



**SCHOOL OF MEDCINE AND HEALTH SCIENCES
BACHELORS OF PUBLIC HEALTH**

**AN ASSESSMENT OF MENSTRUAL HYGIENE MANAGEMENT AMONG
ADOLESCENT SCHOOL GIRLS IN MAZABUKA DISTRICT AND THE
IMPACT ON THEIR EDUCATION**

BY

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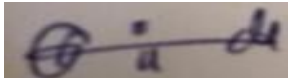
**A research dissertation submitted to the University of Lusaka in partial fulfillment
of the requirements of degree in Bachelor of Science in public health.**

DECLARATION

I, Linda Moonde(BSPH19217490) do hereby declare that this proposal is my own original work. It has been guided by my supervisor in accordance with the guidelines for Bachelors of Science in Public Health at University of Lusaka.

Signature:

Date:



I **Pamela Mwansa** guided and read this proposal and approved it. I am satisfied that this is the original work of the author under the name it is presented. I confirm that the work has been completed satisfactorily and ready for submission to ethics for approval. a

Supervisor's signature:

Date:



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LIST OF ACRONYMS

HIV Human immunodeficiency virus

MHM Menstrual hygiene management

NGOs Non-governmental organization

NHRA National health research authority

SHN School health and nutrition

SLTS School led total sanitation

UNICEF United Nations children's fund

WASH water sanitation and hygiene

MOE Ministry of education

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ABSTRACT

INTRODUCTION:

Adolescence is a time of transition from childhood to maturity, and during this time, various changes such as menstruation take place. Menstruation is the regular flow of blood through the vaginal cavity that coincides with the shedding of the uterine mucosa. (Oyebola, 2002). Menstruation is a normal and healthy physical process for girls and women in their reproductive years however managing it presents a number of difficulties that are primarily brought on by negative cultural perception. Menstrual cycle is stigmatized in most societies and possesses hindrance to women and girls especially where participation in community activities is concerned. Menstruation tends to demoralize young girls and burden them with emotions of guilt, humiliation, and worthlessness, especially for those who may not know how to maintain the best hygiene which affects their school performance.

OBJECTIVE: The objective of the study was to assess the menstrual hygiene management among adolescent school girls in the district and its impact on their education.

METHODS:

A quantitative cross-sectional study was used to conduct this research; data was collected through self-administered questionnaire which was then analyzed using SPSS version 16, the sample size (91) was obtained using Yamane formula. The study made use of multi-stage and random sampling methods in the selection of study participants.

FINDINGS:

It was found that the largest number of respondents (57.3%) had family members more than five while the least number of respondents (42.7%) had family members less than 5, additionally 66.3 % were able to purchase sanitary pads while 33.7 could not manage. In relation to their knowledge on menstruation 100 % of the respondents had knowledge on the importance of bathing during menstruation however, 85.4% of the girls said menstrual blood was unclean, and 2.2% were not sure. 96.7% of those surveyed said agreed that hormonal changes in the body

were to blame for menstruation. One-fourth of the respondents were not sure of the origin of menstrual blood, while 55.5% named the womb, 15.6% the abdomen, and 13.3% the bladder. The findings also indicate that 57.3% of the respondents were not frowned upon discussion of periods, 25.3 % gave correct answer about presence of harmful substances in their menses. Due to cultural differences 17.8% of the respondents did not bath regularly while on periods consequently, 37.1% demonstrated that they were missing from school because of feminine cycle and 43.8% detailed that they missed school because of period for 1-4 days in a month. More than half (51.6 %) of the respondents missed game or play because of period, while 27.3 % of the girls concurred that feminine cycle impeded them from walking far. Majority (57.6%) also indicated lack of menstrual resources such as water, 51.7 had no access to soap and 67.3 of the respondents were not able to purchase disposable sanitary pads.

CONCLUSION:

It was concluded that social factors affect knowledge, attitudes, and practices related to menstrual hygiene management among adolescents in peri-urban schools, Culture, lack of knowledge and economic reasons have greater impact on menstrual hygiene among school going children, hence government and key stakeholders need to put up measures into ensuring that schools have a girl-friendly environment, where resources like running water, soap, and sanitary facilities are available.

CHAPTER ONE

1.0 BACKGROUND/INTRODUCTION

Puberty's beginning and the emergence of secondary sex traits are two features that commonly define adolescence. (stang, 2005). Adolescence is a time of transition from childhood to maturity, and during this time, various changes take place, including the development of the female reproductive system, including menstruation. Menstruation is the regular flow of blood through the vaginal cavity that coincides with the shedding of the uterine mucosa. (Oyebola, 2002). . One or two years following the emergence of secondary sexual traits, it is an indication of sexual maturity. Previous studies show that due to a lack of social support and taboos that prevent information about menstruation from being shared, the majority of females experience feelings of dread, shame, destruction, worry, and guilt. Menstruation is a normal and healthy physical process for girls and women in their reproductive years, but managing it still presents a number of difficulties that are primarily brought on by negative cultural perceptions. Additionally, Poor menstrual hygiene has drawn considerable attention, but adolescent female children are particularly affected because menstruation begins at the same time that girls begin school. The misconception that menstruation is dirty, unclean, and filthy frequently restricts the amount of information that is provided with adolescent girls. In other words, the entire menstrual cycle, whether it occurs in girls or women, is stigmatized in most societies, and as a result, menstruating women and girls are prohibited from participating in various social activities until their periods are over.

Previous studies have shown that, due to their lack of preparation, most adolescent girls have a propensity to be worried and naive. Menstruation tends to demoralize young girls and burden them with emotions of guilt, humiliation, and worthlessness, especially for those who may not know how to maintain the best hygiene standards needed at that time. As a result, girls have a limited capacity to learn, particularly when they are in school. In order to raise women and girls' understanding of menstrual hygiene, there is a need for a holistic approach to health education that centers on schools, communities, health services sectors, families, and religious institutions. (adolescents program, n.d.)

The Zambian government is currently making efforts with intentions of strengthening menstruation hygiene management (MHM) in schools for adolescent girls, there are a number of

initiatives such as commemorating the day of menstrual hygiene day which falls on 28th of May each year to help increase awareness. Secondly creating favorable environments for NGOs to implement Programmes such as school led total sanitation (STLS). Thirdly promoting WASH Programmes with the view of facilitate the provision of adequate water. Lastly training school health and nutrition (SHN) coordinators in schools etc. despite all efforts the status of menstrual hygiene management (MHM) for adolescent girls in schools to help reduce girls' absenteeism is still poor in Zambia and need to be addressed even though there are services currently being offered to the public.

1.1 Statement of the problem

In Zambia, adolescents make up about 27% of the overall population, and they are particularly vulnerable to dangers such as sexual abuse, drug and alcohol addiction, HIV/AIDS, maternal and infant mortality, the use of contraceptives, poor literacy rates, and many others. (Super and Torondel 2013). Girls drop out of school most frequently in the sixth grade, despite the fact that the government and NGOs have put intervention measures in place to guarantee that they provide equal chance for both boys and females to attend the school systems. Additionally, when females begin getting their periods, myths and taboos surround the entire process, leading to unfavorable sentiments. More specifically, girls must deal with difficulties related to menstruation management in public settings like schools. According to estimates, one in ten adolescent girls skip school each month when they are menstruating. (UNICEF 2013). The majority of adolescent girls miss school because of their periods. It is essential that the educational setting offers a clean and safe atmosphere in order to support healthy behaviors like having access to menstrual hygiene products, latrines and places to change, safe water and sanitation, and good hygiene practices like washing hands with soap. The learning atmosphere at school would be unpleasant, gendered and insufficient without them. (Sommer, M and Ackatia-Armah 2012).

Menstrual hygiene requires availability and access to clean and absorbent menstrual materials, privacy, water and soap and proper disposal facilities for used menstrual materials (JMP, 2015). lack access to suitable facilities, and they may worry about getting dirty and facing ridicule and bullying from their classmates. (tegegne TK, 2014). The aim of this research is to assess the menstrual management practices among adolescent girls in Mazabuka district and its impact on their education. Especially with the new free education policy the number of girls enrolled in

schools has increased, therefore associated factors will help policy makers, program planners and program implementers to come up with interventions that will address the factors that hinder adolescent girls from attending school consistently.

1.2 Justification of the study

Numerous studies have been conducted on how women and girls manage menstruation hygiene, particularly in poor countries in Asia and Africa. Menstruation is misunderstood in many ways, including the notion that women and girls are filthy because they are menstruating. (Yagnik 2015) Most schools lack the assistance of teachers, who are usually male. Furthermore, alternative menstruation products are not widely accepted in culture. There are poor water and sanitation facilities at the school, a lack of funding for supplies, and cramps, agony, and discomfort related to menstruation. Low family support, the distances to and from school, and the taunting of classmates when unintentional clothing soiling occurs all exacerbate leaks and clothing soiling. (UNICEF 2013). To the planner, policy makers and programmers, this study is significant as it will help in planning different interventions on how to reduce information gap concerning menstrual hygiene management for adolescent girls.

1.3 General objectives

To assess menstrual hygiene management among adolescent school girls in the district and its impact on their education.

1.4 Specific objectives

- (1) To identify the social factors affecting attitudes and practices related to menstruation and MHM among adolescent girls' in peri-urban schools in Mazabuka district.
- (2) To assess the local understanding of menstrual hygiene management among adolescent girls' in peri-urban schools in Mazabuka district.
- (3) To identify the cultural views on adolescent girls' school attendance during menstruation.

1.5 Research questions

1. What social factors affect the attitudes and practices related to menstrual hygiene management among adolescent girls in peri urban school?
2. What is the local understanding of menstrual hygiene management among adolescent girls' in peri-urban schools in the district?
3. What are the cultural views on adolescent girls' school attendance during menstruation?

CHAPTER TWO (02)

In this chapter, available literature on the subject matter will be examined. The research will discuss the importance of menstrual hygiene management among adolescent girls in schools and how it affects their quality of education and how they relate in society.

2.0 Literature Review

The study on the impacts of menstrual hygiene management on adolescent girls' education has been on going in recent years. Several factors have been analyzed by various scholars all over the world.

A study carried out in Rajshahi division, Bangladesh reviewed that, although it is a normal occurrence, most civilizations still consider menstruation and menstrual blood to be unclean and taboo. The aim of the study was to uncover patterns, distinctions between urban and rural locations, and factors influencing the management of menstrual hygiene by adolescent females. As a result, many adolescent girls are left to come up with their own solutions to the problem since they lack access to proper health education and information regarding menstruation health. While there are some instances of sanitary pad use, still menstrual hygiene management is unhealthy in most cases in both rural and urban areas of Bangladesh. (Ha and Alam, 2022)

Adolescent girls' physical and emotional changes throughout puberty may have far-reaching social and cultural effects on their wellness, making them more susceptible to early marriages and dropping out of school. (McMahon et al., 2011)

Cultural taboos and customs surrounding menstruation, a lack of conversation about sexual maturation, and false information from a variety of unreliable sources, including friends, parents, and instructors, are some issues that adolescent females confront. (Sommer et al., 2014).

According to a study carried out in south-Sudan, the results demonstrate how cultural, political, and social issues influence how adolescents and their communities see menstruation and puberty. MHM was culturally formed, however the findings indicate an undue focus on social standards rather than menstruation hygiene management, which may have long-term health effects for

adolescent females. Adolescent females, who are already among the most mistreated, may experience further humiliation and suffering as a result of some unfavorable social conventions around puberty. in south-Sudan.

Menstruation and puberty are not well covered in health education, and there is a lack of peer and teacher support for managing periods at school. Lack of access to water, sanitation, hygienic supplies, and disposal infrastructure are barriers that contribute to the physical gender bias in schools and the widespread stigma associated with menstruation. These barriers can also prevent adolescent girls from participating fully in the classroom and cause them to worry about menstrual accidents for hours at a time.(Alam M-U, 2017).

Because they lack access to sufficient supplies and facilities, females in Zambia's majority of government-owned schools have a tough time managing their menstrual hygiene. Adolescent girls miss school more often because of this. According to a study conducted in Zambia's Mumbwa and Rufunsa district. The study sought to examine the issues faced by schoolgirls, menstrual hygiene management in rural Zambian schools, and knowledge experiences. Menstrual hygiene management (MHM)-related challenges include the use of non-absorbent and uncomfortable menstrual cloth and insufficient provision of sanitation materials, water, hygiene, and sanitation facilities (WASH) in schools. Most girls reported learning about menstruation only at menarche and did not know the psychological basis of menstruation. To be more specific, there was no running water, no doors or locks for privacy, and there was no soap in the restrooms. Due to their fear that their used menstrual materials would be recovered and used against them through witchcraft, some girls preferred to burn their used menstrual materials instead of disposing of them in garbage bins or pit latrines. Due to the chaffing of wet, non-absorbent menstrual cloth material throughout their lengthy commute to school, the girls complained of friction burns on their inner thighs. Due to inadequate MHM facilities at schools, menstruation schoolgirls chose to skip class rather than attend and feel uncomfortable, inactive, and ashamed. This had a negative impact on the number of girls who attended school and participated in physical activities.

2.1 Theoretical framework

Bronfenbrenner's Ecological theory of development.

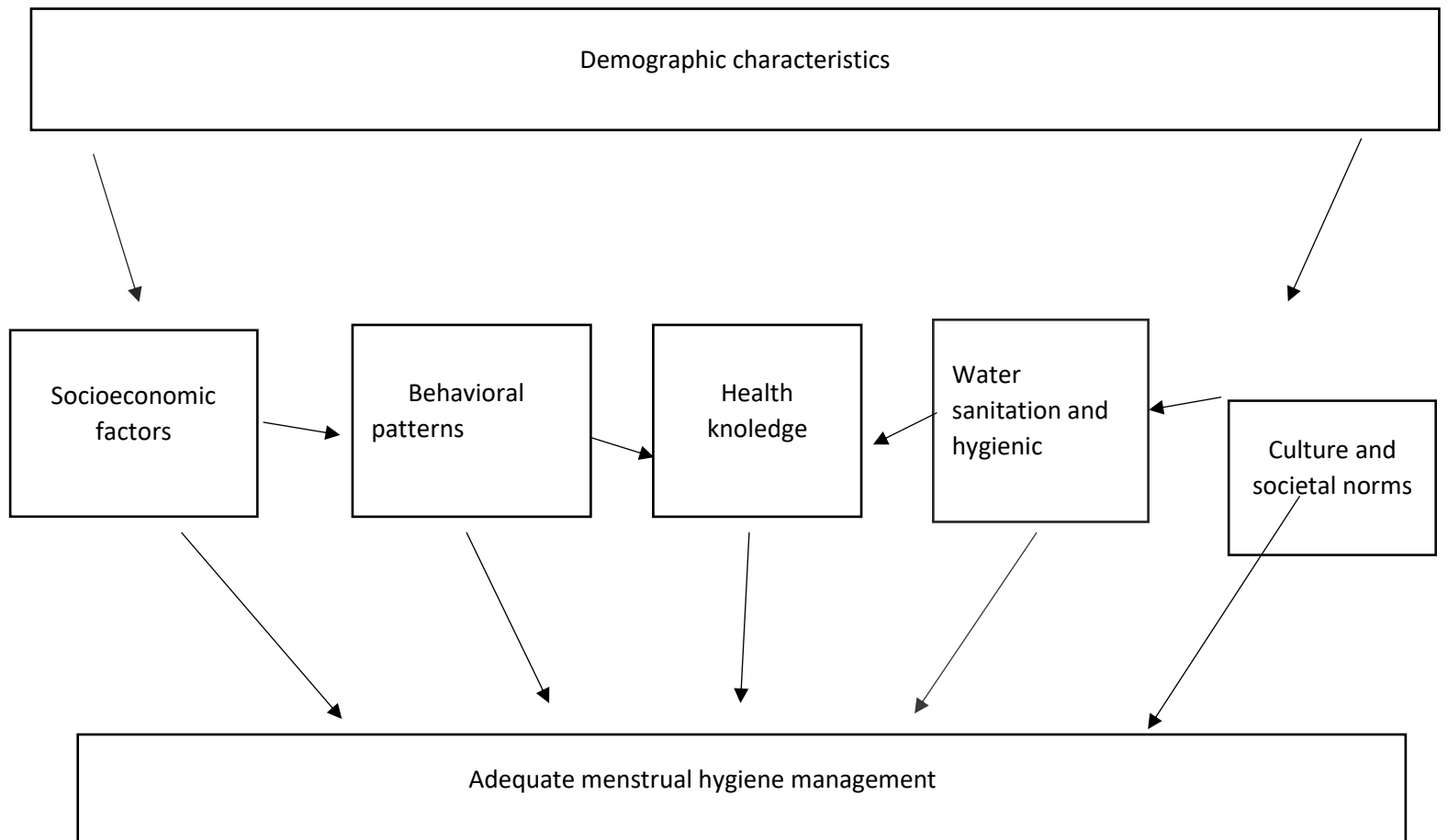
The ecological framework for health promotion focuses on both human and environmental behavior variables at different levels of influence. The ecological perspective is guided by two principles: the premise of interaction and causal reciprocity at several levels further helps us grasp the significance of interventions that are focused on and assessed at various levels. The idea that making the right improvements to environments can cause people to change (McLaren & Hawe, 2005).

This suggests that in order for adolescent girls to succeed academically in the classroom, the setting must be suitable and conducive to the desired result. According to this concept, it is suggested that the availability of MHM spaces will improve learning outcomes for adolescent females and that personal traits, family support, and the school/community environment will be crucial factors in academic success.

In applying this approach, this study investigates how three components interact at three levels with the micro and meso systems of the individual, home, and school to resolve menstrual hygiene management-related difficulties that affect schoolgirls' education. The framework is also appropriate for this study because it provides a thorough understanding of environmental elements that affect adolescent girls' education and handles the interaction between factors at various environmental levels with balanced emphasis.

2.2 Conceptual framework

Figure 1: conceptual framework



Adapted from: university of Ghana <http://ugspace.ug.edu.gh>

Figure 1 above represents the conceptual framework for the assessment of menstrual hygiene management among adolescent girls in primary schools in Mazabuka District. It explains the association between the outcome (dependent) variable – adequate menstrual hygiene

management and the independent variables (demographic characteristics, socioeconomic factors, hand washing practice, behavioral patterns, culture and societal norms, health knowledge and resource availability); which helps to determine the likely backgrounds and explanations for patterned conditions of the problem. The demographic characteristics which includes age, educational level (grade in school), religion and ethnicity of the girl child influence their interpretation of culture and societal norms, which in turn influences their hand washing practices and their adopted behavioral patterns of good MHM. Socio-economic factors impacting a great deal, the health knowledge acquired by the adolescent girls in general MHM as well as its implementation through proper hand washing practices. The frequency of hand washing during the menstrual cycle is also dependent on the demographic characteristics of these adolescent girls. Socio-economic factors, have a long way to go in resource availability for the adolescent girls which in turn improves their MHM

CHAPTER THREE

3.0 Methodology

This chapter describes the study approach, study design, study population, sampling size/sampling procedure, data collection, data analysis and ethical considerations for the entire study.

3.1 Study Approach

The research study involved quantitative methods.

3.2 Study design

A cross sectional involving quantitative methods. Self-administered questionnaires were used to collect data (Cochran William 1977)

3.3 Study population /target population

The study was conducted on adolescent school girls in Mazabuka district, the study units are schools in peri-urban areas in Mazabuka, primary schools in Mazabuka district that enroll learners from low socioeconomic backgrounds served as study units. Girls in grade five (5) through to seven (7) who already begun menstruating and those between the age of 10 and 19 will make up the study population. Adolescent girls from the same grades who have not reached menarche will be excluded from the study.

3.4 Sample size, sampling procedures

Multi-stage sampling procedure was used to select the study subjects, the list of adolescent girls in different grades was generated at each participating school in consultation with the head teachers, from the list of all adolescent girls who started having their menstruation were selected from the group using random sampling.

The study sample size was gathered from schools within Mazabuka town high density areas. The sample size will be calculated using the Yamane's formula for the schools. (Yamane 1967). A 95% confidence level will be used with a marginal error of 6.76% or $\epsilon = 0.0676$ and population (estimated proportion of adolescent girls with good MHM) proportion of 0.5 or 50%.

Considering Yamane's formula for calculating sample size (Yamane 1967):-

$$N_0 = \frac{Z^2 P (1-P) N}{Z^2 P (1-P) + Ne^2}$$

Where:

N_0 = required sample size (selected adolescent girls in the three schools within Mazabuka)

Z= Confidence Interval corresponding to a level of confidence

P= population Proportion

e = precision or error limit

N= population size of adolescent girls in the schools

For e = 0.05, P = 0.5, Z =1.96, N=225 adolescent girls

$$N_0 = \frac{Z^2 P (1-P) N}{Z^2 P (1-P) + Ne^2} = \frac{(1.96)^2 \times 0.5 (1-0.5) \times 225}{(1.96)^2 (1-0.5) + 225 (0.05)^2} = \frac{86.541}{1} = 87$$

pupils

However, the desired sample size may be increased by 5%, to help account for no-response and attrition bias. Therefore, the total sample was 91 adolescent school girls.

3.5 Data collection methods

The data was collected using structured self-administered questionnaires for all participating adolescent girls and checklist for the all the schools participating were filled in. prior to data collection the participating schools were visited to explain the aim and objectives of the study as well as the selection criteria for all participation students. Following that the Head teacher helped

come up with a list of all adolescent girls and using purposive sampling elimination of girls who have not yet started their menstruation will be conducted from the list. Further all girls' that agree to participate were given consent forms for their parents to sign allowing them to participate in the study.

3.6 Data analysis

The data was collected through tailored questionnaires and analyzed using Statistical Package For Social Sciences Version 16 (SPSS). Bivariate analysis will be used in order to assess the association between the variables of menstrual hygiene management (MHM) and menstrual knowledge will be calculated and shown using frequency tables, distributions, graphs.

3.7 Ethical considerations

Ethical approval from the school of medicine and health sciences, university of Lusaka research ethics committee. Permission to be obtained from National Health Research Authority (NHRA). An approval letters will have to be collected from the district education board secretary's office to carry out the study in the respective schools. The school head teachers will be briefed on the objectives of the study and given copies of the approval letter from both the DEBs office and university. The purpose of the study will be explained to students and each student will be given a written informed consent for their parents to sign allowing to participate in the study because most of the adolescent girls that have reached their menarche are less than 18 years of age. Confidentiality of the information collected will be maintained by omitting the personal details of participates on the questionnaires and the questionnaires will be stored in safe place.

CHAPTER FOUR

4.0 Key Findings

Socio-demographic Characteristics of Respondents

91 adolescent girls between the ages of 12 and 16 participated in the study overall, and they all completed the self-administered questionnaires. The girls came from three conveniently chosen

Characteristics	Number(N)	%
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primary schools. Twelve-year-old girls (n = 7), thirteen-year-old girls (n = 14), fourteen-year-old girls (n = 32), fifteen-year-old girls (n = 20), and sixteen-year-old girls (n = 18) participated. The respondents' age distribution is depicted in the graph below.

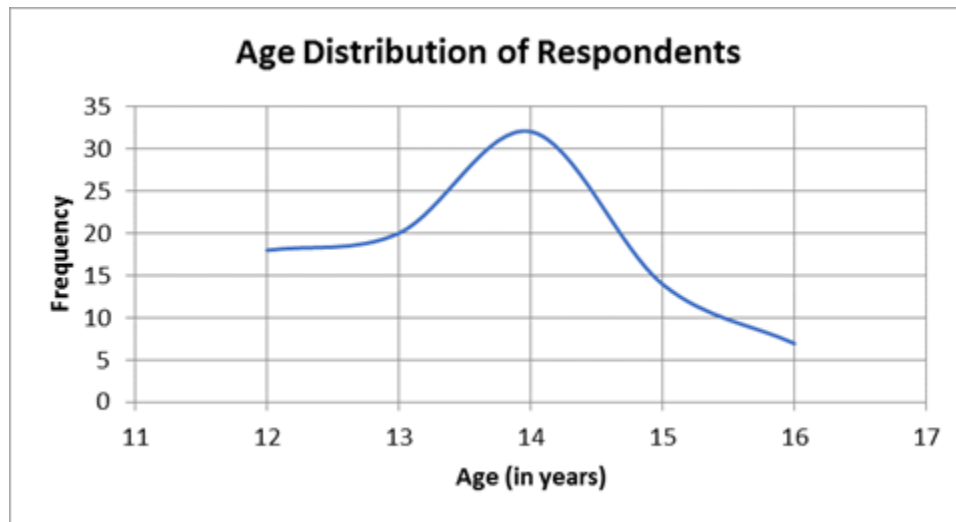


Figure 1: Age Distribution of Respondents

According to table 1's findings, the respondents' average age was 14, with a standard deviation of 1.18. Menarchal age was 11.6 on average, with a 1.12 standard deviation. All of the responders were Christians and had reached menarche. A little over 8.8% of respondents belonged to the G4 age group, 13% to the G5, 35% to the G6, and 42% to the G7 age group

Table 1 : Socio-demographic characteristics of the Adolescent Girls in the Primary School

Age (years) Mean \pm SD	14	1.18
Age of menses (years) Mean \pm SD	11.6	1.12
Grade in school Class		
Grade 4	8	8.8
Grade 5	12	13.2
Grade 6	32	35.1
Grade 7	39	42.9
		100
Religion	0	0
Christianity	91	100
Feeling at the onset of first period		
Prepared	9	9.9
Happy	15	16.5
Sad	20	22
Surprised	47	51.6
Total		100

Social Economic Factors of Respondents

The socioeconomic status is shown in table 2. In terms of how many family members the respondents live with, 42.7% have less than five, while 57.3% have more than five. Additionally, it was discovered that 98.9% of respondents and their families always had access to clean water at home, and 86.5% of respondents said they always had enough food to eat. Only 29.9% of respondents said it had ever happened to them or someone in their family that needed medical care but couldn't afford it. Additionally, the findings revealed that 68.5% of the respondents'

families had trouble paying for school expenditures, which caused more than 75% of the girls to miss school

Table 2 : Socio-economic Factors among Adolescent Girls in Primary Schools of mazabuka Town

Socio-economic factors	N	%
Nos. of family lived in		
Less than five	38	42.8
5 or more	51	57.3
		100
Always had enough food to eat		
Yes	77	86.5
No	12	13.5
		100
Always had clean water for use		
Yes	86	98.9
No	12	1.1
		100
Needed medical treatment but couldn't afford		
Yes	26	29.9
No	61	70.1
		100
Always have means to pay for school expenses		
Yes	28	31.5
No	61	68.5
		100
Bought sanitary products from a shop in last six months		
Yes	60	67.4
No	29	32.6
		100

Given Money to school		
Yes	62	69.7
No	27	30.3
		100
Able to buy sanitary pads from a shop		
Yes	30	33.7
No	59	66.3
		100

Health/ Hygiene Knowledge of the Respondents

Table 3 lists the respondents' knowledge about health, hygiene, and menstruation as well as the sources they used to acquire it prior to reaching menarche. When asked whether it was necessary to frequently bathe while menstruating, every single girl said yes. However, 85.4% of the girls said menstrual blood was unclean, and 2.2% said they weren't sure. 96.7% of those surveyed said they agreed that hormonal changes in the body were to blame for menstruation. One-fourth of the respondents were unsure of the origin of menstrual blood, while 55.5% named the womb, 15.6% the abdomen, and 13.3% the bladder. Once a girl reaches menarche, the majority of respondents (78.9%) are aware that she gets her period every month, and more than half of respondents (54.4) said that women also get pimples during their periods. Boys do not get periods, according to at least 70.8% of respondents, while 3.4% were unsure. When asked if beginning menstruation indicates a girl is ready to become pregnant, 83.2% gave a negative response and 16.7% gave a positive one. While 1.1% did not know, about 70.8% said that beginning their period did not mean they were prepared for marriage. About 50.6% of the adolescent girls reported learning about menstruation from family members, and research results showed that mothers (30.8%), aunts (26.4%), and friends (22%) were the most common sources of information.

Table 3: Health/ Hygiene Knowledge of Adolescent Girls

Knowledge	N	%
Girls should bath frequently		
Yes	91	100
No	0	0
Don't Know	0	0
		100
Menstrual blood is unhygienic		
Yes	76	85.4
No	11	12.4
Don't Know	2	2.2
		100
Menstruation results from hormonal changes		
Yes	78	86.7
No	5	5.5
Don't Know	7	7.8
Menstrual blood is from?		
		100
Womb	50	55.6
Abdomen	14	15.6
Bladder	12	13.2
Don't Know	14	15.2
		100
Menstruation comes every month		
Yes	71	78.9
No	14	15.6
Don't Know	5	5.5
		100
Girls may get pimples (acne)		
Yes	49	54.4
No	39	43.3

Don't Know	2	2.3
		100
<hr/>		
Boys get periods		
Yes	23	26.8
No	63	70.8
Don't Know	3	3.4
		100
<hr/>		
Menstruation means you are ready to get married		
Yes	23	25.8
No	63	70.8
Don't Know	3	4.4
		100
<hr/>		
Menstruation means you are ready to get pregnant		
Yes	15	16.7
No	75	82.2
Don't Know	1	1.1
		100
<hr/>		
Were you taught from home about menstruation		
Yes	44	49.4
No	45	50.6
		100
<hr/>		
Who first talked to you about menstruation		
Mother	28	30.8
Sister	15	16.4
Grandmother	4	4.4
Aunt	24	26.4
Friend	20	22.0
		100
<hr/>		

Culture and Societal Norms

The cultural and social norms in Zambia vary depending on the tribe, but the majority of respondents (57.3%) said that discussing one's period was not frowned upon, and 61.4% said that one could cook while having their period because it was not frowned upon. Menstruation is not a disease, according to the majority of respondents (94.3%), and when asked if menstrual blood contains harmful substances, only 25.3% of them gave the correct answer.

Menstrual Behavior Practices

Table 4 displays the respondents' menstrual practices and behaviors. The majority of respondents (53.7%) had a menstrual flow of between one and four days, followed by 37.1% by five to seven days, and 9.2% by more than seven days. The respondents also indicated how frequently they typically bathed as follows: once (45%), twice (17.2%), three times per day (20%), and some respondents (17.8%) did not regularly bathe due to alleged cultural reasons. When menstruating, more than 50% of respondents said they took a bath twice a day; 37.3% said they took a bath three times a day; and 5.9% said they took a bath just once a day. When asked how much pain they have during menstruation, 16.8% of the girls said they had no pain, 30.7 percent said they had mild pain, 43.2% said they had painful menstruation, 22.5 percent said they had very painful menstruation, and 17.5% said they had very painful menstruation. Consequently, 37.1% demonstrated that they were missing from school because of feminine cycle and 43.8% detailed that they missed school because of period for 1-4 days in a month.

Table 4 : Menstrual Behavior Patterns for Adolescent Girls in Primary School

Menstrual Behaviour Pattern	N	%
How many days do you bleed in a month		
1-4 days	47	51.7
5-7 days	35	39.1
Above 7 days	8	9.2
		100
Do you take a bath when menstruating		
Yes	51	56
No	40	44

		100
	How many times do you change your sanitary pads	
	Once	3 8.6
	Twice	29 82.8
	Thrice	3 8.6
	More than thrice	0 0
		100
	Do you change your pads while at school	
	Yes	42 47.2
	No	47 52.8
Self		100
	Do you get a private place to change pads while at school	
	Yes	22 24.2
	No	69 75.8
		100
	Specify the pain you experience during menstruation	
	None	15 16.8
	Mild	10 11
	Painful	35 39.2
	Very painful	18 20.6
	Extremely painful	11 12.4
	Total	100

Esteem

Concerning self-esteem during menstruation, 73% of respondents reported feeling satisfied with themselves, 77% reported believing they could accomplish things that others did, and 38% reported feeling inadequate. More than half of those polled (59.6%) thought there was no reason to be proud, and 49% said they were less confident than they were when they weren't having menstruation.

Table 5: Self-Esteem among Adolescent Girls during Menstruation

Self-Esteem	N	%
Satisfied with self		
True	65	73
False	24	27
		100
I'm no good		
True	38	42.7
False	51	57.3
		100
Able to do things others do		
True	77	86.5
False	12	13.5
		100
Feeling useless at times		
True	37	41.6
False	52	58.4
		100
No reasons to be proud		
True	53	59.6
False	36	40.4
		100
Not respected by others		
True	15	16.9
False	74	83.1
		100
Feeling less confident compared to when not menstruating		
True	49	55.1
False	40	44.9
		100

Availability of Menstrual Resources

The materials that girls use during menstruation and their availability in the primary schools under investigation are shown in the table below. As a result, the primary sources analyzed in this study were: cleanser, admittance to water and sterile items. When asked if they had access to water, 57.6% of respondents stated that they did not have access to any water at all, while 1.7 percent stated that they always had access to water for menstrual washing and changing. The results also showed that the majority of girls (71.9%) do not wash their genitalia during menstruation, 14.6% use only water, 78.7% use both soap and water, and 6.7% do not wash their genitalia at all.

51.7% of respondents reported having access to soap most of the time, 6.7% reported having access to soap always, 29.2% reported having access to soap a few times, and 12.4% reported not having access to soap. Over half of the adolescent girls (87.9%) said they used cloth during menstruation, while 67% said they used natural materials, 65.5 percent used disposable pads, 61.5 percent used toilet tissue, 39.6% used a mattress, 39.6% used cotton wool, and 16.5 percent used tampons. At the same time, the girls were asked to list all the items they had ever used as sanitary items. According to this study 63.7% were not able to buy disposable sanitary products due not having enough money

Absenteeism

The table 5 addresses some of motivations behind why adolescent girls missed school during monthly cycle. At the point when asked how long in a month the adolescent girls missed school, the greater part (58.4%) of the respondents demonstrated that they had missed school 1-2 days, while 39.3% missed for 3-4 days and 2.2% for over 4 days. With respect to number of days the girls had missed school because of period in a month, 42.7% missed for 1-2 days, 1.1 % missed for 3-4 days, while 56.2% didn't miss by any means. The respondents additionally showed that 81.3% missed school since they had neglected to pay school expenses, 13.2% missed school because of affliction, 2.2% missed school because of burial service and 3.3% never missed

school. More than half (51.6 %) of the respondents missed game or play because of period, while 27.3 % of the girls concurred that feminine cycle impeded them from walking far.

Table 5: Self-Reported School Absenteeism due to Menstruation

Absenteeism	N	%
How many days in a month do you miss school?		
1-2 days	52	58.4
3-4 days	35	39.3
Above	2	2.2
		100
Have you ever missed school because of menstruation?		
Yes	33	37.1
No	56	62.9
		100
How many days in a month do you miss school because of menstruation?		
None	50	56.2
1-2 days	38	42.7
3-4 days	1	1.1
Above 4 days	0	0
		100
Are there any reasons for missing school		
None	3	3.3
Funeral	2	2.2
School fees	74	81.3
Sickness	12	13.2
		100
How many days in a month do you miss school because of		

housework?		
None	65	73.0
1-2 days	24	27.0
		100
Does menstruating make you miss sports or play with your friends?		
Yes	47	51.6
No	44	48.4
		100
Does menstruating stop you from walking far?		
Yes	24	27.3
No	64	72.7
		100
Are there any reasons why you miss school? (please write them)		
I fear staining my clothes		
True	73	82.0
False	16	18.0
		100
Menstruation can cause pain		
True	50	56.2
False	39	43.8
		100
Menstruation can cause discomfort from bloating or tiredness		
True	30	33.7
False	59	66.3
		100
I'm afraid of others making fun of me		
True	30	43.8
False	59	56.2

	100
There is no private place for hand washing or changing at school	
True	59 67.8
False	28 32.2
	100
I do not have disposable sanitary pads	
True	50 56.2
False	39 43.8
	100

Sanitary Surveys of Facilities in Primary Schools in mazabuka

Table 6: Sanitary Surveys of Facilities in Primary Schools in Mazabuka

	School A	School B	School C
Province	Southern	Southern	Southern
District	Mazabuka	Mazabuka	Mazabuka
School Name	Kaonga primary	Changa changa Community	Hillside basic
Reporting period	January 2023	January 2023	January 2023
School's Infrastructure	1x4 classroom block	1x 3 classroom blocks & 7 Pit latrines	1x5 classroom block & latrines
Number of Female Students respondent in	26	37	28

the School

School Committee and Clubs

Are there school clubs?	✓	✓	✓
Is MHM promoted properly in the school?	✓	✓	✓
Are there sanitary products and waste disposal system?	X	X	X
Is there a functional PTA in the school?	✓	✓	✓
Are sanitary products and wastes disposal system in place and functioning?	✓	✓	✓
What types of toilets are there? Pit latrines	✓	✓	✓
Flushable Toilets	X	X	✓
Are there sufficient toilets for girls?	X	X	X
Are girls' toilets easily accessible?	✓	✓	✓
Is there soap available in the toilet facilities	✓	X	✓
Are there lids for the toilets?	X	X	X
Is there a mirror in the toilets?	X	✓	X
How clean are the girls' latrines? Clean			
Soewhat Clean	✓	✓	✓
Not clean			
Are there sufficient toilets in operation	X	X	✓
Are the paths to access the toilets well maintained?	✓	✓	✓
Is there sufficient light in the toilets?	X	X	X
Is there an effective maintenance and	✓	X	✓

cleaning routine in place for the toilets and
MHM facilities?

Is there water in the schools?	✓	X	✓
If so, what type of water supply?	✓	X	✓
Does the water point function well?	✓	X	✓
Is there water available in the toilet facilities?	X	X	✓
Are the girls' toilets separating from the boys' toilets?	✓	✓	✓
Are the pupils' toilets separate from the teachers' toilets?	✓	✓	✓
Are there locks on the inside of cubicle doors?	X	X	X
Are there roofs on the toilets?	✓	X	✓
Are all the doors in place?	X	X	✓
Are there toilets for girls with disability?	X	X	X
Are the toilets for girls with disabilities accessible for them?	X	X	X
Is there a dustbin available in toilet facilities to dispose of used sanitary products?	X	X	X
Is there an incinerator in school for menstrual materials?	X	X	X

Currently, Zambia has no strong policy that supports menstrual hygiene management in schools, therefore, most of the school toilets have no lockable doors to ensure privacy. Over 67% of the respondents in this study indicated that they did not have private places for washing and changing during menstruation.

Associated Factors with Menstrual Hygiene Management among Adolescent Girls in Primary Schools

Culture shapes beliefs, values, customs and tradition in a general public. Religion assumes a significant part of assimilating individuals by giving scriptural direction of acceptance way of behaving and values. The table below shows that the greater part (51%) of the respondents said menstruation cycle talk was not a taboo in their culture.

Table 7: Cross tabulation of Religion and Culture

Cross tabulation

		Menstruation talk is a taboo in my culture			Total
		Yes	no	don't know	
What religion are you?	Christianity	24	51	14	89
Total		24	51	14	89

Table 8: Number of times the sanitary product is changed when in school

Table 8 reveals that many respondents wash their genitals with soap and water when having a period. Further research reveals that 38% of girls who thought it was culturally taboo to talk about menstruation indicated they solely used water to cleanse their genitals during this time, as opposed to 8% of those who said it was not.

		Do you change your sanitary products when in school?		Total
		Yes	no	
Menstruation talk is a taboo in my culture	yes	12	12	24
	no	26	25	51
	don't know	4	10	14
Total		42	47	89

Table 9: Cultural beliefs and the method of genital wash

		What do you use to wash your genitals during menstruating?			Total
		water only	soap and water	nothing	
Menstruation talk is a taboo in my culture	Yes	9	15	0	24
	No	4	42	5	51
	don't know	0	13	1	14
Total		13	70	6	89

For respondents who indicated whether discussing menstruation was considered taboo in their culture or not, Table 9 lists the various access levels to soap.

Table 10: Cultural belief and access to soap

Cross tabulation

		Do you have access to soap at all times?				Total
		not at all	few times	most times	always	
Menstruation talk is a taboo in my culture	Yes	4	13	7	0	24
	No	5	11	31	4	51
	don't know	2	2	8	2	14
Total		11	26	46	6	89

Table 11 :Cross tabulation of reasons for missing school and school privacy

		I miss school during menstruation because I do not have disposable sanitary pads		Total
		true	false	
I miss school during menstruation because there is no private place for hand washing or changing at school	true	19	15	34
	false	11	12	23
Total		30	27	57

Table 12: Cross tabulation of Grade and Cooking (n=88)

Table 12 shows that most respondents said they were not allowed to cook when menstruating. However, differences were also seen according to grade, with 51%, 64% and 100% in grades 5, 6 and 7 respectively saying they were not allowed to cook when menstruating.

		You should not be allowed to cook when menstruating			Total
		yes	No	don't know	
What Grade are you in?	5	19	21	1	41
	6	10	25	4	39
	7	0	8	0	8
Total		29	54	5	88

Table 13: Cross tabulation of Religion and Cooking (n=89)

		You should not be allowed to cook when menstruating			Total
		yes	no	don't know	
What religion are you?	Christianity	29	54	6	89
Total		29	54	6	89

4.1 Discussion

The study revealed that there are inadequate resources and inadequate knowledge on menstrual hygiene management among adolescent school girls in Mazabuka district. Without adequate

resources and knowledge, girls are more likely to miss school during their periods, leading to a lack of education. This can have a long-term impact on their future, as well as their self-esteem since they are not able to participate in school activities and feel ashamed of their condition. Therefore, it is essential to provide them with the resources and knowledge they need to manage their menstrual hygiene and thrive in their education.

Socio-demographic Characteristics of Respondents.

The responses were from a variety of tribes in Zambia, including the Tonga, Lozi, Ngoni, Bemba, Luvale, and Kaonde. This is mostly because the schools are located in Mazabuka town's peri-urban area, which is home to residents from all over the nation. More than half of the girls who took part in the study said they were shocked when their first menstrual cycle (menarche) began. Furthermore, beliefs and attitudes have an effect on the behavior of women and girls during menstruation. As a result, poor menstrual hygiene practices can have negative impacts on the physical, mental and social well-being of these individuals. Many girls and boys grow up believing that menstruation is dirty, embarrassing, and something that needs to be camouflaged or kept hidden for women to function in their everyday life. In the survey, 15% of those surveyed believed periods were 'impure', and more than 40% of boys and young men said they had witnessed a man make a negative comment about a girl's period when they were a boy or young man. (Plan International, n.d.). Nonetheless, this study revealed that 51.6% of the respondents were surprised to see blood at menarche

Social Economic Factors of Respondents.

The study, which looked into why people missed school, found that the majority of those surveyed said it was because of a lack of privacy at school. Due to the lack of a private restroom or changing area in the classroom, girls who claimed they lacked disposable pads are more likely to miss class than other students. Most of the time, girls do not have access to water for menstrual hygiene, which has an impact on how well they practice it. . In order to practice effective menstrual hygiene, one requires access to clean water and toilets, to good hygiene practices like hand washing, to menstrual hygiene supplies, and to a setting that respects privacy.

Health/ Hygiene Knowledge of the Respondents

This study showed that more than half of the respondents had knowledge concerning menstruation and the menstrual hygiene management. There is a knowledge gap regarding whether boys have their menstruation every month, source of menstrual blood every month, and whether menstrual blood is unhygienic or not. This is due to the fact that boys do not experience menstruation, and so there is a lack of first-hand knowledge of the biological processes and hygienic considerations associated with it. Additionally, there is a lack of research in the area, which contributes to the knowledge gap. A study conducted in South-Eastern Nigeria, showed that adolescent girls believed that the menstrual blood being eliminated from the body was bad. They believed that it was a source of weakness, bad luck and ill-health. As a result, they would often try to hide their periods, leading to poor menstrual hygiene management. This in turn, could lead to serious health issues such as reproductive tract infections. (Adinma et al., 2021). In this study 85.4% of the adolescent girls affirmed that menstrual blood was unhygienic which is not the case. Another study that was conducted in Uganda revealed that adolescent girls believed that menstruation was a disease. This false belief was due to lack of education and cultural taboos that were associated with menstruation. This resulted in adolescent girls feeling ashamed and embarrassed about their periods, which inhibited them from seeking help and guidance. (UNESCO 2012). Most of the girls (50.6%) were not taught from home about menstruation and this could be related to low parent to child communication concerning menstruation and its management. Mothers were the most preferred source of information because girls felt more ease discussing sensitive issues such as menstruation and its management.

Cultural and Societal norms

There are cultures where menstrual talk is a taboo, which may have a great impact on girls' menstrual hygiene practices while menstruating since it may have a significant impact on the methods and ways in which sanitary products are used during menstruation. In India, this taboo can be observed in rural areas, where girls are restricted from entering temples or participating in religious activities while menstruating. This is due to the belief that menstruation is impure and that women should not be allowed near places of worship while they are menstruating. This taboo is also seen in other parts of the world and is a reflection of the stigma and discrimination experienced by women during their menstrual cycle. (Welle (www.dw.com), n.d.)

Menstrual behavior practices

Wellbeing dangers, for example, inclination of urinary plot and disposal of foul smell in the vaginal region during period can be decreased by rehearsing great cleanliness. To help improve menstrual hygiene, sanitary products, soap, and water must therefore be readily available.

Self-esteem

Girls may experience low self-esteem as a result of the stigma associated with menstruation, which may prevent them from asking questions in class and from socializing. Furthermore, Stigma associated with menstruation may cause girls to lose self-esteem This can lead to a decrease in school attendance and performance, as girls may be too embarrassed to attend school during their periods. It can also lead to girls being isolated from their peers and feeling like they can't participate in normal activities. This study showed that most of the girls had experienced different reactions on their first menstruation. the reactions could have been due to unpreparedness or lack of information concerning the biological changes that girls must go through at puberty. Previous research has also shown that most girls experience negative reactions such as shame, fear, and feeling guilt and upset, resulting into low self-esteem (United Nations, 2022)

Availability of menstrual resource

74.5% of the respondents in this study indicated that they did not have a private place to change or wash in their schools making it difficult to maintain good menstrual hygiene while at school. As a result, over half of the girls who participated in the study missed school during menstruation for fear of soiling their clothes and fear of others making fun of them.

The findings from the checklist done in the three schools indicated that not one of the schools had a private place for girls to use to wash and change during menstruation. As a result, 67.8% of the girls in the study indicated that they missed school during menstruation., which in the long run can led to school drop outs. A study in Ethiopia showed that girls could not use the sanitary pads due to lack of money and ashamedness to buy them from stores, and unavailability of sanitary pads available in their area, and did not know how to use the pads. There are a number of reasons why girls do not use disposable sanitary items and some are more connected with parents child communication and educational levels, as well as awareness

of information sources such as mothers, aunties, elder sister and the students themselves about the menstruation and hygiene management associated with it. (Sahiledengle et al., 2022)

Several programmes in low-income countries have provided girls with sanitary pads mostly in schools with the aim of increasing school attendance. This was also evident with the 2017 Zambian budget where government had allocated money for buying sanitary pads to help over 14, 000 vulnerable school girls attend school during menstruation. However, this study showed that over 87% of the girls used cloth during menstruation, while 65% had used disposable pads.

Absenteeism

This study shows that most (67.8%) of the girls missed school during feminine cycle because of dread of smudging their garments, trailed by not having private spot to wash and change during period, 56.2% of the girls didn't have cushions, 56.2% likewise demonstrated that it was expected to encountering torment during feminine cycle, while 43.8% who missed because of dread of others making devotee of them and 33.7% missed due to bulging or sleepiness during period. For those that had missed school, they showed that they had missed school for one to two days in a month, notwithstanding, 82 % of respondents missed school because of a paranoid fear of staining themselves.

Sanitary surveys of facilities in primary schools in Mazabuka.

The checklist for evaluating sanitary facilities in three Primary schools was used for data collection. The selected school are all found Mazabuka town in Southern province of Zambia. All the schools involved in the study have a strong Parent Teacher Association (PTA) and school clubs to promote hygiene. The study shows that all the three schools promote menstrual and hygiene management and the sanitary disposal system were in place. The girls used pit latrines to dispose the used sanitary materials when at school and two schools have piped water, while the other school gets water from the nearby community hand pump. The toilets were not very clean for all the schools and only two schools were found to have soap in the toilets. The schools did not have waste bins for disposing of used sanitary products because the girls were advised to use pit latrines to dispose all used menstrual materials. Routine maintenance and cleaning was being done by the pupils themselves every after class, as there were no recruited cleaners.

Associated Factors with Menstrual Hygiene Management among Adolescent Girls in Primary Schools.

Every one of the girls no matter what their prior reaction to whether or not it was a taboo in that frame of mind to discuss menstruation said that they bath while bleeding. Moreover, among the people who said it was anything but a taboo, the greater part said they bathed two times, though among the individuals who said it was a taboo, the larger part bathed multiple times in a day. Also, the times that the pad is changed was viewed as two times regardless, and the common strategy for removal was viewed as washing the pad. This was trailed by burning among the individuals who said it was anything but a taboo to discuss menstruation and burying among the people who said it was a taboo, separately. The number of times that the sanitary product is changed when in school was found to differ slightly among the groups with different cultural beliefs about menstruation talk. The levels of access to soap differed. It has been determined that a fundamental aspect of menstrual hygiene is bathing. However, girls from conservative cultures, where discussing menstruation is frowned upon, are more likely to take baths than those from liberal cultures. Although washing was shown to be the most popular method of disposing of the used pad, it only efficiently proposes getting rid of the blood on the pad and not the pad itself. The final method of getting rid of the real pad varies depending on whether it is considered taboo to talk about menstruation or not. Those who believed it was taboo regarded burning to be the best option. Cultural views had a negligible impact on how frequently a girl changed her sanitary product while she was attending school; this is probably because cultural beliefs are more prevalent in the community than they are in a regulated learning environment where school rules take precedence. Although more girls reported washing their genitalia with soap and water when they were menstruating, it is also evident that proportionately more of them are prone to use water only if they believe that talking about their periods is forbidden. It has also been discovered that females have access to soap more frequently in societies where discussing menstruation is not frowned upon than in those where it is. According to all Christians who responded, 61% think one shouldn't be allowed to cook while menstruating. The majority of girls, even those whose culture forbade talking about menstruation, said they were taught about menstruation before they had their first period. In most cases, respondents who said the first person who spoke to the girls about menstruation was a friend also said that menstruation was

taboo in their culture. Most respondents who said it was not a taboo mentioned the mother as the first person to talk about menstruation.

4.2 Limitations of the study

The major limitation encountered during the study was unwillingness of the adolescent girls to participate in the study for fear of being known that they have already started having their menstruation by both the teachers and the boys.

Some of the girls decided not to participate for fear of being asked by the boys why they were put in a classroom and given forms to fill in. The other challenge was the ability of the girls to write, which was very limited especially those in Grade 4.

On the other hand, there is a possibility that the girls may have exaggerated their use of good menstrual hygiene knowledge as the study was based on self-reported results.

CHAPTER FIVE

5.0 Conclusion and recommendations

Taking into account the findings and discussion of how social factors affect knowledge, attitudes, and practices related to menstrual hygiene management among adolescents in

periurban schools, it is possible to assume that the findings have more to do with the perceptions emphasized by religious and educational institutions. Analysis of how cooking during menstruation affects social factors, such as age, grade, and religion, suggests the findings have more to do with these factors.

Even though all girls prefer to wash blood off their menstrual products before disposing of them, cultural values determine the final disposal method. Despite wanting to use disposable pads, most girls use cloth as padding because of economic reasons. As a result of the culture of silence, girls are also unable to easily access soap, even when they need it during menstruation. Having little access to water at school negatively impacts menstrual hygiene.

According to the study, adolescent girls are more likely to be absent from school due to several factors, including not paying school fees, funerals, illness, and a lack of adequate private places for washing and changing during menstruation, lack of emergency sanitary pads, and fear of soiling their clothes. Government and key stakeholders need to put more efforts into ensuring that schools have a girl-friendly environment, where resources like running water, soap, and sanitary facilities are available.

Recommendations

According to WHO-UNICEF Menstrual Hygiene Management (MHM)“is when women and adolescent girls use a clean material to absorb or collect menstrual blood, and this material can be changed in privacy as often as necessary for the duration of menstruation.”

Therefore, Primary schools should work towards adopting and promoting improved hygiene practices among adolescent girls in schools. This should include education on the importance of good hygiene and access to sanitary supplies. Schools should also ensure that adequate facilities, such as clean and separate toilets, are available for girls. Finally, schools should provide girls with the necessary resources and support to practice good hygiene. In details;

Provide menstrual hygiene materials in schools

Government started the distribution of sanitary pads in schools; therefore, the expansion of this programme to the whole country will help adolescent girls not to miss school due to soiling their clothes, especially when they start their menstruation when at school. Schools should be

supported with adequate resources to help give free sanitary pads. On the other hand, training for teachers and mothers on menstrual hygiene management should be enhanced to help reduce misconceptions. This will not only help girls attend school without fear of soiling their clothes but also reduce the rate of absenteeism and dropout due to period poverty and stigma associated with menstruation. Additionally, providing free sanitary pads and training to teachers and mothers will help create an environment free of taboos and will help to normalize the conversation around periods. This would help girls maintain their dignity and would increase their self-esteem during their menstruation cycle. It would also reduce the stigma attached to menstruation and help girls feel comfortable discussing the issue with their teachers and mothers. Additionally, the availability of sanitary pads would reduce the chances of girls missing out on school and would help them stay in school, allowing them to pursue their education.

Improve Information sharing on menstrual hygiene management

The study also found out that the girls knowledge about menstruation however, there are some knowledge gaps on information about whether menstrual blood is unhygienic or not, whether girls are ready to get married and pregnant when they reach menarche and the origin of menstrual blood. There is overwhelming evidence that educational interventions can help improve menstrual hygiene management among adolescent girls. The approaches need to provide comprehensive information that addresses these misconceptions and proper menstrual hygiene management. Therefore, there is need to intensify the awareness campaigns through mass media to the community at large. On the other hand, the Ministry of Education (MoE) need to formulate policies that will encourage knowledge sharing about menstrual hygiene practices, through school curriculum and extra-curricular activities. There is also need to for the Ministry of Education to promote sick bay which are for menstrual related sicknesses that girls experience while at school.

Such campaigns and policies can ensure that girls get access to the knowledge and supplies required to manage their periods safely and with dignity. Additionally, school-based policies can reduce the stigma around menstruation and empower girls to manage their periods efficiently, so they can stay in school and continue learning. This will help them to reach their full potential and be equal participants in society. Menstrual health education should also be gender-inclusive, so

boys and young men are aware of the subject and can provide support. Period poverty should be addressed to make sure no one is excluded from education and other opportunities.

Improved Water and Sanitation (WASH) facilities in schools

There is need to improve WASH facilities in schools by prioritising with the poorest facilities. Greater coordination is necessary between ministries to ensure that each school has adequate sanitation facilities that are appropriate and functional all the time. The number of latrines or flushable toilets should be according to acceptable standards of one to twenty-five (1/25 for girls and 1/50 for boys) per pit latrine. At the same time, all toilets should have doors to provide privacy which girls require during washing and changing clothes during menstruation. To make this happen, local authorities should ensure that adequate funding is allocated to schools for maintenance and repair of existing sanitation facilities. Schools should also have access to clean and safe water for handwashing and cleaning of toilets. Furthermore, all teachers should be given training on the importance of proper school sanitation. Therefore, providing safety, security, and privacy for girls is essential for maintaining good school sanitation and must be a priority for local authorities.

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APPENDIX:

DATA COLLECTION TOOL I

Adapted from (<http://ugspace.ug.edu.gh>)

AN ASSESSMENT OF MENSTRUAL HYGIENE MANAGEMENT AMONG ADOLESCENT SCHOOL GIRLS IN MAZABUKA DISTRICT AND THE IMPACT ON THEIR EDUCATION

Nobody apart from the research team will know what you write in the questionnaire as your response will be kept confidential. You are expected to complete the questionnaire but if you decide not to participate, be assured that it would not affect your relationship with anyone in the school.

This questionnaire is to be administered to all adolescent girls willing to participate in the study.

Please tick the response you consider true in the space provided.

1. In what month and year were you born?	Year..... Don't Know year.....	
2. Have you started your period?	Yes.....1 No.....2	
3. Age of the first menses		
4. What Grade are you in?	(1) G4 (2) G5 (3) G6 (4) G7	
5. What religion are you?	(1) Christianity (2) Islamic (3) traditional (4) Others..... <i>(specify)</i>	
6. What tribe are you?		

7. how did you feel on the onset of your first period?	(1) Prepared (2) happy (3) Sad (4) Surprised	
Health/ Hygiene Knowledge		
1. Should girls take their bath frequently when menstruating?	Yes.....1 No.....2 Don't Know.....3	
2. Menstrual Blood is unhygienic	Yes.....1 No.....2 Don't Know.....3	
3. Menstruation is as a result of hormonal changes?	Yes.....1 No.....2 Don't Know.....3	
4. Where does menstrual blood comes from?	(1) womb (2) Abdomen (3) Bladder (4) Don't Know	
5. Menstruation comes every month after a girl starts her period?	Yes.....1 No.....2 Don't Know.....3	
6. Girls may get pimples (acne) during their period?	Yes.....1 No.....2 Don't Know.....3	
7. Do boys get periods?	Yes.....1 No.....2 Don't Know.....3	
8. Starting menstruation means you are ready to get married?	Yes.....1 No.....2	

	Don't Know.....3	
9.Starting menstruation means you are ready to get pregnant?	Yes.....1 No.....2 Don't Know.....3	
10.Were you taught from home about menstruation before the onset of your first experience?	Yes.....1 No.....2	
11. Who was the first person to talk to you about menstruation?	(1) Mother (2) Sister (3) Grandmother (4) Aunt (5) Friend (6) Other..... (Specify)	
12. Do you learn health/ hygiene practices in school in any of your study subjects?	Yes.....1 No.....2	
Culture and Societal Norms		
1. Menstruation is a disease	Yes.....1 No.....2 Don't Know.....3	
2. Menstruation blood contains harmful substances	Yes.....1 No.....2 Don't Know.....3	
3. Menstruation talk is a taboo in my culture	Yes.....1 No.....2 Don't Know.....3	
4. You should not be allowed to cook when menstruating	Yes.....1 No.....2 Don't Know.....3	

Menstrual Behavioral Patterns		
1.How many days do you bleed in a month?	(1) 1-4 days (2) 5-7 days (3) Above 7 days	
2. Do you take your bath when menstruating	(1) Yes (2) No	
3.How many times do you take your bath in a day when menstruating	(1) None (2) Once (3) Twice (4) Three times and more (5) Don't remember	
4.How many times do you change your sanitary products daily when menstruating	(1) None (2) Once (3) Twice (4) Three time or more	
5.Where do you dispose the used pads?	(1) Bury (2) Burn (3) Wash (4) Wrap & put in a dustbin (5) Flush (6) Others..... <i>(Specify)</i>	
6.Do you change your sanitary products when in school?	(1) Yes (2) No	
7.Do you get a private place to change your sanitary products if in school?	(1) Yes (2) No	
8.Specify the pain you have experienced	(1) None (2) Mild (3) Painful	

	(4) Very painful (5) Extremely painful	
Menstrual Resource Availability While at School		
1. Do you have water to wash when menstruating at school?	(1) Not at all (2) Few times (3) Most times (4) Always	
2. Do you wash your genitals when menstruating at school?	(1) Yes (2) No	
3. What do you use to wash your genitals during menstruation?	(1) Water only (2) Soap & water (3) Nothing	
4. Do you have access to soap at all times?	(1) Not at all (2) Few times (3) Most times (4) Always	
5. Please tick all circumstances that apply		
Cloth		
Toilet paper		
Cotton Wool		
Mattress form		
Natural Materials		
Disposable Sanitary pads		
Piece of cloth		
Tampon		
Socio-Economic Factors		
1. What is the total number of family members you live in?	(1) Less than 5 (2) 5 or more	

2. Have you or your family always have had enough food to eat?	(1) Yes (2) No	
3. Have you or your family always have clean water 4. for use at home?	(1) yes (2) No	
5. Have you or your family ever needed medicine or medical treatment but could not afford it?	(1) Yes (2) No	
6. Have you or your family always have the means of paying for school expenses?	(1) Yes (2) No	
7. Have you bought disposal sanitary pads from a shop in the last six months?	(1) Yes (2) No	
8. Are you given money to use at school?	(1) Yes (2) No	
9. (If yes), how much are you given per week?	(1) K0-2 (2) K2-4 (3) 4-6 (4) Above K6	
10. Have you ever wanted to buy sanitary pad from a shop before but was unable to?	(1) Yes (2) No	
11. I do not have enough money to buy disposal sanitary pads	(1) True (2) False (3) Don't Know	
12. There are no disposable sanitary pads for purchase in the shops	(1) True (2) False (3) Don't Know	
Hand Washing Practice		
1. Have been taught on hand washing practice?	(1) Yes (2) No	
2. Do you wash your hands after using	(1) Yes	

toilet?	(2) No	
Absenteeism		
1.How many days in a month do you miss school?	(1) None (2) 1-2 (3) 3-4 (4) Above 4 (5) Don't know	
2. Have you ever missed school because of menstruation?	(1) Yes (2) No	
3.How many days in a month do you miss school because of menstruation?	(1) None (2) 1-2 (3) 3-4 (4) Above (5) Don't remember	
4.Does menstruation make you miss household work?	(1) Yes (2) No	
5.How many days in a month do you miss school because of housework?	(1) None (2) 1-2 (3) 3-4 (4) Above (5) Don't remember	
6. Does menstruating make you miss sports or play with your friends?	(1) yes (2) No	
7. Does menstruating stop you from walking far?	(1) Yes (2) No	
8.Are there any reasons why you miss school? (please write them)		
9. Please indicate the appropriate option as it relates to you. I miss school during menstruation because:		
9a. I fear staining my clothes	(1) True	

	(2) False	
9b. Menstruation can cause pain	(1) True (2) False	
9c. Menstruation can cause discomfort from bloating or tiredness	(1) True (2) False	
9d. I'm afraid of other making fun of me	(1) True (2) False	
9e. There is no private place for hand washing or changing at school	(1) True (2) False	
9f. I do not have disposable sanitary pads	(1) True (2) False	
Self Esteem		
1. I am satisfied with myself	(1) True (2) False	
2. At times, I think am no good	(1) True (2) False	
3. I think I have a number of good qualities	(1) True (2) False	
4. I am able to do things others can do	(1) True (2) False	
5. I feel useless at times	(1) True (2) False	
6. I do not reason to be proud of myself	(1) True (2) False	
7. I am not respected by others	(1) True (2) False	
8. I feel less confident compared to when I'm not on my period	(1) True (2) False	

AN ASSESSMENT OF MENSTRUAL HYGIENE MANAGEMENT AMONG ADOLESCENT SCHOOL GIRLS IN MAZABUKA DISTRICT AND THE IMPACT ON THEIR EDUCATION

This questionnaire is to be administered to all Key Informants (e.g. head Master/ school SHN Coordinator or any focal point person).

CHECKLIST FOR THE EVALUTION OF SANIATRY FACILITIES IN SCHOOLS:

Adapted from (House, *et al* 2012).

This tool will be used for data collection at each school

		School A	School B
	Province		
	District		
	School Name		
	Reporting period		
	School's Infrastructure		
	Number of Female Students respondent in the School		
School Committee and Clubs			
	Are there school clubs?		
	Is MHM promoted properly in the school?		
	Are sanitary products and waste disposal system?		
	Is there a functional PTA in the school?		
	Are sanitary products and wastes disposal system in place and functioning?		
	What type of toilets are there?		
	Are there sufficient toilets for girls?		

	Are girls' toilets easily accessible?		
	Is there soap available in the toilet facilities		
	Are there lids for the toilets?		
	Is there a mirror in the toilets?		
	How clean are the girls' latrines? (Clean/ somewhat clean/ Not Clean).		
	Are there sufficient toilets in operation		
	Are the paths to access the toilets well maintained?		
	Is there sufficient light in the toilets?		
	Is there an effective maintenance and cleaning routine in place for the toilets and MHM facilities?		
	Is there water in the schools?		
	If so, what type of water supply?		
	Does the water point function well?		
	Is there water available in the toilet facilities?		
	Are the girls' toilets separate from the boys' toilets?		
	Are the pupils' toilets separate from the teachers' toilets?		
	Are there locks on the inside of cubicle doors?		
	Are there roofs on the toilets?		
	Are all the doors in place?		
	Are there toilets for girls with disability?		
	Are the toilets for girls with disabilities accessible for them?		
	Is there a dustbin available in toilet facilities to dispose of used sanitary products?		
	Is there an incinerator in school for menstrual materials?		

Work plan

ACTIVITY	2022 DEC	2023 JAN	2023 FEB	2023 MAR	2023 APR	2023 MAY	2023 JUN
Designing questionnaires							
Printing questionnaires							
Finalizing research protocols							
Stakeholders consultation							
Selection and training of research assistants							
Pre testing questionnaire							
Data collection							
Data analysis							
Completion of report							
Printing and binding							
Send report							

Budget

Budget category	Unit cost (k)	Multiplying factor	Total cost (k)
1) Personal	Daily wage and per diem	Number of working days	
Researcher	K150	3 days	K450
Assistant	K100	3 days	K300
			Sub total: K750
2) Supplies	Cost per item	Number	
stationery			
Questionnaires	K2	90	K180
Pens and pencils	K2	30	K60
Printing and binding	K15	5	K75
			Sub total: K315
3) Transport	4 litres of fuel per day at K24.310/litre	3 days	K300
			Grand total: K1,365

Authorization letter

SCHOOL OF MEDICINE AND HEALTH SCIENCES LEOPARDS HILL CAMPUS

Plot No. 37413, Off Alick Nkhata Mass Media.

P. O Box 36711, Lusaka.

Phone: +260211258505, 258409 Fax +260211233409; Cell +260976075850,961917862,

E-mail:unilus@zamnet.zm,ictar@zamnet.zm

**SCHOOL OF MEDICINE AND HEALTH SCIENCES RESEARCH ETHICS
COMMITTEE**

Ref no: IORG0010092-2023/029

Date: 15 th DECEMBER, 2022

LINDA MOONDE - BSPH19217490

**Re: RESEARCH TITLE: AN ASSESSMENT OF MENSTRUAL HYGIENE
MANAGEMENT AMONG ADOLESCENT SCHOOL GIRLS IN MAZABUKA
DISTRICT AND THE IMPACT ON THEIR EDUCATION**

The above research was submitted to the research ethics committee for review. The study has no major ethical problems and is approved subject to the following:

1. The study cannot be changed without express permission of the UNILUS Research ethics committee
2. Approval from the Lusaka District health Management or equivalent health authorities should be sought.
3. The study tools should be added.

4. An informed consent form should be attached and filled by all study participants (If dealing with primary data)
5. The risks and benefits should be included in the consent form.
6. Ensure before commencement that approval is sought from ZNHRA Congratulations and the committee wishes you success in your work.

Prof Kasonde Bowa

MSc(Glasgow),M.Med(UNZA),FRCS(Glasgow),FACS,FCS,DPH(LSTMH),MPH(UCL)

Chairman- UNILUS REC

Professor of Urology and Consultant Urologist

Executive Dean University of Lusaka and University Teaching Hospital School of Medicine and Health Sciences.

SCHOOL OF MEDICINE AND HEALTH SCIENCES LEOPARDS HILL CAMPUS

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E-mail:unilus@zamnet.zm,ictar@zamnet.zm

Date: 15 th DECEMBER, 2022

.....

PERMISSION FOR LINDA MOONDE - BSPH19217490 TO CONDUCT A RESEARCH STUDY AT YOUR FACILITY/ INSTITUTION/ORGANIZATION

Reference is made to the above subject matter The University of Lusaka, School of Medicine and Health Sciences here by requests for permission for **LINDA MOONDE** Public Health Student to conduct research at your facility/ institution/ organization, entitled; **AN**

ASSESSMENT OF MENSTRUAL HYGIENE MANAGEMENT AMONG ADOLESCENT SCHOOL GIRLS IN MAZABUKA DISTRICT AND THE IMPACT ON THEIR EDUCATION. The research is in partial fulfillment of the requirements for the degree of Bachelor of Science Public Health. This is purely for academic purposes and information gained in such a way will not be used in the public domain without prior authorization from the institutions/ organizations involved. The research topic has been cleared by the University of Lusaka, School of Medicine and Health Sciences Research Ethics Committee as per the attached copy. Data collection is expected to be done from 1 st January, 2023 to 31st March, 2023.

The University of Lusaka avails itself of this opportunity to review to your office the assurances of its highest considerations and looks forward to your timely and favorable response.

Prof Kasonde Bowa

MSc(Glasgow),M.Med(UNZA),FRCS(Glasgow),FACS,FCS,DPH(LSTMH),MPH(UCL)

Chairman- UNILUS REC Professor of Urology and Consultant Urologist

Executive Dean University of Lusaka and University Teaching Hospital School of Medicine and Health Sciences.

PERMISSION LETTER:

All Communications should be addressed
To the District Education Board Secretary
And not to any individual by name
Telfax: 230768/230767
E-Mail: debsmazabuka@gmail.com



REPUBLIC OF ZAMBIA

In reply please quote
Ref. No.: DEBS/MAZ/ADMN

MINISTRY OF EDUCATION
OFFICE OF THE DISTRICT EDUCATION BOARD SECRETARY,
P.O. BOX 670144,
MAZABUKA.

28th March 2023

The Head Teachers
MAZABUKA DISTRICT

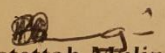
Dear Sir/Madam,

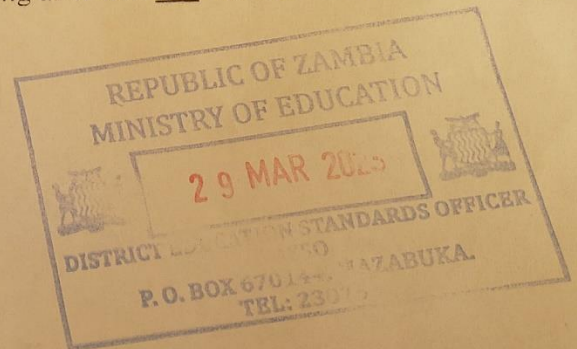
RE: INTRODUCTION: MS LINDA MOONDE

Refer to the subject mentioned above.

The above named is a student at University of Lusaka undertaking a research under the topic: "An Assessment of Menstrual Hygiene Management Among Adolescent School Girls in Mazabuka District and the Impact on their Education". She is visiting your school to conduct a research as this is a requirement for her to complete her studies.

Kindly allow the student carry out this program as long as it will **not** interfere with the teaching and learning in your School.


Christettah Mulinga Mwale (Mrs) (AOD)
District Education Board Secretary
Mazabuka





NATIONAL HEALTH RESEARCH AUTHORITY

Lot No. 18961/M, off Kasama Road, Chalala, P.O. Box 30075, LUSAKA
Tell: +260211 250309 | Email: znhrasec@nhra.org.zm | www.nhra.org.zm

Ref No: NHRA0009/12/05/2023

Date: 12th May 2023

The Principal Investigator,
Ms Moonde Linda,
UNIVERSITY OF LUSAKA
Lusaka, Zambia.

Dear Ms Moonde,

Re: Request for Authority to Conduct Research

The National Health Research Authority Is in Receipt of Your Request for Ethical Clearance and Authority to Conduct Research Titled “**AN ASSESSMENT OF MENSTRUAL HYGIENE MANAGEMENT AMONG ADOLESCENT SCHOOL GIRLS IN MAZABUKA DISTRICT AND THE IMPACT ON THEIR EDUCATION.**”

I wish to inform you that following submission of your request to the Authority, our review of the same and in view of the ethical clearance, this study has been **approved** on condition that:

1. The relevant Provincial and District Medical Officers where the study is being conducted are fully appraised;
2. Progress updates are provided to NHRA bi-annually from the date of commencement of the study;

3. The final study report is cleared by the NHRA before any publication or dissemination within or outside the country;
4. After clearance for publication or dissemination by the NHRA, the final study report is shared with all relevant Provincial and District Directors of Health where the study was being conducted, University leadership, and all key respondents.

Yours faithfully,

NATIONAL HEALTH RESEARCH AUTHORITY



Ms. Sandra Chilengi-Sakala,

ACTING DIRECTOR/CHIEF EXECUTIVE OFFICER