

**KNOWLEDGE ATTITUDE AND PRACTICES OF MENSTRUAL HYGIENE  
AMONG ADOLESCENT GIRLS BETWEEN S1- S4 AT ST ALOYSIUS  
BWANDA SECONDARY SCHOOL KALUNGU**

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2012-BNS-FT-025**

**AN UNDERGRADUATE RESEARCH REPORT SUBMITTED TO THE SCHOOL  
OF NURSING IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE AWARD OF A BACHELOR'S DEGREE OF IN  
NURSING OF INTERNATIONAL HEALTH  
SCIENCES UNIVERSITY**

**NOVEMBER 2016**

## DECLARATION

I, do hereby declare that, to the best of my knowledge, this dissertation is my original work and has never been submitted to this University or any other institution of higher learning for an academic qualification.

I hereby submit it for the award of a degree of bachelors of nursing science of International health Sciences University.

Wanjiku Damaris Wambui

Signature: .....

Date.....

**APPROVAL**

This is to certify that this research has been done under my supervision and that it reaches the requirements of International Health Sciences University for the award of Degree in Nursing Science.

Mr. Kajjabwangu Ronald

Signature: .....

Date: .....

## **DEDICATION**

I dedicate this research report affectionately to the following;

My late Son, Kristian Skylar Mugisha.

My Grandmother, Njoroge Damaris Wambui.

My Mother, Njoroge Grace Wanjiku.

My Sister, Wanjiku Jane Wamaitha.

My Fiancee, Namanya Nicholas Bob.

## **ACKNOWLEDGEMENT**

My deepest gratitude goes to God who has provided all that was needed to complete this project and the program for which it was undertaken for.

I give special thanks to my whole family who has been my constant source of inspiration. A special feeling of gratitude to my loving grandmother Njoroge Damaris Wambui, whose words of encouragement and push for tenacity ring my ears.

I acknowledge and give thanks to Namanya Nicholas Bob for being there for me throughout the entire nursing program. I would like to express my gratitude to my late son Skylar, who always taught me how to be patient, responsible and hardworking for the 1.5 years I had him.

I appreciate my supervisor, Mr. Ronald Kajjabwangu whose contribution and constructive criticism has pushed me to expand the kind of effort I have exerted to make this work as original as it can be.

My appreciation goes to the administration of St. Allosius Bwanda Secondary School for making the data collection at the school possible.

I also acknowledge the effort of Echiru Andrew who assisted with data collection and the analysis of the data.

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## OPERATIONAL DEFINITIONS

*Menstruation:* This is the periodic discharge of mucosal tissue and blood from the vagina and uterus. (Abioye–Kuteyi, 2014).

*Menstrual Hygiene:* This is defined as the conditions or practices (as of cleanliness) conducive to menstrual health of females experiencing menstruation.

*Adolescence:* This the period following the onset of puberty during which a young person develops from childhood into adulthood.

*Attitude:* This is a settled way of feeling or thinking about someone or something, which is typical of that person's reflected behavior.

*Knowledge:* This is an acquaintance, understanding or awareness of something or someone, that is facts, descriptions, information, or skills, that is attained through education or experience by learning, perceiving as well as discovering.

*Practice:* This is the actual application of an idea, method or belief as opposed to theories about such application.

*Culture:* This is the learnt behavior of a cohort of people that generally is considered to be the tradition of that people and transmitted from generation to generation.

*Perception:* These are one's impression(s) or interpretation(s) based on that person's understanding of something.

*Menarche:* This is the first menstrual bleeding in females indicating transition from a girl to a woman.

## LIST OF ACRONYMS

ACOG	:	American Congress of Obstetricians and Gynaecologists
MHM	:	Menstrual hygiene management
NGO'S	:	Non – governmental organizations
SSWM	:	Sustainable Sanitation and Water Management
UNICEF	:	United Nations Children's Fun
WHO	:	World Health Organization

## **ABSTRACT**

### **Background**

Adolescence signifies the transition from girlhood to womanhood and is marked with the onset of menarche. There is a significant gap in the knowledge on menstruation among the adolescent girls. Menstrual hygiene management is an important contention that is inadequately acknowledged and has not gotten sufficient attention. The purpose of this study was to assess the knowledge, attitude and practices of menstrual hygiene among adolescent girls between S1- S4 at St Aloysius Bwanda Secondary School Kalungu so as to adopt interventions to promote adequate menstrual hygiene.

### **Methodology:**

The study was cross sectional quantitative data involving 188 adolescent girls who were sampled randomly. Data was collected through questionnaires.

### **Results:**

Only 36(19.1%) girls correctly defined menstrual hygiene. The important source of information on menstrual hygiene for the girls was found to be their mothers. More than three quarters of the girls in the study were not aware of the source of menstrual bleeding. Sanitary pads were used by 59.0% of the girls in the study. The practice of the changing absorbent was reported in 29.3% of the girls. Satisfactory cleaning of the external genitalia was practiced by 51.6% of the study girls. 34% of the girls had various different restrictions attached to them during menstruation periods.

### **Conclusion:**

The study established that the overall level of knowledge of the adolescent girls on menstrual hygiene was generally low. This study reveals that adolescent girls had generally negative attitudes towards menstrual hygiene and practices of the adolescent girls towards menstrual hygiene was generally poor.

### **Recommendations:**

Therefore, school authorities should take up at least weekly sessions on the issues related to menstrual hygiene, invite various experts at times to address the important issues and teachers should address some issues in class and also inform the students about good and reputable sources which they should access for correct information. Matters concerning menstrual hygiene should be discussed with parents and their children and solutions thought to improvise on disposal bins and incinerators. The government and the Ministry of Education and Sports should revise policies concerning school construction and settings to suit girl child education

for example constructing classrooms that have private sanitary facilities.

## CHAPTER ONE

### 1.0 Introduction

This chapter examined the background of the study, problem statement, significance of the study, the main objectives, specific objectives, the research questions, and the conceptual framework of the study.

### 1.2 Background of study

The onset of menstruation is one of the most significant milestones in a woman's life (Polat et al., 2009). Menstrual hygiene which is defined as the effective management of menstrual bleeding by females, is a principal aspect of reproductive health, that if not handled properly could facilitate infections of the urinary tract, vaginal thrush and pelvic inflammatory diseases, along with bad odour, unclean garments and extreme shame, causing infringement on the girl's' dignity (Oche et al., 2012).

Worldwide, approximately 52% of the females are of reproductive age; hence menstruation is part of their normal life. Menstrual hygiene therefore is a fundamental aspect of basic hygienic practices (House et al., 2012). 56% of the girls are in and out of school and do not receive any information about menstruation (UNICEF, 2014). In India, for the absorption of menstrual blood, 88% used cloth, 4% used cotton wool, 7% sanitary pads while 3% used ash. In Nepal 75% of the adolescent secondary school girls do not have any idea about what material to use to absorb the flow (Water Aid, 2013). 23% of the adolescent girls in rural areas of India, having their period are one of the reasons to quit school. Nonetheless, not much attention is paid to the specific health needs of the girl's (Nagar et al., 2011).

In Africa about 1 in 10 school age adolescent girls absent themselves from school during periods or drop out at puberty because of lack of private, clean and hygienic sanitation facilities in schools (UNICEF, 2014). In Ethiopia 91 % of the adolescent girls were aware of menstruation before starting their periods, their use of sanitary protection material was low at 27.6 % and 64.4 % used pieces of cloth and rags, 25% use nothing, and typically isolate themselves during menstruation and 11% of girls in Ethiopia change their menstrual cloths once a day. (Abera Y, 2014). 83% of girls in Burkina Faso and 77% in Niger have no place at school to change their sanitary materials (Iliyasu Z, 2012). All the above indicates poor knowledge, attitude and practice as far as menstrual hygiene is concerned.

In Uganda like most resource limited countries, menstruation, though a natural physiological process has been and still dealt with secrecy (Mahon and Fernandes, 2010). Majorly this is because of cultural and traditional taboos associated with sexuality and reproductive health. Cultural beliefs and norms, the physical infrastructure and socio- economic circumstances influence the practices associated with menstrual hygiene, some of which when coupled with lack of or inadequate knowledge are responsible for notably high rate of school absenteeism, along with withdrawal from social activities, illness, poor reproductive health and infections of adolescent girls in Uganda (Jarrah and Kamel, 2012).

Although menstruation is highly valued and significant for womanhood, still very few studies have found positive experiences towards menstruation in girls. At St Aloysius Bwanda Secondary School Kalungu, menstrual hygiene and related knowledge, attitude, and practice has not been addressed therefore the study seeks to investigate and establish the knowledge, attitude, and practice of menstrual hygiene among adolescent girls between S1 – S4.

### **1.3 Problem statement**

Unpublished reports at St Aloysius Bwanda Secondary School Kalungu indicate that the challenge of menstrual hygiene is mostly manifested through school absenteeism of adolescent girls and the awareness of these school girls has not been investigated. This is worsened by lack of efforts by individual teachers and parents to facilitate menstruating girls through provision of information and advice hence making menstrual hygiene a difficult topic to talk about. The school has inadequate water and sanitation facilities hence girls have difficulty in managing menstruation while at school. Poor menstrual hygiene affects the psychosocial wellbeing of girls for example increased stress levels, fear and embarrassment, and social exclusion during menstruation that impact negative on their education and social life (Sanyal et al., 2008).

Despite efforts by non – governmental organizations like Pulse Uganda Limited, Afripads and other individuals who have tried to provide sanitary materials to some school going adolescent girls, expansion of sanitation facilities and the Ugandan education system that promotes menstrual hygiene through health education programs, menstrual hygiene is still one of the biggest challenges especially among under privileged adolescent school girls.



Poor hygienic practices can lead to various gynaecological problems in the reproductive life of girls, accompanied by discomfort, smelling and embarrassment among others. This makes menstrual hygiene crucial in an attempt to assist a girl child as far education and the future is concerned therefore this study seeks to investigate the menstrual hygiene related knowledge, attitude and practices among the adolescent girls between S1- S4 at St Aloysius Bwanda Secondary School Kalungu.

#### **1.4 Significance of the Study**

This research work is significant for the following reasons

This research breaks the silence on Menstrual Hygiene by creating awareness on the topic and the impact it has on adolescent secondary school girls, exploring and sharing lessons of the management aspects and promoting integration of Menstrual Health Management in health and hygiene sectors of the Ministry of Health and Health related Nongovernmental organization.

Provide information that strengthens preventive programs that promote women's sanitary health and also this study adds to the existing body of knowledge as far as menstrual hygiene is concerned.

This study discusses ways of supporting the sanitary campaign for women and girls, by informing the society of need for females' access to appropriate, decent, affordable and quality health care, information and related services.

Also this research critically studies an issue that faces every woman in every society in the world over including ours (International Health Sciences University); with the aim of providing viable information for managing menstrual hygiene in girls and women at large.

And finally, this work would serve as reference material for future researchers who intend to carry out researches that are related to this one in particular. A lot of information can be sourced from this work and they can be further improved on as well.

## **1.5 Objectives**

### **1.5.1 Major objective**

To assess the knowledge, attitude and practices of menstrual hygiene among adolescent girls between S1- S4 at St Aloysius Bwanda Secondary School Kalungu so as to adopt interventions to promote adequate menstrual hygiene.

### **1.5.2 Specific objectives**

- To determine the level of knowledge of menstrual hygiene among adolescent girls between S1- S4 at St Aloysius Bwanda Secondary School Kalungu between September and November 2016.
- To examine the attitude of menstrual hygiene among adolescent girls between S1- S4 at St Aloysius Bwanda Secondary School Kalungu between September and November 2016.
- To identify the practices of adolescent girls between S1-S4 towards menstrual hygiene at St Aloysius Bwanda Secondary School Kalungu between September and November 2016.

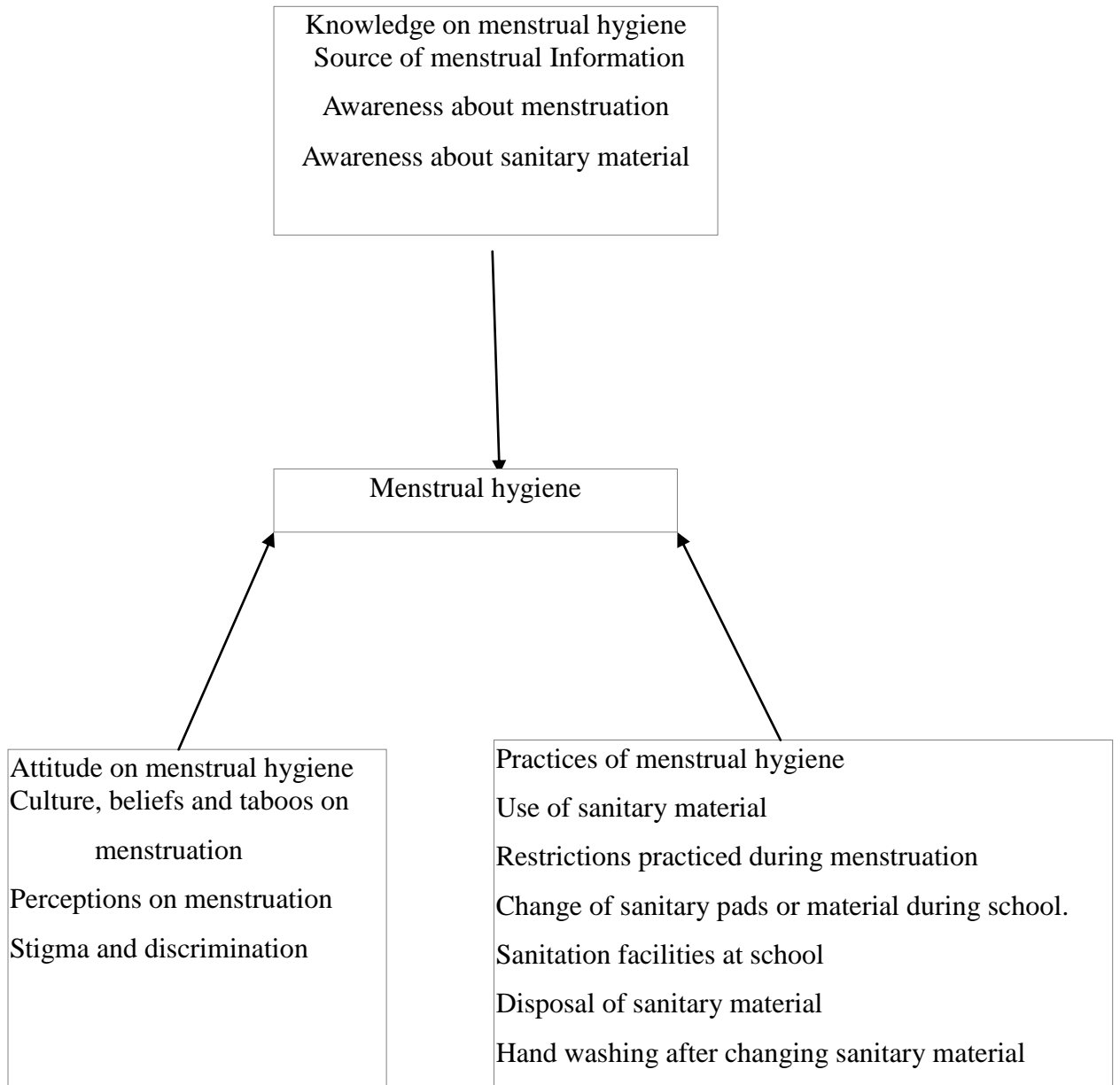
## **1.6 Research questions**

- What is the level of knowledge of adolescent girls between S1-S4 towards menstrual hygiene at St Aloysius Bwanda Secondary School Kalungu.
- What is attitude of adolescent girls between S1-S4 towards menstrual hygiene at St Aloysius Bwanda Secondary School Kalungu.
- What are the practices of adolescent girls between S1-S4 towards menstrual hygiene at St Aloysius Bwanda Secondary School Kalungu.

## **1.7 Conceptual framework of the study**

In the conceptual frame work below, it is hypothesized that favorable socio demographic characteristics, knowledge, attitudes and practices lead to optimal menstrual hygiene. However, if the independent variables are not favorable, menstrual hygiene would be negatively affected.

Figure 1: Showing the conceptual frame work



## **CHAPTER TWO: LITERATURE REVIEW**

### **2.0 Introduction**

The literature review covered reports by different authors within the context of knowledge, attitude and practices of adolescent secondary girls towards menstrual hygiene. Reviewed documents were obtained from websites, journals articles, WHO and UNICEF publications. The literature review covered a period of 2008 – 2015 and will be presented in accordance with specific objectives of the study.

### **2.1 Menstruation**

This is defined as the discharge of blood, tissue debris and secretions from the uterus which recurs in breeding age females that are not pregnant at approximately monthly intervals. It is considered to represent a readjustment of the uterus to the non-pregnant state following proliferative changes accompanying the preceding ovulation (Abioye–Kuteyi, 2010). The average age of menarche is around the globe is 12–13, but menarche can typically occur between ages 9 and 15 years (ACOG, 2016). Among non-pregnant women menstruation lasts from puberty to menopause. Regular menstruation occurs for a few days, that is usually 3 to 5 days, although if it lasts from 2 to 7 days, it is considered normal (Womenshealth, Gov., 2014).

### **2.2 Menstrual hygiene**

This handles the special healthcare needs and requirements of females during monthly menstrual periods. The areas of special concern among female during periods include choice of the best period protection material, how often and when to change the sanitary protection, satisfactory cleaning of the vagina and vulva as well as the assumed benefits of vaginal douching at the end of each menstrual period. Provisions for good menstrual hygiene include home-made remedies like pieces of cotton cloth which are either placed on a woman's undergarment or on a homemade belt that wraps around the waist. These cloths can be washed, dried and used again. Available commercial products for women's hygiene during menstruation include pads, tampons and cups.

### **2.3 Knowledge, Attitude and Practices of menstrual hygiene among adolescent girls**

Poor menstrual hygiene management in schools has been found to cause school age girls humiliation and worries that contributes to monthly school absenteeism leading to poor performance among girls in schools (Patle et al, 2014). UNICEF (2014) stresses the benefits of school sanitation facilities that are built to accommodate the specific needs for privacy, washing facilities, space, cleaning of menstrual pads and correct disposal for menstruating girls. An environment in which these menstrual hygiene needs are observed could lead to improved dignity and attendance, therefore improving education of the girls and consequently the development of a country. The following paragraphs reviewed the available literature on knowledge, attitude, and practice towards menstrual hygiene.

#### **2.3.1 Knowledge of adolescent school girls towards menstrual hygiene**

Several researchers have revealed that a large number of adolescent secondary school girls possess scanty knowledge regarding the phenomenon. A study of Indian adolescent secondary school girls found out that the girls are generally not told anything about menstruation not until they experience it (Khanna et al, 2015). The limited knowledge available has been passed down informally from mothers, who themselves lack knowledge of reproductive health and hygiene because of lower literacy levels and socio-economic status (Dasgupta & Sarkar,2008).

Providing authentic and up to date information for young adolescent girls is critical to the supportive environment required for healthy, dignified management of menstruation. Girls have extremely limited information about why they menstruate and how to manage menstrual flows hygienically and safely. Mothers and friends act as their main source of information. However, these mothers and friends often lack the necessary knowledge about biological changes as the body reaches puberty, the menstrual cycle, infection risks posed by poor practices, and the absorption, drying and material disposal options available to girls (Sommer, 2010). A study done by Carlson, (2014) revealed that mothers, multimedia, school, peers and relatives were the important sources of information on menstruation to the girls.

There is a significant gap in the knowledge on menstrual hygiene management among adolescent girls. Several research findings have shown this gap and they showed that the girls had low levels of awareness about menstruation when they first experienced it (Carlson et al, 2011). Adolescent girls have reported receiving insufficient guidance prior to their first menstrual period thus experiencing shame, fear and embarrassment managing menstruation, especially while at school (Carlson et al, 2011).

Findings from several qualitative and quantitative studies from schoolgirls in rural, peri-urban, and urban settings indicate that many girls receive little or no pre-menarcheal information (Abioye-Kuteyi E et al, 2010). Girls most often ask parents, peers, sisters, and teachers to obtain information about menstruation (Gumanga S,et al.,2012). Frequently, the parents, teachers, and peers pass along incorrect information or do not feel comfortable discussing menstruation ( Gumanga S et al., 2012). Though some countries have puberty education and menstruation topics incorporated into their school curriculums, many schools do not actually teach these lessons or experience great difficulty if they do. The cause of this is that many schools have only male teachers and they lack appropriate materials to help guide the lessons on this subject.( Zegeye D et al., 2009).

Studies demonstrate that girls have difficulty in describing menstruation in biological terms. A Kenyan survey among females living in an informal urban settlement showed that a minority of the participants were able to describe menstruation in biological terms (Mwita C, 2012). There is also a discrepancy in perceived knowledge versus correct knowledge among schoolgirls. In a Nigerian study, the data shows that 85% of schoolgirls perceive that they possess correct knowledge regarding menstruation, whereas only 61% actually possess correct knowledge ( Abioye-Kuteyi E. et al, 2010). While the perceived knowledge of respondents is not influenced by parental education, girls with correct knowledge are more likely to have parents with at least a secondary education. Similarly, parents with at least a secondary education are more likely to have a pre-menarcheal discussion to prepare their daughters for menses than those with lower education levels (Abioye-Kuteyi E. et al, (2010).

Findings suggest that some school teachers believe that it is the responsibility of more senior teachers to discuss menstruation with the girls. Other teachers believe that it is unimportant to discuss menstruation in school because they assume that the girls' mothers are speaking with them about menstruation. The Ugandan school curriculum broaches the biology of menstruation, but does not include information regarding the physiological, financial, and social aspects (Matovu NF, 2011) Yet, most girls from rural areas respond they have never heard their teachers mention menstruation in their science classes.

### **2.3.2 Attitude of adolescent secondary school girls towards menstrual hygiene**

Girls appear to have incorporated many of the prevailing cultural views of menstruation early in life. Unfortunately, most of these views are negative and non-preparative for womanhood. This is important because the experience of menarche is partly dependent on previous expectations. Although a maturation process, menarche is treated culturally as a “hygienic crisis, and improved hygiene appears to be the modern, rational answer to the physical problems and discomfort accompanying this physiological change. This attitude serves to reinforce beliefs that menstruation is only a sign of uncleanness and an embarrassing nuisance that cannot be controlled. This might have devastating effects on body-esteem.

Pads come in different thickness and styles, depending on menstrual flow, and should be changed at least 3 - 4 hours regardless of the amount of staining for comfort and to prevent odour and infections (Egyptian Fertility Care Society, 1999). Unhygienic behavioral practice of not using sanitary pads during menstruation is a result of negative perception and behavior, thus endangering the reproductive health and wellbeing of these girls especially in their early period of transition from a girl to a woman. There is a limited availability of commercial sanitary pads and those that exist are financially out of reach for most girls. Clean clothing materials, toilet tissues, sanitary napkins, pads; tampons have been identified as materials used to manage menstruation (Moronkola and Uzuegbu, 2006)

A study conducted in North-eastern Niger, menstrual hygiene management among the Kel Tuareg revealed that widespread shame, fear and embarrassment were associated with menstrual bleeding (Rasmussen, 2011). Menstrual blood was perceived as harmful, with the females observed to wash the menstrual cloths they wore during menses at night only, when

others were asleep because of the belief that menstrual blood can be misused for sorcery (Rasmussen, 2011). Comparable findings as regards to the need of hiding menstrual cloths due to fear of being cursed were found in Tanzania, Kenya, Ghana, and Ethiopia (Sommer, 2010; Sommer & Ackatia-Armah 2014).

In rural Brazil, Walker, (2012) found out that menstrual blood was seen as shameful and dirty, with menstrual cloths required to be hidden from the sight of males in the society and among the Egbo of southwest Nigeria, (Umeora & Egwuatu, 2008) explored beliefs and norms in rural communities and found out that women believed that disposal and management of menstrual waste was extremely tied to witchcraft and harm. Menstruation is often viewed as a sign of both maturity and adulthood. Once they have had their first period, girls are viewed as “big girls” of potentially marriageable age. They take on greater responsibilities within their communities and, despite a legal age limit of 18 for marriage under Senegalese law, many girls are married before they reach this age (Walker, 2012).

Menstruation has usually been associated with some levels of embarrassment, shame and sufferings by the community. Boys find menstruating girls smelly and objectionable, therefore girls will simply stay home so that to deal with this, to avoid embarrassment associated with staining while at school. Girls slip behind in their studies and are incapable of learning because of menstrual hygiene related stress and often eventually drop out (Pravin , 2011). Menstruation is a taboo subject for too many people, male and female alike, leading to misunderstanding, confusion, and prejudice. Menstruation has long been a signifier of Otherness and difference, a difference that stigmatizes and silences.

Embarrassment and stigma around menstruation not only affects how adolescent girls feel about menstruation, but also makes it difficult to cope at a very practical level. It inflicts indignity upon women and girls and violates their rights to non-discrimination, equality, bodily integrity, health, privacy and right to freedom from inhuman and degrading treatment. Girls are forbidden from cooking or preparing meals, participating in social events, working in the field, and going to their various religious places during their periods they are considered impure, filthy, and even cursed (Pravin , 2011).



It is important to recognize the potential for intra-cultural variations in the interpretation of meanings of menstruation, and how ‘taboos’ may in fact serve the interests of women, even if at first glance they appear to be negative. For example, women may appreciate the ‘banishment’ to menstrual huts as they are given a rest period from the normal intensity of daily chores (Kirk & Sommer 2010). A cross sectional study conducted among the Creols and Maroons of Surinam, Ten (2009), reveals that , pubescent girls would be given gifts such as jewelry as a sign and symbol of maturity, and from a study of the social implications of the ritual celebrations of menstruation and menarche in rural India (Narayan et al, 2011). The latter study reports specifically about turmeric bathing ceremonies, where the Tamil Nadu people of South India invite relatives and friends to celebrate and the pubescent girls also receive expensive gifts (Narayan et al, 2011).

A rare and sort of positive misperception of menstrual blood is reported from Australia. The aboriginal healers are reported to apply cloths soaked in menstrual blood to wounds, as it is believed that the wounds will heal quicker and no scars will occur owing to the notion of the healing powers of menstrual blood (Ten, 2007).

### **2.3.3 Practices of adolescent secondary school girls towards menstrual hygiene**

The lack of knowledge and education about menstruation feeds into many traditional and cultural practices that exacerbate the negative feelings many schoolgirls experience. These practices often lead girls to feel isolated and stigmatized, as well as discourage girls from participating in school and other social events while menstruating. Some ethnic groups in particular areas of Malawi pay a man called a *fisi* to have sexual intercourse with a girl who has begun menstruating as a sexual initiation rite. Cultural initiation rituals following menarche in Tanzania were common place in the past, However, these practices continue only in certain ethnic groups, such as the Masai and Zaromo. Compulsory schooling is linked to a decrease in these initiation rituals (Vaughn, 2013).

From a very practical perspective, girls who lack adequate sanitary materials may miss school each month during their period. In sub-Saharan Africa, the most commonly used feminine hygiene products are reusable cloths and sanitary pads among schoolgirls. Girls make reusable cloths using scraps from shirts, dresses, old towels, or blankets. Girls from peri-

urban and rural areas typically utilize reusable menstrual materials and often respond that sanitary pads are too expensive for them to purchase. Girls from rural areas indicate that sanitary pads are inaccessible in their areas. A very small proportion of girls use tampons and menstrual cups (Vaughn, 2013).

Absorbent pads which are used in management of menstrual hygiene have been recognized as an important need of secondary school girls. Despite the fact that sanitary pads are used worldwide in developed countries, a cross sectional study in India revealed that only 11% of menstruating school girls used sanitary pads and 72% of them indicated expense as a major obstacle for using sanitary pads (Kounteya Sinha 2011). Menstruating girls use a wide range of materials to absorb menstrual blood with implications for disposal and sanitation systems both environmentally and culturally. These include sponges, corn cobs, pieces of cloth and wood ash, cotton wool and tissue paper (Kirk 2014).

Other feminine products girls use include cotton, wool, socks, toilet paper, pages torn from school exercise books and old newspapers, pieces of sponge torn from mattresses, and additional clothing worn as menstrual protection. In poor rural areas, girls even report using leaves or cow dung, or digging a hole in the ground to sit on for the duration of menses. In Kenya, some girls use soft grass that they place in their underwear or sit on to manage their menses. In Ethiopia 25% of the schoolgirls use nothing, and typically isolate themselves during menstruation (Jacquelyne, 2013).

Many reusable cloth users explain the obstacles they face when washing and drying their cloths. Most girls wash their cloth during their nightly bath. They do not want to put their cloths out to dry in a place it can be seen. Consequently, girls dry their cloths in a hidden place without light. Under the bed is the most common drying space. Most girls only have two or three cloths, so they often resort to wearing damp cloths. This can cause health risks and can also lead to potential embarrassment when the cloth gives off a strong, distinctive scent (Vaughn, 2013).

In several cultures, diverse restrictions are imposed on women and girls during their menstruation period, thus resulting in poor personal menstrual hygiene and unsafe sanitary conditions leading to gynecological consequences. In some societies, women and girls are not

allowed to use water sources during periods. In societies of India, 91% of girls reported staying away from flowing water (Rathi, 2011). In another study, also in South Asia, 20% of the women interviewed, who had access to toilets, refrained from using them during their periods, partly due to fear of staining the toilet (Pathak, 2011).

In countries like Nepal the practice of chappaudi determines that women are considered 'impure' during their menstruation cycle, and are subsequently separated from others in many spheres of normal, daily life. The tradition is that women cannot enter inside houses, kitchens and temples. They cannot touch other persons, cattle, green vegetables and plants, or fruits. Similarly, cannot milk buffalos or cows, and are not allowed to drink milk or eat milk products. Generally, women stay in a separate hut or cattle shed for 5 days during menstruation. However, those experiencing menstruation for the first time should, according to practice, remain in such a shed for at least 14 days. Access to water taps and wells is also limited. (Kumar , 2009).

Cloths or cloth pads may be a sustainable sanitary option, but it must be hygienically washed and dried in the sunlight. Sunlight is a natural sterilizer and drying the cloth pads on sunlight sterilizes them for future use. They also need to be stored in a clean dry place for reuse. Girls who do not know what menstruation is can have little hope of managing it hygienically, hence hide them in unhygienic places. Most adolescent secondary school girls choose to change their menstrual hygiene materials at home. It is also more convenient for girls to wash themselves and their materials at home, primarily due to a lack of suitable spaces and facilities at school. This, in turn, forces girls to limit their schooling and work activities for anything between four to eight days each month (UNICEF 2014; WSSCC 2013).

Since girls report changing menstrual protection materials several times a day, thus it is vital to have hygienic sanitation facilities at school. Some rural schools have communal latrines or no facilities at all. Many sanitation facilities are open to both sexes and do not afford the girls the privacy they need to manage their menses. Frequently, the facilities do not have locks, doors, water for washing, or disposal mechanisms. Girls complain that the lack of privacy in the bathrooms increases their discomfort and fear of discovery. Furthermore, the sanitation facilities are often dirty and smell badly (Kirk et al 2014).

Access to menstrual hygiene materials is not enough; there is a parallel need for safe, hygienic and private spaces to change menstrual hygiene materials. Basics such as soap and safe water to wash hands and body before and after changing or disposing of used materials for hygiene, and privacy, are all too often not available in schools (Kirk et al 2014). If girls attend schools which lack adequate latrines and water supplies to comfortably change sanitary materials and wash themselves in privacy, they may be unable to remain comfortably in class during their menstrual cycle. The absence of clean and private sanitation facilities that allow for menstrual hygiene may discourage girls from attending school when they menstruate UNICEF (2014).

Schoolgirls do not have places to properly dispose of their feminine hygiene products; this creates many problems. Studies carried out in Malawi and Lesotho report that used sanitary pads are often discarded in open pits, due to the lack of adequate disposal mechanisms. Subsequently, they are carried around the school grounds by dogs and crows, becoming visible to everyone. A Ugandan study highlights that sanitary pads are disposed of in the latrines or toilets in most schools. This poses problems because it causes the latrines to fill up quickly and the toilets to become clogged. Other girls dispose of them in school dustbins, while some girls resort to burying them in their home gardens in rural areas (Vaughn, 2013).

Disposal has to be safe and hygienic as well as take the environment into account. For example, where water is scarce, a disposal and/or re-use option that requires a certain quantity of safe water might not be the best option. Adolescent girls in rural areas of Karachi, Pakistan, found it difficult to manage menstrual hygiene because of lack of infrastructure for disposal of used menstrual cloths in school and lack of privacy to dry washed ones at home (Ali & Rizvi, 2010).

Ketaki et al (2011) described how absent mechanisms for disposal, such as a closed dustbin inside a stall and/or an incinerator on school grounds for burning used menstrual hygiene materials, detracts schoolgirls' enjoyment and quality of learning. Menstrual waste materials are regularly disposed of in latrines and toilets due to a lack of alternative waste disposal options and a lack of knowledge about the consequences. This results in clogged, overflowing toilets and the waste is polluting the environment (Tiwari, 2015). The issue of how and where to dispose of menstrual waste does not appear anywhere in education or health curricula.

Girls using menstrual cups reported high standards of hand washing before as well as after emptying, despite a lack of consistent provision of soap and water in the schools. Hand hygiene among girls using other items was lower, and mostly involved washing after changing. Available data suggest a need for policymakers and programme implementers to continually sensitize girls on the importance of hand hygiene for menstrual hygiene management, assist schools in providing water and soap, and monitor that these services are provided. All menstruating girls in particular, need and deserve consistent access to water and soap while at school (Kirk et al 2014).

The research clearly demonstrates that menstrual hygiene is a problem for many schoolgirls in sub-Saharan Africa. Numerous schoolgirls are missing school, underperforming, and living with negative emotional experiences and physical pain. The existing research provides many recommendations and examples of promising initiatives to resolve the menstrual hygiene situation. Further research will add to this base and help define the problem more clearly.

## **CHAPTER THREE: METHODOLOGY**

### **3.0 Introduction**

This chapter presents the methodology of the study which includes the research design, the study population and the area of study, sampling procedures, sample size calculation, study variables, data collection technique, election of respondents, data management and data analysis methods, quality control, study limitations and ethical considerations.

### **3.1 Study design**

This research study was a descriptive cross-sectional study involving the use of quantitative methods of data collection. This was because it aimed at obtaining data on a representative sample of the study population at a specific time at St Aloysius Bwanda Secondary School.

### **3.2 The area of study**

The study was conducted at St Aloysius Bwanda Secondary School Kalungu. The school is located in Kalungu district, which is 122.4 kilometres from Kampala and 21 kilometers, by road, northeast of the city of Masaka. The coordinates of the district are:00 06S, 31 49E. St Aloysius Bwanda Secondary School Kalungu is community owned school which attracts a significant number of students from different parts of the central southwestern region of Uganda. This helped me as the researcher to be able to obtain data from a group of students from a diverse setting and background.

### **3.3 Study population**

The population under this research study included all adolescent girls between S1 - S4 studying at Bwanda Secondary school during the time of the study.

### **3.4 Sampling technique**

The researcher used simple random sampling in the selection of the adolescent girls to participate in the study. This was because all girls were given an equal opportunity to participate in the study.

### 3.5 Sampling procedures

The study used simple random sampling to select respondents from various classes namely senior 1,2,3 and 4. The researcher tossed a dice to determine which class to start with and the process continued until the four classes were determined. The researcher proceeded and gave potential respondents who met the study criterion an opportunity to pick papers from a box and anybody who picked a paper with the word written YES on it was requested to participate. This continued until the desired total number of respondents for a particular class was achieved. In this case, each member of the population would have an equal chance of being selected. Simple random sampling allowed the researcher to draw externally valid conclusions about the entire population based on the sample hence suits the study.

### 3.6 Sample size determination

This study adopted the Kish Leslie formula of sample size determination.

$$N = Z^2PQ / e^2$$

Where;

N is the appropriate desire sample size.

Z is the Z value at 95% confidence interval which is calculated at 1.96

P is prevalence of knowledge about menstruation at 85.7% (Jalane Mekonnen et al, 2014)

N can be calculated by substitution of the figures into the formula to give the desired sample size;

$$N = (1.96)^2 (0.857) (1 - 0.857) / (0.05)^2$$

$$N = (3.8416) (0.857) (0.143) / (0.0025) = 188.34$$

N is approximately 188.

Therefore, the sample for this study was composed of 188 respondents

### 3.7 Study variables

#### 3.7.1 Dependent variable

The dependent variable of this research study was menstrual hygiene among adolescent girls between S1 – S4 studying at St Aloysius Bwanda Secondary School.

### **3.7.2 Independent variables**

The study was influenced or guided by four independent variables which include;

Socio demographic and economic characteristics, which include age , grade, the person they live with, educational status of the parents and the capability of providing pads.

Knowledge on menstrual hygiene, which include source of menstrual Information, awareness about menstruation and awareness about sanitary material.

Attitude towards menstrual hygiene which include Cultures, beliefs and taboos on menstruation, perceptions on menstruation and stigma and discrimination.

Practices of menstrual hygiene which include use of sanitary material, restrictions practiced during menstruation, change of pads/material during school, sanitation facility at school, disposal of sanitary material and hand washing after changing sanitary material.

### **3.8 Selection criteria**

#### **3.8.1 Inclusion criteria**

Adolescent girls considered were those who have started their periods and are between S1 – S4 while studying at St Aloysius Bwanda Secondary School.

#### **3.8.2 Exclusion criteria**

Girls that were critically ill and incapable of providing informed consent and those that were very busy not participate at the time of data collection were excluded from the study. Those who were absent at the time of study were also excluded.

### **3.9 Source of data**

The major source of data to be collected as primary data was from adolescent girls studying at St Aloysius Bwanda Secondary School.

The other sources of data as secondary data were internet literature from previous studies, articles, and online journals.

### **3.10 Data collection tool**

Data was collected by a structured interview guide. The data collection tools that used for this study were researcher-administered questionnaire with both open and close ended questions which were pre-coded for easy data entry and analysis. The respondents chose the codes



where their opinions or classifications such as age, level of education or knowledge about menstrual hygiene belongs. However, the questionnaire also had open ended questions, and girls had the opportunity to present their present views in a more detailed way rather than being limited to a yes or no format.

The questionnaire had four sections;

Section A described the socio demographic and economic characteristics of the respondents.

Section B described the Knowledge on menstrual hygiene

Section C described the Attitude towards menstrual hygiene

Section D described the Practices of menstrual hygiene

### **3.11 Data collection techniques and data management**

#### **3.11.1 Pre – visiting**

A visit to the study area was made before data collection. This helped the researcher to get prior knowledge and further insight about the study area, the leadership protocols necessary, the target respondents and informal permission to go to the study area.

#### **3.11.2 Pre – testing**

The research tool (questionnaire) was tried and piloted on 10 respondents at St. Paul Secondary School Kikajjo Wakiso in order to identify problems with the data collection process and areas of improvement. This secondary school had similar characteristics to that of St Aloysius Bwanda Secondary School where the study was based. Pilot testing ensured credibility, accuracy, validity and reliability of the questions. Where necessary this resulted in adjustments in the tools so that some questions were deleted, rephrased, eliminated or even added.

#### **3.11.3 Training of research assistants**

The researcher trained the research assistants so as to help in data collection process. The assistants were oriented on how to use the data collection tool and observe all necessary procedures.

#### **3.11.4 Editing**

Editing of the questionnaire was done in the field immediately after each interview of each respondent before proceeding to the next respondent. This involved checking for completeness of the responses for each question. It also required checking that each question has an appropriate and complete response; and a response to the appropriate question. This was done to save time and avoid call backs to the respondents.

#### **3.11.5 Coding**

Coding means assigning a numerical number to a response. A coding frame was made for each question, which has a set of options to tick(check). This facilitated data entry and analysis. The questionnaire was pre coded. Where need be post coding was done after field for other specific responses and elaborate responses which the researcher had not predicted?

#### **3.11.6 Data entry**

After field data collection, data entry followed. This required construction of template or master sheet into which data was exported from the questionnaires. The template was constructed with the help of computer software SPSS Version 16.0.

#### **3.11.7 Data storage**

Data storage is critical for quality of data. There were boxes for storage of tools. One for the empty questionnaires, the second for the filled questionnaires until the sample size was reached. Both boxes will be strictly kept by the researcher. Upon entry to capture data in the template the entered questionnaires were kept in the third box until data cleaning. The computer template and draft reports were stored on soft copies all of which had passwords known by the researcher only. This was done to avoid alterations by unauthorized people. Variety of soft copies provided a backup, in case of corrupted documentation

#### **3.11.8 Data cleaning**

Data cleaning was done for entered data to check for errors and omissions traceable in the field data tools. This ensured that quality data was presented and analyzed.

### **3.11.9 Data collection procedure**

Data was collected by interviews using a researcher structured questionnaire. All adolescent school going girls voluntarily completed the survey if they so choose. The researcher was responsible for collecting the information and ensured that it was kept in a safe and confidential place.

### **3.12 Plan for data analysis and presentation**

The analysis of the data to be collected was done with the help of computer software SPSS Version 16.0 and the study findings were presented using charts, graphs and tables. The data collected was coded and entered into SPSS software for cleaning/ corrections as well as eliminating errors such as typing errors or outliers. Then the Quantitative data was analysed using software SPSS descriptive and analytical statistics inferences was employed to show the level of association between the variables under the research study. Presentation of the study findings was done using charts, graphs and tables in order to provide summarized and simplified picture about the outcome of this research study.

### **3.13 Quality control issues**

At the end of data collection day, the tools were checked for accuracy and consistency. The data that was collected was kept in a cabinet under lock and key to protect the study respondents and to ensure confidentiality of data collected. Data was coded, cleaned and double entered. At the conclusion of this research study, all completed questionnaires were safely kept for a year after which were shredded and destroyed. The pretesting also helped to ensure that the questionnaire has no errors.

### **3.12 Plan for dissemination of results**

The results of the research study were disseminated to International Health Sciences University and the local authorities at St Aloysius Bwanda Secondary School Kalungu.

### **3.13 Study limitations**

Low transparency among respondents in answering the questions

Communications concerns such as language barrier or questions misunderstanding

Poor time management in case where some respondents took a lot of time to complete the

questionnaire

### **3.14 Ethical considerations**

The study participants had to first give an informed consent after obtaining detailed information about each study variables prior to data collection of the study.

Confidentiality of individual clients' information was ensured by use of unique identifiers and limiting access to the principle investigator and research assistants study information by storing the completed questionnaires safely.

The research study proposal was submitted by the Ethics and Research committee of International Health Sciences University School of Nursing and the permission through the approval letter to conduct the study was sought from St Aloysius Bwanda Secondary School administration receiving the introductory letter from the University.

## CHAPTER FOUR: PRESENTATION OF RESULTS

### 4.0 Introduction

This chapter presents results of the study on Knowledge, Attitude and Practices of menstrual hygiene among adolescent girls between S1- S4 at St Aloysius Bwanda Secondary School Kalungu. Data was obtained from a sample of 150 respondents. The results were presented below.

### 4.1 Description of Demographic data

*Table 1: Findings of the demographic characteristics of the study population*

Variable	Frequency	Percentage
<b>Age range</b>		
Less than 13 years	51	27.1
14 -16	59	31.4
17 years and above	78	41.5
<b>Class of respondent</b>		
S1	43	22.9
S2	41	21.8
S3	55	29.3
S4	49	26.0
<b>Age when you experienced menarche</b>		
Less than 10 years	7	3.7
11 – 14	171	91.0
15 years and above	10	5.3
<b>Who do you live with</b>		
Biological parents	58	30.9
Guardians	103	54.8
Foster parents	27	14.4
<b>Education status of your mother</b>		
Literate	164	87.2
Illiterate	24	12.8
<b>Family capable of providing you with sanitary pads</b>		
Yes	137	72.9
No	51	27.1

Majority 78(41.5%) of respondents were aged 17 years and above while minority 51(27.1%) were aged less than 13 years. Considering the age of menarche majority of the respondents 171(91.0%) experienced menarche at the age range of 11 – 14 years whereas majority of the mothers 160 (87.2%) were illiterate and most of the girls 137(72.9%) came from family's that were not capable to provide them with sanitary pads. and majority of the respondents

103(54.8%) were living with their guardians.

#### 4.2 Description of the Knowledge of Adolescent girls on menstrual hygiene

Table 2: Showing Knowledge of adolescent girls on menstrual hygiene

Variable	Frequency	Percentage
<b>Source of information</b>		
Mother	95	50.5
Sister	49	26.1
Peers	11	5.9
School	21	11.2
others	12	6.4
<b>Cause of menstruation</b>		
Natural or Physiological body change	147	78.2
Disease	2	1.1
Others	5	2.7
Don't know	34	18.1
<b>Organ were menstrual blood comes from</b>		
Vagina	95	50.5
Uterus	13	6.9
Others	39	20.7
Don't know	41	21.8
<b>duration of a normal period</b>		
2 – 4 days	150	79.8
5 – 7 days	38	20.2
<b>Aware of menstrual cycle</b>		
Yes	170	90.4
No	18	9.6
<b>Ever heard about menstruation before you started your periods</b>		
Yes	147	78.2
No	41	21.8
<b>Products you have heard of</b>		
Disposable Sanitary Pad	78	41.5
Tampon	59	31.4
Menstrual Cup	33	17.6
Reusable Pad	18	9.6
<b>Ideal material used during menstruation</b>		
Any type of cloth available	14	7.4
Cloth kept separately for this purpose	35	18.6
Readymade sanitary pads	120	63.8
Others	19	10.1
<b>What is Menstrual Hygiene</b>		
Effective management of menstrual bleeding	36	19.1
Treating the female disease	59	31.4
Containing blood during menstruation	93	49.5

Source: primary data

From the study findings it was revealed that study girls were knowledgeable about the cause of menstruation were by majority 147(78.2%) indicated that it was a natural or physiological body change. The girls were knowledgeable about the menstrual cycle where by majority 150(79.8%) indicated that average duration of the menstrual cycle was 2 – 4 days. The study girls were knowledgeable about menstruation prior to their first menstruation experience as reflected by majority 147(78.2%) and also study girls were knowledgeable about ideal material used during menstruation were by most 120(63.8%) of the study participants indicated readymade sanitary pads.

However the study girls were not knowledgeable about menstrual hygiene were by only 36(19.1%) girls correctly defined menstrual hygiene, as being the effective management of menstrual bleeding and the organ source of the menstrual bleeding as reflected by only 13(6.9%) who knew correctly the source of menstrual blood as the uterus.

#### **4.3 Description of the Attitude of Adolescent girls on menstrual hygiene**

Findings from the study indicated that the study girls had negative attitudes towards menstrual hygiene as reflected that slightly more than half of the participants 104 (55.3%) had traditional beliefs that influenced their menstrual hygiene, most 75(39.9%) of the girls had a perception that sanitary napkins were expensive, more than half 116(61.7%) had ever encountered secondary stigma, more than three fourths 156(83.0%) received no advantage at school while menstruating and majority 64(34.9%) of the girls reported that they felt upset on their first encounter of menstrual bleeding while at school.

Nevertheless the study findings also revealed that the study participants also had positive attitudes as observed that majority 79(42.0%) of the girls had a perception that sanitary napkins were comfortable,

Table 3: Showing Attitude of adolescent girls towards menstrual hygiene

Variable	Frequency	Percentage
<b>Any traditional beliefs that influence your menstrual hygiene</b>		
Yes	104	55.3
No	84	44.7
<b>Perceptions regarding sanitary napkins (Advantages)</b>		
Comfortable	79	42.0
Adequate absorption	64	34.0
Do not stain clothes	31	16.5
No itching	11	5.9
Do not know	3	1.6
<b>Perceptions regarding sanitary napkins (Disadvantages)</b>		
Expensive	75	39.9
Not available everywhere	67	35.6
Do not know	46	24.5
<b>ever encountered secondary stigma as a result of menstruation</b>		
Yes	116	61.7
No	72	38.3
<b>Are there bad words, terms, or phrases used to describe girls who are menstruating at school</b>		
Yes	125	66.5
No	63	33.5
<b>At school are you treated differently if they know you are menstruating</b>		
Yes	71	37.8
No	117	62.2
<b>At school, do you get any of the following advantages while menstruating</b>		
Rest from regular school work	23	12.2
leave school early	3	1.6
Respect from others	6	3.2
No advantage	156	83.0
<b>Have you ever had your period while at school</b>		
Yes	152	80.9
No	36	19.1
<b>How did you feel, at your first encounter while at school</b>		
Normal	15	8.0
Fear and confusion	28	14.9
Upset	64	34.0
Ashamed and embarrassed	45	23.9

Source: primary data



#### 4.4 Description of the Practices of Adolescent girls on menstrual hygiene

Table 4: Showing practices of adolescent girls on menstrual hygiene

Variable	Frequency	Percentage
<b>Type of absorbent used during menstruation</b>		
Cloth	29	15.4
Tampon	8	4.3
Sanitary pad	111	59.0
Menstrual Cup	4	2.1
tissue	15	8.0
cotton wool	11	5.9
Others specific	10	5.3
<b>change of absorbent while at school</b>		
Yes	55	29.3
No	133	70.7
<b>Do you reuse the sanitary cloths</b>		
Yes	124	66.0
No	64	34.0
<b>What do you use to wash the sanitary cloth</b>		
Plain water	22	11.7
Luke warm water	9	4.8
Soap and water	149	79.3
Antiseptics	8	4.3
<b>What do you use to clean the genital area</b>		
Plain water	77	41.0
Luke warm water	9	4.8
Soap and water	97	51.6
Antiseptics	5	2.7
<b>How do you store sanitary protection material</b>		
Bathroom	91	48.4
don't store	59	31.4
Store with routine cloth	27	14.4
others	11	5.9
<b>At school, how do you dispose sanitary material</b>		
Burn it	113	60.1
Throw it in routine waste	25	13.3
others (Don't dispose/Flush/Hide)	50	26.6
<b>Hand washing after changing sanitary material</b>		
Yes	111	59.0
No	77	41.00
<b>Adequate sanitary facilities at school</b>		
Yes	92	48.9
No	96	51.1
<b>Restrictions placed on you during periods</b>		
Yes	163	86.7
No	25	13.3
<b>Type of restrictions</b>		
Religious activities	117	62.2
Household work	11	5.9
Cooking	15	8.0
Mobility	11	5.9
Participation in class	4	2.1
Playing activities	12	6.4
Not allowed to go to school	6	3.2
Others	12	6.4

Source: Primary data

The study findings reveal that the study girls had good practices as regards to menstrual hygiene as reflected by majority 111(59.0%) of the girls indicating use of sanitary pads, more than three fourths 149(79.3%) reported use of soap and water to wash the sanitary protection material, slightly more than half 97(51.6%) indicated use of soap and water for cleaning of the external genitalia and majority 111(59.0%) reported washing hands after changing sanitary material.

However the study findings also revealed that the study girls had poor practices concerning menstrual hygiene as observed by nearly three fourths 133 (70.7%) changing of absorbents at home only, more than half 124(66.0%) reusing the sanitary cloths, majority 91(48.4%) storing sanitary protection material in the bathroom and nearly all 163(86.7%) study girls indicating that they had restrictions attached to them during menstruation periods.

## **CHAPTER FIVE: DISCUSSION**

### **5.0 Introduction**

This chapter presents the analyzed results in relation to the specific objectives which guided the study. The aim of this study was to assess the knowledge, attitude and practices of menstrual hygiene among adolescent girls between S1- S4 at St Aloysius Bwanda Secondary School Kalungu so as to adopt interventions to promote adequate menstrual hygiene. The study comprised of 188 respondents and the findings are discussed as follows.

### **5.1 Knowledge of menstrual hygiene among adolescent girls**

This study finding revealed that a slightly higher percentage of the girls, mothers were their source of information. The fewer gaps may be due to the high illiteracy status of the mothers and small inhibitions for the mothers in talking to their daughters regarding the significance, hygienic practices and a healthy attitude towards menstruation. These findings are in line with a study conducted by Carlson, (2014) who reported that the first informant was the mother in 52.5% of the subjects. This will play a long way in maintaining a healthy reproductive tract for each and every girl child who, after she becomes a mother, percolates the healthy message to her female offspring.

A slightly higher percentage 147(78.2%) of the girls knew correctly that menstruation is a physiological process. The explanation of this observation could be due to the fact that the girls lacked accurate and timely information on menstrual hygiene, with majority mothers and friends being their informants; however mothers and friends lack the necessary knowledge about biological changes as the body reaches puberty. This finding is in line with a study conducted by Sommer , (2010). However this finding is contradictory to a study conducted by Mwita, C., (2012) in Kenya among females living in an informal urban settlement which revealed that only a minority of the participants were able to describe menstruation in biological terms. This means that girls often grow up with limited knowledge of menstruation hence poor MHM practices.

Only a few percentages 13(6.9%) of the participants were aware that menstrual bleeding came from the uterus. This may be related to the low parent to child communication about menstruation and its management too. These findings were consistent with a cross sectional

study conducted by Khanna et al., (2015), which demonstrated that the girls had difficulty in describing menstruation in biological terms, where only minority of the girls were able to describe menstruation in biological terms. This implies that mothers who were the major source of information, themselves were not aware of the biological facts about menstruation.

Most of the adolescents 170(90.4%) were acquainted with the menstrual cycle, and duration of menstrual bleeding 150(79.8%). This could be related to the perceived knowledge attained from peers and other sources of information. However this finding was not in line with a study conducted by Carlson et al, (2011), which showed that there is a significant gap in the knowledge on menstruation among adolescent girls were by the girls had low levels of awareness about menstruation as regards to the menstrual cycle. However this means that the girls had greater awareness about the menstrual cycle.

Prior awareness regarding menstruation among girls was generally high. It was evident that a high percentage 147(78.2%) of the participants were aware of menstruation before menarche. The explanation for this observation is not clear but could be due to interplay of a number of factors like school programs and perceived knowledge from various sources of information like, peers, multimedia and mothers. These findings are not in line with a study conducted by Carlson et al., (2011) which revealed that girls reported receiving insufficient guidance prior to their first menstrual period thus experiencing shame, fear and embarrassment managing menstruation, especially while at school. This implies that may be that girls discussed about menstruation with their friends and peers openly.

It was evident that a slightly higher percentage 78(41.5%) of the adolescent girls had heard of the disposable sanitary pads, the awareness of sanitary pad is higher, which is possibly due to interplay of number of factors like availability, accessibility, cost, exposure to mass media, local customs as well as storage and disposal issues. The study findings are in line with a study conducted by Kounteya Sinha, (2011). This means that there was greater awareness and communication among the girls on menstruation and menstrual hygiene management.

Majority 120(63.8%) of the girls were aware that readymade sanitary pads were the ideal material used for menstruation, which is true hence shows most of the girls were aware of the

sanitary products to be used during menstruation. This concurs with a study conducted by Kounteya Sinha, (2011) in India who revealed that 72% of the girls indicated readymade napkins as the ideal material to be used during menstrual bleeding. This implies that the girls had exposure and access to information hence increase knowledge and awareness of menstruation and menstrual hygiene management issues.

The results established that although 36(19.1%) girls correctly defined menstrual hygiene, a higher percentage of the adolescent girls did not correctly define menstrual hygiene. These findings are in agreement with views Dhingira et al, (2010), Shanghag et al., (2012). This could be due to the assumption that some of these girls were still very young provided that issues of sexuality still have cultural restrictions in our society making them vulnerable to limited sources of information. This implies that the girls received inadequate information provided about menstruation and menstrual hygiene management by schools, families and others.

## **5.2 Attitude of menstrual hygiene among adolescent girls**

A higher percentage 104(55.3%) of the girls had traditional beliefs influencing their attitude towards menstrual hygiene. One of the explanations for this observation could be that majority of the girls could have incorporated many of the prevailing cultural views of menstruation early in life, yet most of these views are negative and non-preparative for womanhood. This finding concurs with a study conducted by Sommer, (2010) in Tanzania which revealed the need to hide menstrual cloths for fear of being cursed. This implies that lack of factual information aggravated by the prevalence of myths means that girls' practical needs related to MHM are often not appreciated or appropriately addressed.

A slightly higher percentage 79(42.0%) had a perception that sanitary napkins were capable of adequate absorption. The explanation for this observation could be related to interplay of several factors such as increased awareness and sensitization and exposure to mass media. This finding is not consistent with a cross-sectional study conducted by Rohtak , (2011) in India which showed that a few percentages of the girls had the perception that sanitary napkins were not capable of adequate absorption. However this modifies the girls' perception towards menstrual hygiene management.

A slightly higher percentage 75(39.9%) of the girls had a perception that sanitary napkins were expensive. The explanation for this observation could be related to the socio economic status of the girls. This finding is similar to a cross-sectional study conducted by Kounteya Sinha, (2011) in India which revealed that only 12% of menstruating adolescent secondary school girls used sanitary pads and 70% of them cited cost as a major barrier for using them. This implies that most of the girls could not afford the sanitary protection materials, hence unhealthy menstrual hygiene management practices.

It was observed that a slightly higher 116(61.7%) percentage of the girls had ever encountered secondary stigma as a result of menstruation, this observation could be due to menstrual mishaps associated with staining which school communities have not embraced, hence stigma. This finding concurs with a study conducted by Pravin, (2011) which revealed that menstruation has often been associated with some degree of sufferings and embarrassment. Nevertheless this finding does not concur with a cross sectional study conducted among the Creols and Maroons of Surinam, Ten, (2009), which showed that, pubescent girls would be given gifts such as jewelry as a sign and symbol of maturity. However this means that many girls are kept at home when they start menstruating hence being left behind that can eventually lead to school drop-out.

A generally high percentage 125(66.5%) reported the use of bad words, terms or phrases to describe girls while menstruating, the explanation for this could be that boys find menstruating girls smelly and objectionable; this finding is in line with a study conducted by Pravin, (2011), who revealed that menstruation could lead to misunderstanding, confusion and prejudice. This means that the girls' right to non-discrimination, bodily integrity, equality, privacy, health and the right to freedom from inhumane and degrading treatment from abuse and violence is not observed.

It was evident that a lower percentage 71(37.8%) of the girls reported being treated differently when menstruating while at school. Only a few percentage of the girls reported receiving advantages while at school when menstruating. This would be because schools have no programs addressing the challenges and needs of menstruating girls. This was also observed by in a study conducted in Cambodia by WASH, (2014). However this finding was

not in line with a cross sectional study conducted among the Tamil Nadu people of South India who invited relatives and friends to celebrate and the pubescent girls also receive expensive gifts (Narayan et al, 2011). This implies that girls get left behind and there is no equal opportunity and because of this obstacle, SDG 3 (promote gender equality and empower women) cannot be achieved either.

It was observed that majority 152(80.9%) of the girls had ever experienced their periods while at school, and a slightly higher percentage 64(34.0%) felt upset on their first encounter which could be because of fear of humiliation from their peers and children and boys making fun of them. This finding is in line with a cross sectional study conducted by Walker, (2012). The experience of periods at school provides the framework for the girl's latter attitude to her body image and menstruation; hence girls develop a negative attitude towards self image.

### **5.3 Practices of adolescent girls between S1-S4 towards menstrual hygiene**

A generally high percentage 111(9.0%) of the girls preferred sanitary pads as a menstrual absorbent. The apparent reasons for not using sanitary pads could be explained by lack of knowledge, high costs, unavailability and shyness. Further the practice of using old clothes was found to be common among girls in the present study and could be due to lack of knowledge about the healthy practices in young girls. This could also be due to lower socio economic status. This finding is consistent with a cross sectional study conducted by (Vaughn, 2013). Lack of sanitary protection may nevertheless create discomfort in the classroom and an inability to participate hence may cause girls to miss school each month during their period.

The study findings shows that majority 133(70.7%) of the adolescent girls did not change absorbents while at school. The probable reason for the girls not changing the absorbents could be ignorance and lack of facilities. These findings are consistent with a study conducted by Jacquelyne, (2013) in Ethiopia who revealed that 25% of the school girls use nothing, and typically isolate themselves during menstruation, undermine the right of privacy, resulting in a fundamental infringement of the human rights of female girls. In frequency in changing absorbent, may increase susceptibility to infection, with the odor of menstrual blood putting girls at risk of being stigmatized.

The study findings revealed that a slightly high percentage 124(66.0%) of the adolescent girls re used the sanitary cloths. The explanation for this observation could be due to their low

socio-economic status, lesser availability of the pads at the rural areas and lack of awareness. These findings are not comparable to a study conducted by Vaughn in (2013) in Nepal which revealed that a generally high percentage of the girls reused the sanitary cloths. If girls re use sanitary cloth, there is a possibility for increased odour, potential for additional infections and discomfort.

The study findings revealed that a higher percentage 149(79.3%) of the girls used soap and water to wash the sanitary material. The use of soap and water would be because of the awareness and availability of the resources. This finding is similar to another study conducted by Quaz SZ, et al., (2012) and Narayan KA, et al., (2011) who revealed that most of the rural girls used old clothes as menstrual pads and reused the clothes after washing them with soap and water. If girls attend schools which lack adequate water supplies to comfortably wash themselves in privacy, they may be unable to remain comfortably in class during their menstrual cycle.

A significantly lesser number 77(41.0%) of rural girls cleaned their genitalia satisfactorily. The reasons for not cleaning the external genitalia could be due to lack of knowledge about menstrual hygiene and privacy, the latter being an important problem. This finding is consistent with a study which was conducted by Omidwar S, (2010) which revealed soap and water were the commonest materials which were used by 57.23% for cleaning the external genitalia. However this finding is not consistent with a study conducted by Narayan KA, et al., (2011) in Bangladesh which showed that majority of the girls used only water to clean the external genitalia. Not satisfactorily cleaning the genitalia can facilitate introduction of bacteria which may cause local infections that can travel up to the uterus.

The proportion of the participants who used the bathroom as a storage place was as high as 49.8%. This is because literature information regarding the adverse health effects due to the bathroom storage is meager. The place of storage of the pads is equally important for their cleanliness; especially the practice of storing them in bathrooms is disturbing, since it could give rise to the harboring of dust and insects. These findings are consistent with another study conducted by (UNICEF 2014; WSSCC 2013). However, this finding was not in line with a study conducted by Pravin (2011), who revealed that majority of the girls dried the sanitation



material under the sunlight and stored them with routine cloths. The absence of clean and private storage facilities that allow for storage of menstruation material may discourage girls from attending school when they menstruate.

In the present study, the commonly practiced methods of disposal of the used absorbent were, burning it 113(60.1%), either disposing it routine waste 25(13.3%) and others such as wrapping it in paper, dust bin 50((26.6%). This was due to the lack of adequate disposal mechanisms. The same findings were reported by other studies conducted by Ali R et al., (2010), Ketaki et al (2011) and Tiwari, (2015). Failing to provide disposal facilities for used sanitary materials can result in latrines becoming blocked and quickly filling pits.

A lower percentage 77(41.0%) of the girls did not practice hand washing after changing the sanitary material. This could be attributed to lack of adequate water supplies to comfortably change sanitary materials and wash them in privacy. The slightly higher percentage of girls practiced hand washing after changing sanitary material that could be attributed to continuous sensitization of the girls on the importance of hand hygiene for menstrual hygiene. These findings are consistent with other studies by Kirk et al, (2014) and UNICEF, (2014). Lack of hand washing after changing sanitary material can facilitate spread of infections such as Hepatitis B or Thrush.

A slightly higher percentage 92(48.9%) of the girls indicated that the school lacked adequate sanitation facilities. The absence of adequate sanitation facilities would be due to the socio-economic status of the school and lack of awareness and knowledge regarding menstrual hygiene by the school administration. These findings are similar to a study conducted by Vaughn, (2011). The grave lack of facilities can push menstruating girls out of school, temporarily and sometimes permanently.

Different restrictions were practiced by most 163(86.7%) of the girls in the present study, possibly due to the different rituals in their communities, ignorance and false perceptions about menstruation, lack of awareness and due to the association of more stigmas with menstruation. These findings were consistent with those of other studies conducted by Rathi, (2011) and Pathak, (2011). Restrictions have led to many girls being kept at home when they start menstruating, either permanently (drop-out) or temporarily during the days they menstruate and when girls get left behind this can eventually also lead to school drop-out.

## **CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS**

### **6.0 Introduction**

This chapter presents the conclusion drawn from the study findings and gives recommendations as to the way forward on how the problem of menstrual hygiene among adolescent girls can be handled.

### **6.1 Conclusion**

The study shows that menstrual hygiene among adolescent girls is definitely a challenge. The study established that the overall level of knowledge of the adolescent girls on menstrual hygiene was generally low and unsatisfactory.

This study reveals that adolescent girls had generally negative attitudes towards menstrual hygiene. The attitudes of the girls were influenced by beliefs and taboos on menstruation, perceptions on menstruation and stigma and discrimination.

Practices of the adolescent girls towards menstrual hygiene was generally poor as it was evident that a large proportion among the adolescent girls practiced unsafe practices during menstruation.

### **6.1 Recommendations**

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

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

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

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

## **6.2 Implications to Nursing Practice**

Health workers need to increase awareness on menstrual hygiene among adolescent girls especially in schools through continuous outreach programs. Their interaction with senior women teachers, parents and adolescents will improve menstrual hygiene in schools. They need to participate in school days/parent meetings and raise awareness on menstrual hygiene.

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**APPENDIX I: CONSENT FORM**

**Dear respondent,**

I Wanjiku Damaris Wambui, a student of International Health Sciences University pursuing A Degree in Nursing Science, I am conducting a study on **Knowledge, Attitude and Practices of Menstrual Hygiene among Adolescent Secondary School girls between S1 – S4 at St. Aloysius Bwanda Secondary School Kalungu.**

You have been selected on merit for your legibility to provide necessary information required . However, any information to be provided will be used mainly for academic purposes and will be treated with utmost confidentiality.

Your participation is entirely voluntary, you have rights to decline to participate, to withdraw any statement before analysis or discontinue your participation and this will not affect you in anyway. There are no physical benefits for participation in this study but findings will help in coming up with strategies to improve menstrual hygiene among adolescents in secondary schools.

Signature of researcher.....

**Respondent**

I hereby confirm that I understand the contents and nature of the document and therefore consent to be interviewed by this researcher carrying out the above mentioned study. I have been assured of total confidentiality, and that the results of this study shall not identify me anywhere in any way since my name is not needed and it shall not appear anywhere in this questionnaire. And in any case, my refusal to answer questions shall not affect me or any member of my family.

Signature of respondent .....

Date .....



## APPENDIX II: INTERVIEW QUESTIONNAIRE

Please tick appropriately and give your honest opinion where needed.

### Section A: Socio demographic characteristics of the respondents.

1. What is your age range?  
Less than 13 years [ ]  
14 -16 [ ]  
17 years and above [ ]
2. In which class are you?  
S1 [ ]  
S2 [ ]  
S3 [ ]  
S4 [ ]
3. At what age did you experience your menarche?  
Less than 10 years [ ]  
10 – 12 [ ]  
13 years and above [ ]
4. Who do you live with?  
Biological parents [ ]  
Guardians [ ]  
Foster parents [ ]
5. What is the education status of your mother?  
Literate [ ]  
Illiterate [ ]
6. Is your family capable of providing you with sanitary pads?  
Yes [ ]  
No [ ]

### Section B: Knowledge on menstrual hygiene

7. What is the cause of menstruation?  
Natural or Physiological body [ ]  
Disease [ ]  
Others [ ]

8. From which organ does menstrual blood come from?
- Abdomen [ ]
  - Urethra/Vagina [ ]
  - Uterus [ ]
  - Others [ ]
9. What is the duration of a normal period?
- 2-4 days
  - 5-7 days
10. Have you ever heard of the menstrual cycle?
- Yes
  - No
11. Which of these products have you heard of?
- Tampon [ ]
  - Disposable Sanitary Pad [ ]
  - Menstrual Cup [ ]
  - Reusable Pad that you can wash and use again e.g. Afripads, homemade pad [ ]
12. What is the ideal material used during menstruation?
- Any type of cloth available [ ]
  - Cloth kept separately for this purpose [ ]
  - Readymade sanitary pads [ ]
  - Others [ ]
13. Have you ever heard about menstruation before you started your periods?
- Yes [ ]
  - No [ ]
14. What is your source of information on menstrual hygiene?
- Mother [ ]
  - Sister [ ]
  - Peers [ ]
  - School [ ]
  - others [ ]

15. What is menstrual hygiene?

Effective management of menstrual bleeding

Treating the female disease

Controlling blood during menstruation

**Section C: Attitude towards menstrual hygiene**

16. Are there any traditional beliefs that influence your menstrual hygiene?

Yes [ ]

No [ ]

17. Perception regarding sanitary napkins (Advantages)?

Comfortable

Adequate absorption

Do not stain clothes

No itching

Do not know

18. Perception regarding sanitary napkins (disadvantages)?

Expensive

Not available everywhere

Do not know

19. Have you ever encountered secondary stigma as a result of menstruation?

Yes [ ]

No [ ]

20. Are there bad words, terms, or phrases used to describe girls who are menstruating at school?

Yes [ ]

No [ ]

21. At school are you treated differently if they know you are menstruating?

Yes [ ]

No [ ]

22. At school, do you get any of the following advantages while menstruating?

Rest from regular school work [ ]

leave school early [ ]

Respect from others [ ]

No advantage [ ]

23. Have you ever had your period while at school?

Yes [ ]

No [ ]

24. If yes, how did you feel, at your first encounter while at school?

Excited [ ]

Fear and confusion [ ]

Stressed [ ]

Ashamed and embarrassed [ ]

#### **Section D: Practices of adolescent girls towards menstrual hygiene**

25. Type of sanitary material used during your period?

Cloth [ ]

Tampon [ ]

Sanitary pad [ ]

Menstrual Cup [ ]

Toilet paper [ ]

Cotton [ ]

others specific [ ]

26. Do you change your absorbents while at school?

Yes [ ]

No [ ]

27. Do you reuse the sanitary cloths?

Yes [ ]

No [ ]

28. What do you use to wash the sanitary cloth?

Plain water [ ]

Luke warm water [ ]

Soap and water [ ]

Antiseptics [ ]

29. What do you use to clean the genital area?

Plain water [ ]

Luke warm water [ ]

Soap and water [ ]

Antiseptics [ ]

30. How do you store sanitary protection material?

Bathroom [ ]

Don't store [ ]

Store with routine cloth [ ]

Others [ ]

31. At school, how do you dispose sanitary material?

Burn it [ ]

Throw it in routine waste [ ]

Others [ ]

32. Are there sanitary facilities at school?

Yes [ ]

No [ ]

33. Do you wash your hands after changing sanitary material?

Yes [ ]

No [ ]

34. Are there any restrictions placed on you during periods?

Yes [ ]

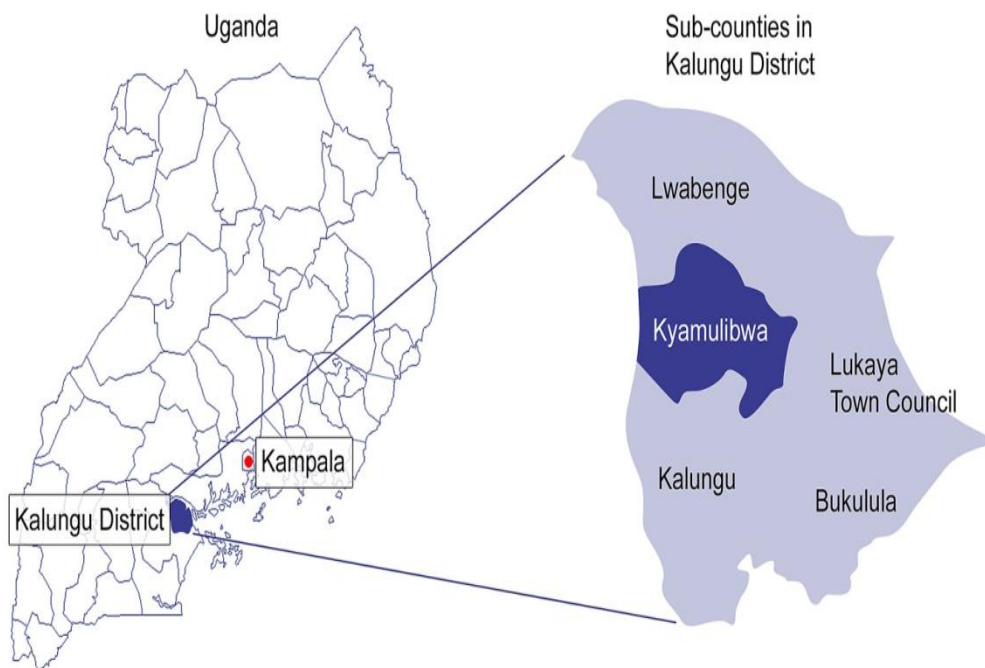
No [ ]

35. If yes mention the type of restriction attached to you during menstruation.

.....

**Thank you so much for your time and participation in this study**

**APPENDIX III: MAP OF SHOWING THE LOCATION OF THE STUDY AREA**



## APPENDIX IV: INTRODUCTORY LETTER



*making a difference in health care*

**Office of the Dean, School of Nursing**

Kampala, 11<sup>th</sup> November 2016

To,  
HEAD TEACHER  
ST. ALOYSIUS BWANDA SEC. S.  
SCHOOL.

Dear Sir/Madam,

**RE: ASSISTANCE FOR RESEARCH**

Greetings from International Health Sciences University.


This is to introduce to you **Wanjiku Damaris Wambui**, Reg. No. **2012-BNS-FT-025** who is a student of our University. As part of the requirements for the award of a Bachelors degree in Nursing of our University, the student is required to carry out research in partial fulfillment of her award.

Her topic of research is: **Knowledge, attitude and practice of menstrual hygiene among adolescents between S.1 and S.4 at St. Aloysius Bwanda Secondary School, Kalungu**

This therefore is to kindly request you to render the student assistance as may be necessary for her research.

I, and indeed the entire University are grateful in advance for all assistance that will be accorded to our student.

Sincerely Yours

  
11 NOV 2016  
SCHOOL OF NURSING  
Ms. Agwang Agnes Uganda  
Dean

The International Health Sciences University  
P.O. Box 7782 Kampala - Uganda  
(+256) 0312 307400 email: [aagwang@ihsu.ac.ug](mailto:aagwang@ihsu.ac.ug)  
web: [www.ihsu.ac.ug](http://www.ihsu.ac.ug)

**APPENDIX V: CORRESPONDENCE LETTER**

**ST ALOYSIUS BWANDA SECONDARY  
SCHOOL KALUNGU  
P.O.BOX 3122, MASAKA  
TEL: 0772479908  
Email: [bwandass@gmail.com](mailto:bwandass@gmail.com)**



*Our ref.....*

*Your ref.....*

*Date: 15/NOV/2016*

OFFICE OF THE DEAN,  
SCHOOL OF NURSING  
INTERNATIONAL HEALTH SCIENCES UNIVERSITY,

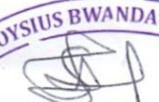
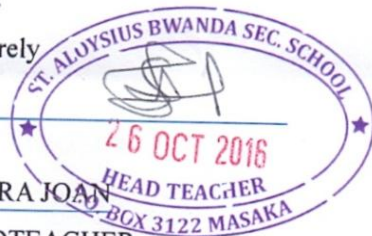
Dear Sir/Madam

RE: Ms. WANJIKU DAMARIS WAMBUI

This is to inform you that we have granted ms WANJIKU DAMARIS WAMBUI permission to carry out her research in this school on the topic Knowledge Attitude and Practices of menstrual hygiene among adolescent girls between S1- S4 being part of the requirements fro her studies.

Yours

Sincerely

  
  
SAKIRA JOAN  
HEADTEACHER