



WOLKITEUNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCEINCE

DEPARTEMENT OF NURSING

**ASSESSMENT OF KAP ON MENSTRUAL HYGIENE AMONG
FEMALE STUDENTS IN ABA FRANSUA GENERAL
SECONDARY AND PREPARATORY SCHOOL GUBRE TOWN,
GURAGE ZONE, SOUTHERN REGION, ETHIOPIA, 2023 G.C**

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**A RESEARCH PAPER TO BE SUBMITTED TO WOLKITE
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APPROVAL SHEET

TITLE: ASSESSMENT OF KAP ON MENSTRUAL HYGIENE AMONG FEMALE STUDENTS IN ABA FRANSUA GENERAL SECONDARY AND PREPARATORY SCHOOL GUBRE TOWN, GURAGE ZONE, SOUTHERN REGION, ETHIOPIA, 2023 G.C

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ABBREVIATION

KAP: Knowledge, Attitude and Practice

AFGSPS: Aba Fransua General Secondary and Preparatory School

MHP: Menstrual Hygiene Practice

MHM: Menstrual Hygiene Management

NGO: Non- governmental Organization

PID: Pelvic Inflammatory Diseases

PPS: Probability Proportionate to Sample size

RH: Reproductive Health

RTI: Reproductive Tract Infections

SES: Socio Economic Status

SRS: Systematic Random sampling

WHO: World Health Organization

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ABSTRACT

Background: Poor hygiene-related menstrual management practices are a very important risk factor for reproductive tract infections (RTI), and females suffer from poor menstrual hygiene, which restricts their movement and self-confidence and ends up poor school performance. Menstrual hygiene and management is an issue that is insufficiently acknowledged and has not received adequate attention.

Objective: The objective of this study is to assess KAP on menstrual hygiene among female students in Gubre town, Aba Fransua General secondary and preparatory school, Southern Ethiopia from June 15 to July 30 , 2023 G.C.

Method: A cross sectional study design was used to conduct study .A Simple random sampling technique was used to select the study participants. Data was collected through a structured questionnaire and the collected data entered into a computer using SPSS for analysis. Ethical approval was obtained from the relevant institutional review board before the study begins.

Result: Among 248 respondent 89.1% of respondents have good knowledge on menstrual hygiene Regarding attitude 71.0% respondents have good attitude on menstrual hygiene and respondents have good practice75.3% on menstrual hygiene

Conclusion: Generally the overall result of our study shows there is good a management on menstrual hygiene.

Key words: Knowledge, Attitude, Practice, Menstrual Hygiene

1. INTRODUCTION

1.1 Background

Menstruation is part of the female reproductive cycle that starts when girls become sexually mature at the age of puberty. It is important that females are able to manage menstruation hygienically. However, menstrual hygiene management is insufficiently acknowledged and has not widely received adequate attention in the reproductive health sectors of developing countries[1].

Adolescent girls constitute a vulnerable group not only with respect to their social status but also in relation to their health. In this regard, menstruation is regarded unclean or dirty in society[2].

Good menstrual hygiene practices include: regular change of clothing and under garments, change of sanitary pad in every three to four hours, daily shower, adequate washing of genitalia after each voiding of urine and feces. Continuing normal routine and daily activities, and maintaining a balanced diet with plenty of fruits and vegetables. Poor menstrual hygiene practices predispose to infections among adolescent girls[3].

Women and girls of reproductive age need access to clean and soft absorbent sanitary products which in the long run protect their health from various infections[4].

During menstruation, girls have been facing both practical and strategic gender problems. These have negative impacts for their personal lives and development opportunities: absent from their work and mobility, increased stress, early marriage, early and premature childbirth, and higher infant mortality, obstetric fistula, complicated labor and potential vaginal and uterine infections resulting in the worst condition in infertility [5].

More than a third of student's class concentration, participation, socializing with their friends test taking skills and homework task performance had affected by menstrual related problem. On the other hand, MHM is important for reproductive health. Poor management of menstrual period may be accompanied by discomfort, reproductive tract infection(RTI), foul smelling and embarrassment among others[6].

Lack of knowledge and poor personal hygienic practices during menstruation can lead to various gynecological problems in the reproductive life of girls. Therefore to manage menstrual complications, essential reproductive health services and youth friendly services should be well addressed including access to water and sanitation[7] Despite safe menstrual hygienic practices can have a paramount importance to help millions of women suffering from such complicated and complex problems[8].

Survey performed in five sub-Saharan African countries including Ethiopia also showed that majority of adolescent girls reported a lack of safe, private, and clean toilets with washing facilities at schools which is important for MHM practices [9] Most girls in Ethiopia are at risk of getting genitourinary tract infections due to their unhygienic practices during their menstruation period which may lead to further complication if left untreated[10].

1.2 Statement of the problem

Menstrual hygiene is an issue that every female of reproductive age is faced. School-age girls have insufficient information about protected menstrual hygiene. Poor menstrual hygiene practices during menstruation can causes different gynecological problems in the reproductive life of girls. Even if menstruation is a natural process, in most parts of the world it is a taboo and rarely talked about it .Community and other sectors focusing on sexual and reproductive health, and education has also largely neglected menstruation . these result in practical challenges of menstrual hygiene are made even more difficult by socio-cultural factors and millions of girls continue to be denied their rights to Water and Sanitary health, education, dignity and gender equity[11].

According to World Health Organization (WHO), at worldwide, 2.3 billion people lack safely managed sanitation. Further, regarding with high cost and ignorance, women and girls often use old rags, clothes or other unhygienic materials as menstrual absorbents, which may result in ascending infections and many other related health problems[12]. Inadequate availability to sanitation facilities such as menstrual hygiene facilities will obviously affect the attendance of girls their in school and the inability to have affordable sanitary napkins force the girls and women to use

insanitary rag, which is result in for the development of bad odor, Reproductive Tract Infection [RTI] and skin problems. This causes to adolescent girls to become anxious, restless and absent from their school[13].

1.3 Significance of the study

- ❖ **For Health sector:** It change the silence on menstrual hygiene by creating awareness for adolescence girls on the menstrual hygiene and the effect it has on secondary and preparatory school adolescence girls, it exploring and sharing lessons of the management aspects and promoting integration of menstrual health management in health and hygiene sectors.
- ❖ **For society:** by giving information for the society which necessary for females access to appropriate, affordable and quality health care, information and related services.
- ❖ **For adolescent Girl:** with the aim of providing important information for managing menstrual hygiene in girls and women at large.
- ❖ **For Researchers :** research would serve as reference material for future researchers who intend to carry out researches that are related to KAP on menstrual hygiene .

2. LITERATURE REVIEW

2.1 Overview of KAP menstrual hygiene

Menstruation is a particularly silent issue because it has a more pronounced effect on the quality and enjoyment of education than do other aspects of puberty. It involves a learning component as well as elements affected by the school environment and infrastructure[15]. In study conducted in different country showed that a higher prevalence of morbidity was found in women with using unclean soaking material during menstruation. The three symptoms those include: Urinary tract infection (UTI), Vaginitis, and Pelvic inflammatory disease complexes were found to be more in with women not washing genitals daily. This lead to reproductive health problem symptoms such as itching, vaginal discharge, and abdominal pain. Rags that are unclean can result urinary, vaginal and perianal infection. Very often serious infections are left untreated and may sometimes lead to potentially fatal toxic shock syndrome[16].

2.2 Prevalence KAP of menstrual hygiene

2.2.1 Knowledge of menstrual hygiene

According to research conducted in Nepal on Knowledge of menstruation hygiene show that out of 276 respondent, 17 (6.2%) of the respondents had poor knowledge, 186 (67.4%) had fair knowledge and 73 (26.4%) has good knowledge of menstrual hygiene management[17]. Similarly the study conducted in Bangladesh showed that 36.7% has Knowledge about Menstruation and they considered menstruation as a disease. Meanwhile, more than half of the respondents know the source of menstrual blood and 33% respondents don't know the source of menstrual bleeding. Regarding to sources of information on menstruation, the half of the respondent's acquired information about menstruation from their mother. For that most of them have knowledge and nearly 42.2 % respondent have no knowledge about menstrual hygiene[18].

According study conducted Nigeria on KAP of menstrual hygiene among female schools girls showed that out of 447 participant, 96.42% of participant heard about menarche before menstruation and above 40% of the respondents said the source of menstrual blood is the vaginal. Majority (76.9%) of them know that as menstruation is a physiological process and 6 percent of them think that menstruation is a pathological process .Generally 55.92% of the respondents have good knowledge of menstrual hygiene. [20]

According to the study conduct in southern Ethiopia, Gedeo zone from 806 participants, 51.8% of adolescent school girls had a miss conception on cause of menstrual flow and 50.2% adolescent school girls think that menstruation as a lifelong process. Generally, 68.3% of adolescent school girls in Gedeo zone have poor knowledge regarding menstrual bleeding[21].

2.2.2 Attitude on menstrual hygiene

According conducted in Nepal on Knowledge, Attitude, and Practice (KAP) on Menstrual Hygiene Management among School Adolescents girls regarding attitude showed that 49% of the respondents had a good attitude towards MHM issues whereas, 51% required improvement on their attitude towards MHM [24].

Study conducted in Nigeria on assessment of knowledge, attitude and practice about menstruation and menstrual hygiene among secondary high school girls . Regarding on attitude of menstrual hygiene conducted on 447 adolescent girls showed that more than 80% of the respondents attended school during their menstruation and 47.4% of respondent experience restriction during menstruation and out of this 45.75% avoid celebration and 9.43 % avoid housework[22]

Study conducted in Eastern Ethiopia ,East Hararge Zone R menstrual hygiene , 87.2 % of them stated that sanitary pad is good absorbent[23]. According to study conducted in Northern Ethiopia ,Amhara region, North- Wollo zone, Among 409 study participants, 47.9% of them had good attitude about menstrual hygiene. study conducted in Among the total respondents, 15.6% of them had experienced restriction during menstruation, of which 26.6% respondent were restricted from household work [5].

2.2.3 Practice of menstrual hygiene

According to study conducted in Nepal Regarding practice related to menstruation, from 141 adolescent girl respondents, 56 (40%) has good menstrual hygiene practices. 72 (51%) girls has a fair practice and 13 (9%) has poor menstrual hygiene practices. 30% of the girl used factor reuse sanitary pads ,76% of them using homemade and reusable pads. [24].

Study conducted in Bangladesh on KAP of female hygiene management regarding practice showed that, from 90 respondent it is observed that the respondents used cloth as an absorbent materials during menstruation period, dry it in different way like that just about 24.4 % of students dried it inside of their house and nearly half of the respondents changed 2 times in a day[25].

Study conducted among Female of Secondary School Zagazig city Egypt to assess Knowledge and Practice about menstruation , out of the 114 girls using sanitary pads during menstruation, 47 (41.22%) girls reported that they changed the pads only two times a day during the pretest period but ,12 (10.52%) in the post-test phase. 107 (93.85%) girls disposed of the sanitary pads in the house-dustbin while 6 (5.26%) and 1(0.87%) adolescence girls disposed it off at the roadside and latrine respectively[26].

Regarding on practice study conducted Nigeria out of 447 respondent,47% of respondents used rag and used cloth as absorbent material during menses while only 20.36% used sanitary pad. Fifty five percent of respondents changed the absorbent material once a day during menstruation and 52.1% respondent disposed used absorbent material in the toilet and 50% wrap the used pad before disposing it. Generally,74.72% of the respondents has poor practice while25% has good practice[19].

Regarding the Practice, (614 (91.4%)) of them used absorbent materials during their last menstruation period. However, only around two-thirds (444 (66.1%)) of the adolescence girls are using commercial disposable sanitary pads, while the remaining using reusable cloths (170(25.3%)) and underwear only (58 (8.6%)).[20]

According to study conducted among adolescence school girls in Southern Ethiopia out a total of 791 adolescent girls , 68.3% has poor knowledge of menstruation. About

48.1% of school girls used absorbent materials, and 69.5% clean their external genitalia. Generally, 60.3% of girls had poor menstrual hygienic practice and poor knowledge of menses had a significantly associated with poor menstrual hygiene practice[8].

According to the study in Southern Ethiopia Gedeo zone conduct on 806 participants in, 33.9% of adolescent girls do not use sanitary pads during their menstruation period. About 42.4% of them used commercially made sanitary pads, and 23.7% used homemade absorbent. More than half (69.5%) of students clean their external genitalia with water and soap. Generally, 60.3% of girls found to have poor menstrual hygiene practice. [27]

3. OBJECTIVES

3.1 General Objectives

To assess of KAP on menstrual hygiene at Aba Fransua General Secondary and Preparatory school among female students, Gubre town, Gurage zone, Southern Ethiopia.

3.2 Specific Objectives

1. To determine Knowledge on menstrual hygiene Aba Fransua General secondary and preparatory school among female students from June15 to 30, 2023 G.C.
2. To determine Attitude on menstrual hygiene Aba Fransua General secondary and preparatory school among female students from June15 to 30, 2023 G.C.
3. To determine Practice on menstrual hygiene Aba Fransua General secondary and preparatory school among female students from June15 to 30, 2023 G.C.

4. METHODS AND MATERIALS

4.1. Study Area

Our study was conducted in Aba Fransua General secondary and preparatory school, which is found in Gubre town, Gurage zone, Southwest of Ethiopia. The town is located in at 178 km southwest of Addis Ababa and 20 km of Wolkite city. Wolkite city is administration and trading center of Gurage. According to Gubre town office(2017) total population of town was 5113 of which 2662 are male and 2451female.the largest ethnic group in Gubre is Sebat Bet Gurage(99.23%;other all made up 0.77%.Aba Fransua General Secondary and Preparatory is one of the secondary and preparatory schools found in the town. Aba Fransua General secondary and preparatory school was established in 1986 and transformed to preparatory on 2007. Based on the data of 2015 E.C the school has a total of 2214 students with 1,210 males and 1004 females (Grade 9 has 346 male and 298 female , which has total of 10 section .Grade10 has 273 male and 220 female ,which has total of 8 section . Grade11has 368 male and 298 female with total of 11 section and Grade 12 has 223 male and 188 female with a total of 6 sections).

4.2 Study design

Cross sectional study was conducted in Aba Fransua General Secondary and preparatory school.

4.3 Study period

The study was conducted from June 15 to July 30, 2023G.C

4.4 Population

4.4.1 Source population

All female students in Aba Fransua secondary and preparatory school.

4.4.2 Study Population

All female students found in each section of class of Aba Fransua secondary and preparatory school.

4.4.3 Study Unit

Female student that found during data collection time.

4.5 Inclusion and Exclusion Criteria

4.5.1 Inclusion Criteria

All female students who started menstruation were included in the study.

4.5.2 Exclusion Criteria

Students, who are absent during data collection and mentally incapable of was excluded from study.

4.6 Sample Size and Sampling Technique

4.6.1 Sample Size

Sample size (n) for the study was determined by using single population proportion formula by considering the proportion of students who practiced good menstrual hygiene 29.8%, which is taken from other study done in harari region [30]. The minimum sample size for this study is calculated by using single population proportion formula:

$$n = z^2 pq / d^2$$

Where n = sample size

Z = desired confidence interval - 95% (1.96)

P = prevalence of desired attribute – 29.8% (0.298)

q = percentage of population without the attribute -

q = 1- p =0.702

d = acceptable margin of error in case of this study (0.05)

$$\text{Calculated Sample Size, } n = \frac{(1.96)^2 \times 0.298 \times 0.702}{(0.05)^2} = 321.4 \approx 321$$

Size of the sample =321

Since number of total population is less than 10,000 corrected sample size formula was be used;

$$n_f = \frac{n}{1+(n-1/N)}$$

Where, n = initial sample size, which is 321 for this study

n_f = corrected sample size

N = total number of female student, (1004 for this study)

$$n_f = 321 / (1 + (320/1004))$$

$$n_f = 321 / (1 + (0.318)) = 321 / 1.318$$

$$n_f = 243$$

10% non-response is = 24.3

Therefore, 267 female students were selected to fill the questionnaire with 7.1 %non-response rate.

4.6.2 Sampling Procedure

The school was selected by simple random sampling starting from grades 9 up to grade 12. we were select participant by lottery method through pick out 267 from 1004 numbered Pieces of paper.

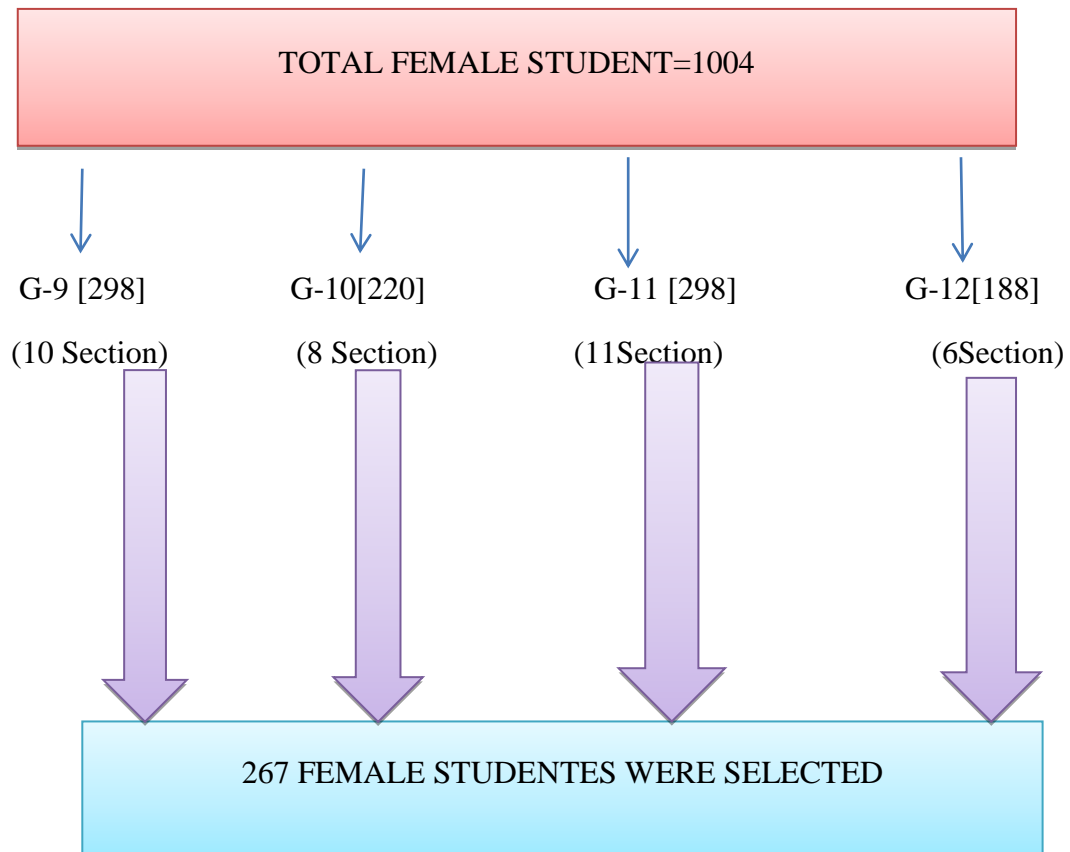


Figure 1 Schematic presentation of the sampling procedure

4.7 Data Collection Instrument

Data was collected by interview using standard questionnaire prepared in English and translated to Amharic, which was adopted from previous literature[31, 32]. It consists of basic socio-demographic characteristics, knowledge on menstrual hygiene, attitude on menstrual hygiene, and practice of menstrual hygiene.

4.8 Data Quality Control

The quality of data was be assured by proper designing and pre-testing of the questionnaires, by appropriate supervision of data collectors. Overall supervision was be made by the principal investigators. Pre-test was done on 5% of study participants on schools not included in the study. An appropriate modification was made after analyzing the pre-test result before the actual data collection. Every day after data collection, questionnaires was reviewed and checked for completeness and relevance by the principal investigators and the necessary feedback was be offered to data collectors in the next morning

4.9 Data Processing and Analysis

Epi-data version 4.6 to enter data and SPSS version 25 was used for data analysis. Frequencies were used to summarize descriptive statistics of the data and tables used for data presentation.

4.10 Study Variables

- Knowledge On Menstrual Hygiene
- Attitude On Menstrual Hygiene
- Practice On Menstrual Hygiene

4.11 Operational Definition of Menstrual Hygiene

- **Good knowledge Menstrual Hygiene** : is given to those respondents who scored greater than or equal to the mean point [20].
- **Poor knowledge Menstrual Hygiene** : is given to those respondents who score below the mean point.[20].
- **Good attitude Menstrual Hygiene:** is given to those who score at least the mean points. [32].
- **Poor attitude Menstrual Hygiene:** those who score below the mean points [32].
- **Good Menstrual Hygiene practice:** is given to those respondents who scored greater than or equal to the mean point [20]
- **Poor Menstrual Hygiene practice:** poor practice of menstrual hygiene is given to those respondents who scored below the mean point[20] .

4. 13 Ethical Consideration

The study was conducted after ethical clearance from Wolkite university ethical review committee, college of medicine and health science is obtained. A school director was briefed on the objectives of the study. Verbal informed consent was obtained from the participants and confidentiality was maintained by omitting their names and addresses on the questionnaires. Students was informed of their full right to skip or ignore any questions or terminate their participation at any stage

4.12Disseminationof the Study

The hardcopy of this result was submitted to Wolkite University College of medicine and health science department of nursing.

5. RESULT

5.1 Socio-Demographic Characteristics of Respondents

Two hundred and sixty seven respondents participated in the study, making a respondents rate of 92.8%. The majority of the participant (68.1%) is in the age group 17-20 years. Seventy-four respondents are in grade 9. One hundred, ten of respondent were Muslim, and 71.8% of them live with their parent. The majority of the respondent's fathers' had the secondary and more of education and mothers had primary education. (Table 1)

Table 1 socio-demographic characteristic of respondent

Variables		Frequency	Percent
Age	14-16	79	31.9
	17-20	169	68.1
Class	Grade 9	74	29.8
	Grade 10	55	22.2
	Grade 11	73	29.4
	Grade 12	46	18.5
Religion	Orthodox	88	35.5
	Muslim	101	40.7
	Protestant	51	20.6
	Catholic	8	3.2
Whom do you live	Parent	178	71.8
	Relative	33	13.3
	Alone	21	8.5
	Peer	16	6.5
Mother's level of education	No formal education	90	36.3
	Primary	109	44.0
	Secondary or more	49	19.8
Father's level of education	No formal education	81	32.7
	Primary	95	38.3
	Secondary or more	72	29.0

5.2 Knowledge respondent on menstrual hygiene

Among 248 respondent 89.1% of them have good knowledge on menstrual hygiene. Students' menstrual knowledge score was calculated out of the 6 knowledge specific questions, which include definition menstruation, causes of menstruation, source of menstrual blood, normal cycle length, and duration of menstrual blood flow and whether she heard about menstrual before menarche. Each correct response earned one point, whereas any wrong response attracted no mark. [20]. (table 2)

Table 2 Knowledge of adolescent female students toward menstrual hygiene

Variables		Frequency	Percent
What is menstruation	Physiological process	217	87.5
	Pathological process	12	4.8
	Don't know	19	7.7
Causes of menstruation	Hormones	194	78.2
	Curse of God	30	12.1
	Caused by disease	24	9.7
Source of menstrual blood	Uterus	191	77.0
	Vaginal	51	20.6
	Bladder	2	0.8
	Abdomen	4	1.6
Normal cycle length	21-35days	221	89.1
	>35days	27	10.9
Duration of menstrual blood flow	2-4day	94	37.1
	5-7day	154	62.1
Have Ever heard about menstrual before menarche	Yes	242	97.6
	No	6	2.4
KNOWLEDGE LEVEL	GOOD	220	89.1
	POOR	28	10.9

5.3 Attitude of Respondent on Menstrual Hygiene

As shown in Table 3 below, Among 248 respondent 71.0% of them have good attitude on menstrual hygiene. Students menstrual attitude score was calculated out of the five attitude specific questions, which include ever missed school because of menstruation, main reasons for missed school(multiple answers, abstained from household work during menstruation, there are some food girls should avoid during menstruation, girl is dirty or unclean during menstruation, it is too shameful to discuss menstruation. Each correct response earned one point, whereas any wrong response attracted no mark. (Table 3)

Table 3 Attitude of adolescent female students towards menstrual hygiene

Variable		Frequency	Percent
Ever Missed School Because of Menstruation	Yes	119	48.0
	No	129	52.0
Main reasons for missed school(Multiple answers)	Afraid of odor	38	15.3
	Pain	87	35.1
	Lack of water	3	1.2
Abstained from household work during menstruation	Yes	197	79.4
	No	51	20.6
There are some food girls should avoid during menstruation	True	154	62.1
	False	94	37.9
Girl is dirty or unclean during menstruation	True	121	48.8
	False	127	51.2
It is too shameful to discuss menstruation	Yes	174	70.2
	No	74	29.8
ATTITUDE LEVEL	GOOD	176	71.0
	POOR	72	29.0

5.4 Practice of Respondent on Menstrual Hygiene

Among 248 respondent 75.3% of them have good practice on menstrual hygiene students menstrual practice score was calculated out of the 6 practice specific questions, which include type of absorbent material use during menses, frequency of changing absorbent material during menses, method of disposing of used pad, do you clean your genitalia during menstruation, do you wash your hand after changing absorbent material, do you use private room in school to change absorbent material. Each correct response earned one point, whereas any wrong response attracted no mark. (table 4).

Table 4 Practice of adolescent female students towards menstrual hygiene

Variables		Frequency	Percent
Type of absorbent material use during menses	Sanitary pad	230	92.7
	Rag/used cloth	13	5.2
	Toilet roll	4	1.6
Frequency of changing absorbent material during menses	Once	26	10.5
	Twice	161	64.9
	Three or more times	61	24.6
Method of disposing of used pad	Dust bin	42	16.9
	Drain	29	11.7
	Toilet	145	58.5
	Open field	32	12.9
Do you clean your genitalia during Menstruation?	Yes	219	88.3
	No	29	11.7
Do you wash your hand after changing Absorbent material?	Yes	189	76.2
	No	59	23.8
Do you use private room in school to change Absorbent material?	Yes	197	79.4
	No	51	20.6
PRACTICE LEVEL	GOOD	186	75.3
	POOR	62	24.7

6. DISCUSSION

Our study's findings show that majority (89.1 %) (95% CI: 85.1 - 92.7) of girls had good knowledge about menstrual hygiene management. This was similar to the study conducted in North wollo which just 89.2% [5]. The possible reason may be due to both the study was conducted in high school students and preparatory students. but This was contrary to the findings of a study carried out in east Harerge zone [23]. This might be due to the fact that the Majority of the girls were rural by resident.

Majority of students know about menstruation, which might be attributed to the inclusion of reproductive health education in school curricula and exposure to a wide range of information media like television, radio, and internet. But, still there is misperceptions persist in this matter. In this study the majority of respondents (97.6%) (95% CI: 95.2 -99.2) revealed high level of awareness on menarche before menstruation. which is similar to the findings of a study done in Nigeria (96.4%). [19] . This result might be due to the good literacy of the mother, and proper relationship between respondents and their mother.

High percentage of the respondents (71%) 95% CI :(65.4 -76.5) had a positive attitude towards menstrual hygiene management. This was contrary to the findings of a study conducted in Nepal Which was 49% of the respondents had a good attitude towards MHM issues[24]. This result might be due cultural difference and might be cultural taboos existing in society.

Nearly half (48%) (95% CI: 41.9 -54.4)of adolescent girls ever missed school due to menstruation, which is higher than the study conducted in Nigeria which was 20% adolescent girls missed school during menstruation. Pain and Afraid were the two main reasons adolescent girls missed school during menstruation. [19] This suggests that menstruation could negatively affect the academic performance of female adolescent students. Additionally, the perception that adolescent girls are unclean during menstruation as indicated by 48.8% might also explain why some adolescents abstain or are prevented from carrying out their domestic responsibilities. This implies that further education on menstruation is necessary for both the adolescent girls and the communities in which they live.

In this study, (75) (95% CI: 69.5-80.2) of the respondents had good practice of menstrual hygiene. The finding of this study was higher than studies conducted in in Nepal, which were 40%. Additionally, we found that majority of school girls (92.7%) (95% CI: (89.9 -96.3) used sanitary pads during their menstruation. This is similar to reports from Nepal [24]. But in contrast to the study conducted in Gedeo zone, (33.9%) of adolescent school girls do not use sanitary pads and 42.4% are used commercially made sanitary pads during their menstruation period [27]. This increment in practice indicates exposure and readiness of school adolescents to adopt hygiene behavior. For effective MHM behavior modification among adolescent girls, parents and boys should be included in MHM education to reduce the stigma associated with acquiring absorbents

7. CONCLUSION AND RECOMMENDATION

7.1 Conclusion

The study established that the overall level of knowledge of the adolescent girls on menstrual hygiene was generally somehow good and satisfactory.

This study reveals that adolescent girls had good attitudes towards menstrual hygiene. Beliefs and taboos on menstruation and perceptions on menstruation influenced the attitudes of the girls.

Practice of the adolescent girls towards menstrual hygiene was good or somehow better as it was evident that a large proportion among the adolescent girls practiced safe practices during menstruation. Generally the overall result of our study shows there is good a management on menstrual hygiene.

7.2 Recommendation

School authorities should take up at least monthly session on the issues related to menstrual hygiene with parents. They can invite various experts at times to address the important point.

Teachers should also address some point in the class and inform the students about good and reputable sources, which they should access for, correct information.

Schools should highlight issues like the girl child welfare in parent meetings, school days and report days to ensure that every girl child has enough sanitary pads for the whole term. Matters concerning menstrual hygiene should be discussed with parents and their children and solutions thought to improvise on disposal bins and incinerators.

The government together with the Ministry of Education should revise policies concerning school construction and settings to suite girl child education for instance in constructing classrooms that have private sanitary facilities.

REFERRANCE

1. Nnennaya, E.U., et al., *Menstrual hygiene management among adolescent school girls in Taraba State, Nigeria*. African Health Sciences, 2021. **21**(2): p. 842-851.
2. Choudhury, M., et al., *Menstrual hygiene practices of adolescent girls from slum areas of a city from North East India: A Knowledge Attitude and Practice (KAP) study*. Indian Journal of Health and Wellbeing, 2021. **12**(2): p. 145-149.
3. JOYA, A.M., D. SHAWAR, and N.R. MALIK, *Assessment of Knowledge, Attitude and Practices (KAP) about Menstruation, Menarche and Menstrual Hygiene among students of grades 8th, 9th and 10th of the Ch Rehmat Ali Trust Higher Secondary School, Township Lahore*.
4. MedicalCollege, D. and A. Tater, *A study of knowledge, attitudes and practices of menstrual hygiene among adolescent girls*.
5. Gedefaw, G., et al., *Knowledge, Attitude, Practice and its associated factors on menstrual hygiene among high school students of North Wollo Zone, Ethiopia, 2019: A cross-sectional study*. 2019.
6. Ghevariya, J.G.D.J. and H.M.D.H. Mehta, *Menstrual hygiene among adolescent girls: A cross sectional study in Field*. World Wide Journals, 2022. **11**(10).
7. Singh, A., et al., *Wealth-based inequality in the exclusive use of hygienic materials during menstruation among young women in urban India*. Plos one, 2022. **17**(11): p. e0277095.
8. Belayneh, Z. and B. Mekuriaw, *Knowledge and menstrual hygiene practice among adolescent school girls in southern Ethiopia: a cross-sectional study*. BMC public health, 2019. **19**: p. 1-8.
9. Mohammed Gena, H., *Menstrual hygiene management practices and associated factors among secondary school girls in East Hararghe Zone, Eastern Ethiopia*. Advances in Public Health, 2020. **2020**: p. 1-7.
10. Konlan, L., *Assessing the impact of menstrual hygiene management on the health and school attendance of adolescent girls in junior high schools in the KUMBUNGU district of the Northern region of Ghana*. 2020.

11. Anusha, R., *A comparative study to assess the effectiveness of structured teaching programme on knowledge, attitude and practice regarding menarche and menstrual management among school girls in selected urban and rural schools at Coimbatore*. 2016, KMCH College of Nursing, Coimbatore.
12. Unicef, *Progress on drinking water, sanitation and hygiene*. 2017.
13. Abita, Z., et al., *Menstrual hygiene management practice and associated factors among secondary school girls in finot selam town, northwest Ethiopia, 2019*. Int J Sex Reprod Health Care, 2021. **4**(1): p. 053-61.
14. Etoh, E.C.I., U.S. Ekanem, and A.J. Umoiyoho, *Attainment of menstrual hygiene by girls in boarding secondary schools in a state in Sub-Saharan Africa*. International Journal of Reproduction, Contraception, Obstetrics and Gynecology, 2020. **9**(3): p. 985.
15. Bulto, G.A., *Knowledge on menstruation and practice of menstrual hygiene management among school adolescent girls in Central Ethiopia: a cross-sectional study*. Risk management and healthcare policy, 2021: p. 911-923.
16. Odey, G.O., et al., *Knowledge and practice of menstrual hygiene among adolescent girls in secondary schools of Herat, Afghanistan*. Razi International Medical Journal, 2022. **2**(1): p. 12-22.
17. Khalili, A.M., et al., *Operation research on menstruation hygiene management*. 2019.
18. Anee, U.S., et al., *Knowledge, attitude and practice on female Hygiene management among Madrasa girls in Dhaka, Bangladesh*. Asian Journal of Multidisciplinary Studies, 2020. **3**(1): p. 110-116.
19. Gorah, K.Y., E.A. Haruna, and J.J. Ufwil, *Knowledge, Attitudes and Practices of Menstrual Hygiene Management of Female Students in Bokokos Local Government Area of Plateau State; Nigeria*. KIU Journal of Social Sciences, 2020. **6**(1): p. 365-374.
20. Shah, S.F., et al., *Knowledge, Attitude, And Practices Regarding Menstrual Hygiene Among Girls in Ghizer, Gilgit, Pakistan*. 2023.
21. Belayneh, Z., M. Mareg, and B. Mekuriaw, *How Menstruation Is Perceived by Adolescent School Girls in Gedeo Zone of Ethiopia?* Obstetrics and Gynecology International, 2020. **2020**.

22. Ibeagha, N., *KNOWLEDGE, ATTITUDE AND PRACTICE OF MENSTRUAL HYGIENE AMONG PUBLIC SECONDARY SCHOOL STUDENTS IN AKINYELE LOCAL GOVERNMENT AREA OF OYO STATE.*
23. Neyazi, A., et al., *Assessment of knowledge, attitude and practice about the menstruation among secondary school girls in Herat, Afghanistan-A cross sectional study.* 2021.
24. Bhusal, C.K., *Practice of menstrual hygiene and associated factors among adolescent school girls in Dang district, Nepal.* Advances in Preventive Medicine, 2020. **2020**.
25. Hasan, M., et al., *Menstrual hygiene practices and school absenteeism among adolescent girls in Bangladesh: a cross-sectional study.* Population Medicine, 2021. **3**(March): p. 1-8.
26. El-Kurdy, R., E. Fadel, and A. Elsayed, *Effect of structured audio educational sessions on visually challenges adolescent school-girls' knowledge and practices regarding menstruation.* International Journal of Novel Research in Healthcare and Nursing, 2020. **7**(1): p. 497-509.
27. Ayele, E. and Y. Berhan, *Age at menarche among in-school adolescents in Sawla Town, South Ethiopia.* Ethiopian journal of health sciences, 2013. **23**(3): p. 189-200.
28. Bolanle, F., T. Ayoade, and A. Sola, *Knowledge and Menstrual Hygiene Practices among Adolescent Female Apprentices in Lagelu Local Government Area, Ibadan, Nigeria.* Journal of Education, Society and Behavioural Science, 2021. **34**(5): p. 1-13.
29. Tegegne, T.K. and M.M. Sisay, *Menstrual hygiene management and school absenteeism among female adolescent students in Northeast Ethiopia.* BMC public health, 2014. **14**(1): p. 1-14.
30. Alemayehu, A., A. Ahmed, and M. Abdalla, *Assessment of menstrual hygiene practice and associated factor among High school female students in Harari Region, Eastern Ethiopia 2019.* 2020.
31. Fehintola FO et al. *Assessment of knowledge, attitude and practice about menstruation and menstrual hygiene among secondary high school girls in Ogbomoso, Oyo state, Nigeria* International Journal of Reproduction, Contraception, Obstetrics and Gynecology, 2017: p28-30

32. Kpodo, L., et al., *Socio-cultural factors associated with knowledge, attitudes and menstrual hygiene practices among Junior High School adolescent girls in the Kpando district of Ghana: A mixed method study*. Plos one, 2022. **17**(10): p. e0275583.

APPENDIX I : INFORMED CONSENT

Dear respondent,

Our name is Natif Gebisa, Museab Ebrahim and Segenet Gerbachew . We are fourth year Nursing student at Wolkite University conducting research on assessment of knowledge, attitudes and practice of menstrual hygiene among female in Aba Fransua General secondary and preparatory school students, which found in Gubre town. The objective of the study is to assess the Knowledge, Attitude and Practice on menstrual hygiene in AFGSPS.

General instruction: You will not write your name on this questionnaire. Hence, there is no chance to know who filled in this questionnaire. All the data obtained will be kept strictly confidential by using only code numbers and will be stored in locked in the file cabinets and to be accessed only by the principal investigators, and destroyed immediately when the study is finalized. Various questions appear to be more sensitive and personal. However, we solemnly request you to give us true and right answer. The study revolves around the knowledge attitude and practice menstrual hygiene.

May I begin the interview now?

1. **Agree** _____

2. **Not agree** _____

Thank you for your kind cooperation !

Code number _____

APPENDIX II: INTERVIEW QUESTIONNAIRE

Part I Socio-demographic Characteristic related questionnaire

No	Questions	Response	Skip Answer
1	How old are you?	_____ Years	
2	Grade level?	1.9 th 2.10 th 3.11 th 4.12 th	
3	What is your religion?	1.Orthodox 2.Muslim 3. Protestant 4. Catholic 5.Other	
4	Whom do you live with you at present?	1.With parent 2..With relatives 3.Alone 4. peer 5 .Other	
5	Educational status of the mother is?	1.No formal education 2. Primary 3.Secondary and above	
6	Educational status of the father is?	1.No formal education 2. Primary 3.Secondary and above	

Part II Knowledge of menstrual hygiene related questionnaire

S.no	Questions	Response	Skip answer
1.	What is menstruation?	1.Physiological 2.Pathological 3.Don't know	
2	What is cause of menstrual blood?	1. Hormones 2. Curse of God 3. Disease	
3	What is source of menstrual blood?	1.Uterus 2.vaginal 3.Bladder 4.Abdomen	
4	Have you ever heard about menstrual before menarche?	1. yes 2. No	
5	What is normal cycle length of menstruation ?	1. 21-35days 2. >35day	
6	What is the duration of a normal period?	1.2-4 days 2.5-7 days	

Part III Attitude of menstrual hygiene related questionnaire

S.no	Questions	Response	Skip answer
1	Do you believe that missing school because of menstruation is not necessary?	1. Yes 2. No	
*	If you say 'No' what is main reasons for missing school?	1. Afraid 2. Pain 3. Lack of water 4., Due to Lack of clean latrine	
2	Do you believe that it is not necessary abstained from household work during menstruation?	1. Yes 2. No	
3	Do you believe that there is no need of food avoidance during menstruation?	1. True 2. False	
4	Do you think that girl is clean during menstruation?	1. True 2. False	
5	Do you believe that It is not shameful to discuss menstruation?	1. Yes 2. No	

Part IV Practice of menstrual hygiene related questionnaire

S.no	Questions	Response	Skip to answer
1	What type of absorbent material do you use?	1.Sanitary pad 2. Rag/used cloth 3.Toilet roll	
2	How many times do you change absorbent material per day?	1.Once 2.Twice 3.Three or more	
3	Which method of disposal materials do you use while menstruation?	1Dust bin 2.Drain 3.Toilet 4.open field	
4	Do you clean your genitalia during menstruation?	1.Yes 2.no	
	If you say 'yes' frequency of clean your genitalia per day?	1.Once 2.Twice 3.Three or more	
5	Do you wash your hand after changing absorbent materials?	1.Yes 2.No	
6	Do you use private room in school to change absorbent material?	1.Yes 2.No	

DECLARATION

We, do hereby declare that, to the best of our knowledge, this paper is our original work and has never been submitted other institution of higher learning for an academic qualification. We here by submit it for the award of a degree of bachelors of nursing science of Wolkite University