



WOLKITE UNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCIENCE

DEPARTEMENT OF NURSING

**KNOWLEDGE, ATTITUDE, PRACTICE AND ASSOCIATED FACTORS
OF MENSTRUAL HYGIENE AMONG ADOLESCENT GIRLS IN
WOLISO TOWN SECONDARY SCHOOLS, OROMIA REGION,
ETHIOPIA, 2023.**

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ACRONYM AND ABBREVIATION

AOR	Adjusted odd ratio
COR	Crude odd ratio
CI	Confidence interval
MHM	Menstrual Hygiene Management
NGO	Non-Governmental Organization
RTIs	Reproductive Tract Infections
SRS	Simple random sampling
UNICEF	United Nations International Children’s Emergency Fund
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization

ABSTRACT

Introduction: Menstruation is one of normal biological processes as well as a key sign of reproductive health. But the issue is inadequately assessed and has not received proper attention. In many cultures menstruation is greatly stigmatized, treated as something shameful or dirty and constrained by practical, social, economic and cultural factors such as expense of commercial sanitary pads, lack of water and latrine facilities, lack of private rooms for changing sanitary pads and limited education about the facts of menstrual hygiene. However, menstrual hygiene management is an issue that is under researched in Ethiopia in general and study area in particular.

Objective: To assess knowledge, Attitude, practice and associated factors of menstrual hygiene among adolescent girls in woliso town secondary schools, Oromia region, Ethiopia 2023.

Method: An institutional-based cross-sectional study design was employed from May to June, 2023 in Woliso town secondary schools. A simple random sampling technique was used to select 414 study participants. A pretested and self-administered structured questionnaire was used to collect the data. Data was collected, coded, and entered into SPSS version 25.0. Bivariate and multivariable logistic regression was used in the analysis to determine the association between independent and outcome variables. Independent variables with a p-value of less than 0.25 in the bivariate analysis were entered into the multivariable logistic regression model. The significance and strength of the association was determined at a 95% confidence interval with a p-value of less than 0.05.

Results: A data were collected from 414 participants, and 414 girl students were completed the questionnaires giving the response rate of 100%. Among 414, 245(59.2%), 214(51.7%) and 167(40.3%) adolescent girls have good knowledge, positive attitude and good practice of menstrual hygiene management respectively. Respondents whose mother's educational status of college and above [AOR=1.71, 95% CI (1.538-5.458)]. Respondents whose mother's able to read and write [AOR=2.73, 95% CI (1.069-6.954), P=0.036)]. Respondents who was 11th grade level [AOR= 6.824; 95% CI (1.265-36.815), P=0.026)], who get permanent pocket money [AOR=7.603;95% CI (3.210-18.010), P=0.000), who learn about menstrual hygiene management in school [AOR=2.9; 95% CI (1.185-6.873), P=0.019)] were factors significantly associated with knowledge, attitude, practice of menstrual hygiene.

Conclusion and Recommendation: More than half of respondents were knowledgeable and had positive attitude about menstrual hygiene but, lower than half of respondents had good practice of menstrual hygiene. Town education office and school directors should work hard to improve knowledge, attitude and practice of students on menstrual hygiene management.

Keywords: Menstrual hygiene, students, Knowledge, Attitude and Practice, Woliso

1. INTRODUCTION

1.1 Background

Menstruation is the periodic shedding of the uterine inner lining and blood through the vagina under the control of the hypothalamus-pituitary-ovarian axis hormones (1). Women begin menstruating at the mean age of 13 and continue until the age of 50. The menstrual cycle is usually 28 days long, but it can range from 21 to 35 days. Menstrual bleeding lasts between 2-7 days on average, with lighter and heavier flow days. For the first year or first two years after menstruation begins, the cycle is frequently irregular. Each cycle begins with the release of an egg (ovulation), which moves into the uterus via the fallopian tubes. Menarche, or the onset of menstruation, is a landmark feature of female puberty and signals reproductive maturity (2),(3).

Adolescence is a period of growth and development between childhood and adulthood that occurs in girls and boys aged 10 to 19 years. Early adolescence is a period of physical, intellectual, emotional, and social development, as well as sexual maturation. During this period that the child experiences physical and sexual changes as well as questions about self-concept and social relationships (4).

Menstrual hygiene management refers to the use of clean materials to absorb menstrual blood that can be changed secretly, safely, and hygienically as needed during menstruation. Managing menstruation entails dealing with menstrual blood flow as well as continuing regular activities such as attending school, playing and dancing, and performing routine tasks (5). Globally, women's menstrual management strategies vary greatly from country to country and within countries, depending on an individual's personal preferences, available resources, economic status, local traditions, cultural beliefs, and knowledge or education (6).

Menstruation is perceived as contaminated or dirty in society (6). In developing countries, adolescent girls, particularly those living in rural areas, face poor menstrual hygiene management practices (7-8). Although menstruation is a natural process, it is still considered taboo, and there are many negative cultural attitudes associated with it, such as the belief that menstruating women and girls are contaminated, dirty, and impure. According to research, menstruating girls face shame, fear, confusion, and poor MHM as a result of insufficient information, a lack of social support, ongoing social and hygiene taboos, and a lack of water, sanitation, and waste disposal facilities in the school environment (8), (7), (9),(10). Schools in developing countries do not have adequate water, sanitation, and hygiene (WASH) facilities, which contributes to poor menstrual hygiene practices among girls (7), (11), (12).

Gender equality cannot be guaranteed when taboos and myths prevent menstruating women and girls from fully participating in society and when restricts girls from attending school. Furthermore, the inability to develop markets for high-quality menstrual materials can have an impact on long-term consumption and production patterns (13).

Several studies were conducted in Ethiopia on the topic of menstrual hygiene management practice by collecting data from only menstruating women. It is critical to observe WASH facilities during data collection to obtain rich information about MHM.

1.2 Statement of problem

According to the World Health Organization (WHO), 2.3 billion people worldwide lack access to safe sanitation, such as menstrual hygiene management facilities. Furthermore, due to the high cost and lack of knowledge, women and girls frequently use old rags, clothes, or other unsanitary materials as menstrual absorbents, which can lead to ascending infections and a variety of health problems (14).

According to the United Nations International Children's Emergency Fund (UNICEF), one out of every ten African girls of school age misses class during menstruation (15). The lack of sanitation facilities, including menstrual hygiene facilities, will have an impact on girls' school attendance, and the inability to obtain affordable sanitary napkins will force the girls to use insanitary rags, leading to the development of bad odor, reproductive tract infections (RTI), and skin problems. As a result, young girls become anxious, restless, and absent from school (16).

In Ethiopia, 17% of girls absent school due to menstruation, with roughly equal numbers of urban and rural girls absent. The most common reasons for missing class are pain/discomfort, fear of an accident at school, embarrassment, and a lack of resources to manage their periods. The likelihood of absenteeism appeared to differ depending on how the girls managed their periods (17).

Menstruating women and girls are regarded as impure, unsanitary, and unfit for public consumption. This perception is exacerbated by a lack of facilities, materials, and spaces that can assist women and girls in managing menstrual discharge with dignity and safety (18). Every year, approximately 10% of women worldwide are exposed to genital infections such as bacterial vaginosis and urinary tract infections, and 75% of women have a genital infection history (19). Women and girls in rural areas and schools face the greatest stigma, as well as a lack of services and facilities to help them cope with the physical and psychological pains associated with menstruation (20). According to studies, 25% of girls in Ethiopia do not use MHM products to manage their periods and isolate themselves during menstruation (21).

According to various studies, good menstrual hygiene is practiced among girls whose mothers were literate, girls in grades higher than grade 10, older girls, having prior knowledge about menstruation before menarche, the presence of a proper sanitary latrine at home, and exposure to advertisements promoting the use of sanitary napkins (22) Various sectors in Ethiopia, including the Ethiopian government, international donors, local NGOs, and social enterprises, are working to improve MHM. Though several non-governmental organizations (NGOs) have begun to address the issue, there is no national-level policy direction or program focused on menstrual hygiene management (20).

Several schools do not assist female students or teachers in handling menstrual hygiene with dignity. Inadequate water and sanitation facilities make it difficult to manage menstruation, and poor sanitary safety materials can result in blood-stained clothes, causing stress and embarrassment. Teachers and male members of staff, in particular, may be unaware of girls' desires, refusing to allow them to use the restroom in some cases. As a result, it has been reported that girls miss school during their menstrual periods or even drop out entirely (23).

Access to MHM is critical to meeting the Sustainable Development Goals (SDGs) (8). Lack of basic knowledge about MHM can result in urinary tract infection, stress, and early and unwanted pregnancy, all of which are harmful to a girl's health. Due to a lack of WASH facilities or a lack of support from the school community, girls may be absent or less attentive at school during menstruation, affecting educational or work performance and economic opportunities (7).

There are many studies done on Knowledge, Attitude, and Practice and factors associated with menstrual hygiene among adolescent girls. But, in our study area there is no study done on Knowledge, Attitude, and Practice and factors associated with menstrual hygiene among adolescent girls in woliso town secondary schools. Therefore, this study was aimed to assess Knowledge, Attitude, and Practice and factors associated with menstrual hygiene among adolescent girls in woliso town secondary schools.

1.3 Significance of the study

Adolescents are the future hopes of a country and a family and they require care and attention. The identified gaps in menstrual hygiene may help policymakers, School Directors, non-government organizations and students to improve menstrual hygiene services in the school. This study may be baseline data for the researcher.

Therefore, this study was come up with evidence of the student's menstrual hygiene and identifies factors that hinder to practice of menstrual hygiene. Suggest an important possible solution that enhances the future improvement of menstrual hygiene at school level.

2. LITERATURE REVIEW

2.1. Level of knowledge on menstrual hygiene

A mixed cross-sectional study conducted in Nepal assumed that approximately 92% of the participants had heard about menstruation before their menarche and identified mothers (51%), sisters (41%), and friends (36%). The outcome is fairly consistent with the source of menstrual hygiene and management information. Only about one-fifth of those polled said they learned about these issues from their teachers (24).

According to a study conducted in Nigeria, the majority of respondents (96.42%) had heard about menarche before menstruation, and the respondents' mothers (41.83%) were the main source of information, with friends and television also contributing. Menstruation is described as a pathological process by more than half of those polled. Hormones, according to 38.93% of those polled (25).

A mixed cross-sectional study conducted in South Africa assumed that the majority of girl learners participating in the study had prior knowledge about menstruation before their first menarche, with mothers (55.2%) being the primary source of information, followed by sisters (14.1%), grandmother (12.1%), auntie (7%), and friends (6%) (28).

A study in Nekemte town found that 60.9 percent of respondents were knowledgeable about menstruation and its sanitary management(27). The majority of girls (76.9%) knew that menstruation was a physiological process, but 9.7% thought it was a curse from God. More than half of the respondents (62.9%) were aware that menstruation was caused by a hormone, and 60.9 percent were aware that menstrual blood originated in the uterus. Before they began menstruating, the majority of them (79.3%) were aware of menstruation. Friends, mass media, teachers, mothers, and books were the primary sources of information for (67.8%), (57%), (50.4%), (35.1%), (17.9%), respectively.

2.2 ATTITUDE REGARDING MENSTRUAL HYGIENE

A cross sectional study in Nepal shows 140 (51%) of the respondents needed to improve their attitude toward MHM, whereas 136 (49%) of the respondents had a favorable attitude regarding MHM concerns. According to the data, 52.5% of respondents said it was important to place restrictions on doing domestic activities while having a period. Only 47% of respondents believed that breaking cultural taboos or customs while menstruating would not result in gods or other deities condemning people calling their relatives names. 77% of respondents concurred that increased nutritional and dietary supplementation is required during menstruation. Only 54% of respondents believed that men do not become sick if a woman who is menstrual touches them. 65% of respondents agreed that women who are menstruation should bathe. Only 45% of respondents agreed that women who are menstruating can eat sour and dairy foods(28).

A cross sectional study in Nigeria shows the first period for almost 64% of responders was frightening, uncomfortable, or emotionally upsetting. 73.83% of respondents reported having menstruation symptoms. The respondents reported that the two main symptoms they encountered during menstruation were abdominal aches and anorexia. More than 80% of the respondents said they went to class while having their period(29).

A cross sectional study in north wollo Ethiopia shows 196 (47.3%) of the 409 study participants had a positive attitude toward menstruation hygiene. Menstruation is beneficial to health, according to 354 respondents (86.6%), while 207 respondents (50.6%) thought menstrual blood was trash and contaminated(30).

2.3. Menstrual hygiene practice

A comparative cross-sectional study conducted in Mangalore, India, discovered that only 56.55% of adolescent girls (49.24% in rural and 65.17% in urban) use absorbent material during menstruation (31). Another cross-sectional study of rural adolescent girls in India discovered that 89.2% use sanitary pads as a menstrual absorbent, with the remaining 7.2% and 3% using fresh cloth and reusable cloth, respectively (32).

An interventional study conducted in Bangladesh discovered that even after a health intervention, only 24% of girls use menstrual pads, despite a 16% baseline. The rest wore low-quality clothes dyed with toxic pigments, which could leads them to uterine pain (33). According to a school-based cross-sectional

study conducted in Iran, more than half of adolescents have moderate practice and 95.6% of participants use disposable pads during menstruation (34). According to a descriptive cross-sectional study conducted in South Africa, the majority of adolescent girls use sanitary pads to manage their menstruation. When they ran out of money to buy a pad, they resorted to using newspapers, toilet paper, and old clothes (26). However, these management methods are not only ineffective and uncomfortable, but they also put them at risk of urogenital infections.

A cross-sectional study conducted in rural Bangalore areas reveals that personal practices and hygiene play a significant role during their monthly period. It was discovered that 34.7% of the study population uses cloth during menstruation, 44.1% uses a sanitary pad, and 21.2% uses both cloth and sanitary pad. The frequency of change revealed that 39.8% changed sanitary pad or cloth twice a day, 29.5% three times a day, and 21.7% once a day during menstruation. 43.2% of girls only use water, and 88.8% take a bath every day during menstruation (26).

According to a quantitative survey conducted in rural Uganda, only 36% of schoolgirls use sanitary pads as their primary absorbent. The remaining majority makes use of cloth. After washing, half of those who use reusable absorbents hide them to dry, most commonly under the bed. However, no girls were discovered disposing of pads at community garbage dumps, burning or burying pads (10).

A cross-sectional study of schoolgirls in Ethiopia's capital, Addis Abeba, found that 52% use sanitary napkins and the rest use homemade cloth and underwear as menstrual soak-up during menstruation. This study also found that 64.3% of menstruation-related school absenteeism occurs at least once a month. The most common reason for school absence during menstruation (79.03%) was pain, followed by a lack of washing facilities at school (78.49%) and a lack of a private place to change sanitary pads (48.12%). (34).

A school-based study in western Ethiopia discovered that 60.1% of adolescent girls have poor menstrual hygiene practices. Approximately 66.2% of girls use commercially manufactured sanitary pads as absorbent material during menstruation, but only 20.2% of girls discard used sanitary pads in the trash ((34)). A similar study in Adama town found that 43% of adolescent school girls practice poor menstrual hygiene (34).

2.4. Factors associated with knowledge, attitude and practice of menstrual hygiene

Several traditional norms and beliefs, as well as socio-cultural conditions, can and do influence menstrual hygiene practices. For example, in some cultures, girls are told not to bathe (or they were become

infertile), touch a cow (or it was come infertile), look in a mirror (or it will lose its brightness), or touch a plant during their menstrual cycle (or it will die) (5).

According to a cross-sectional study conducted in India, there is a statistically significant difference in the use of sanitary pads between urban and rural residents, with 49.24% in the rural area and 65.17% in the urban area. There is also a significant difference in the frequency of sanitary pad changes, with 80.35% of girls in urban schools changing their pad every 8 hours compared to only 25% of rural girls (31). Another study conducted in India discovered a significant relationship between age group and absorbent type (32).

Being in second grade, having a father with elementary education or illiteracy, living in an undesirable economic status, having peer group and friends as the primary source of information, and having insufficient information about puberty all have a negative relationship with practice, while age at menarche has a positive relationship with practice (35).

According to a study conducted in Uganda, menstruation is a taboo, shameful, and embarrassing issue. It was evident in the girls' nervous laughs, avoidance of eye contact, and the fact that they frequently turned their faces towards the floor when speaking, drawing attention to the fact that menstruation is a shameful and embarrassing experience and a topic of conversation, even in a private, confidential, female-only environment (10).

A study conducted in Addis Abeba discovered that students who learn about menstrual hygiene in school are 2.47 times more likely to practice good menstrual hygiene management than students who do not learn about menstrual hygiene in school. Furthermore, girls aged fifteen and up are 2.832 times more likely than those aged less than fifteen to have good. Other factors identified in the study that have a statistically significant association with menstrual hygiene practice include maternal education, paternal occupation, and. In addition, girls over the age of thirteen are 2.572 times more likely to practice good menstrual hygiene than those under thirteen years old (34).

The Adama Town study discovered that having money to buy sanitary materials and feeling uncomfortable at school are significant predictors of good menstrual hygiene practice for school adolescent girls. As a result, the practice of good menstrual hygiene among students who do not feel comfortable at school is 43.3% lower than among students who do. Students who earn money from their parents are 2.3 times more likely to practice good menstrual hygiene than those who earn it themselves. In terms of mothers' educational status, students whose mothers attended secondary and higher levels of

education are 39.2% less likely to practice good menstrual hygiene than students whose mothers attended primary and lower levels of education (36).

Age, educational status of adolescents, educational status of adolescent's father and mother, residence, living arrangements, family monthly income, lack of WASH facilities, lack of latrine privacy, knowledge of women or girls about menstruation, and lack of pocket money all influence menstrual hygiene practice (37), (38)–(39).

2.4 Conceptual frame work

The conceptual framework was adapted through reviewing of different of kinds of literature. The diagram indicated that Socio-demographic, Environmental factors, social and economic factor associated with Knowledge, Attitude, and Practice of menstrual hygiene among adolescent girls (5) (10) (31) (32) (35) (36)

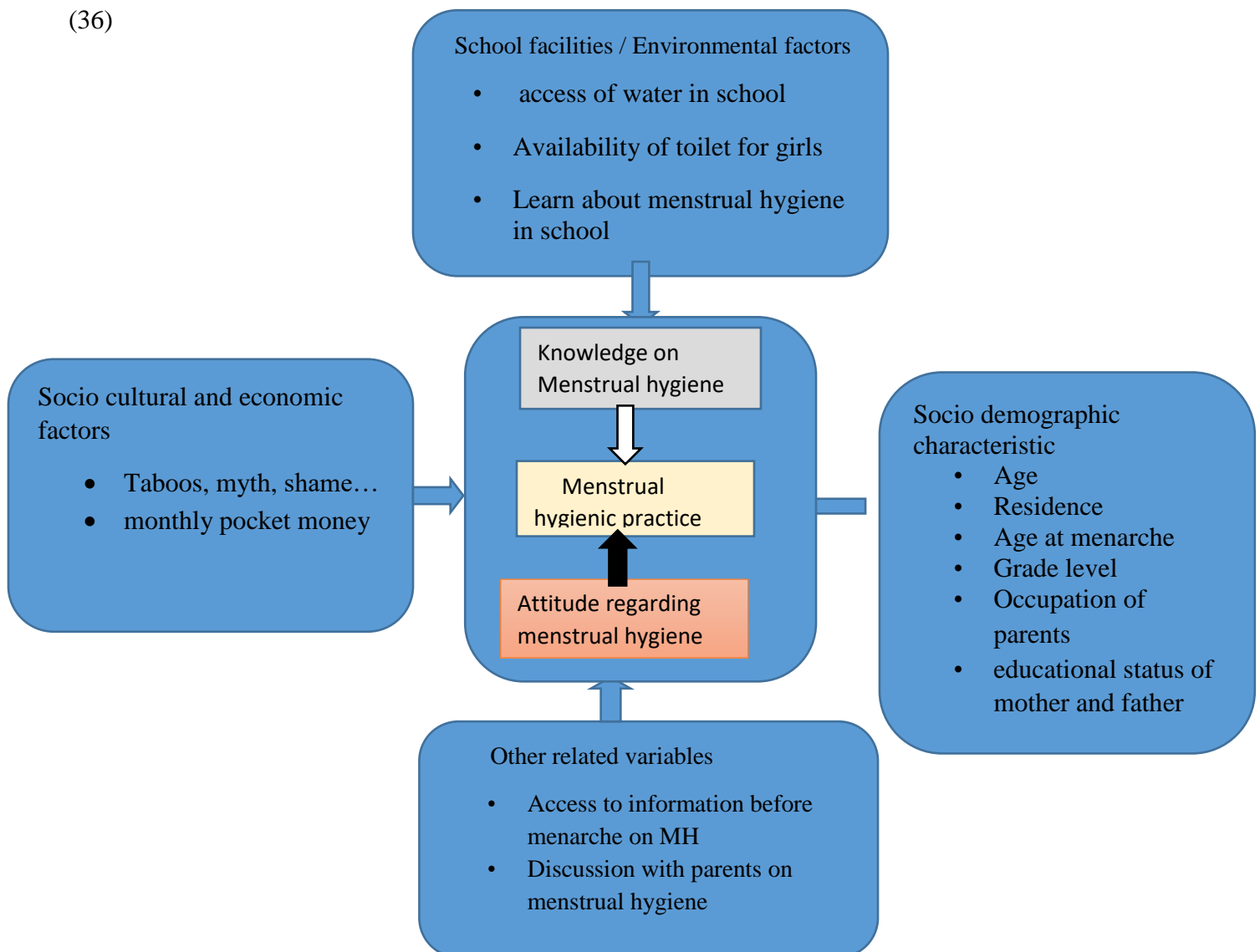


Figure 1:- Conceptual framework of knowledge, Attitude, practice and associated factors with menstrual hygiene among adolescent girls in woliso town secondary schools, 2023.

3. OBJECTIVES

3.1 General objective:

- To assess Knowledge, Attitude, practice and associated factors of menstrual hygiene among adolescent girls in woliso town secondary schools, Oromia Region, Ethiopia 2023.

3.2 Specific objective:

- To determine knowledge of menstrual hygiene among adolescent girls in woliso town secondary schools, Oromia Region, Ethiopia 2023.
- To determine Attitude of menstrual hygiene among adolescent girls in woliso town secondary schools, Oromia Region, Ethiopia 2023.
- To determine practice of menstrual hygiene among adolescent girls in woliso town secondary schools, Oromia Region, Ethiopia 2023.
- To identify factors associated with knowledge on menstrual hygiene among adolescent girls in woliso town secondary schools, Oromia Region, Ethiopia 2023.
- To identify factors associated with Attitude on menstrual hygiene among adolescent girls in woliso town secondary schools, Oromia Region, Ethiopia 2023.
- To identify factors associated with practice of menstrual hygiene among adolescent girls in woliso town secondary schools, Oromia Region, Ethiopia 2023.

4. METHODS AND MATERIAL

4.1 Study area and Period

The study was conducted in Woliso town secondary schools, southwest shewa zone of Oromia region. Woliso town is 114km far from Addis Ababa capital city of Ethiopia. it has a latitude and longitude of 8°32'N with an elevation of 2063 meters above sea level. Woliso is administrative center of this zone. Woliso town has administratively divided in to seven kebeles. This town has 4 public secondary school, 1 public campus which is branch of Ambo university, 1 poly technic college, 5 public Elementary schools. The 2009 national census reported a total population of woliso town was 59,685. The number of students in those schools, in Dej. Geresu Duki secondary school there is 3,721 Regular students among them 1,844 are males and 1,877 are females, in Ifa boruu secondary school there is 1526 Regular students among them 797 are males and 729 are females, In Woliso secondary school there is 1888 Regular students among them 794 are males and 1094 are females, In Debel bedasa there is 2396 Regular students among them 1220 are males and 1176 are females. The study was conducted from May 25 to June 25/2023.

4.2 Study design

- An institution-based cross-sectional study was conducted.

4.3 Population

4.3.1 Source of population

- All-female students attending their education in Woliso town Secondary Schools

4.3.2 Study population

- All selected female students attending their education in Woliso town Secondary Schools.

4.3.3 Study unit

- Individual student

4.4 Eligibility criteria

4.4.1 Inclusion criteria

- All-female students from grade 9 to 12 who have attended their education in woliso secondary school and who start to see menses was included.

4.4.2 Exclusion Criteria

- Female students who cannot present during data collection time.

4.5 Sample size determination and sampling procedure

4.5.1 Sample size determination

The sample size was determined by using the single population proportion formula as shown below by considering confidence interval CI 95%, margin of error 5%(d) and 43.1% high school female students had good menstrual hygiene practice from the previous study conducted in Gimbi town (40). The total number of female students in woliso town secondary schools, N = 4876.

The sample size was;

$$n = \frac{\left(\frac{Z_{\alpha}}{2}\right)^2 (p(1-p))}{d^2} \text{ Were,}$$

n = the initial sample size

Z = standard normal tabulated value

$\alpha/2$ = level of significance

Confidence interval at 95 %

P = percentage from previous study (43.1%)

d= the allowable marginal error which is 5%

$$n = \frac{(1.96)^2 (0.431(1- 0.431))}{(0.05)^2} = 376$$

By using 10% of the value calculated for non- response rate finally, we gain 414 number of participants.

4.5.2 Sampling procedure

The study participants in this study were female students in Woliso Town secondary schools. A stratified sampling technique was used to allocate female students by their grade level because the students are heterogeneous by their grade level, knowledge and age of maturity. Four strata were formed for each three schools by grade level from grade 9-12. Three Strata was formed for the rest one school which has from grade 9-11. Then, a simple random sampling technique was used to select the desired samples by using the student list as a sampling frame and select from each grade and each school to get wanted participant's number.

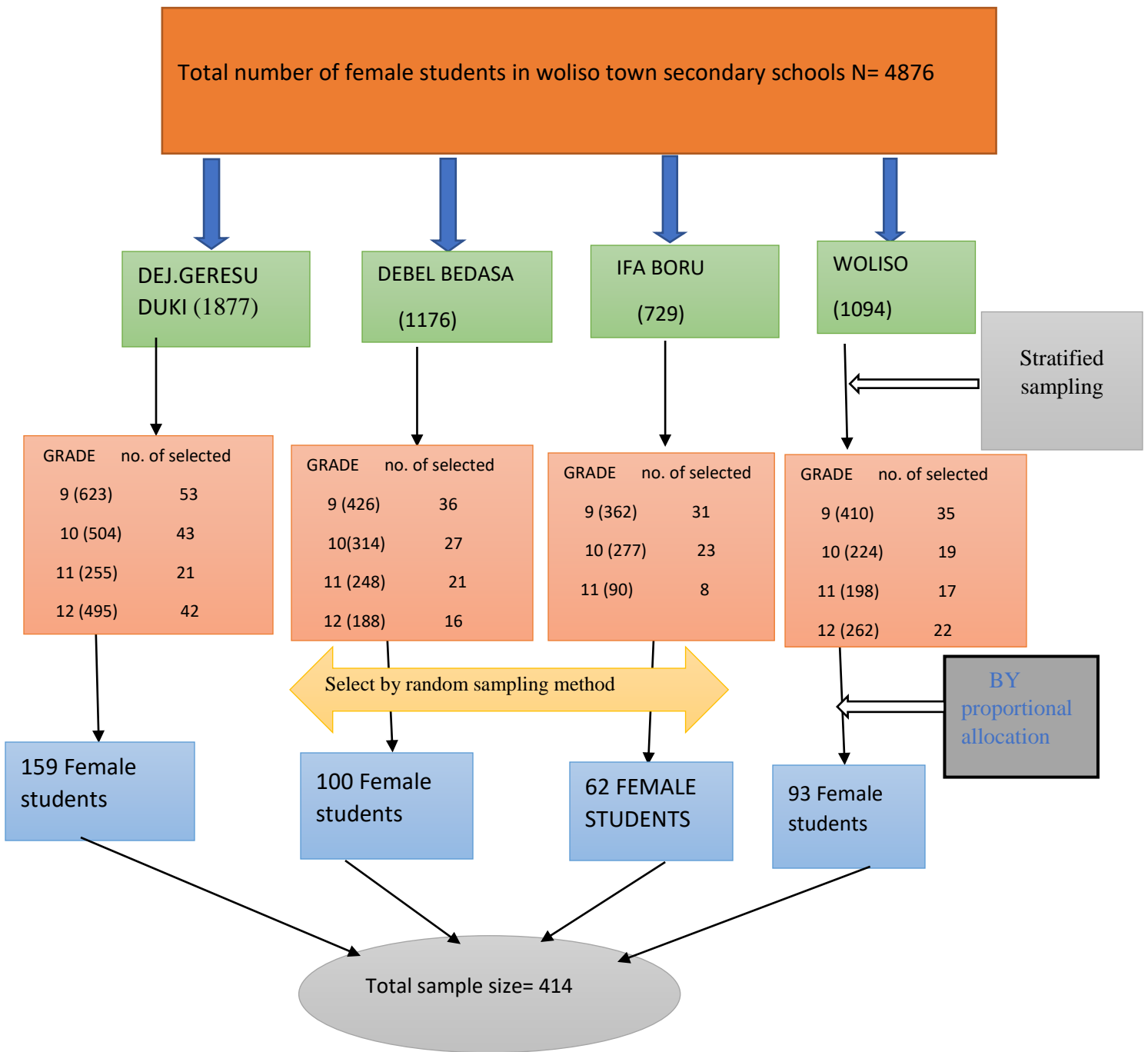


Figure 2: - Schematic presentation of sampling procedure to assess Knowledge, Attitude, practice and associated factors of menstrual hygiene among adolescent girls in woliso town secondary schools, Oromia Region, Ethiopia 2023.”

4.6 Variables

4.6.1 Dependent variables

- Knowledge, Attitude and practice of MH.

4.6.2 Independent Variables

- ❖ Socio demographic characteristics
 - ✓ Age
 - ✓ Grade level
 - ✓ Place of residence
 - ✓ Age at menarche
 - ✓ Parent's occupation
- ❖ School environment related variable
 - ✓ Presence of latrine facility
 - ✓ Continuous water supply
 - ✓ Learn about menstrual hygiene in the school,
 - ✓ Private room to manage period at school
- ❖ Other related variable
 - ✓ Discussion with parents on menstrual hygiene.
 - ✓ Age at menarche
 - ✓ Information before menarche on menstrual hygiene.
 - ✓ Knowledge of sanitary pads available in the market.

4.7 Operational or definition of terms

Menstrual hygiene: Personal hygiene during menstrual flow includes bathing once a day, changing clothes regularly, and changing pads at least two-four times per day(41).

Knowledge: To measure the respondent's knowledge of menstrual hygiene, there are 14 questions with coding of 1 for correct and 0 for incorrect or don't know(41).

Good knowledge: Study participants who scored mean and above the mean score of respondents (41).

Poor knowledge: Study participants who scores below the mean score of respondents(41).

Practice: The measurement of practice of menstrual hygiene focus on the use of material during menstruation there are 13 questions regarding menstrual hygiene practice and coding is similar to knowledge questions(41).

Good practice: Study participants the mean and above the mean score of respondents(41).

Poor practice: Study participants who scores below the mean score of respondents(41).

Attitude: The measurement of attitude towards menstruation and its hygiene there are 8 questions regarding attitude of menstrual hygiene and coding is similar to the knowledge questions(41)

Good attitude: Study participants the mean and above the mean score of respondents(41).

Poor attitude: Study participants who scores below the mean score of respondents(41).

4.8 Data collection tools and procedures

The study was collected with self-administered questionnaires. The questionnaire was adopted from previous research done on similar title with this study, first adopted in English then it was translated to Amharic and Afaan oromo language in order to make the questions easily understandable and clear for respondents. The Amharic and Afaan oromo version were again translate back to English to make easy and suitable for analysis and interpretation of the data that was collect from the respondents. A questionnaire was contained socio demographic characteristics, knowledge about menstruation, attitude regarding menstrual hygiene, practice about menstrual hygiene and school and environmental factors. The overall data collection process was coordinated and supervised by principal investigators. A total of 2 volunteer school staff members who are easily communicate with participants was selected to assist the data collection process as facilitator.

4.9 Data quality assurance

The quality of data was maintained by training facilitators about how to approach the study subjects, how to record data, how to control missing data and more over how to communicate with participants. Pre-test was employed before engaging to full implementation of data collection by taking 5% (21) students from sample size in Tulu Bollo secondary school before beginning the research. Pre-test was conducted and the response was discussed so that a modification was made for the final tool. Investigators and facilitators were responsible to check for data consistency and completeness throughout the data collection and analysis.

4.10 Data processing and analysis

The questionnaire was checked for its completeness, coded, and entered into Epi Data version 3.1, then exported to SPSS version 25.0 for analysis. Both descriptive and analytic statistics was done. Tables and pie charts were used to present the data. A binary logistic regression analysis was used to assess any association between the dependent variable and independent variables. Independent variables having a p-value of less than 0.25 during the bivariate analysis were added to the multivariable logistic regression model to control the potential impact of confounders and avoid missing important variables. The significance and strength of the association was determined at a 95% confidence interval with a p-value of less than 0.05 and AOR with a 95% confidence interval respectively.

4.11 Ethical consideration

To conduct this study written permission was obtained from Wolkite university, college of Medicine and Health science after ethical review of the contents of the proposal and formal letter from college of health science was written ensuring the approval the proposal. After having the approval; written, informed and signed consent was taken from the study participants (>18 years old) and from family/ guardians of study participants for those aged less than 18 years. Any information that was identified participants in particular was not be used. No reference was made in oral or written a report that was link participants to the research. Participation for the study was fully voluntary. Participants was having the right to declare to participate or not in the study.

4.12 Dissemination of the result

The final result was presented for Wolkite University, College of Medicine and Health science, department of nursing as partial fulfillment of the Bachelor of Science degree in nursing. Copies of this study was sent to Woliso Health Bureau and will also being disseminated through publication on local or international journals.

5. RESULT

This study was conducted in woliso town secondary schools. A total of 414 girls' students were included in this study with a response rate of 100%. All questionnaires were complete and include in the analysis.

5.1. Socio-Demographic Characteristics of the respondents

Four hundred fourteen female students took part in the study, with a 100% response rate. Almost half, 220 (53.1%) of the respondents were in the age group of 15-17 years and more than three-quarters, 414 (78.5%) did not have any pocket money. More than one-third of the study participants, 152 (36.7%) began menstruating between the ages of 10 and 13 years.

Table 1: Socio-Demographic Characteristics of the respondents among adolescent girls in woliso town secondary schools, Oromia Region, Ethiopia 2023

Variable	Variable Categories	Frequency	Percent (%)
Age	<15	54	13
	15-17	220	53.1
	18	90	21.7
	>18	50	12.2
Residence	Urban	230	55.6
	Rural	184	44.4
School name(type)	Geresu	159	38.4
	Ifa boru	62	15
	Woliso	93	22.5
	D/bedhasa	100	24.2
Grade level	9 th	154	37.4
	10 th	112	27.1
	11 th	67	16.2
	12 th	80	19.3
With whom do you live	Both parents	227	54.8
	Mother only	64	15.5
	Father only	10	2.4
	Relatives	82	19.8
	Others	31	7.5
Mothers' educational status	Unable to read and write	53	18.1
	Able to read and write	78	26.6
	Primary	32	11

	Secondary	78	26.6
	College and above	52	17.7
Mothers' occupational status	House wife	90	30.8
	Student	9	3.1
	Merchant	67	22.9
	Private organization employee	49	16.8
	Government employee		
	Daily laborer	60	20.5
	Other	5	1.7
		12	4.1
Fathers' educational status	Unable to read and write	11	4.5
	Able to read and write	67	27.3
	Primary	26	10.6
	Secondary	58	23.7
	College and above	83	33.9
Fathers' occupational status	Farmer	38	15.4
	Merchant	66	26.8
	Government employee	58	23.6
	Private employee	29	11.8
	Daily laborer	12	4.9
	Driver	25	10.2
	Others	18	7.3
Permanent pocket money	Yes	125	30.2
	No	289	69.8
Shopping center	Yes	377	91.1
	No	37	8.9

5.2. Knowledge about menstrual hygiene

The majority, 259 (62.6%) of respondents had heard about menstruation before menarche: 39.8% of them heard about menstruation before menarche from their mothers, 15.7% from their instructors, 13.5% from their friends, 5.3% from the mainstream media (TV/radio), 2.2% from health professionals, and 1.2% from others. The majority of responders, 354 (85.5%), knew the actual reason of menstruation as it is due to physiological process, and 224 (54.1%) knew the organ from which monthly blood flows, uterus. Regarding the knowledge, more than half 245 (59.2%) of respondents had good knowledge about menstrual hygiene management and 169 (40.8%) have poor knowledge.

5.2.1. Magnitude of knowledge

The finding of this study revealed that the knowledge of adolescent girls' students on menstrual hygiene was good 245 (59.2%) figure 3.

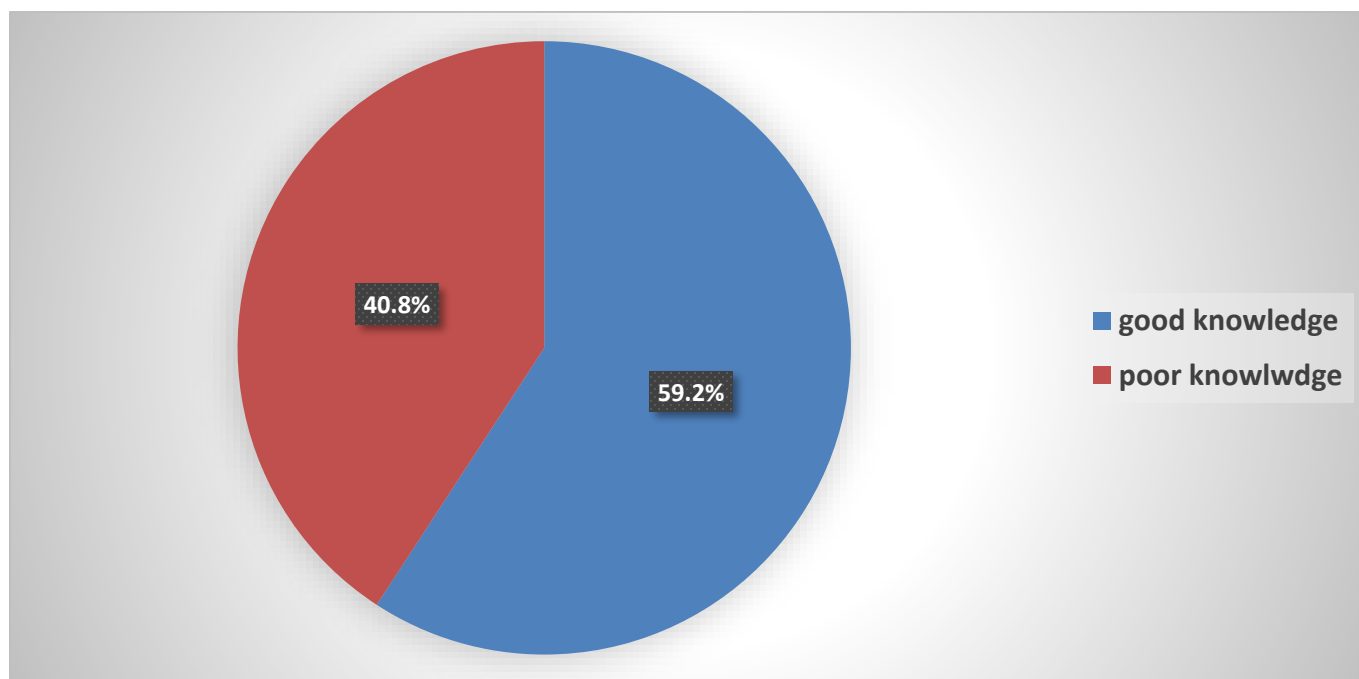


Figure 3: Knowledge of adolescent girls about menstrual hygiene in woliso town secondary schools, Oromia Region, Ethiopia 2023

5.3. Attitude about menstrual hygiene

Two hundred sixteen, 216 (52.2%) of respondents report their first menstrual period as frightening, 175 (42.3%) as uncomfortable or emotionally disturbed, and 23 (5.6%) as joyful. Majority, 291 (70.3%) of respondents discuss about menstrual period with their parents and friends and 190(45.9%) discuss both menstrual hygiene management and ways for using sanitary pads.

The majority of the 237 responders (57.2%) went to school during their menstruation. More than half, 226 (54.6%) of respondents disagree with having a bath during menstruation and 147 (36.5%) of respondents claimed bathing during menstruation increases bleeding.

Table 2: attitude of the respondents among adolescent girls in woliso town secondary schools, Oromia Region, Ethiopia 2023

Variable	Variable Categories	Frequency	Percent (%)
Feeling your first menses	Happy	23	5.6
	Scared	216	52.2
	Discomfort	75	18.1
	Emotional disturbance	100	24.2
Freely discuss menstrual issues with your parents and friends	Yes	291	70.3
	No	123	29.7
Discussion topics	About menstrual hygiene management	49	16.8
	About methods on how to use sanitary pads		
	Both	48	16.5
	Others	190	65.3
Reason to didn't discuss	Because of shamefulness	40	30.8
	Not habitual	63	48.5
	Privacy	25	19.2
	Others	2	1.5
Attending class during menses	Yes	237	57.2
	No	177	42.8
Reason to didn't attend class during menses	Lack of toilet facilities in the school	3	1.7
	Fear of unexpected bleeding	21	11.9
	Lack of material or pad	2	1.1
	Presence of menstrual symptoms	48	27.2
	Lack of water facilities	33	18.6
	Lack of disposal facilities	70	39.5
Do you agree menstruating female should take bath	Yes	188	46.4
	No	226	54.6
Reason to didn't agree menstruating girl shouldn't take bath	Tacking bath during menses increase bleeding	147	65
	After tacking bath, there is feeling of pain or discomfort	67	29.6
	Others	12	5.4

5.3.1. Magnitude of attitude regarding menstrual hygiene

The finding of this study revealed that the positive attitude of adolescent girls' students on menstrual hygiene was 214 (51.7%).

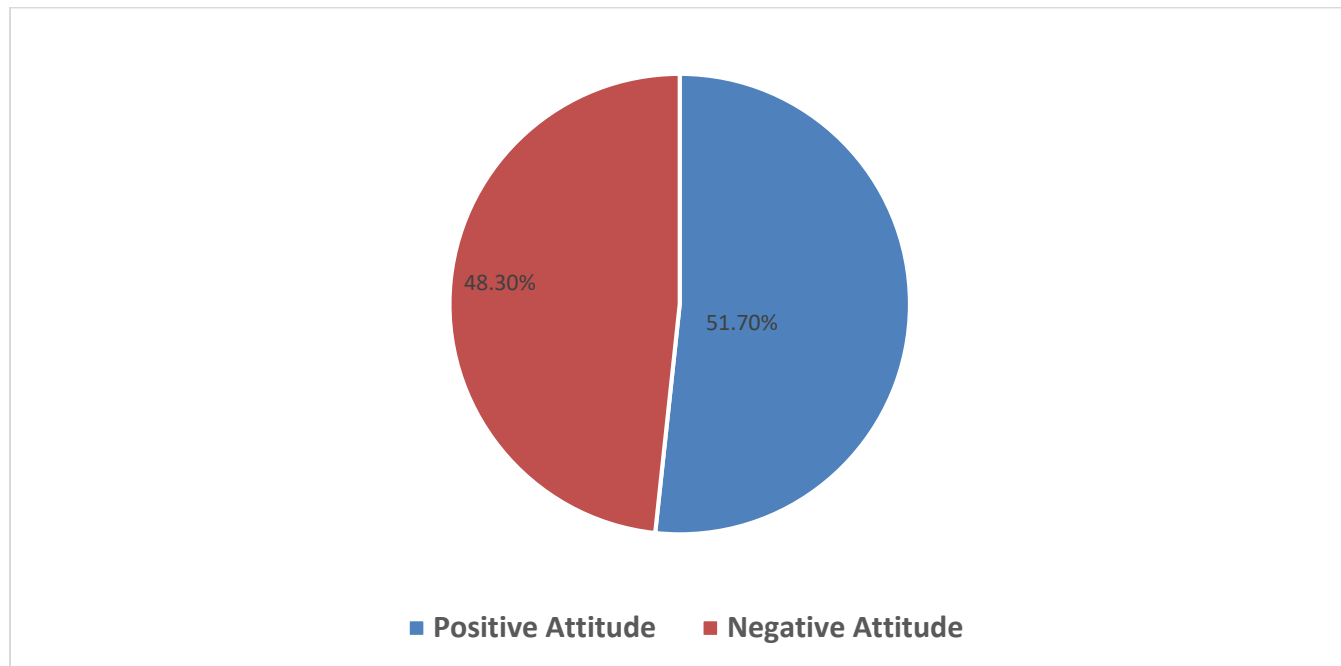


Figure 4: Attitude of adolescent girls towards menstrual hygiene in woliso town secondary schools, Oromia Region, Ethiopia, 2023

5.4. Practice of hygiene during menstruation

Nearly half of respondents, 202(48.8%) used disposable sanitary pads, 97(23.4%) used disposable rags, 55(13.3%) used reusable sanitary pads, 55(13.3%) used underwear, and 5(1.2%) used other type. The majority stated that they did not use disposable sanitary pads 146 (71.9%) due to expensive cost, 20 (7.4%) lack of information, 15 (unavailability), 11 (5.4%) shyness, and 11 (5.4%) other reasons.

The majority, 313 (75.5%) of respondents wash their genitalia just with water, 97(23.5%) with soap, and 4(1%) with others. During menstruation, 408 (98.8%) of respondents change their sanitary products in which;230(55.6%) of the respondents change twice per a day, 60(14.5%) once daily, 95(23%) three times daily, 28(6.8%) change more than three times per a day

Variable	Variable Categories	Frequency	Percent (%)
Do you use sanitary material(s) during menstruation?	1.Yes	414	100
	2.No		
If your answer is Yes for Q no 401, what sanitary material do you use during menstruation?	1.Disposable sanitary pads.	202	48.8
	2.Disposable piece of rags.	97	23.4
	3.Reusable sanitary pads	55	13.3
	4.Underwear.	55	13.3
	5.Others; specify-----	5	1.2
What is your reason for not using a disposable sanitary pad?	1.Lack of knowledge	20	9.9
	2.High cost	146	71.9
	3.Unavailability	15	7.4
	4.Shyness	11	5.4
	5.Others; specify-----	11	5.4
Do you wash your genitalia during menstruation?	1.Yes	410	99
	2.No	4	1
If your answer for question no 404 is 'yes', what medium do you use for your genital cleaning purpose?	1.Only Water.	311	75.5
	2.Soap and water.	97	23.5
	3.Others; specify-----	2	1

If your answer to question no 404 is yes how often do you wash your genitalia per day?	1.Once 2.Twice 3.Three times 4. above three times	56 151 103 100	13.7 36.8 25.1 24.4
Do you change your sanitary material(s) during menstruation?	1.Yes 2.No	408 5	98.8 1.2
How often do you change absorbent material per day?	1.Once 2.Twice 3.Three times 4.More than three times	60 230 95 28	14.5 55.7 23 6.8
How do you dispose of menstrual materials after use?	1.Open field 2.Latrine 3.Put in the bin 4.Others; specify -----	53 181 170 10	12.8 43.7 41.1 2.4

Where do you store your new and/or reusable absorbent(s)?	1.Drawers	170	41.2
	2.Dress cabinet	82	19.9
	3.Bathrooms	55	13.3
	4.Store with routine cloth	72	17.4
	5.Don't store	31	7.5
	6.Others; specify----- -----	4	0.7
What materials do you use for Washing of the reusable cloth?	1.With soap and water	403	97.6
	2.With water, only	7	1.7
	3.Others (specify) ----- -	4	0.7
Where do you put/ keep your reusable sanitary pads after washing for drying?	1.In the shade outside	130	31.4
	2.In the shade inside	114	27.75
	3.In the sunlight inside	62	16
	4.In the sunlight outside	108	26.1

5.4.1. Magnitude of practice of menstrual hygiene

The finding of this study revealed that good practice of menstrual hygiene among adolescent girl students was 167 (40.3%).

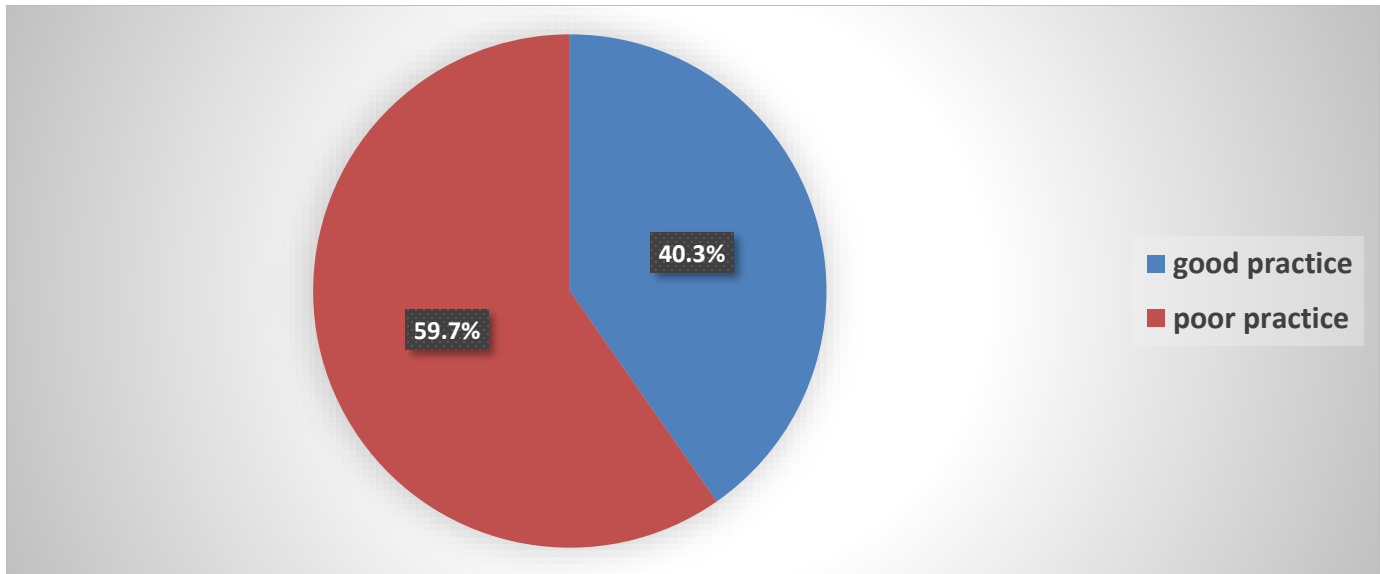


Figure 5: Practice of menstrual hygiene among adolescent girls in Woliso town secondary schools, Oromia Region, Ethiopia 2023

5.5 FACTORS ASSOCIATED WITH KNOWLEDGE, ATTITUDE AND PRACTICE OF MENSTRUAL HYGIENE

5.5.1 Factors affecting knowledge with menstrual hygiene management

In bivariate analysis age, residence, mother's educational status, mothers occupational status, fathers educational status, fathers occupational status, learn about menstrual hygiene in the school, girls club in the school, girls club support and private menstrual hygiene management room in the school were the factors that shown association (at $P < 0.25$) with overall knowledge of menstrual hygiene management of respondents.

In the multivariable logistic regression analysis, it is found that the odd of good knowledge was 1.71 times higher [AOR=1.71; 95% CI: 1.538-5.458] among girls whose mothers' educational status is college and above compared with girls whose mothers' are un able to read and write.

Table 3 :factor affecting knowledge with menstrual hygiene management of the respondents among adolescent girls in Woliso town secondary schools, Oromia Region, Ethiopia 2023

Variable	Variable categories	Knowledge		COR 95% CI	AOR 95% CI
		Good N (%)	Poor N (%)		
Age	<15	28(51.9%)	26(48.1%)	0.994(0.460- 2.147)	
	15-17	138(62.7%)	82(37.3%)	1.553(0.837-2.883)	
	18	59(65.6%)	31(34.4%)	1.757(0.868-3.555)	

	>18	26(52.0%)	24(48.0%)		
Residence	Urban	146(63.5%)	84(36.5%)	1.308(0.880-1.944)	
	Rural	105(57.1%)	79(42.9%)		
Mother's educational status	Unable to read and write	11(31.4%)	24(68.6%)		
	Able to read and write	16(32.0%)	34(68.0%)	1.026(0.671-2.794)	0.927(0.471-2.241)
	Primary	13(48.1%)	14(51.9)	2.025(0.360-2.098)	0.768(0.287-2.057)
	Secondary	34(50.7%)	33(49.3%)	2.247(0.380-2.546)	0.665(0.297-1.492)
	College and above	104(90.4%)	11(9.6%)	20.628(1.210-26.747)	1.713(1.538-5.458)*
Mother's occupational status	House wife	44(47.3%)	49(52.7%)		
	Student	3(33.3%)	6(66.7%)	0.557(0.131-2.361)	0.417(0.146-3.525)
	Merchant	58(64.4%)	32(35.6%)	2.018(1.115-3.653)	1.782(0.926-3.419)
	Private organization employee	19(63.3%)	11(36.7%)	1.924(0.825-4.486)	1.293(0.844-6.231)
	Government employee	41(77.4%)	12(22.6%)	3.805(1.777-8.146)	3.365(1.194-9.484) *
	Daily laborer	3(60.0%)	2(40.0%)	1.670(0.267-10.465)	1.450(0.205-10.251)
	Others	8(66.7%)	4(33.3%)	2.227(0.627-7.910)	1.992(0.493-9.752)
Father's educational status	Unable to read and write	5(45.5%)	6(54.5%)		
	Able to read and write	43(64.2%)	24(35.8%)	2.150(0.593-7.792)	
	Primary	11(42.3%)	15(57.7%)	0.880(0.213-3.637)	
	Secondary	38(66.7%)	19(33.3%)	2.400(0.649-8.880)	
	College and above	48(57.8%)	35(42.2%)	1.646(0.465-5.827)	
Father's occupational status	Farmer	26(68.4%)	12(31.6%)		
	Merchant	41(62.1%)	25(37.9%)	0.757(0.325-1.763)	
	Government employee	32(55.2%)	26(44.8%)	0.568(0.241-1.339)	

	Private employee	18(62.1%)	11(37.9%)	0.775(0.274-2.084)	
	Daily laborer	4(33.3%)	8(66.7%)	0.231(0.058-0.919)	
	Driver	13(52.0%)	12(48.0%)	0.500(0.177-1.416)	
	Others	13(72.2%)	5(27.8%)	1.200(0.348-4.137)	
Learn about menstrual hygiene in the school	Yes	163(63.2%)	95(36.8%)	1.326(0.884-1.988)	1.212(0.763-2.256)
	No	88(56.4%)	68(43.6%)		
School has water source	Yes	176(64.9%)	95(35.1%)	1.680(1.112-2.537)	0.958(0.024-3.543)
	No	75(52.4%)	68(47.6%)		
Girls club in the school	Yes	154(65.5%)	81(34.5%)	1.607(1.079-2.394)	
	No	97(54.2%)	82(45.8%)		
Private menstrual hygiene management room	Yes	141(65.9%)	73(34.1%)	1.580(1.063-2.350)	
	No	110(55.0%)	90(45.0%)		

Key

N=frequency, %=percent, *= significant at p value < 0.05

5.5.2 Factors associated with Attitude regarding menstrual hygiene

In bivariate analysis residence, grade level, mothers' educational status, mothers' occupational status, get monthly permanent pocket money, shopping center, toilet facility females toilet kept locked inside, private menstrual hygiene room in the school were the factors that shown association (at $P < 0.25$) with overall attitude of menstrual hygiene management of respondents. In the multivariable logistic regression analysis students whose mothers are able to read and write, 2.73 times more likely had good attitude than whose mothers are unable to read and write; [AOR= 2.73, 95% C.I (1.069-6.954, Pv, 0.036)].

Table 4: association between attitude on menstruation and menstrual hygiene of the respondents among adolescent girls in woliso town secondary schools, Oromia Region, Ethiopia 2023

Variables	Variable categories	Attitude		COR 95%CI	AOR 95%CI
		Good attitude	Poor attitude		
Residence	Urban	100(43.5%)	130(56.5%)	0.646(0.220-2.500)	
	Rural	100(54.3%)	84(45.7%)		
Grade level	9 th	106(68.4%)	49(31.6%)	0.552(0.486-1.822)	
	10 th	61(54.5%)	51(45.5%)		
	11 th	13(19.4%)	54(80.6%)		
	12 th	20(25%)	60(75%)		
Mothers' educational status	Unable to read and write	39(73.6%)	14(26.4%)	0.299(0.016-4.250)	2.73(1.069-6.954)*
	Able to read and write	35(45.5%)	42(54.5%)		
	Primary	14(43.8%)	18(56.3%)		
	Secondary	43(55.1%)	35(44.9%)		
	College and above	14(26.4%)	39(73.6%)		

Mothers' occupational status	House wife	53(58.9)	37(41.1%)	1.396(0.015-1.662) 0.810(0.673-1.123) 0.481(0.892-2.900) 0.433(0.389-5.750) 1.047(0.914-3.567) 0.349(0.061-24.497)	
	Student	6(66.7%)	3(33.3%)		
	Merchant	36(53.7%)	31(46.3%)		
	Private organization employee	20(40.8%)	29(59.2%)		
	Government employee	23(38.3%)	37(61.7%)		
	Daily laborer	3(60%)	2(40%)		
	Other	4(33.3%)	8(66.7%)		
Permanent pocket money	Yes	59(47.2)	66(52.8%)	0.938(0.507-1.182)	
	No	141(48.8%)	148(69.2%)		
Shopping center	Yes	174(46.2%)	203(53.8%)	0.362(0.269-2.794)	
	No	26(70.3%)	11(29.7%)		
Does the female toilet kept locked inside	Yes	78(61.4%)	49(38.6%)	2.152(1.317-2.410)	
	No	122(42.5%)	165(57.5%)		
Girls club in the school	Yes	120(51.1%)	115(48.9%)	1.291(1.064-1.481)	
	No	80(44.7%)	99(55.3%)		
Does the school have private menstrual hygiene room	Yes	119(55.6%)	95(44.4%)	1.840(0.416-1.916)	
	No	81(40.5%)	119(55.6%)		

5.5.3 Factors associated with menstrual hygiene management practice

In bivariate analysis age, place of residence, grade level, mothers' educational level, fathers' occupational status, taking monthly permanent pocket money, learn menstrual hygiene management at school, female toilet kept locked inside, girls club on the school and private menstrual hygiene room in school were the factors that shown association (at $P < 0.25$) with overall practice of menstrual hygiene management of respondents. In the multivariable logistic regression analysis, it was grade level found that the odd of good practice was 6.8 times higher [AOR= 6.824; 95% CI: (1.265-36.815)] among girls who are grade 11th compared with girls who are learn in grade 9th. Adolescent girls whose are get monthly permanent pocket money 7.6 times [AOR=7.603; 95% CI:(3.210-18.010)] more likely to have good practice of menstrual hygiene management compared to those who didn't get monthly permanent pocket money. It was also found that the odd of good practice of menstrual hygiene management among those who are get learn menstrual hygiene management in the school was 2.9[AOR=2.9; 95% CI:(1.185-6.873)] times higher than those who didn't learn about menstrual hygiene management in the school.

Table 4-Factors associated with menstrual hygiene management practice of the respondents among adolescent girls in woliso town secondary schools, Oromia Region, Ethiopia 2023

Variables		Practice		COR 95%CI	AOR 95%CI
		Good practice	Poor practice		
Age	<15	47(87%)	7(13%)		
	15-17	156(70.9)	64(29.1)	0.363(0.035-0.956)	
	18	31(34.4)	59(65.6)	0.078(0.053-1.118)	
	>18	13(26%)	22.2(74%)	0.088(0.071-9.270)	
Residence	Urban	119(51.7)	111(48.3)	0.469(0.419-1.202)	
	Rural	128(69.6)	56(30.4)		
Grade level	9th	128(83.1)	26(16.9)		
	10th	77(68.8)	35(31.3)	0.446(0.262-4.031)	2.375(0.0820-6.882)
	11th	26(38.8)	41(61.2)	0.128(0.096-14.946)	6.824(1.265-36.815)
	12th	16(19.8)	65(80.2)	0.050(0.656-4.380)	3.490(0.715-4.021)
Mothers' educational status	Unable to read and write	37(69.8)	13(30.2)		
	Able to read and write	51(66.2)	27(33.8)	0.663(0.408-2.541)	
	Primary	20(62.5)	12(37.5)	0.585(0.301-1.804)	
	Secondary	50(61)	28(39)	0.627(0.555-2.300)	
	College and above	27(50.9)	25(49.1)	0.379(0.183-5.324)	

Fathers' occupational status	Farmer	31(55.3)	21(44.7)		
	Merchant	46(69.7)	27(30.3)	1.154(0.235-1.228)	
	Government employee	23(55.9)	17(44.1)	0.916(0.356-1.808)	
	Private employee	16(48.7)	19(51.3)	0.570(0.266-2.060)	
	Daily	10(36.9)	25(63.1)	0.270(0.048-1.283)	
	Laborer	14(51.5)	13(48.5)	0.729(0.222-1.760)	
	Driver	7(78.9)	2(21.1)	2.370(0.241-3.560)	
	Others	46(73.8)	12(26.2)	2.596(0.557-5.469)	
Permanent pocket money	Yes	20(69.6)	11(61.1)	0.990(0.523-9.100)	7.603(3.210-18.010)
	No	145(56.2)	79(47.3)		
Learn menstrual hygiene in the school	Yes	102(65.4)	88(52.7)	1.597(0.976-2.221)	2.900(1.185-6.873)
	No	82(64.6%)	113(43.3)		
Does the female toilet kept locked inside	Yes	165(57.5)	54(34.6)	1.108(0.482-1.144)	
	No	124(52.8)	45(35.4%)		
Girls club in the school	Yes	123(50.9)	122(49.1)	27.977(1.309-29.953)	
	No	4(12.8)	111(87.2)		
Does the school have private menstrual	Yes	127(63.5)	109(50.9)	1.809(0.882-1.941)	
	No	47(87%)	73(40.1)		

hygiene room					
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6. DISCUSSION

According to our study findings, the magnitude of adolescent students' knowledge, attitude, and practice of menstrual hygiene was 59.2% [95% CI: 55-64], 51.7% [95% CI: 47- 57] and 40.3% [95% CI 36-45] respectively.

According to the findings of this study, the knowledge of menstrual hygiene management among adolescent school girls was 59.2%. This finding is in line with the study conducted in western Ethiopia which indicated (56.9%) (42), North East Ethiopia (64.9%) (16), Nekemte, town (60.9%) (27), Western Ethiopia (60.9%) (43). The probable justification for the observed 'in line' findings could be due to the study design and study setting because those studies were conducted using a facility based cross-sectional study design. The current finding is lower than the findings Lucy Village of Rift Valley (70.9%) (40), cross sectional study in Central Ethiopia (72.5%), North Eastern Ethiopia (53.9%) (42) cross sectional study in the Savannah Region of Ghana (63.7%) (42). The discrepancy could be attributed to differences in sociodemographic features or differences in the study population, as the bulk of prior research was done in urban regions, whereas the current study was conducted in both urban and rural areas. Another possible explanation for the difference might be that the current study and prior studies used different methods to assess menstrual hygiene management.

Adolescent girls whose mothers are government employees have a higher chance of good knowledge about menstrual hygiene than those whose mothers are housewives. This is related to the issue of family occupational status so that mothers who are governmental employee may have improved their knowledge to inform their daughter's constructive information necessary to menstrual hygiene management. It is supported by the finding from qualitative studies (43).

The current study revealed that the frequency of schoolgirls' attitude regarding menstrual hygiene management was 51.7%. The current finding is higher than the findings from Kakumiro town (46.9%) (42), North Wollo Zone Ethiopia (47.9%) (41), Northern Region of Ghana (13.6%) (44). The reason for the difference could be due to differences in sociodemographic characteristics, differences in study population as the majority of previous studies were conducted in urban areas whereas the current study was conducted in both urban and rural areas. Another possible explanation for the difference is that the way menstrual hygiene management was measured was different for the current study and previous studies.

Adolescent girls whose mothers are able to read and write have a higher chance of good attitude about menstrual hygiene than those whose mothers are unable to read and write. This is related to the issue of family educational status so that mothers who are able to read and write may have improved their attitude to inform their daughter's constructive information necessary to menstrual hygiene management for their daughter.

The findings of this study revealed that the practice of menstrual hygiene management among adolescent schoolgirls was (40.3%). The current finding is lower than the findings North eastern Ethiopia (53.9%) (44), Lucy village of Ethiopian rift valley (70.2%) , The reason for the difference could be due to differences in sociodemographic characteristics, differences in study population as the majority of previous studies were conducted in urban areas whereas the current study was conducted in both urban and rural areas. Another possible explanation for the difference is that the way menstrual hygiene management was measured was different for the current study and previous, those studies use different methodology, study design and materials studies. And this finding is in line to the study conducted in western Ethiopia (39.9%) (27) the probable justification for the observed inline findings could be study design, and data collection tool and study setting because both studies were conducted using a facility based cross sectional study.

An adolescent girl whose grade level was higher had greater chance to have good practice than those adolescent girls whose grade level was less. This is related issue of whose grade level is increase they have improved their menstrual hygiene practice because their educational level and probability of getting some additional knowledge and how to maintain their hygiene. It is supported by the finding from qualitative studies(38).

Adolescent girls who had monthly permanent pocket money have higher chance of good menstrual hygiene practice than those girls hadn't get permanent pocket money. This is related issue of girls who had get permanent pocket money higher probability get or buy absorbents affects their MHM. It is supported by the finding from qualitative studies. (45)

Adolescent girls who are learned menstrual hygiene management in the school have higher chance of good menstrual hygiene practice than girls who were not learned menstrual hygiene management in the school. The reason might be related issue of girls who are learned menstrual hygiene in the school higher probability to know how to maintain their MHM and how to develop their knowledge about how to

change pads per a day, how to dispose and some related illness caused by poor MHM. It is supported by the finding from qualitative studies (37).

7. STRENGTH AND LIMITATION OF THE STUDY

7.1 Strength of the study

- Data were collected from primary sources
- The study used a random method of sampling procedure which give equal chance to participants included in the study.
- Data collection method was employed 100% response rate.
- The data collection tools were standardized from similar previous studies.

7.2 Limitations of the study

- Elementary school which found in the town was not included.
- This study was conducted using a cross-sectional study design, which may result in difficulty in providing a causal relationship between menstrual hygiene and independent variables.
- The other challenge was we were new for soft wares used for analysis during study time.

8. Conclusion

According to the results of this study revealed that greater than half of adolescent girl students were knowledgeable and had positive attitude about menstrual hygiene but, lower than half of adolescent girl students were practice about menstrual hygiene. Educational status of mothers was found strong factor associated with attitude about menstrual hygiene. Students' grade level, getting permanent pocket money, learning about menstrual hygiene in the school and Knowledge of menstrual hygiene were found strong factor associated with menstrual hygiene practice.

9. Recommendation

Based on the finding of current study the following recommendations were forwarded to the concerned bodies to improve menstrual hygiene practice resulting to improve institutional education and female students' satisfaction.

Town Education offices

- Work hard on constructing menstrual hygiene management room and water to improve menstrual hygiene practice of the students.

School Directors

- The school work hard water supply, Toilet facility, girls club which give support for female students, and also containers to dispose the menstrual blood absorbent materials.
- Work hard to improve students' knowledge on menstrual hygiene
- It is better to give to incorporate reproductive health education, including menstrual hygiene to their students in the school at school level.
- It is better establish reproductive health club to improve menstrual hygiene practice of the students.

Students

- It is better to be ready in case of menstrual management material at mensuration period to improve menstrual hygiene.

Researchers

- It is recommended to conduct mixed study by including elementary school to both qualitative and quantitative methods to assess detail associated factors with menstrual hygiene management and take an appropriate intervention.

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ANNEX

Questionnaires

Questionnaires prepared to collect information about Knowledge, Attitude, Practice and its associated factors of menstrual hygiene among adolescent girls in woliso town secondary schools.

Information sheet; Good morning/ afternoon thank you for participating in our study. We are from college of medicine and health science department of Nursing in Wolkite University. We are conducting study among female students on their Knowledge, Attitude, Practice of menstrual hygiene and its associated factor. The purpose of this study is to identify factors that affect MHM and to assess participant knowledge, attitude and the way of they practicing.

Concerning this, a self-administered questionnaire is prepared for you to read properly and give your answer by circling the answer you choose and filling blank spaces. You are not required to write your name on the questionnaire. The information you provide us will not in any way be transfer to a third party and your identity was concealed at all cost. Your name will not be used in any report, but your ideas and suggestions will help us to do better. You are not obliged to participate in the study and you have the right to refuse to participate at any stage of the study. If you agree to participate in the study and you find some questions that you are not comfortable to answer, you can skip them without answering. If you have any questions, you can ask us.

CONSENT FORM

I have understood that no information about me was exposed to other party. After taking this consideration

1 agreed to participate in the study (continue)

Signature Date

2 disagree to participate in the study (stop)

Signature Date

Part 1: - Socio-demographic, Economic and Family related questions			
S.no	Questions	Possible answer	Remark
101	Age in years	I am-----years old	

102	Your residence	1.Urban 2.Rural	
103	Your grade levels	1. =9th 2. =10th 3. =11th 4. =12 th	
104	With whom do you live?	1.Both parents 2.Mother only 3.Father only 4.Relatives 5.Others (specify) ----	If your answer is '1' move to next questions. If your answer is '2' move to Qn. No 105 and 106. If your answer is '3' move to Qn. No 107 and 108. If your answer is '4' or '5' move to Qn. No 109
105	What is your mother's educational status?	1.Unable to read and write 2.able to read and write 3.Primary 4.Secondary 5.College and above	
106	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) -----	

107	What is your father's educational status?	1.Unable to read and write 2. Able to read and write 3.Primary 4.Secondary 5.College and above	
108	What is the father's occupational status?	1.Farmer 2.Merchant 3.Governmental employee 4.private organization employee 5. Daily laborer 6. Driver 7. Others (specify) ---	
109	Do your parents provide permanent pocket money regularly?	1.Yes 2.No	
110	Is there shopping center in your environment?	1.yes 2.No	

Part 2: -Menstrual hygiene management knowledge related questions			
201	Do you start to see menstruation	1, yes 2, no	
202	Age at menarche	-----years old	
202	Have you heard about menstruation before menarche?	1.Yes 2. No	If your answer is yes gone to203

203	If your answer is 'Yes' for question No 202, what is the source of information?	<ul style="list-style-type: none"> 1.Mother. 2.Teacher. 3.Health personnel. 4.Mass media (radio/ TV). 5. Friends 6.others; specify----- 	
204	What is menstruation?	<ul style="list-style-type: none"> 1.Is a physiological process 2.Is a pathological process 3.I curse from God 4.I don't know 5.Other (specify 	
205	What is the cause of menstruation?	<ul style="list-style-type: none"> 1.Hormone. 2.Is caused by sin. 3.It is a curse of God. 4.Is caused by a disease. 5.I don't know. 6.Other (specify) 	
206	From which organ does the menstrual blood come?	<ul style="list-style-type: none"> 1.Uterus 2.Vagina 3.Urinary bladder 4.Abdomen 5.I don't know 6.Other (specify) 	
207	What is the normal duration of the menstrual cycle?	<ul style="list-style-type: none"> 1.<20 Days 	

		2.20-35 Days 3. >35 Days 4. Don't know	
208	Do you know about menstrual hygiene management?	1. Yes 2. No	
209	Do you Know that Menstruation is not a lifelong process?	1. Yes 2. No	
210	Do you know about RTIs?	1. Yes 2. No	

Part 3; - menstrual hygiene attitude related questions

301	How do you feel during your first menses?	1, Happy 2, Scared 3, Discomfort 4, Emotional disturbance	
302	Do you freely discuss menstrual issues with your parents, friends?	1. Yes 2. No	If your answer is No go to Q- 304
303	If your answer to question No 302 is "Yes", in what topics/issues why?	1. About menstrual hygiene management. 2. About methods on how to use sanitary pads. 3. both	

		4.other, specify-----	
304	If your answer to question No 302 is “No”, why?	1.Because of shamefulness 2.Not habitual. 3.Privacy. 4.other specify-----	
305	Do you attend school during menses?	1, yes 2, No	
306	If your answer to question No 305 “no”, why?	1, Lack of toilet facilities in school. 2, Fear of unexpected bleeding. 3, Lack of material or pad. 4, Presence of menstrual symptoms. 5, Lack of water. 6, Lack of disposal facilities.	
307	Do you agree menstruating female should take bath?	1, yes 2, No	
308	If your answer is to question No 307 “no” Why?	1, taking bath during menses increase bleeding. 2.After taking bath, there is feeling of pain or discomfort 3. Other (specify it)	

Part 4; -menstrual hygiene practice relate questions

401	Do you use sanitary material(s) during menstruation?	1.Yes 2.No	
402	If your answer is Yes for Q no 401, what sanitary material do you use during menstruation?	1.Disposable sanitary pads. 2.Disposable piece of rags. 3.Reusable sanitary pads 4.Underwear. 5.Others; specify-----	
403	What is your reason for not using a disposable sanitary pad?	1.Lack of knowledge 2.High cost 3.Unavailability 4.Shyness 5.Others; specify-----	
404	Do you wash your genitalia during menstruation?	1.Yes 2.No	If your answer is No, go to Q- 407
405	If your answer for question no 404 is 'yes ', what medium do you use for your genital cleaning purpose?	1.Only Water. 2.Soap and water. 3.Others; specify-----	
406	If your answer to question no 404 is yes how often do you wash your genitalia per day?	1.Once 2.Twice 3.Three times	

		4. above three times	
407	Do you change your sanitary material(s) during menstruation?	1. Yes 2. No	
408	How often do you change absorbent material per day?	1. Once 2. Twice 3. Three times 4. More than three times	
409	How do you dispose of menstrual materials after use?	1. Open field 2. Latrine 3. Put in the bin 4. Others; specify -----	
410	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--	
411	What materials do you use for Washing of the reusable cloth?	1. With soap and water 2. With water, only 3. Others (specify) -----	

412	Where do you put/ keep your reusable sanitary pads after washing for drying?	1.In the shade outside 2.In the shade inside 3.In the sunlight inside 4.In the sunlight outside	

Part 5; School facility or Environmental related Questions			
501	Have you ever learned about menstrual hygiene management in the school?	1.Yes 2.No	
502	Does the school have a water source?	1.Yes 2.No	If your answer is No go to Q- 504
503	If your answer is 'Yes' for question No "402" what is the source of water?	1= piped into a dwelling or borehole with a pump or protected dug well 2= pond or unprotected well	
504	Does the school have a toilet facility?	1.Yes 2.No	If your answer is No go to Q- 506
505	If your answer is 'Yes' for question No "404" what type of toilet facility is there?	1= flush or ventilated improved latrine	

		2= open pit or none (Bush field)	
506	Does the school have females' toilets kept locked inside?	1.Yes 2.No	
507	Dose the school have girls club?	1.Yes 2.No	
508	If your answer is yes questioning No 507 which type of support give you?	1.rest room during menses 2.get sanitary pad 3.private room for changing pads 4.some tutor class for menstrual hygiene management 5. No menstrual hygiene related support	
509	Does the school have private menstrual hygiene management room?	1, Yes 2, No	

Thank you very much for your patience

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

Questionnaire/Gaaffiilee

Gaaffiilee waa'ee beekumsa, ilaalcha, qabiinsa fi wantoota isaa wajjin walqabatan qulqullina lagu shamarran dargaggoota manneen barnootaa sadarkaa lammaffaa magaalaa walisoo keessatti argaman walitti qabuuf qophaa'e.

Waraqaa odeeffannoo

Akkam bultee/ Akkam ooltee? qo'annoo keenya irratti hirmaachuu keessaniif galatoomaa. Nuti kolleejjii Medicine fi saayinsii fayyaa departementii Narsii Yuunivarsiitii Wolkite irraati. Barattoota dubartootaa irratti Beekumsa, ilaalcha, qabiinsaa fi wantoota eegumsa qulqullina lagu isaanii wajjin walqabatan irratti qorannoo gaggeessaa jirra.

Kaayyoon qorannoo kanaa beekumsa hirmaattotaa, ilaalcha isaanii, akkaataa qabiinsaa qulqullinaa yeroo lagu madaaluu fi wantoota isaaniiin walqabatan irratti dhiibbaa geessisan adda baasuudha.

Kana ilaalchisee, deebii filatte naannessuu fi bakka duwwaa guutuudhaan sirriitti dubbistee deebii kee akka kennitu gaaffiileen qophaa'anii jiru. Gaaffii irratti maqaa kee barreessuun sirra hin Eegamuu. Odeeffannoon ati nuuf kennitee karaa kamiinuu qaama sadaffaatti kan hin dabarfamnee fi eenyummaan kee haala kamiinuu hin ibsamuu. Maqaa kee gabaasa kamiyyuu keessatti hin fayyadamnu, garuu yaadni ati nuu kennitu kana caalaa akka hojjenu nu gargaara. Qo'annicha irratti hirmaachuuf dirqama kan hin qabnee fi sadarkaa qo'annichaa kamiyyuu irratti hirmaachuu diduudhaaf mirga qabdu. Qorannicha irratti hirmaachuuf yoo walii galtee fi gaaffiiwwan deebisuuf sitti hin tolle tokko tokko yoo argatte osoo deebii hin kenniin darbuu dandeessa. Gaaffii yoo qabaatte nu gaafachuu dandeessa.

UNKA HEEYYAMA

Odeeffannoon waa'ee koo kamiyyuu qaama biraatiif akka hin dabbaree hubadheera. Erga hubannoo kana fudhatanii booda

1 qorannoo kana irratti hirmaachuuf waliigaleeraa (itti fufi)

Mallattoo Guyyaa

2 qorannicha irratti hirmaachuuf walii hin galle (dhaabbadhu)

Mallattoo Guyyaa

Kutaa 1:- Gaaffiilee Buu'uraa, kan diinagdee fi maatii waliin wal qabatan			
Tartiiba Lakk.	Gaaffiilee	Deebiiwwan ta'u danda'an	Yaada
101	Umuriin kee meeqa?	Waggaa-----	
102	Bakka jireenyaa	1. Magaala 2. Baadiyaa	
103	Kutaa meeqaffaa baratta?	1. 9 ^{ffaa} 2. 10 ^{ffaa} 3. 11 ^{ffaa} 4. 12 ^{ffaa}	
104	Eenyu waliin jiraatta?	1. Haadha fi Abbaa 2. Haadha qofa 3. Abbaa qofa 4. Firoota 5. Kanneen biroo (ibsi) -----	Deebiiin kee 'isa lammaffaa yoo ta'e 105 tti ce'i Deebiiin kee isa saddaffaa yoo ta'e 107tti darbii
105	Sadarkaa barnootaa haadha keetii	1. Dubbisuu fi barreessuu kan hin	

	maali?	dandeenyee 2.dubbisuu fi barreessuu kan danda'u 3.Sadarkaa tokkoffaa 4.Sadarkaa Lammaffaa 5.Kolleejjii fi isaa ol	
106	Gaheen hojii haadha keetii maali?	1.Haadha manaa 2.Barataa 3.Daldalaa 4.Hojjetaa dhaabbata dhuunfaa 5.Hojjetaa mootummaa 6.Hojjetaa guyyaa guyyaa 7.Kanneen biroo (ibsi) -----	
107	Sadarkaa barnootaa abbaa kee maali?	1.Dubbisuu fi barreessuu kan hin dandeenyee 2. Dubbisuu fi barreessuu kan danda'u 3.Sadarkaa tokkoffaa 4.Sadarkaa Lammaffaa 5.Kolleejjii fi isaa ol	
108	Gaheen hojii abbaa kee maali?	1.Qonnaan bulaa 2.Daldalaa 3.Hojjetaa mootummaa 4.hojjetaa dhaabbata dhuunfaa 5. Hojjetaa guyyaa guyyaa 6. Konkolaachisaa 7. Kanneen biroo (ibsi) ---	
109	Warri kee maallaqa kiishaa dhaabbataa ni kennu?	1.Eeyyee 2.Lakki	
110	. Naannoo jiraattan keessatti wiirtuun daldalaa dhiyeenyatti jiraa?	1.Eeyyee 2.Lakki	

aa 2. Gaafiilee Beekumsaa waa'ee Eegumsa qulqullina laguun wal qabatan

Marsaa Laguu arguu jalqabdeetaa?	1. Eeyyee 2. Lakki(yoo arguu hin jalqabnee waraqaa gaafii kana deebisii osoo gaafiilee itti aananiitti hin ce'iin)	
Umurii laguun jalqabaa itti argitee	Waggaa -----	

Waa'ee lagu, lagu arguu keetiin dura dhageesseetaa?	1.Eeyyee 2. Lakki	Yoo deebiin kee eeyyee ta'e gara 204 deemi
Gaaffii Lakk. 203f deebiin kee 'Eeyyee' yoo ta'e, maddi odeeffannoo keetii maali?	1.Haadha. 2.Barsiisaa. 3.Hojjetoota fayyaa. 4.Miidiyaa ummataa (raadiyoo/ TV). 5. Hiriyyoota 6.kanneen biroo; ibsi-----	
Laguun maali?	1.Adeemsa uumamaatii 2.Adeemsa dhibee dhaan dhufu 3. abaarsa waaqaatii 4.Hin beeku 5.Kanneen biroo (ibsi)	
Sababni laguun dhufuuf maali?	1.Hormoonii ykn xannacha 2.Cubbuun kan dhufudha. 3.Abaarsa Waaqayyooti. 4.Dhukkuba tokkoon tokkon dhufa 5.Hin beeku. 6.Kanneen biroo (ibsi)	
Dhiigni lagu qaama kamirraa dhufa?	1.Gadameessa 2.Qaama saalaa 3.Ujummoo fincaanii 4.Garaa 5.Hin beeku 6.Kanneen biroo (ibsi)	
Yeroon marsaa lagu idilee meeqa?	1.<Guyyaa 20 2. Guyyoota 20-35 3. >Guyyoota 35 4.Hin beeku	
Haala Eegumsa Qulqullina lagu Beektaa?	1.Eeyyee 2.Lakki	
Laguun adeemsa umurii guutuu akka hin taane Beektaa?	1.Eeyyee 2.Lakk	
Waa'ee dhibee ykn infeekshinii ujummoo qaama wal hormaataa beektaa?	1.Eeyyee 2.Lakk	

aa 3:- Gaafilee Ilaalcha qulqullina Laguun wal qabatan

Yeroo laguun jalqabaa sitti dhufu maaltu sitti dhagahame?	1, Gammachuu 2, Sodaa 3, Mijachuu dhabuu 4, Miira jeeqamuu	
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Dhimma lagu irratti warra kee, hiriyoota kee waliin bilisaan mari'attaa?	1.Eeyyee 2.Lakki	Deebiin kee Lakki yoo ta'e gara Gaaffii 304 ce'i
Gaaffii Lakk 302f deebiin kee "Eeyyee" yoo ta'e, mata dureewwan/dhimmoota akkamii irratti mari'atta?	1.Waa'ee Eegumsa qulqullina lagu. 2.Waa'ee maloota akkaataa itti fayyadama modesii ykn pad irratti. 3.lamaanuu 4.kan biro (ibsi)-----	
Gaaffii Lakk 302f deebiin keessan "Lakki" yoo ta'e, maaliif?	1.Sababa qaanii 2. kan baramee waan hin taaneef 3.Iccitii Eeguuf jecha 4.kanneen biro(ibsi)-----	
Yeroo laguun sirra jiru mana barumsaa ni deemtaa?	1.Eeyyee 2.Lakki	
Gaaffii Lakk 305f deebii kee "lakki" yoo ta'e, maaliif?	1, Hanqina mana fincaanii mana barumsaa keessatti. 2, Dhiigni osoo hin eegin akka bahu sodaa. 3, Hanqina meeshaa qulqullinaa ykn modesii 4, Mallattoo/ miira dhukkubbaa yeroo lagu jiraachuu. 5, Hanqina bishaanii. 6, Hanqina meshaa modesii fayyadamtee itti gataman	
Dubartiin lagu irra jirtuu dhaqna(qaama) dhiqachuu qabdi jette yaaddaa?	1, eeyyee 2, Lakk	
Deebiin kee gaaffii Lakk 307 "lakki" yoo ta'e Maaliif?	1, yeroo lagu dhiqachuun dhiigaa bahu baay'isaa 2.Erga dhiqatanii booda miirrii dhukkubbii ykn miira tasgabbii dhabuutu namatti dhagahama 3. Kan biroo (ibsi)	

aa 4:- Gaafiilee haala qabiinsa qulqullina Laguun wal qabatan

Yeroo lagu meeshaa Eegumsa qulqullinaa fayyadamtuu?	1.Eeyyee 2.Lakki	
Gaaffii lakk 401 Deebiin kee Eeyyee yoo ta'e, yeroo lagu meeshaa qulqullinaa akkamii fayyadamta?	1.modesii qulqullinaa yeroo tokkotti fayyadamtee gatamu. 2.uffataa moofaa kuttee yeroo tokkof fayyadamtuu 3.meeshaalee qulqullinaa irra deebiin itti fayyadamuu danda'amuu	

		4.Uffata jalatti kewwatamuu qofa 5.Kanneen biroo; ibsi-----	
	Gaaffii 402f deebiin kee “1 ^{ffaan} ” ala yoo ta’e , Sababni modesii qulqullinaa yeroo tokkotti gatamu fayyadamuu dhiisuu keessaniif maali?	1.Hanqina beekumsaa 2.Baasii guddaa/ maallaqa dhabuu 3. dhiyeenyatti argamuu dhabuu 4. Sodaa ykn qaaneeffachuu 5.Kanneen biroo; ibsi----- .	
	Yeroo lagu qaama saalaa dhiqattaa?	1. Eeyyee 2. Lakki	Yoo deebiin kee ‘Lakki’ ta’e Gaaffii 407tti ce’i
	Gaaffii lakk 404f deebiin kee ‘eeyyee’ yoo ta’e qulqulleessituu qaama saalaa keetiif wantoota akkamii fayyadamta?	1.Bishaan Qofa. 2.Saamunaa fi bishaan. 3.Kanneen biroo; ibsi-----	
	Gaaffii lakk 404f deebiin kee ‘eeyyee’ yoo ta’e guyyaatti qaama saalaa kee yeroo meeqa dhiqatta?	1.Al tokko 2.Yeroo lama 3.Yeroo sadii 4. yeroo sadii oliitti	
	Yeroo lagu meeshaa qulqullina itti fayyadamtan ni jijjiirta?	1.Eeyyee 2.Lakki	
	Deebiin kee ‘Eeyyee’ yoo ta’e guyyaattii si’a meeqaa jijirtaa?	1.Al tokko 2.Yeroo lama 3.Yeroo sadii 4.Yeroo sadii olii	
	Meeshaalee lagu erga itti fayyadamtee booda akkamitti gattaa?	1.Dirree banaa 2.Mana fincaanii 3.meeshaa akka basketii itti gatamuu keessa kaa’uu 4.Kanneen biroo; ibsi -----	
	Meeshaalee qulqullinaa haaraa ykn irra deebi’amee itti fayyadamuu dandeessu eessatti kuufatta?	1.sanduuqa keessa qophaatti 2.Kaabineetii uffata 3.Mana dhiqannaa 4.Huccuu kaan faana kaa’aa 5.Hin kaa’uu 6.Kanneen biroo; ibsi-----	
	Huccuu Eegumsaa qulqullina lagu irra deebiin itti fayyadamuu danda’u dhiquuf meeshaalee akkamii fayyadamtu?	1.Saamunaa fi bishaan waliin 2.Bishaaniin qofa 3.Kanneen biroo (ibsi) ----- .	
	Huccuuwwan qulqullinaa irra deebiin itti fayyadamuu dandeessan erga miicciitanii booda	1.Gaaddisa ala jiru keessatti 2. mana Keessa gaaddisa jala	

gogsuuf eessa kaa'attu?	3.Ifa aduu jala mana kessa 4.Ifa aduu jala manaan alatti	
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Maqaa 5:- Gaafiilee mana barumsaa fi Naannoo wajjin walqabatan		
Waa'ee Eegumsa qulqullina lagu mana barumsaa keessatti barattanii beektuu?	1.Eeyyee 2.Lakki	
Manni barumsichaa madda bishaanii qabaa?	1.Eeyyee 2.Lakki	Yoo deebiin kee Lakki ta'e gara G- 504 ce'i
Gaaffii Lakk "502" jedhuuf deebiin kee 'Eeyyee' yoo ta'e maddi bishaanii maali?	1= paampii ykn boolla qotame eegumsa qabuun gara mana jireenyaa ykn boolla boollaatti tuuboodhaan darbuu 2= bishaan kuufamaa ykn boolla bishaanii eegumsa hin qabne	
Manni barumsichaa mana fincaanii qabaa?	1.Eeyyee 2.Lakki	Yoo deebiin kee Lakki ta'e gara G- 506 ce'i
Gaaffii Lakk' 504f deebiin kee 'Eeyyee' yoo ta'e gosa mana fincaanii akkamii jira?	1= mana fincaanii fooyya'a dhiqamuu fi qilleensa argatuu 2= boolla banaa 3.dirree bosonaa banaa	
Manni barumsichaa mana fincaanii dubartootaa keessaan cufamuu qabaa?	1.Eeyyee 2.Lakki	
manni barumsichaa Gumii shamarranii qaba?	1.Eeyyee 2.Lakki	
Deebiin kee 'Eeyyee' yoo ta'e gaaffii Lakki 507f deeggarsa gosa kam siif kenna?	1.yeroo lagu kutaa boqonnaa itti fudhattu qaba. 2.paadii ykn modesii qulqullinaa siif kenna 3.kutaa dhuunfaa paadii ykn modesii itti jijjiirrattu qophessa. 4.barnoota waa'ee Eegumsa qulqullina lagu siif kenna.	
Manni barumsichaa kutaa qophaattii Eegumsa qulqullina laguuf fayyaduu qabaa?	1.Eeyyee 2.Lakki	

Obsa keetiif baay'ee galatoomii!

Maqaa walitti qabaa odeeffannoo ----- mallattoo ----- Guyyaa -----.

Annex V የአማርኛ መጠይቅ ስምምነት ቅጽ

ክፍል አንድ : ስለጥናቱ ዝርዝር መረጃን በተመለከተ

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

አንደኛውን አደርሽ / እንደምን ዋልሽ። ስሜ -----ይባላል። የምንማረው በወልቂጤ ዩኒቨርሲቲ የህክምና እና ጤና ሳይንስ ኮሌጅ የነርቲንግ ትምህርት ክፍል የመጀመሪያ ዲግሪ ማሟያ ጥናታዊ ጽሁፍ በማድረግ ላይ ከሚገኙት ተማሪዎች ከተባለ ጥናት አድራጊ ስር ነዉ። እኔ አሁን ከ20-30 ደቂቃ የማይበልጥ ጊዜ የሚወስዱ ስለ “ሴት ተማሪዎች ስለወር አበባ ያላቸውን እውቀት, አመለካከት እና በወር አበባ ጊዜ የሚያደርጉትን የንፅህና አጠባበቅ እና ተያያዥ ችግሮች በተመለከተ የሚጠይቁ ጥያቄዎችን አዘጋጅተናል። አንች የምትመልሱን መልስ በወር አበባ ጊዜ የንፅህና አጠባበቅ ጋር ተዛማጅ የሆኑ ችግሮችን ለመለየት በጣም አስፈላጊ ነዉ ። እርሰዎ የተመረጡት እዚህ ጥናት ላይ ከሚሳተፉ ሰዎች ውስጥ በእድል ሲሆን ከዚህ በታች የተገለጹትን መረጃዎች ከተረዱ በኋላ የስምምነት ዉል ይሰጡኛል ።

የጥናቱ ርዕስ:- “በወሊሶ ከተማ የሁለተኛ ደረጃ ትምህርት የሚማሩ ሴት ተማሪዎች ስለወር አበባ ያላቸውን እውቀት, አመለካከት እና በወር አበባ ጊዜ የሚያደርጉትን የንፅህና አጠባበቅ እና ተያያዥ ችግሮችን በተመለከተ ለማወቅ እና ለማጤን የሚካሄድ ጥናት ነዉ።

የጥናቱ አላማ:- “ሴት ተማሪዎች ስለወር አበባ ያላቸውን እውቀት እና በወር አበባ ጊዜ የሚያደርጉትን የንፅህና አጠባበቅ እና ተያያዥ ችግሮችን ለማወቅ እና ከዚህ ጋር ተያያዥነት ያላቸውን ዋናዎች ጉዳዮች በመለየት የሴቶችን የንጽህና አጠባበቅ እና ጤናን ይበልጥ ለማሻሻል ነዉ። ሌላዉ የዚህ ጥናት ጥቅም በወልቂጤ ዩኒቨርሲቲ የህክምና እና ጤና ሳይንስ ኮሌጅ የነርቲንግ ትምህርት ክፍል የመጀመሪያ ዲግሪ ማሟያ ጽሁፍ ለማቅረብ ነዉ። ከዚህ በተጨማሪ የጥናቱ ዉጤት በሴቶችን ንጽህና አጠባበቅ እቅድ ዙሪያ ለሚሰሩ አካላት ወይም ሀላፊዎች እቅድ ዝግጅትና ትግበራ ላይ ማሻሻያ ለማድረግ አስፈላጊነቱ የላቀ ነዉ።

ሚስጥራዊነት:- ለዚህ ጥናት የሚሰበሰቡ ማንኛውም አይነት መረጃ ሚስጥራዊነቱ የተጠበቀ ሲሆን የእርሰዎም ስም ሳይጻፍበት ሚስጥራዊ ቁጥር ብቻ ተሰጥቶት በፋይል ውስጥ የሚቀመጥ ይሆናል። እንዲሁም መረጃዉን ጥናቱን ከሚያካሂደዉ ሰዉ በስተቀር ለማንም ግልጽ አይሆንም። ተሳትፎ:- በዚህ ጥናት ላይ መሳተፍም አለመሳተፍም ሙሉ በሙሉ በእርሰዎ ፍቃድኝነት ላይ የተመሰረተ ነዉ። ለጥቂቶቹም በሙሉም ይሁን በከፊል መልስ ያለመስጠት መብት አለዎት። ይህ ደግሞ ማንኛውንም አይነት አገልግሎት ከማግኘት አያግደወትም። እንዲሁም በፈለጉት ሰዓት መጠይቁን የማቋረጥ ሙሉ መብት አለዎት። የበለጠ መረጃ ካስፈለገት በማንኛውም ሰዓት መጠየቅ ይችላሉ።

Annex VI 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 እንዲሰበስቡ

ተስማምቻለሁ ::

ተስማምቻለሁ አልተስማማሁም

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

የመረጃ ተቆጣጣሪው/ዋ ሰው ስም----- ፊርማ----- ቀን-----/-----/-----

ክፍል 1:- ማህበረሰባዊ፣ ኢኮኖሚያዊ እና ቤተሰብ ነክ ጥያቄዎች			
	ጥያቄዎች	ሊሆን የሚችል መልስ አስተያየት	አስተያየት
101	ሰንት አመትሽ ነው?	-----ዓመቱ ነው።	
102	የት ነው የምትኖረው?	1. ከተማ 2. ገጠር	
103	ስንተኛ ክፍል ነሽ?	1. =9ኛ 2. =10ኛ 3. = 11 ኛ 4. = 12 ኛ	
104	ከማን ጋር ነው የሚኖረው?	ከማን ጋር ነው የሚኖሩት? 1. ከሁለቱም ወላጆች ጋር 2. ከእናትቴ ጋር 3 ከአባቴ ጋር 4.ዘመዶች 5.ሌሎች (ይጥቀሱ) ----	መልስሽ ከሁለቱም ወላጆች ጋር ከሆነ ጥያቄ ቁጥር105-108 ያሉትን መልሺ,ከአንዳቸው ጋ ብቻ ከሆነ ግን ለመረጃው መልስ የሚሆኑትን የሚመገናኙትን ብቻ ሙዪ።
105	የእናትሽ የትምህርት ደረጃ ምን ያህል ነው?	1. ማንበብ እና መጻፍ አትችልም 2. ማንበብ እና መጻፍ ትችላለሽ 3.የመጀመሪያ ደረጃ 4.ሁለተኛ ደረጃ 5.ኮሌጅ እና ከዛ በላይ	

106	የእናትን የሞያ ዐይነት/ደረጃ ምን ያህል ነው?	1. የቤት እመቤት 2. ተማሪ 3. ነጋዴ 4. የግል ድርጅት ሰራተኛ 5. የመንግስት ሰራተኛ 6. የቀን ሰራተኛ 7. ሌሎች (ይጥቀሱ) -----	
107	የአባትን የትምህርት ደረጃ ምን ያህል ነው?	1. ማንበብ እና መጻፍ አይችልም 2. ማንበብ እና መጻፍ ይችላል 3. የመጀመሪያ ደረጃ 4. ሁለተኛ ደረጃ 5. ኮሌጅ እና ከዛ በላይ	
108	የአባትን የሞያ ዐይነት/ደረጃ ምን ይደነው?	1. ገበሬ 2. ነጋዴ 3. የመንግስት ሰራተኛ 4. የግል ድርጅት ሰራተኛ 5. የቀን ሰራተኛ 6. ሹፊር 7. ሌሎች (ይግለጹ) -----	
109	ወላጆችን የኪስ ገንዘብ ይሰጡላቸዋል?	1. አዎ 2. አይ	
110	በአካባቢው ውስጥ የገበያ ማእከል አለ?	1. አዎ 2. አይ	

ክፍል 2: - የወር አበባ ንፅህና አጠባበቅ ከእውቀት ጋር የተያያዙ ጥያቄዎች

201	የወር አበባ ማየት ጀምረሽል?	1. አዎ 2. አይ	
202	በስንት አመት ስንት የወር አበባ ያየሽው?	-----ዓመት	
203	ስለ የወር አበባ ሰምተሽ ታውቁዎታለሽ?	1. አዎ 2. አይ	መልስዎ አዎ ከሆነ ወደ 204 ይሂዱ
204	ለጥያቄ ቁጥር መልስዎ 'አዎ' ከሆነ 202, ከማን/ከየት ነው የሰማሽው?	1. ከእናቴ 2. መምህር 3. ከጤና ችፍሮች ሰራተኞች. 4. ከመገናኛ ብዙሃን (ሬዲዮ / ቲቪ). 5. ከጓደኞቼ 6. ሌሎች; ይግለጹ-----	
205	የወር አበባ ምን ይደነው?	1. የተፈጥሮ ዑደት	

		2. በበሽታ የሚመጣ 3. ከእግዚአብሔር እርግጥን 4. አላውቅም 5. ሌላ (ይግለጹ)	
206	የወር አበባ መንስኤ /የሚመጣው በምን ምክንያት ነው?	1. ሆርሞን. 2. በኃጢአት ምክንያት ነው. 3. የእግዚአብሔር እርግጥን ነው። 4. በበሽታ ምክንያት ይከሰታል. 5. አላውቅም. 6. ሌላ (ይግለጹ)	
207	የወር አበባ ደም የሚመጣው ከየትኛው አካል ነው?	1. ማሕፀን 2. ከረቤዛ 3. የሽንት ፊኛ 4. ሆድ 5. አላውቅም 6. ሌላ (ይግለጹ)	
208	የወር አበባ ዑደት መደበኛ ቆይታ ምን ያህል ነው?	1. <20 ቀናት 2. 20-35 ቀናት 3. > 35 ቀናት 4. አያውቅም	
209	ስለ የወር አበባ ንፅህና አጠባበቅ ታውቂያለሽ?	1. አዎ 2. አይ	
210	የወር አበባ የዕድሜ ልክ ሂደት እንዳልሆነ ታውቂያለሽ?	1. አዎ 2. አይ	
211	ስለ የሰውነት መራቢያ አካል ኢንፎክሽን/ህመም ታውቂያለሽ?	1. አዎ 2. አይ	

ክፍል 3:- የወር አበባ ንጽህና አመለካከት ተያያዥ ጥያቄዎች			
301	በመጀመሪያ የወር አበባዎ ወቅት ምን ተሰማሽ?	1, ደስተኛ 2, የፍርሃት ሰሜት 3, ምችት ማጣት ስሜት 4, የስሜት መረበሽ	
302	ከወላጆቻቸው ፣ ከጓደኞቻቸው ጋር የወር አበባን ጉዳዮች በነፃነት ትነጋገራለሽ?	1. አዎ 2. አይ	መልስህ ከሆነ ወደ ሂድ ጥ - 304

303	ለጥያቄ ቁጥር 302 የሰጡት መልስ “አዎ” ከሆነ፣ ስለ የትኞቹ ርዕሰ ጉዳዮች/ ጉዳዮች ለምን?	<p>1. ስለ የወር አበባ ንጽህና አያያዝ. የንፅህና መጠበቂያ ሞዴሶችን እንዴት መጠቀም እንደሚቻል</p> <p>2. ስለ የወር አበባ ንፅህና አጠባበቅ ዘዴዎች.</p> <p>3. ስለ ሁለቱም</p> <p>4. ሌላ፣ ይግለጹ---</p>	
304	ለጥያቄ ቁጥር 302 የሰጡት መልስ “አይ” ከሆነ ለምን?	<p>1. ስለማፍር</p> <p>2. የተለመደ አይደለም.</p> <p>3. ግላዊነት.</p> <p>4. ሌላ ይግለጹ-----</p>	
305	በወር አበባ ወቅት ትምህርት ቤት ሄደሽ ትማረአለሽ?	<p>1, አዎ</p> <p>2, አይ</p>	
306	ለጥያቄ ቁጥር 305 የሰጡት መልስ “አይ” ከሆነ ለምን?	<p>1, በትምህርት ቤት ውስጥ የመጻፍ ስነ ስርዓት እቃዎች እጥረት.</p> <p>2, ያልተጠበቀ የደም መፍሰስ መፍራት.</p> <p>3, የቁሳቁስ ወይም የወር አበባ ንፅህና መጠበቂያ/ሞዴስ እጥረት.</p> <p>4, የወር አበባ ምልክቶች መኖር.</p> <p>5, የውሃ እጥረት.</p> <p>6, የማስወገጃ መሳሪያዎች እጥረት.</p>	
307	በወር አበባ ላይ ያለች ሴት ሰውነቷን/ገላዋን መታጠብ እንዳለባት ተስማሚ ያለሽ?	<p>1, አዎ</p> <p>2, አይ</p>	
308	መልስህ ለጥያቄ ቁጥር 307 ከሆነ "አይ" ለምን?	<p>1, በወር አበባ ወቅት ገላውን መታጠብ የደም መፍሰስን ይጨምራል ስለሚባል</p> <p>2, ገላውን ከታጠቡ በኋላ, ህመም ወይም ምችት ይሰማል ስለሚባል</p> <p>3. ሌላ (ይግለጹ)</p>	

ክፍል 4:- የወር አበባ ንጽህና ልምምድ ጥያቄዎችን ይዛመዳል

401	በወር አበባ ወቅት የንፅህና መጠበቂያ ዕቃዎችን ትጠቀሚያለሽ?	1. አዎ 2.አይ	
402	መልስዎ ለ ጥያቄ ቁጥር 401 አዎ ከሆነ በወር አበባ ወቅት ምን አይነት የንፅህና መጠበቂያ ቁሳቁሶችን ትጠቀሚያለሽ?	1.የሚጣሉ የንፅህና መጠበቂያዎች. 2.የሚጣል የጨርቅ ቁርጥራጭ. 3.እንደገና ጥቅም ላይ የሚውሉ የንፅህና መጠበቂያዎች 4. የውስጥ ሱሪ. 5.ሌሎች; ይግለጹ-----	
403	የሚጣሉ የንፅህና መጠበቂያ ቁሳቁሶች /ሞዴስ ያልተጠቀሙበት ምክንያት ምንድን ነው?	1. የእውቀት ማነስ 2.ከፍተኛ ወጪ 3.ሰለማላገኝ 4. ስለማፍር 5.ሌሎች; ይግለጹ-----	
404	በወር አበባ ጊዜ የጾታ ብልትን ንፅህና ትጠብቂያለሽ/ ተታጠቢያለሽ?	1. አዎ 2.አይ	መልስዎ የለም ከሆነ ወደ Q-407 ይሂዱ
405	ለጥያቄ ቁጥር 404 የሰጡት መልስ ‘አዎ’ ከሆነ ለጾታ ብልት ማጽጃ ዓላማ ምን ዓይነት ይጠቀማሉ?	1. ውሃ ብቻ. 2. ሳሙና እና ውሃ. 3.ሌሎች; ይግለጹ ----	
406	ለጥያቄ ቁጥር 404 መልስዎ አዎ ከሆነ በቀን ስንት ጊዜ ብልትዎን ይታጠቡታል?	1. አንድ ጊዜ 2. ሁለት ጊዜ 3. ሶስት ጊዜ 4. በላይ ሶስት ጊዜ	
407	በወር አበባ ወቅት የንፅህና መጠበቂያ ቁሳቁሶችን ይለውጣሉ?	1. አዎ 2.አይ	
408	በቀን ምን ያህል ጊዜ የሚስቡ ነገሮችን ይለውጣሉ?	1. አንድ ጊዜ 2. ሁለት ጊዜ 3. ሶስት ጊዜ 4.ከሦስት ጊዜ በላይ	
409	የወር አበባ ቁሳቁሶችን ከተጠቀሙ በኋላ እንዴት እንደሚወገዱ?	1. ክፍት መስክ 2.መጻፍ ሴት 3. በቆሻሻ ማጠራቀሚያ ውስጥ ያስቀምጡ 4.ሌሎች; ይግለጹ -----	

410	አዲሱን እና/ወይም እንደገና ጥቅም ላይ ሊውል የሚችልን (ዎች) የት ነው የሚያከማቹት/የሚያስቀምጡት?	1. መሳቢያ ውስጥ 2. የልብስ ማስቀመጫ ላይ 3. መታጠቢያ ቤት 4. በተለመደው ጨርቅ 5. አላስቀምጥም 6. ሌሎች; ይግለጹ --	
411	እንደገና ጥቅም ላይ ሊውል የሚችል ጨርቅ ለማጠብ ምን ዓይነት ቁሳቁሶች ይጠቀማሉ?	1. በሰሙና እና በውሃ 2. በውሃ, ብቻ 3. ሌሎች (ይጥቀሱ) ----- -	
412	ለማድረቅ ከታጠቡ በኋላ እንደገና ጥቅም ላይ ሊውሉ የሚችሉትን የንፅህና መጠበቂያዎችዎን የት ያስቀምጣሉ/ ያቆዩታል?	1. ከቤት ውጪ ጥላ ላይ 2. ቤተ ውስጥ በጥላ ውስጥ 3. ቤት ውስጥ በፀሐይ ብርሃን 4. ውጭ የፀሐይ ብርሃን ውስጥ	

ክፍል 5; የትምህርት ቤት መገልገያ ወይም ከአካባቢ ጥበቃ ጋር የተያያዙ ጥያቄዎች

501	ስለ የወር አበባ ንፅህና አጠባበቅ በትምህርት ቤት ተምረጃ ታውቂያለሽ?	1. አዎ 2. አይ	
502	ትምህርት ቤቱ የውሃ አቅርቦት አለው?	1. አዎ 2. አይ	መልስህ የለም ከሆነ ወደ ሂድ ጥ - 504
503	መልስዎ 'አዎ' ከሆነ ለጥያቄ "402" የውሃ ምንጭ ምንድን ነው?	1= በቧንቧ ወደ መኖሪያ ቤት ወይም ጉድጓድ ውስጥ በፓምፕ ወይም በተጠበቀው የተቆፈረ ጉድጓድ ውስጥ 2= ኩሬ ወይም ያልተጠበቀ ጉድጓድ	
504	ትምህርት ቤቱ ሽንት ቤት አለው?	1. አዎ 2. አይ	መልስህ የለም ከሆነ ወደ ሂድ ጥ - 506
505	ለጥያቄ ቁጥር 504 መልስዎ 'አዎ' ከሆነ ምን ዓይነት የመጻዳጃ ቤት መገልገያ አለ?	1= የተሻሻለ መጻዳጃ ቤት መታጠብ ወይም አየር ማናፈሻ ያለው 2= ክፍት ጉድጓድ ወይም የለም (ሜዳ ላይ)	
506	ትምህርት ቤቱ የሴቶች ሽንት ቤት ከውስጥ ይዘጋል?	1. አዎ 2. አይ	

507	ትምህርት ቤቱ የሴቶች ክብብ አለው?	1. አዎ 2. አይ	
508	መልስዎ አዎ ከሆነ ጥያቄ አይ 507 የትኛው አይነት ድጋፍ ነው የሚሰጠው?	1. በወር አበባ ወቅት የእረፍት ክፍል 2. የወር አበባ ንፅህና መጠበቂያ ቁሳቁስ/ሞዴስ ልገሳ 3. የግል ክፍል/የወር አበባ ንጽህናን መጠበቂያ ክፍል 4. ስለወር አበባ ንፅህና አጠባበቅ ግንዛቤ ማስጨበጫ ስልጠና	
509	ትምህርት ቤት ውስጥ የግል የወር አበባ ንፅህና መጠበቂያ ክፍል አለ?	1. አዎ 2. አይ	