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Original article

FACTORS ASSOCIATED WITH MENSTRUAL HYGIENE MANAGEMENT PRACTICES AMONG SECONDARY SCHOOL GIRLS IN LIRA SUBCOUNTY LIRA CITY WEST.

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Abstract

Background:

Menstrual hygiene management (MHM) remains a public health concern globally, and menstruating girls in school environments face several challenges which include a lack of adequate, clean, safe, private toilets with water and disposal mechanisms for used menstrual materials, a lack of information, guidance, and support on their changing bodies and insufficient materials for managing monthly menstrual flow. Despite the initiative of several organizations to create awareness and highlight the importance of good MHM, the actual proposed actions to address MHM are still largely underdeveloped

Aim: This study aimed at assessing factors associated with MHM practices among secondary school girls in the Lira Sub-County Lira City West division.

Methodology:

A cross-sectional study employing quantitative techniques was done. Data was collected from 312 participants by the use of semi-structured questionnaires. Data entry and analysis were done using SPSS version 23.

Results:

Poor menstrual hygiene management practice was 61.5%, and the age of respondents (P-value 0.000, AOR 11.320), (P-value 0.001, AOR 1.882), knowledge about menstruation (P-value 0.000, AOR 12.213), soap and water being available in girls' toilet (P-value 0.001, AOR 0.461)

Conclusion:

High rate of poor MHM practices indicates that school environments were not female-friendly for managing menses safely, thus water, sanitation, and hygiene facilities in the schools need urgent solutions.

Keywords: menstrual hygiene management, practice, secondary school girls, Submitted: 2023-01-29 Accepted: 2023-02-02

1. Background

Menstrual hygiene management (MHM) remains a public health concern globally, as every day millions of women and girls have to manage their menstruation (Gerlach, 2021). It is estimated that at least 500 million women and girls globally lack adequate facilities for MHM (WORLD BANK, 2018). Menstruation is an entirely natural physiological process yet still considered too 'private' to discuss (UNFPA ESARO, 2020). The onset of menstruation means a new phase and new vulnerabilities in the lives of girls (UNICEF, 2021). Girls face a multitude

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of challenges beyond the immediate practicalities of learning to manage a monthly inconvenience and in many cultures, the onset of menstruation affects not just a girl's body, but also her role and status in the community (Gerlach, 2021). Girls are disproportionately affected by the challenges posed by menstruation in the least developed countries, where often a majority of adolescent girls are not told about menstruation before experiencing their first period and where sanitary products are all too often unaffordable (PMNCH, 2020).

There is evidence of 'inadequate' menstrual hygiene, in terms of personal hygiene or products used among girls from around the world, and it has been demonstrated that menstruating girls in school environments face several challenges which include a lack of adequate, clean, safe, private toilets with water and disposal mechanisms for used menstrual materials, a lack of information, guidance, and support on their changing bodies and new menstrual management needs, and insufficient materials for managing monthly menstrual flow (Kuhlmann et al., 2017; WORLD BANK, 2018) Lack of access to basic hygiene products has led girls to use unhygienic materials, such as rags, leaves, and papers which expose them to urinogenital infections (Gibson et al., 2019). Girls are also absent from school or are less attentive in class during menstruation due to a lack of WASH (water, sanitation, and hygiene) facilities and support from the school community which affects their education (Miiro et al., 2018). In Uganda, 28% of adolescent girls miss at least four school days per cycle (Uganda For Her, 2022). School girls also engage in transactional sex to pay for menstrual products which increases their risk of HIV (Human Immunodeficiency Virus), unintended pregnancy, and school dropout that come with other far-reaching consequences (Global G.L.O.W., 2020; The Guardian, 2016).

In the last decade, interest has grown globally in the issue of menstruation in schools. To ensure dignity for women and girls, the United Nations in 2014, declared May 28th of every year a Menstrual Hygiene Day that aims to create awareness and highlight the importance of MHM to different stakeholders (WASH United, 2016). In 2014, UNICEF and Columbia University organized the MHM in Ten meeting with a wide range of actors, to map out a ten-year agenda for MHM in schools with a vision of; "Girls in 2024 around the world are knowledgeable and comfortable with their menstruation, and able to manage their menses in school in a comfortable, safe and dignified way" (Sommer et al., 2016). In Uganda, the Ministry of Education and Sports (MoES) has taken several steps towards improving MHM in schools; along with UNICEF, SNV, and Plan International, developed a national program in 2021 aiming at addressing challenges surrounding MHM in schools (Caruso et al., 2013). As part of this national strategy, the MoES developed and distributed a Menstrual Reader to schoolgirls to increase their education regarding MHM (Atwijukye, 2014). It also issued a circular that instructed all schools and local governments to support menstrual hygiene management (Ministry of Education and Sports, 2015).

Despite the above efforts, there is inadequate literature about menstrual hygiene management practices and associated factors among secondary school girls in Lira Sub-county Lira City West. Yet knowledge of MHM practices and associated factors would be a cornerstone in enabling adolescent school girls to manage their menstrual cycle and helping the responsible stakeholders in making informed decisions and actions. Therefore, it was against this background that this study assessed the factors associated with MHM practices among secondary school girls in Lira Sub-County Lira City West.

2. Methodology

2.1. Study design

This was a cross-sectional study using quantitative techniques of data collection and analysis because the exposure and the outcome were assessed at the same time.

2.2. Study site and setting

The study was carried out in mixed secondary schools of Lira Sub-county, Lira City West Divi-

sion, Lira City.

Lira City is the main administrative and commercial centre of the Lira District. It is located approximately 100 kilometres (62 miles), southeast of Gulu City the largest city in northern Uganda, along the highway of Gulu and Mbale. Lira city lies 124 kilometres northwest of Soroti City. This location lies approximately 337 kilometres (209 miles), by road, north of Kampala.

The city has two divisions Lira city east (comprising of Adekwok Sub County, Ngetta and Lwal Sub County, Lira central division and railways division) and Lira city west (comprising of Ojwina Sub County, Adyel Sub County, and Lira Sub County). Lira Sub County comprises 9 secondary schools of which 7 are mixed secondary schools.

2.3. Study population

Target population

All secondary school girls who have reached menarche in Lira Sub-County Lira City West.

Accessible population

All secondary school girls who have reached menarche and were present on the day of data collection.

2.4. Eligibility criteria

Inclusion criteria

All Secondary School girls who have reached menarche were included in the study

Exclusion criteria

• Girls who were too ill on the day of data collection.

• Those who declined to participate

Sample size

The sample was determined using the Leslie Kish formula (1965) for a single proportion.

$n = (Z\alpha/2)2.pq/d2$

Where

n = Estimated sample size

$Z\alpha/2$=confidence level of significance for a 95% to confidence interval ($Z\alpha/2$=1.96)

P= percentage of good MHM practices among secondary school girls is 71.2% taken from a similar study done in Kenya (Korir et al., 2018)

q= (1-p), probability of poor menstrual hygiene practices, (1-0.712) = 0.288

d= precision of the study which is 5% (0.05)

$$n=\frac{(1.96x1.96x0.712x0.288)}{(0.05x\ 0.05)}$$

$n \approx 315$

Hence sample size = 315 participants

2.5. Sampling technique and procedure

The study used a multistage sampling method which involved two mixed secondary schools being selected by simple random sampling. Names of mixed secondary schools in Lira Sub County (Amuca SDA Secondary School, Lira high school, Odokomit Secondary School, Bulluge Comprehensive Secondary School, Cotn Marani Honors High school, Lira Secondary School, and Townside High School, Lira) were written on separate papers, folded, and then shuffled. Two papers were picked randomly and the schools on those papers were taken for my study population. This study also employed a convenience random sampling technique given the availability of the study participants who met the inclusion criteria. The first participant was selected randomly then subsequent participants were selected depending on their availability until the desired sample size of 315 was realized. An approximation of 60 study participants was interviewed each day and this took about 5 days to hit the targeted study population, thus this procedure was repeated until the targeted number was reached. This sampling procedure was selected to achieve the target sample population with limited resources and time.

2.6. Data collection methods

Semi-structured questionnaires were administered to study participants

The questionnaires were written in English

2.7. Data collection instruments

Data was collected using a semi-structured questionnaire that was designed based on the literature of previously conducted similar studies in other parts of the world.

It contained four sections; a social-demographic section, a section on socio-cultural factors, school-related factors, and the menstrual hygiene management practices of secondary school girls in Lira

Sub-county Lira City West. All questions in this questionnaire were having corresponding answers therefore the study participants were chosen from those alternatives.

2.8. Data collection procedure

The data collection process started with seeking permission from the schools. The session then started by building rapport with the respondents followed by introducing the study topic, and purpose of the study, then seeking their consent and assent to participate in the study. Upon Informed consent, semi-structured questionnaires were administered in a quiet, safe place observing high levels of confidentiality and comfort of the study participant. Students were giving their responses under the guidance of the researcher.

2.9. Quality control.

2.9.1. Validity

The questionnaires were double-checked by my supervisor, edited, and modified to suit the interest of the research.

Questionnaires were pretested before data collection and sticking to the inclusion and exclusion criteria

Data collected was checked daily for completeness of the questionnaires before leaving the field

Getting feedback on the research process and data itself from the participants to increase the chances of results being implemented

2.9.2. Reliability

Reliability is used to measure the degree to which the questionnaire will produce consistent results under similar and different conditions. The questionnaires were pretested on 10 secondary school girls who have reached menarche in Standard High School.

2.10. Data analysis

Data entry and cleaning were done using Excel software, then imported in SPSS version 23 for data analysis

Data analysis was done using SPSS (Statistical Package for Social Sciences) version 23 computer software. The data analysis was composed of univariate analysis where descriptive statistics of the socio-demographic characteristics, socio-cultural factors, and school-related factors of the respondents were analyzed and presented using absolute numbers, simple percentages, and measures of central tendency (mean, mode) where appropriate. A bivariate analysis was used to describe the association between variables and a multivariate to find predictors of MHM practices.

Data was presented in frequencies, percentages, tables, and graphs. On bivariate, a variable that was found to have a $P<0.05$ was significant, and on multivariate, a variable with a p-value <0.02 was significant.

2.11. Ethical considerations

2.11.1. Approval

The proposal was presented to the department of nursing and midwifery and thereafter to the Faculty of Health Science. An approval letter was issued and taken to the school authorities where the study was to be conducted requesting permission.

2.11.2. Consent

Written consent and assent were sought from students who participated in the study.

2.11.3. Confidentiality

Identifiers like names on participants' information were avoided, Data was coded to ensure confidentiality

A password was put on the laptop containing participants' data. Honesty was maintained throughout the research process; in collecting and reporting data, results, methods, and procedures used during data collection to avoid fabrication, falsification, misrepresentation, and or misreporting of data. The questionnaires were kept in a lockable cupboard.

All quotations used and sources were distinguished and acknowledged using references.

3. Results

A total of (315) questionnaires were given out to the respondents, (312) were filled and returned

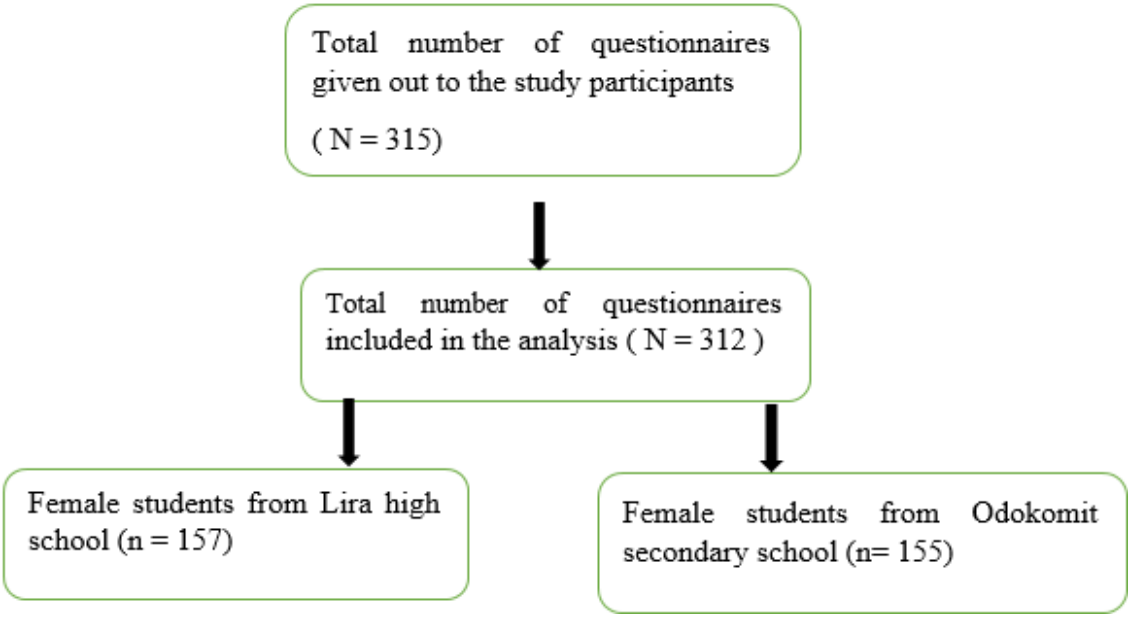

Figure 1: Study Profile

and this gave a response rate of 99%. 157 participants at Lira high school were interviewed and 155 participants were interviewed at Odokomit secondary school as well.

3.1. Socio-demographic characteristics of the study participants.

Table 1: Distribution of socio-demographic characteristics of participants

Variable	Frequency	Percentage (%)
Age		
<12	4	1.3
12-15	149	47.8
16-19	143	45.8
>19	16	5.1
Mother's education level		
Illiterate	45	14.4
Primary	141	45.2
Secondary	110	35.3
Tertiary	16	5.1
Father's education level		
Illiterate	21	6.7
Primary	78	25
Secondary	160	51.3
Tertiary	53	17
Lives with;		
Both parents	188	60.3
Mother only	61	19.6
Father only	50	16
Others	13	4.2
Mother's occupation		
Farmer	67	21.5
Housewife	60	19.2
Business woman	161	51.6
Others	24	7.7
Father's occupation		
Farmer	59	18.9
Civil servant	22	7.1
Business man	204	65.4
Others	27	8.7

Table 1 shows that the majority of the respondents 47.8% (n=149) are in the age group of 12-15 years. The majority of the study participants' mother's education level, 45.2% (n=141) were educated to the primary school level. The majority of the study participants' father's education level, 51.3% (n=160) were educated to the secondary school level. Most of the study participants 60.3% (n=188) live with both parents. A greater number of respondents 51.6% (n=161) their mothers were business women and most of the participants 65.4% (n=204) their fathers who were business men.

Table 2: Association between socio-demographic characteristics and menstrual hygiene practices

Variable	MHM practices		P value
	Good (%)	Poor (%)	
Age			**0.000***
<12	1 (0.3)	3 (1.0)	
12-15	18 (5.8)	131 (42.0)	
16-19	89 (28.5)	54 (17.3)	
>19	12 (3.8)	4 (1.3)	
Mother's education level			**0.011***
Illiterate	12 (3.8)	33 (10.6)	
Primary	46 (14.7)	95 (30.4)	
Secondary	55 (17.6)	55 (17.6)	
Tertiary	7 (2.2)	9 (2.9)	
Father's education level			0.443
Illiterate	6 (1.9)	15 (4.8)	
Primary	35 (11.2)	43 (13.8)	
Secondary	61 (19.6)	99 (31.7)	
Tertiary	18 (5.8)	35 (11.2)	
Lives with:			0.184
Both parents	75 (24.0)	113 (36.2)	
Mother only	27 (8.7)	34 (10.9)	
Father only	16 (5.1)	34 (10.9)	
Others	2 (0.6)	11 (3.5)	
Mother's occupation			0.390
Farmer	23 (7.4)	44 (14.1)	
Housewife	23 (7.4)	37 (11.9)	
Business woman	61 (19.6)	100 (32.1)	
Others	13 (4.2)	11 (3.5)	
Father's occupation			**0.042***
Farmer	20 (6.4)	39 (12.5)	
Civil servant	14 (4.5)	8 (2.6)	
Business woman	79 (25.3)	125 (40.1)	
Others	7(2.2)	20 (6.4)	

* Statistically significant values

The table 2 shows that; Age, mother's education level and father's occupation of students were found to be significantly associated with menstrual hygiene management practices with a p-value<0.05.

3.2. Menstrual hygiene management practices

Table 3: menstrual hygiene management practices of respondents

MHM practice related questions	Frequency	Percentage (%)
Ever used any absorbent material during menses		
No	29	9.3
Yes	283	90.7
Type of absorbent material used mostly		
Rag (cloth of any kind)	27	8.7
Under wear	28	8.3
Clean cloth	63	20.2
Sanitary pad	196	62.8
Frequency of change of absorbent material		
Once a day	42	13.5
Twice a day	100	32.1
3times and above	170	54.5
Disposal of absorbent material		
Open field	33	10.6
Dust bin	42	13.5
Burning	69	22.1
Pit latrine	168	53.8
Cleaning of body during menses		
Clean around genitalia with tissue	58	18.6
Wash genitalia area with soap	53	17.0
Take a birth with soap	201	64.4
Frequency of cleaning genitalia during menses		
Do not until end of menses	4	1.3
Once a day	95	30.4
Twice a day	213	68.3
Overall MHM practices		
Good	120	38.5
Poor	192	61.5

Of the 312 respondents, 61.5% (n=192) of participants' MHM practices were poor. Most of them 90.7% (n=283) used absorbent materials during their menstruation period. However, only 62.8% (n=196) were using disposable sanitary pads. More than half 54.5% (n=170) of the girls changed the sanitary materials more than three times a day, and 68.3% (n=213) cleaned their external genitalia more than twice a day during menstruation. 64.4% (n=201) of the girls took a bath daily with soap and water during menstruation, and 53.8% (n=168) used a pit latrine for disposing of sanitary materials.

Figure 2 shows that 61.5% of study participants had poor MHM practices and 38.5% had good MHM practice according to the UNICEF definition of MHM

3.3. Socio-cultural factors

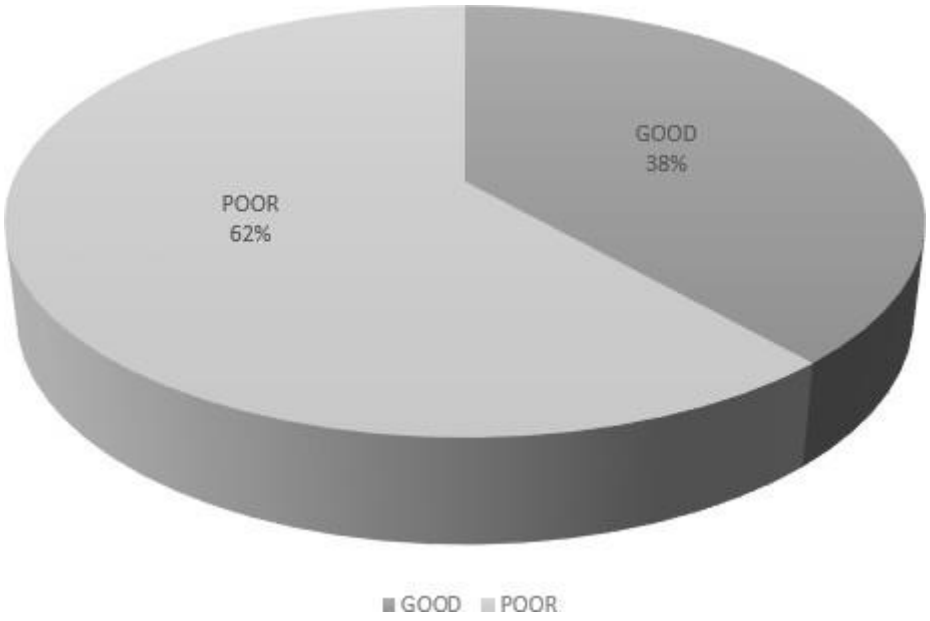

Figure 2: Pie chart showing menstrual hygiene management practices of respondents

Table 4: Socio-cultural factors associated with MHM practice

Variables	Frequency	Percentage (%)
Ever heard about menses before menarche		
No	100	32.1
Yes	212	67.9
Main source of information		
Mother	111	35.6
Teacher	102	32.7
Friends	82	26.3
Radio/TV	5	1.6
Others	12	3.6
Do you discuss about menses?		
No	118	37.8
Yes	194	62.2
Frequency of discussing about menses		
Frequently	25	8.0
Sometimes	169	54.2
Almost never	118	37.8
Pocket money for pads		
No	58	18.6
Yes	254	81.4
Causes of menses		
Others	140	44.9
Hormones	172	55.1
Where does menstrual blood come from?		
Others	84	26.9
Uterus	228	73.1
Is it harmful to exercise during menses?		
Yes	122	39.1
No	190	60.9
Does poor menstrual hygiene expose to infections?		
No	66	21.2
Yes	246	78.8
Total score of knowledge about menstruation		
Good (3-4)	194	62.2
Poor (0-2)	118	37.8

Table 4 shows that more than half of the respondents heard about menstruation before menarche 67.9% (n=2212), majority of the respondents got their main source of information about menstruation from their mothers 35.6% (n=111). More than half of the respondents discuss with friends about menses 62.2% (n=194), and of them, 54.2% (n=169) discuss them sometimes. The majority of the respondents get pocket money for sanitary pads 81.4% (n=254) and the rest do not.

In the assessment of their knowledge regarding menstruation, four questions were asked where each correct answer carried 1 mark, and a wrong one zero and scored out of four, 0-2 scored poor knowledge and 3-4 scored good knowledge. More than half of the respondents had good knowledge regarding menstruation 62.2% (n=194).

Table 5: Association between socio-cultural factors and MHM practices

Variables	MHM practices		P value
	Good (%)	Poor (%)	
Ever heard about menses before menarche			**0.001***
No	25 (8.0)	75 (24.0)	
Yes	95 (30.4)	117 (37.5)	
Main source of information			0.519
Mother	49 (15.7)	62 (19.9)	
Teacher	39 (12.5)	63 (20.2)	
Friends	26 (8.3)	56 (17.9)	
Radio/TV	2 (0.6)	3 (1.0)	
Others	4 (1.3)	8 (2.6)	
Do you discuss about menses?			**0.044***
No	37 (11.9)	81 (26.0)	
Yes	83 (26.6)	111 (35.5)	
Frequency of discussing about menses			0.126
Frequently	10 (3.2)	15 (4.8)	
Sometimes	73 (23.4)	96 (30.4)	
Almost never	37 (11.9)	81 (26.0)	
Pocket money for pads			0.322
No	19 (16.1)	39 (12.5)	
Yes	101 (32.4)	153 (49.0)	
Knowledge about menstruation			**0.000***
Poor	6 (1.9)	112 (35.9)	
Good	114(36.6)	80 (25.6)	

* Statistically significant values

Table 5 shows that, hearing about menstruation before menarche, knowledge about menstruation and discussing about menses with friends were found to be significantly associated with menstrual hygiene management practices with a p-value<0.05.

3.4. School-related factors

Table 6: School related factors associated with menstrual hygiene management practices

Variables	Frequency	Percentage (%)
School provide sanitary pads		
No	311	99.7
Yes	1	0.3
Ever faced menstrual related teasing by boys		
Yes	43	13.8
No	269	86.2
Separate latrines for boys and girls at school		
Yes	309	99.0
No	3	1.0
Do the latrines have doors?		
Yes	246	78.8
No	66	21.2
Water and soap available in girls' toilet		
Yes, water and soap	102	32.7
Soap only	4	1.3
Water only	134	42.9
Neither water nor soap	72	23.1
Covered bins for disposal of pads		
Yes	78	75.0
No	234	25.0
Menstrual hygiene taught at school		
Yes	165	52.9
No	147	47.1

In table 6 shows that almost all of the participants 99.7% (n=311) reported that sanitary pads were not provided at schools. The majority of the students reported that they had never faced any menstrual-related teasing by boys 86.2% (n=269). Almost all of the students reported the presence of separate toilets for boys and girls 99.0% (n=309), 78.8% (n=246) reported the presence of latrine doors, 75.0% (n=78) reported the presence of covered bins in latrines for disposal of sanitary pads and 42.9% (n=134) reported water only being available in girls' toilets. More than half of the respondents reported MHM being taught at school 52.9% (n=165).

Table 7: Association between school related factors and MHM practices

Variables	MHM practices		P value
	Poor (%)	Good (%)	
School provide sanitary pads			0.205
No	192 (61.5)	119 (38.1)	
Yes	0 (0.0)	1 (0.3)	
Ever faced menstrual related teasing by boys			0.232
Yes	30 (9.6)	13 (4.2)	
No	162 (51.9)	107 (34.3)	
Separate latrines for boys and girls at school			0.313
Yes	191 (61.2)	118 (37.8)	
No	1 (0.3)	2 (0.6)	
Do the latrines have doors?			0.861
Yes	152 (48.7)	94 (30.1)	
No	40 (12.8)	28 (8.3)	
Water and soap available in girls' toilet			**0.001***
Yes, water and soap	48 (15.4)	54 (17.3)	
Soap only	4 (1.3)	0 (0.0)	
Water only	88 (28.2)	46 (14.7)	
Neither water nor soap	52 (16.7)	20 (6.4)	
Covered bins for disposal of pads			0.788
Yes	47 (15.1)	31 (9.9)	
No	145 (46.5)	89 (28.5)	
Menstrual hygiene taught at school			**0.014***
Yes	91 (29.2)	74 (23.7)	
No	101 (32.4)	46 (14.7)	

* Statistically significant values

Table 7 above shows that, teaching menstrual hygiene management in school and availability of water and soap in girls' toilets are significantly associated with menstrual hygiene management practices with a p-value of <0.05.

Table 8: Predictors of MHM practices

Variable	Frequency (%)	COR	AOR	P value
Age				**0.000***
<12	4 (1.3)			
12-15	149 (47.8)	0.412	0.316	
16-19	143 (45.8)	4.944	4.154	
>19	16 (5.1)	9.000	11.320	
Mother's education level				
Illiterate	45(14.4)			0.042
Primary	141 (45.2)	1.332	2.321	
Secondary	110 (35.3)	2.750	3.921	
Tertiary	16 (5.1)	2.139	2.060	
Father's occupation				0.107
Farmer	59 (18.9)			
Civil servant	22 (7.1)	3.413	4.012	
Business man	204 (65.4)	1.232	1.118	
Others	27 (8.7)	0.683	0.648	
Ever heard about menses before menarche				0.069
No	100 (32.1)			
Yes	212 (67.9)	2.436	1.882	
Knowledge about menstruation				**0.000***
Poor	118 (37.8)			
Good	194 (62.2)	26.600	12.213	
Discuss about menses with friends				0.540
No	118 (37.8)			
Yes	194 (62.2)	1.637	1.220	
Water and soap available in girls' toilets				**0.012***
Yes, soap and water	102 (32.7)			
Soap only	4 (1.3)	000	0.000	
Water only	134 (42.9)	0.465	0.461	
Neither soap nor water	72 (23.1)	0.342	0.252	
MHM taught in school				0.453
No	147 (47.1)			
Yes	165 (52.9)	1.785	1.258	

* Statistically significant values, COR- crude odds ratio, AOR- adjusted odds ratio

On multivariate analysis using binary logistic regression; Age, knowledge about menstruation, and availability of soap and water in girls' toilets were found to be significantly associated with MHM practices with a p-value of <0.02).

4. Discussion:

This study aimed at assessing factors associated with menstrual hygiene management practices among secondary school girls in Lira Sub-County Lira City West.

This study identified that more than half of the girls' MHM practice was poor (61.5%). Those who scored four out of the four criteria in the definition of MHM were classified as good MHM practice and otherwise classified as poor. This finding is high compared with studies done in Nepal, Kenya, and Eastern Ethiopia (Bhusal, 2020; Korir et al., 2018; Mohammed Gena, 2020). The difference could be due to measurement differences since they used a single criterion to rate MHM practice and study location differences. However, this is also consistent with the studies conducted in Western Ethiopia and Lao PDR (Shallo et al., 2020; Sychareun et al., 2020)

Knowledge about menstruation in this study was a predictor for MHM practices with a p-value of 0.000. Previous studies done in Southern Ethiopia (Belayneh & Mekuriaw, 2019), North-eastern Ethiopia (Habtegiorgis et al., 2021), and Zambia (Lahme et al., 2018) also linked knowledge about menstruation with MHM practices. This could be explained by the fact that good knowledge about menstruation, enables girls to practice good menstrual hygiene. However, this finding contradicts the findings of the study conducted in Kenya (Korir et al., 2018). This could be because the study was carried out among primary girls unlike this current which was conducted among secondary girls.

Water and soap available in girls' toilets were also found to be a predictor of MHM practices with a p-value of 0.012. This was also reported in previous studies conducted in Bhutan (Tshomo et al., 2021), and Kenya (Korir et al., 2018). The reason might be that the lack of soap and water in girls' toilets limits girls from washing their genitalia and body as frequently as possible.

This study reported age to be a predictor of menstrual hygiene management practices with a p-value of 0.000, this was supported by other studies carried out in India, Kenya, and Ethiopia (Habtegiorgis et al., 2021; Korir et al., 2018; Suhasini & Belgaumndra, 2018), which brought it out the younger age was associated with poor MHM practices. This could be because younger girls (<16 years) have just started their menses and most of them are not yet sure of how to manage their menses, compared to the older ones (≥16 years) who are experienced.

5. conclusion .

Almost two-thirds (61.5%) of the students had poor MHM practices. The main contributors to this were the respondent's age, knowledge about menstruation, and availability of water and soap in girls' toilets. The school environments were not female-friendly for managing menses safely, indicating that the water, sanitation, and hygiene facilities in the schools need urgent solutions.

6. Recommendations.

Administrators and policymakers should provide specific education on menstrual hygiene management to not only students but also parents.

School officials and other stakeholders should give special attention to making the school environment a comfortable place for girls to manage their menstrual hygiene.

Menstrual hygiene management should be incorporated into the primary school curriculum so that by the time girls reach menarche, they are already knowledgeable on how to manage their menses

Another broader study should be conducted in more than two schools employing both quantitative and qualitative methods to explore more about MHM practices and their associated factors.

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Last but not the least, I applaud myself for being a strong lady and never giving up amidst all life's challenges.

8. List of Abbreviations.

UNICEF: United Nations Children's Fund
MHM: Menstrual Hygiene Management
MHH: Menstrual Hygiene Health
WHO: World Health Organization
JMP: Joint Monitoring Program
HIV: Human Immunodeficiency Syndrome
MOH: Ministry of Health
MoES: Ministry of Education and Sports
SNV: Stichting Nederlandse Vrijwilligers
WASH: Water Sanitation and Hygiene
SDG: Sustainable Development Goals
LMICs: Low and Middle-income countries
SPSS: Statistical Package Social Sciences

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11. References.

1. Atwijukye, O. (2014). Design of Sanitation facilities for MHM. 1St Menstrual Hygiene Management Conference First Menstrual Hygiene Management Conference, 256(0), 95–96.
2. Belayneh, Z., & Mekuriaw, B. (2019). Knowledge and menstrual hygiene practice among adolescent school girls in southern Ethiopia: A cross-sectional study. BMC Public Health, 19(1), 1–8. https://doi.org/10.1186/s12889-019-7973-9
3. Bhusal, C. K. (2020). Practice of Menstrual Hygiene and Associated Factors among Adolescent School Girls in Dang District , Nepal. 2020.
4. Caruso, B., Fehr, A., Inden, K., Sahin, M., Ellis, A., & Andes, K. L. (2013). WASH in schools empowers girls. null(October), null.
5. Gerlach, E. (2021). MENSTRUAL HEALTH AND MENSTRUAL HYGIENE MANAGEMENT A contribution of Sanitation for Millions to improved gender equality and safer hygiene Table of contents.
6. Gibson, L., Yamakoshi, B., Burgers, L., & Alleman, P. (2019). Menstrual Health and Hygiene. Real Relief Website, 93. https://www.realreliefway.com/menstrual-health-and-hygiene%0Awww.unicef.org/wash%0Ahttps://www.unicef.org/wash/files/UNICEF-Guidance-menstrual-health-hygiene-2019.pdf

7. Global G.L.O.W. (2020). The Devastating Consequences of Period Poverty for Girls. https://globalgirlsglow.org/the-devastating-consequences-of-period-poverty-for-girls/
8. Habtegiorgis, Y., Sisay, T., Kloos, H., Malede, A., Id, M. Y., Arefaynie, M., Damtie, Y., Kefale, B., Tegegne, B., Addisu, E., Lingerew, M., Id, L. B., Berihun, G., Natnael, T., Abebe, M., Id, A. F., Dangura, F., & Id, M. A. (2021). Menstrual hygiene practices among high school girls in urban areas in Northeastern Ethiopia : A neglected issue in water , sanitation , and hygiene research. 1–22. https://doi.org/10.1371/journal.pone.0248825
9. Korir, E., Okwara, F. N., & Okumbe, G. (2018). Menstrual hygiene management practices among primary school girls from a pastoralist community in Kenya: A cross sectional survey. Pan African Medical Journal, 31, 1–11. https://doi.org/10.11604/pamj.2018.31.222.13521
10. Kuhlmann, A. S., Henry, K., & Wall, L. L. (2017). Menstrual Hygiene Management in Resource-Poor Countries. Obstetrical & Gynecological Survey, 72(6), 356. https://doi.org/10.1097/OGX.0000000000000443
11. Lahme, A. M., Stern, R., & Cooper, D. (2018). Factors impacting on menstrual hygiene and their implications for health promotion. 25, 54–62.
12. Miiro, G., Rutakumwa, R., Nakiyingi-Miiro, J., Nakuya, K., Musoke, S., Namakula, J., Francis, S., Torondel, B., Gibson, L. J., Ross, D. A., & Weiss, H. A. (2018). Menstrual health and school absenteeism among adolescent girls in Uganda (MENISCUS): A feasibility study. BMC Women's Health, 18(1), 1–13. https://doi.org/10.1186/S12905-017-0502-Z/TABLES/3
13. Ministry of Education and Sports. (2015). Menstrual Hygiene Management Charter-Uganda 2015. 2–4.
14. Mohammed Gena, H. (2020). Menstrual Hygiene Management Practices and Associated Factors among Secondary School Girls in East Hararghe Zone, Eastern Ethiopia. Advances in Public Health, 2020. https://doi.org/10.1155/2020/8938615
15. PMNCH. (2020). Menstrual hygiene and health - a call for dignity, rights and empowerment. https://www.who.int/pmnch/media/news/2020/menstrual_hygiene_health/en/
16. Shallo, S. A., Willi, W., & Abubeker, A. (2020). Factors affecting menstrual hygiene management practice among school adolescents in Ambo, western Ethiopia, 2018: A cross-sectional mixed-method study. Risk Management and Healthcare Policy, 13, 1579–1587. https://doi.org/10.2147/RMHP.S267534
17. Sommer, M., Caruso, B. A., Sahin, M., Calderon, T., Cavill, S., Mahon, T., & Phillips-Howard, P. A. (2016). A Time for Global Action: Addressing Girls' Menstrual Hygiene Management Needs in Schools. PLoS Medicine, 13(2), 1–9. https://doi.org/10.1371/journal.pmed.1001962
18. Suhasini, K., & Belgaumndra, M. (2018). Factors Influencing Menstrual Hygiene Practice Among Late Adolescent Girls in an Urban Area of Belgaum. Annals of Community Health, 4(May), 0–5.
19. Sychareun, V., Chaleunvong, K., Essink, D. R., & Durham, J. (2020). Menstruation practice among school and out-of- school adolescent girls , Lao PDR. Global Health Action, 13(2). https://doi.org/10.1080/16549716.2020.1785170
20. The Guardian. (2016). We don't know enough about menstruation and girls are paying a price. https://www.theguardian.com/global-development-professionals-network/2016/may/28/we-dont-know-enough-about-menstruation-and-girls-are-paying-a-price
21. Tshomo, T., Gurung, M. S., Shah, S., Gilcuesta, J., Maes, P., & Saunders, P. (2021). Menstrual Hygiene Management — Knowledge , Attitudes , and Practices Among Female College Students in Bhutan. 3(August). https://doi.org/10.3389/frph.2021.703978

22. Uganda For Her. (2022). Menstrual Dropouts_ Period Taboos in Rural Uganda. https://uganda4her.org/menstrual-dropouts-period-taboos-in-rural-uganda/
23. UNFPA ESARO. (2020). We shouldn't be made to feel ashamed of menstruation, a normal and essential process. https://esaro.unfpa.org/en/news/we-shouldnt-be-made-feel-ashamed-menstruation-normal-and-essential-process
24. UNICEF. (2021). Menstrual hygiene. https://www.unicef.org/wash/menstrual-hygiene
25. WASH United. (2016). MENSTRUAL HYGIENE DAY 2016 Planning Guide Welcome ! https://menstrualhygieneday.org/wp-content/uploads/2016/05/MHDay2016_Planner_FINAL.pdf
26. WORLD BANK. (2018). Menstrual Hygiene Management Enables Women and Girls to Reach Their Full Potential. https://www.worldbank.org/en/news/feature/2018/05/25/menstrual-hygiene-management

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