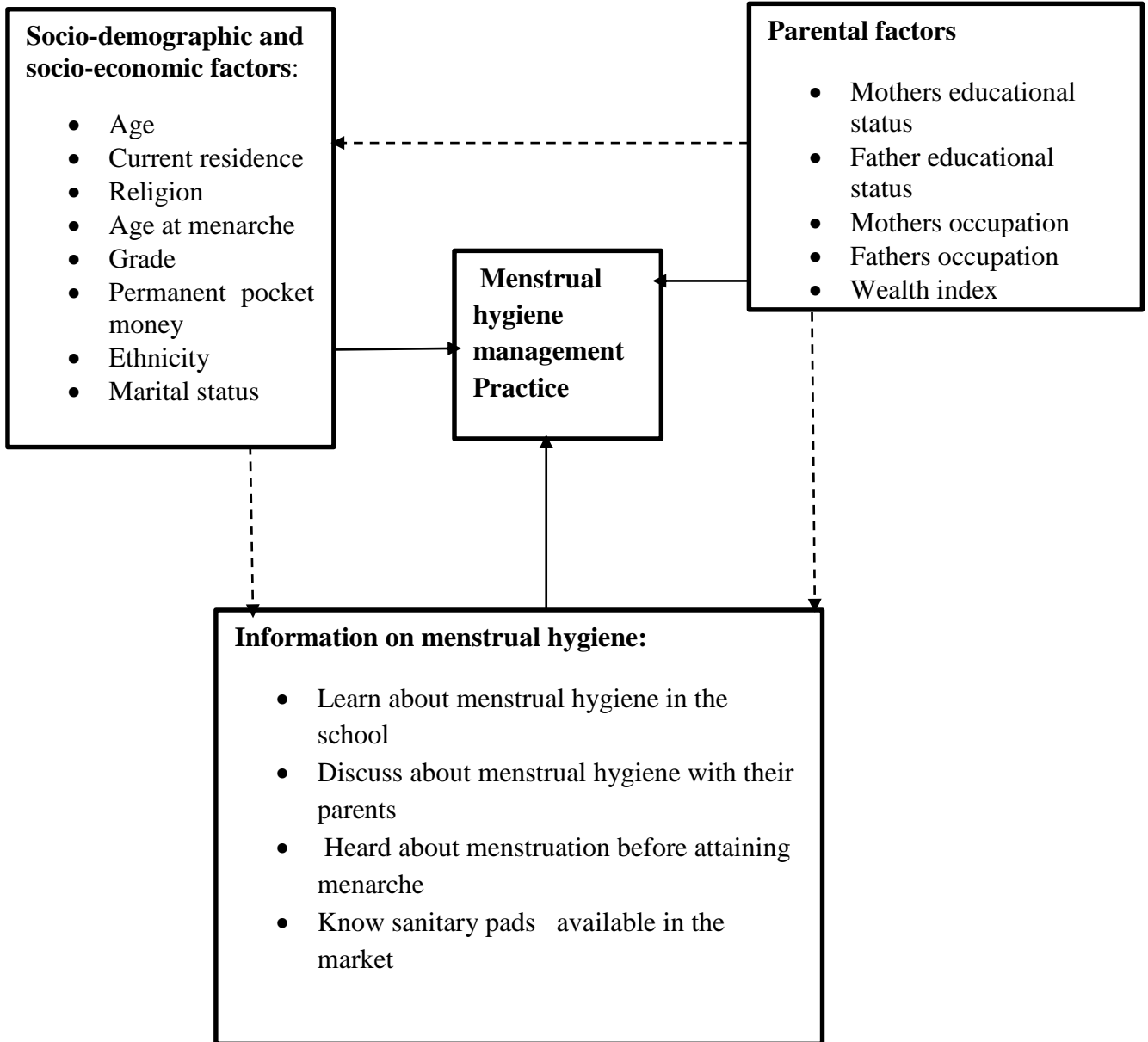
Another study in Amhara region Mehalmeda high school students revealed that the practice of good menstrual hygiene is 2.38 times higher among students who live in the urban than those in the rural area, and those students whose source of information is teacher is 7.645 times higher than students who received from mother. Having access for water is the another significant predictors of good menstrual hygiene practice.(3). Similar study in North Wollo zone Habru

district shows that adolescent girls who live in urban are 2.32 times more likely to have good practice of menstrual hygiene than those who reside in rural area (22).

The study done in Adam town found that money source to buy sanitary materials and feeling the school as uncomfortable are significant predictors of good menstrual hygiene practice for school adolescent girls. Accordingly, the practice of good menstrual hygiene among students who doesn't felt the school is comfortable is lower by 43.3% compared to students who felt school is comfortable and students whose source of money is their parents are 2.3 times more likely to have a good menstrual hygiene practice as compared to those earn by themselves (34).

Another school based cross-sectional study in Bahirdar town found that the practice of good menstrual hygiene is 2.493 times higher among students who had heard about sanitary materials than who had not heard(36). Similar study in northern Ethiopia showed that there was statistically significant association between menstrual practice and exposure to advertisement regarding usage of sanitary napkins in mass media (radio/TV) and knowledge on menstrual hygiene. The likelihood of good menstrual practice among girls who had exposure to advertisement is two times higher compared to girls who had no exposure to advertisement (41).

### 2.3. Conceptual framework



**Figure 1:** Conceptual framework of menstrual hygiene management and associated factors among female high school students in Finot Selam town northwest, Ethiopia, 2019 (32, 35, 36)

## **Chapter three: Objective**

### **3.1. General objective**

- To assess menstrual hygiene management practice and associated factors among secondary school girls in Finot Selam town, Northwest Ethiopia 2019.

### **3.2. Specific objectives**

- To determine menstrual hygiene management practice among secondary school girls.
- To identify factors associated with menstrual hygiene management practices among secondary school girls.

## **Chapter four: Methods and Material**

### **4.1 Study area and period**

The study was conducted in Finot Selam town, the capital city of west Gojjam zone, located 396 km away from Addis Ababa and 170 km from Bahirdar. According to the population projection of Ethiopia for all regions at woreda level in 2017, the total population of the town is estimated to be 38,399. Out of these, 19,923 are male and 18,476 females. Amharic is the official language spoken in the city. The town is administratively divided into five kebeles. In the town there is one primary hospital, one health Centre, and four private clinics. There is 1 high school and 1 preparatory school in the town. The study was conducted from March 20 to March 30,2019.

### **4.2 Study design**

School based cross-sectional study with both quantitative and qualitative methods was employed.

### **4.3 populations**

#### **4.3.1 Source population**

- All school girls who have reached menarche and attending their education in secondary and preparatory schools in Finot Selam town.

#### **4.3.2 Study population**

- School girls in secondary and preparatory schools in Finot Selam town for 2018/19 academic year who met the eligibility criteria.

### **4.4 Eligibility Criteria**

#### **4.4.1 inclusion criteria**

- All girls from grade 9th to 12th who were attending their education on the regular program.

### **4.5 Sample size determination and sampling procedure**

#### **4.5.1 Sample size determination**

The sample size for menstrual hygiene management practice was calculated using single population proportion formula, with the following assumptions: 95% CI, 5% margin of error and 52.5% proportion of good menstrual hygiene practice among adolescent school girls in previous study (32). The calculated sample size was 383.

For factors associated with menstrual hygiene management, the sample size was calculated by STATCALC of epi info version 7.2.2.6 as follows.

**Table 1 : sample size calculation for objective two**

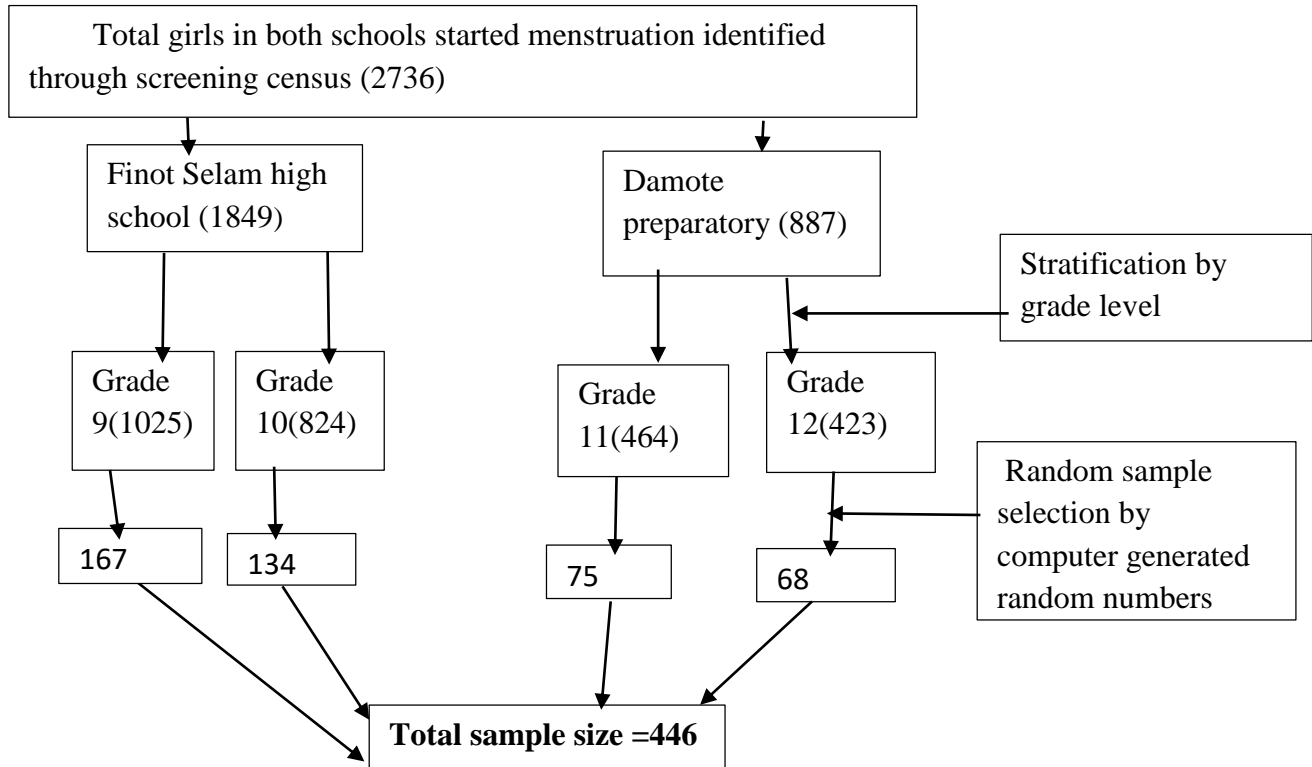
s. no	Associated factor (variable)	Proportion of outcome among unexposed	Ratio of exposed to unexposed	AoR	Pow er (%)	CI (%)	Calculated sample size (n)	References
1	Learn about menstrual hygiene in the school	35.8	1.01	2.47	80	95	188	(Ephrem B et al,2017)
2	Heard about sanitary pads	14.1	0.21	2.50	80	95	<b>477</b>	(Balew Z, 2016)
3	Residence	27.6	0.45	2.70	80	95	183	
4	Permanent Pocket money	36.7	00.15	2.73	80	95	276	(Upashe S et al,2015)

So, decision was made based on the comparison between the first specific objective (383) and second objective (477). Finally, due to the issue of representativeness a sample size of 477 was used. since the source population was <10,000(2736) finite population correction formula was used and adding 10 % non-response rate the final sample size for this study was 446. For in-depth interview and key informants interview, 8 adolescent girls & 3 female teachers, 4 male students and 2 school directors, who can reflect the different inputs required to support to meet the set objectives were participated.

#### **4.5.2 Sampling procedures**

A stratified sampling technique was used to select participants from secondary and preparatory schools in the town. First respective sample was allocated to each year of study (grade) proportionally based on number of female students. Finally, by using computer generated random numbers adolescent girls from each grade were selected considering the list of female students as a sample frame. Purposive sampling for in-depth interview and key informant interview was employed.

**Figure 2: Schematic presentation of sampling procedure**



## **4.6 Data collection procedure**

### **4.6.1 Instrument**

Data were collected by using pre-tested structured self-administered questionnaires adapted from review of related literatures (32,36). It consists of three sections (socio demographic information, menstrual hygiene management practice and menstrual hygiene management practice associated factors questions). For qualitative data semi structured IDI guide was used.

### **4.6.2 Data collection technique**

Self-administered questionnaire was distributed to the students by trained four health extension workers with past experience on data collection, and the data were collected in class rooms and female instructors have facilitated the orientation and dissemination of the questionnaire. Finally, the filled questionnaire was checked for completeness and consistency of the data by the supervisors (BSc Midwives). In-depth interview was conducted with adolescent girls & male students and key informant interview with school directors, female teachers.

## **4.7 Variables**

### **4.7.1 Dependent variables**

- Menstrual hygiene management Practice.

### **4.7.2 Independent variables**

- **Socio-demographic and socio -economic variables;**
  - ✓ Age
  - ✓ Grade
  - ✓ Religion
  - ✓ Ethnicity
  - ✓ Marital status
  - ✓ Place of residence
  - ✓ Age at menarche
  - ✓ Permanent pocket money
- **Parental factors**
  - ✓ Mothers educational status
  - ✓ Fathers educational status
  - ✓ Mothers occupation
  - ✓ Fathers occupation



- ✓ Wealth index
- **Information on menstrual hygiene**
  - ✓ Discussion with parents on menstrual hygiene.
  - ✓ Hear about menstruation before attaining menarche
  - ✓ Knowledge on sanitary pads available in the market
  - ✓ Learn about menstrual hygiene at school

#### **4.8 Operational definition**

The students' practices were scored using a scoring system adapted from a past study(36). The measurement of practice of menstrual hygiene score was calculated out of 12 practice specific questions (Table 3). Each correct response earned one point, where as any wrong or don't know response attracted no mark and thus the sum score of practice was calculated. And the mean score of menstrual hygiene practice ( $7.92 \pm 1.83$ ) was used to decide the cutoffs of the rank.

**Good practice:** - Respondents who scored 8-12 points from practice questions were declared as having good practice.

**Poor practice:** - Respondents who scored 0-7 points from practice questions were declared as having poor practices (36).

**Wealth index:** the wealth index is a composite measure of a household's cumulative living standard. The wealth index was calculated using easy-to-collect data on a household's ownership of selected assets, such as televisions and bicycles; materials used for housing construction; and types of water access and sanitation facilities. Households are then categorized in to five quantiles from the poorest to the richest groups corresponding to the lowest to the highest quantile(42).

#### **4.9 Data analysis**

The quantitative data were checked, coded and entered in to Epi-data version 3.1 software, and then exported to Statistical package for social sciences (SPSS) version 20 for statistical analysis. First descriptive summaries (including frequency, proportions, and mean) were carried out for both independent and dependent variables. Principal component analysis was used to compute wealth index from house hold assets and utilities. Appropriateness of PCA for the items was checked by Kaiser Meyer Olkin measure of sampling adequacy and Bartlett test of sphericity. Items with communality  $< 0.5$  and have complex structure ( $\geq 0.4$  loading on more than one component) in the

rotated component matrix was removed from the analysis. Finally, the first component which have higher total variance was taken as wealth index. Bivariate analysis was done to identify association between the independent and the dependent variables. Those variables with a p-value  $< 0.25$  in bivariate analysis was a candidate for multivariable logistic regression, and then those variables with a p-value  $< 0.05$  in multivariable analysis was declared as having statistically significant association with menstrual hygiene management practice. Multicollinearity was checked by using VIF and not detected ( $VIF < 10$ ). Hosmer and Lemeshow goodness of fit test was used to assess the model fitness (p-value  $> 0.05$ ). Data from in-depth interview were transcribed, translated, coded and then overarching themes were identified based on recurring patterns.

#### **4.10 Data quality management**

The quality of data was assured by using structured questionnaire adapted after reviewing related literatures and following the necessary procedures. To check for its conceptual equivalence, the questionnaire was translated to Amharic language and back translated to English by language professionals of similar status. Pre-test of data collection tools was also done in Burie high school by taking 5% of the sample size (23) and appropriate amendment was taken. Training was given for data collectors and supervisors one day before data collection. The questionnaire was checked for completeness on daily basis by immediate supervisors.

#### **4.11 Ethical consideration**

Ethical clearance was obtained from the Institutional Review Board of Jimma University institute of Health. Approval letter was obtained from Finot Selam town education office and support letter was written for the respective schools. School directors were briefed on the objectives of the study and permission to conduct the study was obtained from participating schools. Informed consent was obtained from each study participants and assent from parents/guardians was taken for those with age  $< 18$  years and their confidentiality, privacy and anonymity was maintained.

#### **4.12 Dissemination of results**

The finding of this research will be presented for thesis examiners and submitted to Jimma University Faculty of Public Health Department of Population and Family Health. The results will also be disseminated to Finot selam town health and educational offices. Effort will be made to present it in different seminars, research conferences and workshops. Finally, attempt will be made to publish it in reputable journals.

## **Chapter five: Results**

### **5.1. Socio-Demographic Characteristics of the respondents**

A total of 442 adolescent girls, 299 from secondary and 143 from preparatory school were participated in the study, with response rate of 99.1%. Almost two third (66.1 %) were within the age group between 16 and 18 with the mean ( $\pm$ SD) age of 17.39 ( $\pm$ 1.59) years. The mean( $\pm$ SD) age of menarche was 14.1 $\pm$ 1.36 years. The majority, 434 (98.2%) of respondents were from Amhara ethnic group and 422 (95.5 %) were orthodox Christians. Most, 422(95.5%) of adolescents were single and 346 (78.3 %) lives with both parents, whereas 52 (12%) lives with mothers only. A little above half (54.1%) of respondents earned permanent pocket money from their families. One hundred fifty-four (35.1%) of respondent's mother can read and write and only 58 (13.2 %) of their fathers completed college and above. More than three fourth (76.5 %) of respondent's mother were housewife and two hundred thirty (53.5 %) of their fathers were farmers.

**Table 2 :** Sociodemographic and economic characteristics of high school students in Finot Selam Town Northwest, Ethiopia, 2019

Variables	Category	Frequency	Percentage
Age in years	13-15	55	12.4
	16-18	292	66.1
	>=19	95	21.5
Age at menarche in years	9-14	265	60.0
	15-20	177	40.0
Residence	Urban	262	59.3
	Rural	180	40.7
Religion	Orthodox	422	95.5
	Muslim	10	2.3
	Protestant	5	1.1
	Catholic	5	1.1
Ethnicity	Amhara	434	98.2
	Agew	4	0.9
	Others <sup>1</sup>	4	0.9
Marital status	Single	422	95.5
	Married	13	2.9
	Others <sup>2</sup>	7	1.6
Live with	Both parents	346	78.3
	Mother only	53	12.0
	Relatives	27	6.1
	Others <sup>3</sup>	16	3.7
	Illiterate	199	45.3
Mothers educational status	Read & write	154	35.1
	Primary	25	5.7
	Secondary and above	51	13.9
Fathers educational status	Illiterate	96	22.0
	Read & write	203	46.5
	Primary	34	7.8
	Secondary	46	10.5
	College and above	58	13.3
	Housewife	336	76.5
Mothers occupation	Merchant	46	10.5
	Governmental employee	28	6.4
	Others	29	6.6
Fathers occupation	Merchant	81	18.8
	Private employee	32	7.4
	Governmental employee	74	17.2
	Farmer	230	53.5
Pocket money	Others <sup>4</sup>	13	3.1
	Yes	239	54.1
	No	203	45.9
Wealth index	quantile one	89	20.1
	quantile two	88	19.9
	quantile three	88	19.9
	quantile four	89	20.1
	quantile five	88	19.9

<sup>1</sup> Ethnicity= Oromo, Tigray, <sup>2</sup>marital status= divorced, widowed, <sup>3</sup>live with= their husband, individually, <sup>4</sup>father's occupation = no work at all, daily laborer

## 5.2 Information about menstrual hygiene management

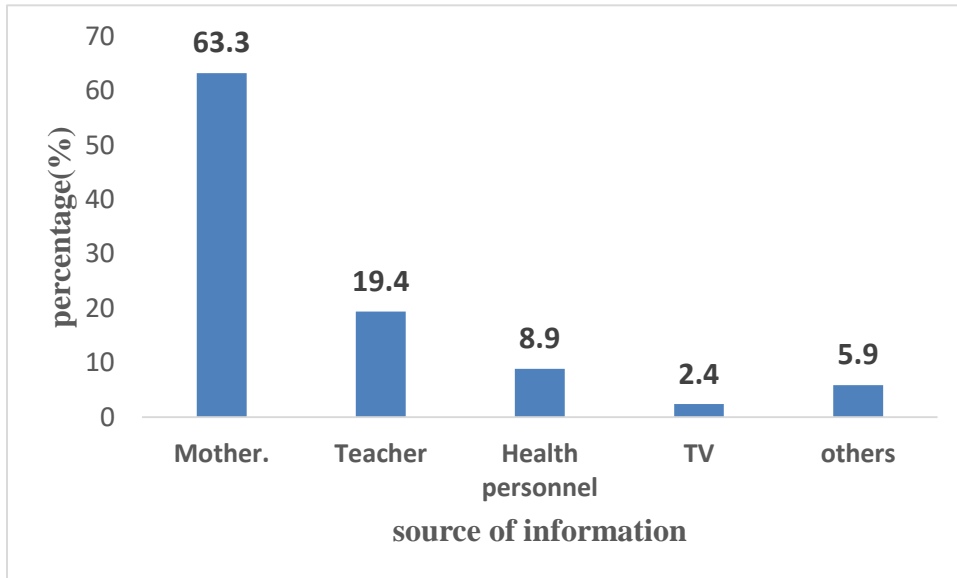
According to the data obtained from the participants, three hundred seventy-one (83.9 %) of the participants had heard about menstruation before menarche. Mothers (63.3%) were the main sources of information followed by teachers (19.4%), health professionals (8.9%), mass media (2.4%). The in-depth interviews in the qualitative session also revealed that most girls had prior knowledge about menstruation and its management. But they become frustrated during their first menstruation and they reported to have been faced different psychological and emotional problems, including being shocked and scared.

*“... I was attending class when I had my first menstruation....my cloth was stained with blood as I was not ready and had only underwear’s. I felt ashamed because of others might gossip at me. I went to home running ahead of the students in order not to be seen by others.....”*  
(IDI participant, G11 female student)

*“During my first menstruation I was shocked and embarrassed. Generally, whenever I have it, I think that I’m below humans, depressed ..... I hate being female; I assumed it as a disease....”* (IDI participant, G 9 female student).

Two hundred sixty (58.8%) of respondents had a discussion about menstruation with their parents at home. Both about menstrual hygiene management & methods how to use sanitary materials (82.3%) were the main topics that have been discussed. Shamefulness 60 (33%), Not habitual 58 (31.9%), Privacy 45(24.7%) & all together 18(9.9%) were the major reasons of not discussing about the issue of menstruation. This is also supported by qualitative findings as the information, which came out strongly from most of the girls participating in the IDI, revealed that talking about menstruation is shameful and sensitive issue to be discussed. As one of the interviewed girls pointed out:

*“.... Before I started menstruating I didn’t know about menstruation..., this issue is very secretive; it is not supposed to be discussed with parents even sisters at home about menstruation”* (IDI participant G10, female student).

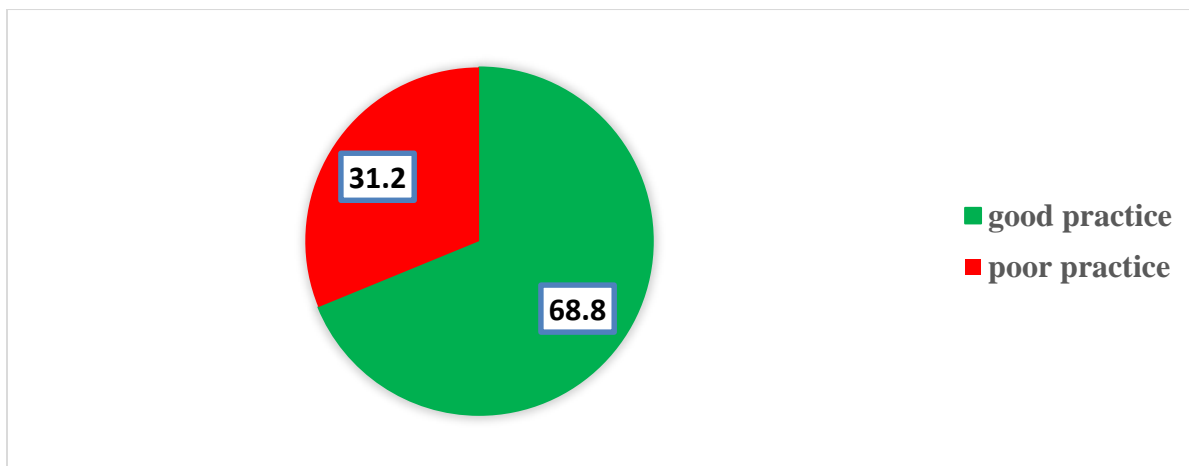


*Others = books, peer to peer training & friends.*

Figure 3 :Respondents source of Information about menstruation in Finot Selam town Amhara region ,northwest Ethiopia 2019.

### 5.3 Hygienic practices during menstruation

Out of the total respondents ,304 (68.8%) of respondents had good practice on menstrual hygiene management. Majority, 410(92.8 %) of girls were using absorbent material during menstruation of whom 293 (71.5 %) of girls use commercially made disposable sanitary pads, 73 (17.8%) use reusable sanitary pads, 39 (9.5 %) use disposable piece of rage and 1.2 % use toilet paper/underwear as absorbent material during menstruation.

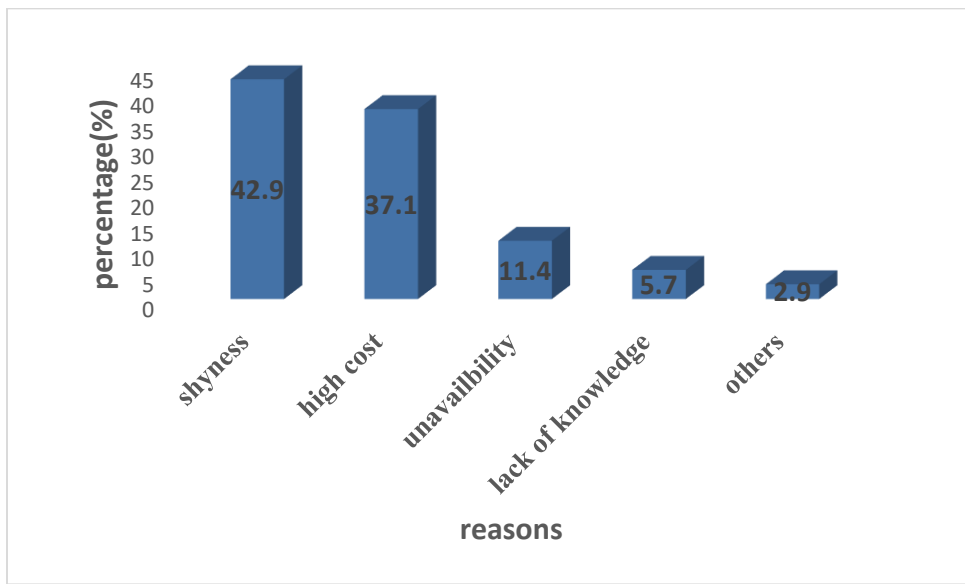


**Figure 4:** level of menstrual hygiene management practice among secondary school girls in Finot Selam town northwest Ethiopia, 2019.

Shyness to purchase (46.9%) was the main reason for not using sanitary pads followed by high cost (37.5%), unavailability (12.5%) & lack of knowledge (3.1%). It was also found in the IDI that even though girls know sanitary pads, most of them used homemade cloths or underwear. Lack of money, local access and knowledge and skill gap on how to use sanitary pads were some of the reasons explained why they didn't use sanitary pads. In addition to these some girls didn't buy sanitary pads from shops since they were shameful to do so.

*“..... I felt ashamed to buy sanitary pads from shop and I thought that people might talk about my monthly menstrual period while I ask the sanitary pads and thus I didn't use....”* (IDI participant)

*“.....Our teacher has taught and told us, in the gender club, to use sanitary pads even at school. However, since male students follow us while we change menstrual soak ups in school and teased at us, we didn't use sanitary pads...”* (IDI participant)



*Others=Not bleeding highly, lack of comfort*

**Figure 5 :** Reasons why students didn't use menstrual sanitary materials among female high school students in Finot selam town northwest Ethiopia, 2019.

One hundred forty-one (39.8 %) of the respondents change sanitary pads or clothes three times and above, 179 (41.7 %) change twice & (17.8%) change once per day. More than two third (70%) of the respondents didn't change their sanitary materials at school. The findings from qualitative survey related with this concept showed that the majority of the respondents changed their pad/cloths 2-3 times a day during their menses indicating averagely good menstrual hygiene management practice. A girl in damote preparatory says:

*“I use pads during menstruation and I change the pads mostly three to four times a day depending on the flow of blood. If the flow is much I change up to five times in a day.”*

Inadequate sanitation facility was the reported main challenges for girls to manage their menstrual hygiene in the school.

*“In our school there is no water supply in the toilet. Also there is no arrangement of disposing the cloth/rags. Sometime the used cloth/rags have to be disposed of in the toilet-pan. Some days we bleed heavily, and we need to change clothes at least 2 or 3 times during school hours. But there is no place to change and dispose the cloth –there is question of putting back those used cloth in our pockets...”* (IDI participant)

*“In our school there is no private space/room for menstruating girls to change their sanitary materials at school and the water supply of the toilet is inadequate even running water for drinking is infrequent.....”* (female preparatory teacher)

*“.....The school haven't its own water source and it is from the town administrative. The toilet is not adequately supplied with water which challenge specially menstruating girls. This inadequate water supply leads girls to have difficulties maintaining proper standards of hygiene during menstruation.....”* (high school director)

Four hundred twenty-five (92.6 %) of the respondents wash their genitlia during menstruation. From these less than half (44%) use soap and water, and 237 (55.8%) use water only. One hundred thirty-seven (33.6%) of respondent store their sanitary pads with routine clothes and 88(21.6%) store in the bath rooms. Out of 392 study participants who use reusable sanitary pad, 357 (92.1%) use water and soap for washing purpose and only 111 (28 %) of them dried their washed clothes in the sun light. Furthermore, girls in the in-depth interview noted that the use of materials such as



rags torn from old textiles can cause vaginal itching, especially when not properly washed and dried:

*“...If you don't wash and change your sanitary pads regularly you can have rashes and bruises especially. It's very common to feel itching when you are using old rags or pieces of blankets...”*  
(IDI participant).

Moreover:

*“...Sometimes if you don't change you might develop bruises or rashes ... you feel very uncomfortable.....”* (IDI participant).

Two hundred ninety-two (68.9%) of respondents drop their used sanitary pads in the toilet, 113(26.7%) wrap in paper and put in the bin ,2.8% threw in the open field and 1.7% burn it. Nearly two third (63.8 %)of the participants take bath during menstruation of whom only 77 (27.3%) take more than twice per day. Misconception about taking bath during menstruation days was common as revealed from in-depth interviews, girls didn't take bath while having their menstruation due to fear of it might aggravate the bleeding.

*“..... I had never had a bath while having my period, as people often say, it might aggravate the bleeding ..... I had never gone religious places while on my periods, as I learnt from my spiritual, God might curse If I might do it so....”* (IDI participant)

**Table 3 :** Menstrual hygiene management practice among female high school students in Finot selam town northwest Ethiopia, 2019

Hygienic practices	Category	Frequency	Percentage(%)
Use of sanitary materials during menstruation	Yes	432	92.8
	No	10	7.2
Types of materials used	Disposable sanitary pads	293	71.5
	Disposable piece of rags	39	9.5
	Reusable sanitary pads	73	17.8
	toilet paper/Underwear.	5	1.2
Frequency of changing sanitary materials/ day	< three times	243	59.6
	≥ three times	165	40.4
change materials at school	Yes	125	30.5
	No	285	69.5
Practice of genital washing	Yes	425	96.2
	No	17	3.8
Frequency of genital washing	<3 times per day	132	31.1
	≥3 times per day	293	68.9
medium used for washing genitalia	Only Water	238	55.8
	Soap and water	187	44.0
take bath during menstruation	Yes	282	63.8
	No	160	36.2
frequency of bath during menstruation	≤Two times in a day	205	72.7
	> Two times in a day	77	27.3
Medium used to wash reusable cloths	Soap and water	357	92.5
	Water only	35	7.5
Disposal of sanitary materials after use	Open field	12	2.7
	Latrine	286	69.9
	Wrap in paper and put in the bin	107	26.2
	Others*	5	1.2
Drying of washed reusable cloths	In the shade inside	198	50
	In the sunlight outside	111	28.1
	Hidden under other clothes	87	22

\*=burn, any hidden place

#### **5.4 Factors associated with menstrual hygiene management practice**

In bivariate analysis place of residence, mother's educational status, father's educational status, father's occupation, monthly pocket money, wealth index, knowledge of sanitary pads, discussion with parents about menstruation, heard about menstruation before attaining menarche, learn about menstrual hygiene in the school were the factors that shown significant association (at  $P < 0.05$ ) with overall practice of menstrual hygiene management of respondents.

In the multivariable logistic regression analysis, it was found that the odd of good practice was 3.4 times higher [AOR=3.40; 95% C.I: (1.16, 9.97)] among girls whose fathers' education was college and above compared with girls whose father can't read and write. Adolescent girls who heard about menstruation before menarche were 3.95 times [AOR=3.95; 95% C.I: (2.13 ,7.33)] more likely to have good practice of menstrual hygiene management compared to those who didn't heard about menstruation. It was also found that the odd of good practice of menstrual hygiene management among those who discuss about menstrual hygiene with their parents was 2.75 [AOR =2.75 ;95% CI: (1.71, 4.43) times higher than those who didn't discuss about menstrual hygiene with their parents. Adolescent girls who know sanitary pads in the market was 2.1 [AOR =2.10 ;95% CI: (1.18, 3.28)] times more likely to practice good menstrual hygiene management than those who didn't know about sanitary pads.

Table 4 :Bivariate and multivariable logistic regression analysis for factors affecting the practice of menstrual hygiene among female high school students in Finot selam town northwest Ethiopia ,2019.

Variables		Practices		COR(95% C.I)	AOR(95% C.I)
		Good(%)	Poor(%)		
Residency	Urban	190(72.5)	72(27.5)	1.53(1.02,2.29)*	0.77(0.43 ,1.38)
	Rural	114(63.3)	66(36.7)	1	1
Mothers educational status	Illiterate	118(59.2)	81(40.8)	1	1
	Read & write	111(72%)	43(28%)	0.28(0.14,0.60)*	0.36(0.13 , 1.01)
	Primary	22(88)	3(12)	0.51(0.24, 1.02)	0.52(0.18 ,1.50)
	Secondary & above	51(83.6)	10(16.4)	1.44(0.36,5,74)	1.39(0.25 ,7.47)
Fathers educational status	Illiterate	57(59.4)	39(40.6)	1	1
	Read & write	136(67)	67(33)	1.40(0.84 , 2.29)	1.13(0.64 ,2.00)
	Primary	27(79.4)	7(20.6)	2.64(1.05 , 6.66)*	1.65(0.61,4.45)
	Secondary	29(63)	17(37)	1.17(0.57 ,2.41)	0.57(0.25 ,1.30)
Fathers occupation	College and above	53(91.4)	5(8.6)	7.25(2.66 ,11.78)	<b>3.40(1.16 ,9.97)**</b>
	Merchant	69(85.1)	12(14.9)	1	1
	private organization	15(46.8)	17(53.2)	0.15(0.06,0.39)*	0.12 (0.04 ,0.53)
	Governmental employee	64(86.5)	10(13.5)	1.11(0.45 ,2.75)	0.57(0.19 ,1.70)
Pocket money	Farmer	150(61.7)	93(39.9)	0.30(0.16, 0.59)*	0.22 (0.09, 0.50)
	Yes	181(75.7)	58(24.3)	2.03 (1.35 , 3.05)*	0.76(0.45 ,1.29)
Wealth index	No	123(60.2)	81(39.8)	1	1
	quantile one	55(61.7)	34(38.3)	0.33(0.17 ,0.67)*	1.03 (0.39 ,2.72)
	quantile two	48(54.5)	40(45.5)	0.25(0.12 ,0.490)*	1.03 (0.41 ,2.61)
	quantile three	62(70.4)	26(29.6)	0.49(0.24 ,1.01)	1.61(0.65 ,3.99)
	quantile four	66(74.1)	23(25.9)	0.59(0.28 ,1.22)	1.84(0.69 ,4.87)
	quantile five	73(83)	15(17)	1	1
Heard about menstruation before menarche	Yes	279(75.2)	92(24.8)	5.58(3.24 ,9.59)*	<b>3.95(2.13,7.32)**</b>
	No	25(35.2)	46(64.8)	1	1
Discussion with parents about menstruation	Yes	208(80)	52(20)	3.58(2.35 ,5.46)*	<b>2.75(1.71,4.43)**</b>
	No	96(52.7)	86(47.3)	1	1
Learn about menstrual hygiene in the school	Yes	224(74.9)	75(25.1)	2.35( 1.54 ,3.58)*	1.62 (0.97 ,2.72)
	No	80(55.9)	63(44.1)	1	1
Know sanitary pads in the market	Yes	220(75.80)	709(24.2)	2.58(1.69 ,3.91)*	<b>2.10(1.30,3.39)**</b>
	No	83(54.9)	68(45.1)	1	1

\*=p-value<0.25; \*\*=p-value<0.05(significant)

## **Chapter six: Discussion**

This institution based study attempted to assess the magnitude and associated factors of menstrual hygiene management in Finot Selam town. Accordingly, hygienic practice of adolescent girls during menstruation and influencing factors were identified.

The finding of this study showed that 83.9 % of adolescent girls had heard about menstruation before menarche of which the majority got the information from their mothers (63.3%). This could be suggestive of the contribution of mothers for hygienic practice of girls during menarche. This is higher than similar studies in Amhara region mehalmeda high school and Nepal that found 22.9% & 37.1% of adolescent girls have informed before menarche respectively (3, 27) . This might be due to difference in the source of information as the major source in these two studies were mass media which might not be easily accessed by most of adolescent girls.

In this study it was observed that 68.8% of respondents had good practice of menstrual hygiene management. This finding is similar with study done in Oromia region Boset district which showed that 70.9% had good practice of menstrual hygiene(35). This is higher than a finding from a study conducted in Amhara region Wugera district and Bangladesh in which only 39.9 % & 28.8% practices good menstrual hygiene (41,25). This discrepancy may be due to different socio demographic and socio cultural characteristics of the study participants. The possible explanation for this finding is residency as most of participants in the current study were from urban this in its turn will increase the access of getting health information and might have access of sanitary pads (36).

Regarding the type of sanitary materials used, the study found that 88.3 % of the respondents use commercially made sanitary pads. This is higher than studies conducted in Oromia region Boset district and Uganda in which only 46.3 %& 36. % respectively use commercially made sanitary pads (35, 31). This difference might be due to lack of access to and knowledge on menstrual napkins and it might be due to misperceptions about utilization of sanitary pads.

It was also found that only 31.5 % of girls change their sanitary pads at school. This is lower than studies done in Addis Ababa and Bahirdar showed 70.2 %& 95.1% of students change their menstrual pads at school (32 , 36). This might be due to difference in sanitation facilities and lack

of private space to manage menstruation in the school as the in-depth interview data documented that most girls in this study didn't change their sanitary material at school.

*“In our school there is no water supply in the toilet. Also there is no arrangement of disposing cloth/rags. Sometime used cloth/rags have to be disposed of in the toilet-pan.. There is no place to change and dispose the cloth –there is question of putting back those used cloth in our pockets...”* (G10 Female participant)

*“In our school there is no private space/room for menstruating girls to change their sanitary materials at school and the water supply of the toilet is inadequate even running water for drinking is infrequent.....”* (female preparatory teacher).

This study also showed that 63.8 % of girls took bath during menstruation. This is consistent with similar study in Addis Ababa which found 65 .8 % take bath during mensuration(32). However, it is lower than studies done in India and Egypt where 88.8% &70.9% of the girls took bath during menstruation (30 , 8). This might be due to socio cultural difference in perception towards menstruation and traditional restrictions on some regular activities. This is also supported by finding from the in-depth interview that bath during menstruation is considered as it might aggravate the bleeding.

*“..... I had never had a bath while having my period, as people often say, it might aggravate the bleeding ..... I had never gone religious places while on my periods, as I learnt from my spiritual, God might curse If I might do it so....* (IDI participant)

This study also showed only 2.7 % of girls dispose in open field after utilization of sanitary material. This finding is consistent with the study in Bahirdar town in which open filed disposal was 4%(36). It might indicate that how much the issue is sensitive and its management is secretive. It is much lower compared to study in northwest Ethiopia north Wullo zone where 33.4% disposed in the open field (22). This might be due to difference in respondent's solid waste management system, access to toilet facilities and the perception for menstruation.

The multivariable analysis showed that girls whose fathers education was colleges and above were 3.4 times more likely to practice good menstrual hygiene than Girls whose father was illiterate. It is consistent with the finding from study in Iran which showed that girls whose father's educational

status was university and above was 4.3 times higher than those whose father was illiterate (26). The reason could be that educated fathers are more likely to be aware of the physiology of menstruation and to be supportive for their daughter's in material as well as to discuss openly on menstrual hygiene. Studies in Adama town and Nekemtie town revealed the significant association between Menstrual hygiene practice and maternal educational status (34 , 33). But the finding of this study did not support these findings. It might be related to adolescent girls are more intimate and open to deal their problem with their mothers irrespective of maternal educational status.

Information about menstruation before menarche was found to be significantly associated with hygienic practice. It was observed that good practice was 3.95 times more among those who had information before they reach menarche compared to their counter parts. It might be due to prior information made them ready to practice safe hygienic management. Other studies (36, 41,32) found that there was no significant association between information before menarche and menstrual hygiene management practice. It might be due to difference in source of information in which mothers were the main source of information in this study it may increase their confidence to practice what they informed.

Discussion with parents about menstruation was the other predictor of menstrual hygiene management. Those who have discussion with their parents at home were 2.7 times more likely to have good practice than those who didn't discuss. Study done in Addis Ababa also found significant association between these variables(32). It might be related to getting freedom to ask for sanitary materials from their parents and to consider it as a natural phenomenon to manage without frustration. Knowledge on sanitary pads available on the market was the other significantly associated factor. The study done in Bahirdar town also showed this significant association that good practice was 2.49 times higher among those who know about sanitary pads (36). This might be related that having an information and knowing sanitary pads could initiate them to utilize sanitary pads.

### **Strength and Limitation of the Study**

Data was collected from primary sources by self-administered questioner which might decrease the possibility of social desirability bias. Mixed data collection method was employed and the quantitative finding was triangulated by qualitative findings from in-depth interview.

Due to its cross-sectional nature of the study, it is difficult to establish causal relationship between the dependent and predicting variables. Basically, the study addressed the sensitive issue about menstrual hygiene and there will be possibility of social desirability bias. Was tried to minimize it by using experienced female data collectors and female teachers to facilitate the orientation and it was self-administered. It was difficult to acquire the exact age of menarche as there may be recall bias. To minimize it attempt was made to link with their grade level during their first menstruation.



## **Chapter seven: Conclusions & Recommendations**

### **7.1 Conclusions**

According to the study finding most adolescent school girls have good practice of menstrual hygiene management and most utilize commercially made sanitary pads whereas paternal educational status, discussion with parents, prior information on menstruation and knowledge on sanitary materials on the market revealed significant association with practice of menstrual hygiene. Maternal education, pocket money & residency were the factors that didn't show association with menstrual hygiene management practice. However only a little above half of respondents have discussion with their parent's about menstruation at home. Shyness to purchase and high cost were found to be the major reasons of not utilizing commercially made sanitary pads. Most of the students didn't change their sanitary material at school related with lack of WASH facilities in the school.

### **7.2 Recommendations**

#### **Regional level**

- Program designers and stakeholders should setup health education program to adolescent on menstrual hygiene at all levels starting from the elementary schools.

#### **School level**

- School level managers are suggested to complement menstrual hygiene management as part of the school health programs
- Should also give special attention towards making schools a comfortable place for girl's menstrual hygiene management.
- Special educational programs in school curriculum to improve parent's literacy, particularly fathers.

#### **Health professionals**

- should educate the community about menstruation to avoid cultural restrictions and practices during menstruation and to educate adolescent girls about good menstrual hygiene management.

- Should increase mother's awareness about menstruation and its hygienic management and encourage mother – daughter communication since they are the main source of information about menstruation.

**Parents are advised to:**

- Educate their daughters about personal hygiene, to utilize sanitary pads, and its proper disposal.
- Support their children with sanitary materials for menstrual hygiene.

**Researchers**

- Are advised to do large scale study on menstrual hygiene by employing both qualitative and quantitative methods to identify deeply rooted socio cultural and environmental factors and, the risk of RTIs related with poor menstrual hygiene and the effect on their academic performance.

## References

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## **Annex:1 Information sheet**

### **Introduction**

Good morning /good afternoon.

My name is Zinie Abita. I am conducting research as part of my degree in Master of public health in Reproductive Health at Jimma university. My Research project is entitled as:

Assessment of menstrual hygiene management practices and Associated Factors among secondary and preparatory school girls in Finot Selam town, Northwest Ethiopia, 2019.

### **Dear participants:**

The aim of this study is to assess menstrual hygiene management practices and associated factors among secondary and preparatory school girls. And you are selected to participate in this study by chance. The benefits of this study is to generate information about menstrual hygiene management practices and associated factors among secondary and preparatory school girls in Finot Selam town northwest, Ethiopia; which may help policy makers, responsible persons in the high schools, stakeholders and significant others to take actions based on the findings. There is no any financial benefit for you in participating in the research. However, in order to effectively attain the objective of the research, I am kindly requesting your participation.

There are questions related to menstrual hygiene management practices and associated factors among secondary and preparatory school girls for you to fill completely and there is no need to put your name on the questionnaire. Your responses will be completely confidential. It is your full right to refuse in responding any question or all of the questions. If you don't want to participate you can leave the questionnaire empty even you can stop filling the questionnaire in between. However, your honest answers to these questions will help me in better understanding of menstrual hygiene management practices and associated factors. It will take a maximum of 30 minutes to answer these questions.

Name of Principal Investigator: - Zinie Abita.

Name of Advisors: - Dr. Bitiya A& Mss. Rahma A

## Informed Consent

Dear study participants!

You are invited to participate in a research project about Menstrual hygiene management practices and associated factors among secondary and preparatory school girls in Finot Selam town, Northwest Ethiopia 2019.

This self-administered questionnaire will take about 20 to 30 minutes to complete. Participation is voluntary, and responses will be kept anonymous. You have the option to not respond to any questions that you choose. Participation or nonparticipation will not impact your relationship with the teacher or any other members of the school.

I confirm that I have read and understood the information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to take out at any time, without giving a reason and without cost.

I Agree  I Disagree

## English Questionnaire

Jimma university faculty of public health department of population and family health; Questionnaires for assessment of menstrual hygiene management practices and associated factors among secondary and preparatory school girls.

<b>Part 1:-Socio-demographic related questions</b>			
Sno	Questions	Possible answer	Code
101	How old are you now?	I am -----years old	
102	Your grade level	1.9 <sup>th</sup> 2.10 <sup>th</sup> 3.11 <sup>th</sup> 4. 12 <sup>th</sup>	
103	How old were you at your menarche?	I was -----years old	
104	Your residence	1. Urban 2. Rural	
105	Your religion	1. Orthodox 2. Muslim 3. Protestant 4. Catholic	

		5. Others (specify) -----	
106	Your Ethnicity	1. Amhara 2. Oromo 3. Tigre 4. Other; specify	
107	Your marital status	1. Single 2. Divorced 3. Widowed 4. Married 5. Not applicable	
108	With whom do you live?	1. Both parents 2. Mother only 3. Relatives 4. Father Only 5. Others (specify) -----	
109	What is your mother's educational status?	1. Illiterate 2. Read & write 3. Primary 4. Secondary above	
110	What is the father's educational status?	1. Illiterate 2. Read & write 3. Primary 4. Secondary 5. College and above	
111	What is your mother's occupational status?	1. Housewife 2. Student 3. Merchant 4. Private organization employee 5. Governmental employee 6. Daily laborer 7. Others (specify) -----	
112	What is the father's occupational status?	1. Merchant 2. private organization employee 3. Governmental employee 4. Driver 5. Daily laborer 6. Others (specify) -----	
113	Do your parents provide permanent pocket money regularly?	1. Yes 2. No	
114	<b>Household assets and utilities</b>		
	<b>Assets and Utilities</b>	<b>Response</b>	<b>Assets and Utilities</b>
	Clock	1=yes 0=no	Private shower
	Radio	1=yes	Bicycle
			Response
			1=yes 0=no
			1=yes



		0 =no		0 =no
	TV	1=yes 0 =no	Tracker /Automobile	1=yes 0 =no
	Mobile phone	1=yes 0 =no	Privately owned house	1=yes 0 =no
	Home phone	1=yes 0 =no	Have crop land?	1=yes 0 =no
	Refrigerator	1=yes 0 =no	Laptop /computer	1= yes 0 = no
	Washing machine	1=yes 0 =no	Have cattle/camels	1=yes 0 =no
	Material of the house	1 = concrete or wood 0 = mud or thatch	Have sheep/goats?	1=yes 0 =no
	Roof material	1= tiles or galvanized iron or concrete 0 = mud or thatch or plastic	Have horse/mule/donkey?	1=yes 0 =no
	Crowding	1 = 5 or fewer people per room 0 = 6 or more people per room	Grow cash crops	1=yes 0 =no
	Toilet facilities	1 = flush or ventilated improved latrine 0 = open pit or none (bush field)	A bed/ table?	1=yes 0 =no
	Source of water	1 = piped into dwelling or borehole with pump or protected dug well 0 = pond or unprotected well	A kerosene lamp / pressure lamp?	1=yes 0 =no
<b>Part 2:-Menstrual hygiene management practice related questions</b>				
201	Do you use sanitary material(s) during menstruation?		1. Yes 2. No	
202	If your answer is Yes for Q no 301, what sanitary material do you use during menstruation?		1. Disposable sanitary pads. 2. Disposable piece of rags. 3. Reusable sanitary pads 4.toilet paper/ Underwear. 5. Others; specify-----	

203	If your answer is No for Q no 301, What is your reason for not using sanitary pad?	1. Lack of knowledge 2. High cost 3. Unavailability 4. Shyness 5. Others ; specify-----	
204	Do you wash your genitalia during menstruation?	1. Yes 2. No	
205	If your answer for question no 304 is yes what medium do you use for your genital cleaning purpose?	1. Only Water. 2. Soap and water.	
206	If your answer for question no 304 is yes how often do you wash your genitalia per day?	1. <= Two times in a day. 2. > Two times in a day.	
207	Do you take bath during menstruation (exceptional from the usual)?	1. Yes 2. No	
208	If your answer for question no 307 is yes how often do you take bath during menstruation per day?	1. <= Two times in a day. 2. > Two times in a day	
209	Do you change your sanitary material(s) during menstruation at school?	1. Yes 2. No	
210	How often do you change absorbent material per day?	1. Once 2. Twice 3. Three times 4. More than three times	
211	How do you dispose menstrual materials after use?	1. Open field 2. Latrine 3. Wrap in paper and put in the bin 4. Others; specify ---- -----	
212	Where do you store your new and/or reusable absorbent(s)?	1. Drawers 2. Dress cabinet 3. Bathrooms 4. Store with routine cloth 5. Don't store 6. Others ; specify--	
213	What materials do you use for Washing of the reusable cloth?	1. With soap and water 2. With water, only	

214	Where do you put/keep your reusable sanitary pads after washing for drying?	1. inside the home 2. Outside the home 3 Hidden elsewhere	
-----	---	---	--

<b>Part3:-Menstrual hygiene management practice associated factors related questions</b>			
301	Have you heard about menstruation before menarche?	1. Yes 2. No	
302	If your answer is 'Yes' for question no 401, where did you get the information about menstruation before menarche?	1. Mother. 2. Teacher. 3. Health personnel. 4. TV. 5. others; specify----- -----	
303	Do you freely discuss about menstruation issues with your parents?	1. Yes 2. No	
304	If your answer for question no 403 is "Yes", in what topics/issues why?	1. About menstrual hygiene management. 2. About methods how to use sanitary pads. 3. both	
305	If your answer for question no 403 is "No", why?	1. Because of shamefulness 2. Not habitual. 3. Privacy. 4.other specify----- -----	
306	Do you know sanitary pads in the market?	1. Yes 2. No	
307	Have you ever learned about menstrual hygiene management in the school ?	1. Yes 2. No	

Thank you very much for your patience

Data collector's name-----signature----- Date -----

**ክፍል አንድ : ስለጥናቱ መረጃን በተመለከተ**

**የጥናቱ ተሳታፊ የሚሆኑ ሴት ተማሪዎች ወደ ጥናቱ ተሳታፊ ከመሆናቸው በፊት ስለጥናቱ ጥቅም ማግኘት ያለባቸው መረጃን በተመለከተ**

እኔ ዝኔ አቢታ የጅማ ዩኒቨርሲቲ የድህረ ምረቃ ተማሪ ስሆን በምእራብ ጎጃም ዞን፣ፍኖት ሰላም ከተማ በሁለተኛ ደረጃ እና የከፍተኛ ትምህርት መሰናዶ ትምህርት ቤቶች በሚማሩ ሴት ተማሪዎች በወር አበባ ጊዜ የሚያደርጉትን የንፅህና አጠባበቅ እና ተያያዥ ችግሮች በተመለከተ ጥናት በማድረግ ላይ እገኛለሁ። እርስዎ የጥናቱ ተሳታፊ እንዲሆኑ ተመርጠዋል። ይህ ጥናት ለሚመለከታቸው ፖሊሲ አዘጋጆች እና ለመንግስት አካላት የሴት ተማሪዎችን በወር አበባ ጊዜ የንፅህና መጠበቅ አገልግሎት መሻሻልን በተመለከተ እቅድ ለማውጣት ይጠቅማቸዋል። የጥናቱ አስፈላጊነት በሚመለከታቸው አካላት ተረጋግጧል። ለጥያቄዎች መልስ ይሰጡን ዘንድ ግማሽ ያህል ሰዓትዎን ልንሻማብዎት ነው። እርስዎም በተቻለ መጠን ትክክለኛውን መልስ ወይም መረጃ እንዲሰጡን ስንል በትህትና እንጠይቃለን። የሰጡት መረጃ ለሌላ ጤና ባለሙያ ወይም ሌላ ሰው ያለ እርስዎ ስምምነት ተላልፎ የማይሰጥ መሆኑን ማለትም ምስጢሩ የተጠበቀ መሆኑን እየገለፅሁ ጥናቱ ምንም አይነት ጉዳት እንዳለማድረሱ መጠን ምንም ዓይነት ካሳም አያስፈልገውም። የእርስዎ ተሳትፎ ሙሉ በሙሉ በፈቃደኝነት ላይ የተመሰረተ ከመሆኑም ባሻገር በማንኛውም ሰዓት ማቋረጥ ይችላሉ ። ስለ ራስሽ ማንነት የሚገልጽ ምንም አይነት መረጃ ስምም ቢሆን በመጠይቁ ላይ አይጻፍም።

**ክፍል ሁለት: የሚስጥር አጠባበቅ ስምምነት**

እኔ ጥናቱን በተመለከተ ተገቢውን የሆነ መረጃ በተገቢው ሁኔታ ተነግሮኝ በአግባቡ ተረድቻለሁ። ጥናቱ ምንም አይነት ጉዳት በህይወቴ ላይ እንደማያደርስ ተረድቻለሁ ስለዚህም ምንም ዓይነት ካሳ አያስፈልገኝም። እኔ የዚህ ጥናት ተሳታፊ ለመሆን ተስማምቻለሁ፤ በተጨማሪም ለመረጃ ሰብሳቢዎችም ለጥናቱ አስፈላጊ የሆነ ተገቢውን መረጃ እንዲሰጠኝ ተስማምቻለሁ ።

ተስማምቻለሁ-----አልተስማማሁም-----  
 -

ፈቃደኝነትን ያረጋገጠው መረጃ ሰብሳቢ ስም -----ፊርማ-----ቀን-----  
 /-----/-----

የመረጃ ተቆጣጣሪ ሰው ስም----- ፊርማ----- ቀን-----  
 ---/-----/-----

**የአማርኛ ቃለመጠይቅ**

ክፍል አንድ፤ የተጠያቂው አጠቃላይ የማህበራዊና ኢኮኖሚያዊ መረጃ በተመለከተ			
ተ.ቁ	ጥያቄ	መልስ	ዝላል
101	አሁን እድሜዎ ስንት ነው ?	-----	
102	የትምህርት ደረጃ	9ኛ፣10ኛ፣11ኛ፣12ኛ	
103	የመጀመሪያ የወር አበባ ሲያዩ ዕድሜዎ ስንተ ነበር?	እኔ -----	

		ዓመት ነበርኩ	
104	መኖሪያ ቦታ	1. ከተማ 2. ገጠር	
105	ሃይማኖት	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ----- -----	
106	የእርስዎ የዘር ሀረግ	1. አማራ 2. አሮሞ 3. ትግሬ 4. ሌላ፤ -----	
107	የጋብቻ ሁኔታ	1. ያላገባ 2. ያገባ 3. የፈታች 4. የሞተባት 5. የማይተገበር	
108	የአኗኗር ሁኔታ	1. ከሁለቱም ወላጆች 2. ከእናቴ ብቻ 3. ከዘመዶች 4. ከአባት ብቻ 5. ሌሎች (ዝርዝር ይግለጹ) ----- -----	
109	የእናት የትምህርት ደረጃ	1. ያልተማረች 2. ማንበብና መፃፍ የምትችል 3. የመጀመሪያ ደረጃ 4. ሁለተኛ ደረጃ 5. ኮሌጅ እና በላይ	
110	የአባት የትምህርት ደረጃ	1. ያልተማረ 2. ማንበብና መፃፍ የሚችል 3. የመጀመሪያ ደረጃ 4. ሁለተኛ ደረጃ 5. ኮሌጅ እና ዩኒቨርሲቲ	

111	የእናት የሥራ ሁኔታ			1. የቤት እመቤት 2. ተማሪ 3. ነጋዴ 4. የግል ድርጅት ሠራተኛ 5. የመንግሥት ሠራተኛ 6. የቀን ሰራተኛ 7. ሌላ (ይግለጹ) --- -----	
112	የአባት የሥራ ሁኔታ			1. ነጋዴ 2. የግል ድርጅት ሠራተኛ 3. የመንግሥት ሠራተኛ 4. ግብርና 5. የቀን ሰራተኛ 6. ሌላ (ይግለጹ) --- --	
113	ወላጅዎ የኪስ ገንዘብ በቋሚነት ይሰጥዎታል?			1. አዎ 2. የለም	
<b>የቤት ንብረት እና መገልገያ ቁሳቁሶች</b>					
114	<b>የቤት ንብረት እና መገልገያ ቁሳቁሶች</b>	<b>መልስ</b>	<b>114.14</b>	<b>የቤት ንብረት እና መገልገያ ቁሳቁሶች</b>	<b>መልስ</b>
114.1	የግድግዳ ሰዓት	1=አዎ 0=የለም	114.15	የግል ወይም ቤት ውስጥ ያለ ገለ መታጠቢያ	አዎ = 1, የለም=0
114.2	ሬዲዮ	1=አዎ 0=የለም	114.16	ብስክሌት	አዎ = 1, የለም=0
114.3	ቴሌቪዥን	1=አዎ 0=የለም	114.17	የቤት/የጭነት መኪና	አዎ = 1, የለም=0
114.4	ሞባይል	1=አዎ 0=የለም	114.18	የግል/የራስ/ መኖሪያ ቤት	አዎ = 1, የለም=0
114.5	የቤት ስልክ	1=አዎ 0=የለም	114.19	የጋዝ ሙቀት አምጥል	አዎ = 1, የለም=0
114.6	ፍሪጅ	1=አዎ 0=የለም	114.20	በግ / ፍየል ቤት ውስጥ አለ??	አዎ = 1, የለም=0
114.7	የኤሌክትሪክ ልብስ ማጠባሰቢያ ማሽን	1=አዎ 0=የለም	114.21	ፈረስ / በቅሎ / አህያቤት ውስጥ?	አዎ = 1, የለም=0
114.8	ለጥቶጥ / ኮምፒተር	1=አዎ 0=የለም	114.22	የሰብል መሬት?	አዎ = 1, የለም=0
114.9	ቤቱ የተሰራበት ቁሳቁስ	1 =	114.23	አልጋ / ጠረጴዛ?	አዎ = 1,

		ከንክራት ወይም እንጨት 0 = ጭቃ ወይም ሳር		የለም=0
114.10	የቤቱ ጣሪያ የተሰራበት ቁሳቁሶች	1 = የብረት እርጥበት ወይም የሲሚንት 0 = ጭቃ ወይም ሳር ወይም ፕላስቲክ		
114.11	የቤትሰብ ብዛት(ጥግግት) በመኖሪያ ክፍል ውስጥ	1 = 5 ወይም ጥቂት ሰዎች በአንድ ክፍል 0 = 6 ወይም ከዚያ በላይ ሰዎች በአንድ ክፍል		
114.12	የመጻፍ ሴት ዓይነት	1 = በውሃ ግፊት የሚሰራ የተሻሻለ መጻፍ ሴት 0 = ክፍት ጉድጓድ ወይም ምንም (ሜዳ ላይ)		
114.13	የውኃ አቅርቦት	1 = ከቧንቧ ወይም ጥልቅ ጉድጓድ በፖምፕ ወይም በደንብ የተቆፈረ ጉድጓድ 0 = ከ ወንዝ ወይም ንጽህናውን ያልተጠበቀ ጉድጓድ		
<b>ክፍል 2 - በወር አበባ ጊዜ ንጽህና አጠባበቅ ትግበራ ጋር የተያያዙ ጥያቄዎች</b>				
201	በወር አበባ ጊዜ የንጽህና መጠበቂያ ቁሳቁስ ይጠቀማሉ?	1. አዎ 2. አልጠቀምም		<b>2 ከሆነ ወደ 203 ይሂዱ</b>
202	ለ ጥያቄ ቁጥር 201 መልስዎ አዎ ከሆነ፣ በወር አበባቸው ወቅት ምን አይነት የንጽህና መጠበቂያ ቁሳቁስ ይጠቀማሉ?	1. ለአንድ ጊዜ ብቻ የሚያገለግሉ የወር አበባ መጠበቂያ(ሞዴስ). 2. ለአንድ ጊዜ ብቻ የሚያገለግል ቁርጥራጭ ልብስ 3. ለብዙ ጊዜ የሚያገለግሉ የወር አበባ መጠበቂያ(ሞዴስ). 4. የመጻፍ ወረቀት 5. የውስጥ ልብስ. 6. ሌላ : ይገለጽ-----		
203	ለ ጥያቄ ቁጥር 201 መልስዎ አልጠቀምም ከሆነ የማይጠቀሙበት ምክንያት ምንድን ነው?	1. ስለማላውቅ 2. መግዛት ስለማልችል 3. በቅርብ ስለማይገኝ 4. ስለማፍር 5. ሌላ : ይገለጽ ----		
204	በወር አበባ ጊዜ አባላዘርዎን (ብልትዎን) ይታጠባሉ ?	1. አዎ      2. አልታጠብም		<b>2 ከሆነ ወደ 207 ይሂዱ</b>
205	ለጥያቄ ቁጥር 204 መልስዎ አዎ ከሆነ ለማጽዳት ምን ይጠቁማል?	1. ውሃ ብቻ. 2. ሰሙና ውሃ. 3. ሌላ : ይገለጽ -----		
206	ለጥያቄው 204 መልስዎ አዎ ከሆነ	1. አንድ ጊዜ		

	በየቀኑ ለምን ያክል ጊዜ ብልትዎን ይታጠባሉ ?	2. ሁለት ጊዜ 3. ሶስት ጊዜ 4. አራት ጊዜ እና ከዚያ በላይ	
207	በወር አበባ ጊዜ ገላውን ከሁልጊዜው በተለየ ይታጠባሉ?	1. አዎ 2.የለም	2 ከሆነ ወደ 209 ይሂዱ
208	ለጥያቄ ቁጥር 207 መልስዎ አዎ ከሆነ በቀን ለስንት ጊዜ ይታጠቡ ?	1. በቀን ሁለት ጊዜ 2. በቀን ከሁለት ጊዜ በላይ	
209	ትምህርት ቤት ውስጥ እያሉ የወር አበባ ንጽህና መተበቂያ ቁሳቁስዎን ይቀይራሉ?	1. አዎ 2. አልቀይርም	
210	በየቀኑ የሚጠቀሙትን ቁሳቁስ ለምን ያህል ጊዜ ይቀይራሉ?	1. አንድ ጊዜ 2. ሁለት ጊዜ 3. ሦስት ጊዜ 4. ከሦስት ጊዜ በላይ	
211	የወር አበባ ንጽህና መጠበቂያዎን ከተጠቀሙ በኋላ የተጠቀሙትን ቁሳቁስ እንዴት ያስወግዳሉ?	1. ባገኘሁበት ቦታ 2. መፀዳጃ ቤት 3. የቆሻሻ ማጠራቀሚያ 4. ሌላ ይግለጹ-----	
2012	አዲሶቹን እና / ወይም መልሰው የሚጠቀሙትን የንጽህና መጠበቂያ ቁሳቁስዎን የት ነው የሚያስቀምጡት?	1.መሳቢያ ውስጥ 2. ቁም ሣጥን 3. መታጠቢያ ክፍል 4. ከዘወትር ልብሶች ጋር 5. አላስቀምጥም 6. ሌላ ይግለጹ-----	
213	መልሰው የሚጠቀሙበትን የንጽህና መጠበቂያ ቁሳቁስዎን ለማጽዳት ምን ይጠቀማሉ?	1. በሰሙና እና በውሃ 2. በውኃ ብቻ 3. ሌላ ይግለጹ-----	
214	መልሰው የሚጠቀሙባቸውን የንጽህና መጠበቂያዎች ካጠቡ በኋላ ለማድረቅ የት ያሰጣሉ?	1. ከቤት ውጭ ጥላ ውስጥ 2. ከቤት ውስጥ ጥላ ውስጥ 3. ቤት ውስጥ ፀሐይ ላይ 4. ውጭ ላይ በፀሐይ ብርሃን 5. ውጭ ላይ በሌሎች ልብሶች ተጋርዶ 6. ሌላ ስወር ቦታ 7. ሌላ ይግለጹ-----	
<b>ክፍል 3 : ከወር አበባ ንጽህና አጠባበቅ ትግበራ ጋር ተያያዥ ችግሮች</b>			
301	የወር አበባ ማየት ከመጀመርዎ በፊት ስለ ወር አበባ ሰምተው ያውቁ ነበር?	1. አዎ 2. አልሰማሁም ነበር	
302	ለጥያቄ ቁጥር 401 መልስዎ አዎ ከሆነ መረጃውን ከማን አገኙት ?	1. ከእናቴ. 2. ከመምህራን. 3. ከጤና ሰራተኞች.	



		4. በቴሌቪዥን. 5. ሌላ ይግለጹ-----	
303	ስለ ወር አበባ ጉዳይ ከወላጆችዎ ጋር በግለጽ ይወያያሉ?	1. አዎ 2. አንወያይም	<b>2 ከሆነ ወደ 305 ይሂዱ</b>
304	ለጥያቄ ቁጥር 303 መልስዎ <input type="checkbox"/> አዎ <input type="checkbox"/> ከሆነ በየትኞቹ ርእሶች / ጉዳዮች ላይ ?	1.ስለ የወር አበባ የንጽህና አጠባበቅ. 2. ስለ የወር አበባ የንጽህና መጠበቂያ ዘዴዎች አጠቃቀም 3. ሁለቱም	
305	ለጥያቄ ቁጥር 303 መልስዎ <input type="checkbox"/> አይደለም <input type="checkbox"/> ከሆነ፣ ለምን?	1. አሳፋሪ ስለሆነ 2. የተለመደ ስላልሆነ. 3. ምስጢራዊ ስለሆነ. 4. ሁሉም 5.ሌላ -----	
306	ገበያ ላይ ያሉ የወር አበባ የንጽህና መጠበቂያዎችን ያውቃሉ?	1. አዎ 2. አላውቅም	
307	ት/ቤት ውስጥ ስለወር አበባ ንጽህና አጠባበቅ ተምረው ያውቃሉ?	1. አዎ 2. አልተማርኩም	

ለትዕግስትዎ በጣም እናመሰግናለን።

የመረጃ ሰብሳቢው ስም -----  
 ቀን -----

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**Annex 2: semi-structured In-depth interview questioner  
For female students**

Opening Questions – Personal background and questions about school	
<b>Questions</b>	
1. How old are you? 2. What grade are you in? 5. Who do you live with? 6. Any other family members close by? 7. What do you learn about health at school? 8. What do you learn about puberty at school?	
Personal experience with menstruation	
<b>Questions</b>	
9. Can you tell me the story of the first time you got your period? • What was your immediate reaction or feeling? Resources/management/practices: • What did you use (pads, cloth, tissues, etc.)? • Who/where did you get materials from? • Where did you go to manage your period (latrine, separate room, outside, etc.)? • Was there water, soap, privacy?	
11. Can you tell me about the most recent time you got your period at school? • Were you prepared for it? • Did you bring supplies with you? • If yes, what supplies? • • What did you do? • What clothes do you wear? • What did you do and/or use that day to manage it (pads, cloth)? • Do you normally use those materials? • Who/where did you get them from? • Where did you go to clean up?	

12. Can you tell me about a time that you had your period at school and you weren't prepared or didn't have supplies?

OR

If you don't have a story about this experience, what would you do if it happen?

**School challenges:**

- Was anything difficult for you at school?
- Did you stay at school that day?

14. Was there a time at school that you were asked to do something that you didn't feel you could do because you were menstruating? Please explain.

15. Are there any activities you do not do when you're menstruating?

- Are there restrictions placed on you? Mobility? Cooking? Eating? Religious?
- Are there things you prefer not to do?
- Do you go to school?
- Do you stay in school all day?

**For male students**

How old are you?

What grade are you in?

**can you describe what comes to your mind when you hear the word 'menstruation'?**

- When did you first hear about menstruation?
- Who do you talk to about menstruation?
- Do parents talk about menstruation, with their sons?
- Why do females menstruate?
- Are there any terms you use to refer to menstruation?

**How is menstruation talked about at school by boys?**

- What do boys say?

- Is it important for boys to understand menstruation?
- Do boys freely talk about menstruation?
- Is it acceptable for boys to talk about menstruation?

**How are girls treated differently once they start menstruation?**

**Can you tell me how boys are expected to act around menstruating girls?**

**Sometimes boys tease girls when they have their period, can you tell me about a time that may have happened at this school?**

- What do they say? Why did they do it?
- Can you tell me a story of a girl who was once teased; don't mention her name?
- How do teachers react if they see boys teasing?

**How do you think a girl feels during menstruation?**

- What does she think about?

- Does she act the same as she normally does?
- If she's not feeling well, what can classmates do to make her feel better?

**If you had a daughter, would you talk to her about menstruation?**

- How would you talk to her about menstruation?

**Would you like to know more about menstruation?**

**What do you think menstruating girls need in school?**

### Questioner for school teachers

Questions
1. What is the school's main water source?
2. What is the water source used for?
3. How do you think most teachers feel about teaching menstruation to girls in school? If not taught, ask how they think teachers would feel if asked to teach about menstruation related topics. Difficulty of topic, training to discuss, the role of others to teach, male teachers feelings vs. female teachers feelings.
4. Can you tell me if girls are expected to come to school while menstruating? why, do girls abide by these expectations, what do girls' parents think
5. In many schools, girls get teased if it is known they are menstruating. Can you tell me the extent to which this happens at this school? who teases?; why is there teasing?; are those teasing ever disciplined?; do boys receive education?
6. Can you tell me how girls' behaviors may change when they are menstruating? class/activity participation, leaving school, missing school, distraction, class behaviours, etc.
7. What do you think schools can do to make it easier for girls to be in school during menstruation?