

**WATER AND SANITATION FACILITIES FOR MENSTRUATION
MANAGEMENT BY FEMALE STUDENTS IN HIGHER
EDUCATIONAL INSTITUTIONS. A CASE OF
KYAMBOGO UNIVERSITY**

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**A RESEARCH REPORT SUBMITTED TO THE DIRECTORATE
OF RESEARCH AND GRADUATE TRAINING IN PARTIAL FULFILMENT
OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF
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UNIVERSITY**

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DECLARATION

I, **Nassozi Pomlet**, declare that this dissertation titled “Water and Sanitation Facilities for Menstruation Management by female students in Higher Education Institutions; A case of Kyambogo University” is my original work which has never been submitted to any institution for any award. I am now submitting it to the Institute of Research and Graduate Training of Kyambogo University with the approval of my supervisors.

Signature: _____

Date: _____

Student

APPROVAL

This dissertation titled “Water and Sanitation Facilities for Menstruation Management by female students in Higher Education Institution; A case of Kyambogo University” by Nassozi Pomlet has been developed with our guidance and it is now submitted for examination with our consent as supervisors.

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Date: _____

Dr. Harriet Kebirungi

Supervisor

DEDICATION

This dissertation is dedicated to my mother Babirye Nanyonjo Christine, my daughter Ellah Nambuya and most importantly to the Holy Spirit.

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First and foremost I am grateful to the Holy Spirit for a second chance to life and health. My sincere thanks go to my God for the protection and health. Am thankful to my mother for both moral and financial support for without it, this kind of work would not be seen.

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ABBREVIATIONS/ACRONYMS

DVC (F&A)	Deputy Vice-Chancellor (Finance & Administration)
EFA	Education For All
EPS	Equal Probability of Selection
FGD	Focus Group Discussion
GRCs	Guild Resident Commission
HEI	Higher Education Institutions
ITEK	Institute of Teacher Education Kyambogo
KyU	Kyambogo University
MDG	Millennium Development Goal
Mgt	Management
MHM	Menstruation Hygiene Management
PLA	Participatory Learning and Action
SDG	Sustainable Development Goal
SOME	School of Management and Entrepreneurial Studies
SRS	Simple Random Sampling
UK	United Kingdom
UNESCO	United Nations Educational Scientific and Cultural Organisation
UNICEF	United Nations International Children's Emergency Fund
UNISE	Uganda National Institution of Special Education
UPK	Uganda Polytechnic Kyambogo
USAID	United States Agency for International Development
WHO	World Health Organisation

ABSTRACT

This study focuses on the status of water and sanitation facilities for menstruation management in Higher Education Institutions. The study addressed three objectives namely; 1.To assess the status of water and sanitation facilities for menstruation management by female students in HEI. 2. To examine the integration of water and sanitation facilities for menstruation management in the planning and budgeting processes in HEI. 3. To assess female students' perceptions towards access and utilization of water and sanitation facilities for menstruation management in HEI. The study employed a descriptive survey research design with qualitative methods of data collection and analysis. The methods included: in-depth individual interviews, Key Informant Interviews, Focus Group Discussions, observation and documentary analysis. Data was collected from 52 participants who comprised of 05 top management officials and 47 female students who included Student Course Coordinators and Guild Officials. The findings of the study were that, first; the status of water and sanitation facilities in Kyambogo University is poor, inaccessible, unavailable and unusable by female students during menstruation. Secondly, the findings revealed that there is limited engagement of female students and administrators in the budgeting and planning of water and sanitation facilities for menstruation management by the Estates Department. Moreover, the generic budget does not adequately cover all the requirements for menstruation management by female students. Thirdly, findings also revealed that female students perceive water and sanitation facilities for menstruation management as generally available but inaccessible and unacceptable in various ways. The conclusion drawn is that the study generates knowledge about the status of water and sanitation facilities for menstruation management to enable female students participate in academic activities in Higher Education Institutions. Among recommendations made were; The Directorate of planning and development at KyU should promote a participatory and gender- equity inclusive plan and budget that ensures that water and sanitation facilities for menstruation management becomes an integral aspect in planning and budgeting processes of the Estates department. The university should equitably improve the current status of water and sanitation facilities for menstruation management by providing water in toilet rooms include changing rooms, replacement of broken doors to provide privacy and other required facilities to enhance effective menstruation management.

CHAPTER ONE: BACKGROUND TO THE STUDY

1.0 Introduction

This chapter presents information on the background of the study. It includes the conceptual, historical and contextual aspects of the problem under study. It also highlights the statement of the problem, purpose, objectives, research questions, scope and the significance of the study.

1.0 Background to the Study

1.1.1 Conceptual perspective

Bartram et al. (2012) defines sanitary facilities for menstruation management as necessities for women and girls to manage menstruation. These include private safe toilets, latrines and availability of toilet paper. Sanitary facilities also involve urinals, wash facilities for hands, clothes and the body as well as changing rooms for girls (Joint Sector Reports, 2009). It also refers to resources like menstrual materials, soap and mirrors, private places to wash, change and dry re-useable menstrual materials and a disposal system for menstrual materials.

According to UNICEF (2008) sanitation facilities for menstruation management involve the availability of privacy and hygienic facilities for female students' use during periods. These facilities include clean toilets, urinals, bathrooms, incinerators, menstrual disposal bins, soap, and the existence of hand washing basins.

In this study, sanitation facilities for menstruation management refer to accessibility, availability, and utilization of necessary facilities for female students to use during menstruation in the teaching facilities at the university. Sanitation facilities for

menstruation management in the teaching facilities at the university are commonly used by female students since they spend most of their hours at the university.

The operational definition of water for menstruation management in this study is adapted from Kebirungi (2015a) who defines water for menstruation management as privately and constantly clean supplied water in toilet rooms. This refers to tapped water placed inside toilet rooms in the toilet facilities of the university for private and easy access by female students during menstruation. The provision and utilization of adequate water and facilities for menstruation management result into efficient menstruation management by female students.

Menstruation management is the ability to take care of oneself during one's period, including having access to safe, functioning facilities for changing used sanitary pads, hygienic, and dependable absorbent materials, as well as handy and appropriate disposal techniques. It also includes cleaning and accurate knowledge of health behaviours and hygienic practices during menstruation. Ineffective management of menstruation can lead to skin irritations, UTIs, worm infestations, lymphatic filariasis, intestinal difficulties, mental stress, and stigma among female students (Bartram and Cairncross, 2010).

1.1.2. Historical Perspective

During the reproductive years, menstruation is a normal and common event for women, and it is accompanied by significant physiological and emotional changes (Kjellén et al., 2012). Menstrual cycles have been experienced by women since before humans were fully evolved as a species (Samah, 2022). There isn't much information regarding menstruation in ancient history, presumably because the majority of scribes were men and they didn't want to write about women's

management of their periods (Samah, 2022). In the ancient era, menstruating women were associated with magic and sorcery and people were scared of seeing menstrual blood even women themselves (Samah, 2022). Menstruation was also considered shameful religiously, which forced most of the women to hide their periods, more so cramps were considered as a punishment to women for the sin of Eve in the account of the origin of sin in the bible (Samah, 2022). In the ancient era, menstruation was also associated with curses which made people think of it as a mystical thing to be feared for a long time (Kjellén et al., 2012). The negative perspective towards menstruating women made organisational institutions, educational institutions inclusive to be silent about issues concerning menstruation management (Johnston-Robledo and Chrisler, 2011). For instance, according to WHO (2019), menstrual health was not specifically mentioned in the Sustainable Development Goals targets for the goals of health, gender, water, and sanitation, nor was it included in the agenda of the international conference on population and development or the Millennium Declaration..

The silence of educational institutions about issues concerning menstruation management has made them irresponsive to the menstruation management needs of the female students. Consequently, According to Tegegne and Sisay, (2014), by the 20th century, girls in primary schools in developing countries could not attend school during menstruation due to lack of clean and private toilet facilities for female students in these institutions. UNICEF (2016) also corroborated that about one in ten female students in primary school in Africa did not attend school during menstruation.

However, efforts to raise awareness of the difficulties school-age girls encounter in managing their menstruation have improved recently (Sommer & Armah, 2012). For example, in 2012, a number of public health organizations started to speak out about Menstruation Hygiene Management (MHM) and focus on the problem on a global scale (WHO, 2019). Among them were United Nations organizations, social entrepreneurs, and grassroots activists. Furthermore, an attempt was made in 2014 to address MHM by developing a vision, priorities, and ten-year plan to change the primary school experiences of girls. This involved providing information, support, and enabling school environment for managing menstruation with dignity, safely and comfortable (Sommer & Armah, 2012). As a result of the afore mentioned interventions, Wash MHM- Resource guide (2015), observed that provision of sanitation and hygiene facilities for menstruation had become a global concern. UNICEF (2016) further evidenced that there was a growing need to comprehend the difficulties faced by schoolgirls who are menstruation as well as the possible risks and repercussions that may follow. These included gastrointestinal issues, emotional stress, stigma among female students at HEI, skin irritations, urinary tract infections, worm infestations, lymphatic filariasis, and bowel difficulties (Bartram & Cairncross, 2010). The need to avert the afore mentioned diseases forms the basis upon which Mitchell (2017) recommended that water and sanitation facilities for menstruation management play a major role in the lives of female students in higher educational institutions. Adequate provision and utilization of these facilities promotes privacy and minimizes complications such as urinary tract infection, discomfort and the odour that could affect female students (Kebirungi et al., 2017). This helps to limit diseases such as skin irritations, urinary tract infections, worm

infestation, lymphatic filariasis, bowel complications, mental stress, and stigma among female students in HEI (Bartram & Cairncross, 2010).

There has been limited literature about menstruation hygiene in higher educational institutions which has led to limited understanding of their facilities for menstruation management. Consequently, over time planning and budgeting for these facilities has attracted limited attention (Kebirungi et al., 2017). Therefore, this calls for scholarly understanding and documentation of water and sanitation facilities for menstruation management in HEIs with the aim of increasing female enrolment, retention and completion rates (Mitchell, 2017).

1.1.3 Contextual Perspective

Menstruation is a natural and essential aspect of life, although it negatively impacts women's and girls' quality of life. Menstrual hygiene is essential to women's and girls' dignity and well-being. It is also a crucial component of basic sanitation, hygiene, and reproductive health care, all of which are rights guaranteed to women and girls. Globally, about 64% of women and girls' population is of reproductive age and menstruate each month for a period of 2 to 7 days (Hussein et al., 2022). Some menstruating women and girls are engaged in different spaces including educational institutions (Kebirungi, 2015b). In addition, academics, feminist activists, legislators, and practitioners all acknowledge the significance of menstruation because it is necessary for all menstruating individuals to achieve certain goals in the areas of health, education, employment, and gender equality (Kebirungi, 2015b).

However, there are still significant knowledge and understanding gaps on menstruation and its management in educational institutions. Open discussions about menstruation and its management have not met the required attention (Larsen-Reindorf & Shamsudeen, 2020). For insistance, menstrual education has not been implemented from elementary school onwards to help girls be ready for menarche, increase their understanding of menstruation, and teach boys how to support women and girls throughout their periods (Larsen-Reindorf, & Shamsudeen, 2020). Due to this knowledge gap, menstruating women and girls are considered 'un- clean', 'contaminated' and 'impure' (Larsen-Reindorf, & Shamsudeen, 2020). The situation could be due to lack of supportive work place and public health policies to promote accessibility and equal access of facilities to accommodate menstruating women and girls in educational institutions (Abanyie et al. 2016). If not properly managed,

menstruation can disrupt attainment of Sustainable Development Goals (SDGs), such as; SDG #3 on excellent health, SGD #4 on good education, SDG #5 on gender egalitarianism, and SDG #6 on the need for safe water and sanitation (Munro et al., 2021, Abanyie et al. 2016; Sang et al., 2021, Hussein, et al., 2022).

Globally, there is steady increase in the enrolment of students in different higher education institutions due to the MDGs and SDGs that mandate all the world countries to provide Education For All (EFA) at all levels (UNESCO, 2015). In Uganda, the Affirmative Action program which offers 1.5 points to borderline female candidates admitted into public Universities has increased girls' enrolment in Higher Education Institutions (Kebirungi, 2018) and Kyambogo University is no exception to this experience. Consequently, the aforementioned scenario forms the basis for inclusion of menstruation management facilities in the processes and arrangements of university routines to mitigate personal hygiene of students in higher education institutions.

The expanding number of students in sub-Saharan Africa is not matched by the availability of water and sanitary facilities for female students to manage their periods in public institutions (Kebirungi, 2015b). However, compared to their male peers in these educational establishments, female students need more water and sanitary facilities for washing and bathing, particularly during their menstrual cycles.

In Uganda, Kyambogo University is one of the public universities with an increasing student population. To date, the university has a total population of over 24,053 (Kyambogo University, 2018/2019). Since its inception in 2003, the number of female students has risen from 700 to 11,529 in 2018 (Kyambogo University, 2018/2019). However, despite the increase in the number of students, it is not certain

if the strategic plan of the University prioritizes investment in water and sanitation facilities for menstruation management for access and utilization by female students. Studies in Sub-Saharan Africa have only focused on: gender responsiveness in water and sanitation facilities provision and management in East African institutions: a case of Makerere University, Uganda and University of Dar es Salaam, Tanzania (Kebirungi, 2018); water conservation at primary and secondary levels in Sub Sahara Africa and East Africa (Ameade & Garti, 2016); recognizing the difficulties in managing menstruation hygiene that displaced women and girls face in Nairobi, Kenya's primary schools (Ellis et al., 2017); in primary and secondary schools in Sub-Saharan Africa, teenage girls manage their menstrual hygiene; a comprehensive analysis of the effects of water and sanitation on health and education in poor nations (Jasper et al., 2012); water, sanitation and hygiene standards for schools in low-cost settings in primary schools in Uganda (WHO, 2009). Most of these studies were conducted outside Uganda and majorly focused on pre- University educational institutions. Hence, these findings cannot be generalized to the Higher Education Institutions (HEIs). This gap therefore, provides an urgent need to investigate water and sanitation facilities for menstruation management by female students in HIE with specific reference to Kyambogo University.

1.2 Statement of the Problem

The call for equal and equitable access to education by all in the MDG #08 and SDG #04 coupled with the 1.5 points which has increased global demand for higher education leading to the increase in female students' enrolment in HEIs, Kyambogo University inclusive has had an increase in the female students' enrolment from 700 in 2003 to 11,529 in 2019 (Kyambogo University, (2019)). The above increase may

have put a strain on the already existing water and sanitation facilities for menstruation management. However, available studies (Sommer, & Armah, 2012; Schmitt et al., 2017; Kebirungi, 2015a) have not investigated the extent to which water and sanitation facilities are available for menstruation management by female students in HEIs. In addition, the aforementioned studies do not also reveal the extent to which HEIs plan and budget for water and sanitation facilities for menstruation management. This means that in HEIs, knowledge about availability of water and sanitation facilities for menstruation management remains un-documented. This forms a significant problem and a barrier to involvement in educational and social activities for some menstruating females. Provisioning of adequate on-campus water and sanitation facilities for menstruation management enables female students to compete favorably on the ladder of academic performance with their male counterparts (Gault et al., 2011).

1.3 Purpose of the Study

The purpose of this study was to investigate water and sanitation facilities for menstruation management for female students in HEIs: A case of Kyambogo University.

1.4 Objectives of the Study

The following objectives guided the study;

1. Assess the status of water and sanitation facilities for menstruation management by female students in HEIs.
2. Examine integration of water and sanitation facilities for menstruation management in the planning and budgeting processes in HEIs.

3. Assess female students' perception of access and utilization of water and sanitation facilities for menstruation management in HEIs.

1.5 Research Questions.

The study was guided by the following research questions.

1. What is the status of water and sanitation facilities for menstruation management by female students in HEIs?
2. Do University managers integrate water and sanitation facilities for menstruation management in the planning and budgeting processes in HEIs?
3. How do female students perceive the accessibility and utilization of the current status of water and sanitation facilities for menstruation management?

1.6 Significance of the Study

The Study contributes to the body of knowledge on water and sanitation facilities for menstruation management for female students in HEIs which can be used as a source reference by researchers interested in this area of study.

These findings advocate for consideration and provisioning of adequate water and sanitation interventions that promote the right of female students to access and utilise appropriate water and sanitation facilities for menstruation management at KyU and other HEIs.

The revelation that the status of water and sanitation facilities for menstruation management at Kyambogo University are quantitatively and qualitatively inadequate may guide the department of Estates and Works to continue working to improve on the provision and maintenance of water and sanitation facilities for menstruation management.

The finding on the absence female student representatives in the planning and budgeting processes of the Estates Department may encourage policy makers at the university to come up with strategies for their inclusion in the planning and budgeting processes of the Estates Department. This will enable the department to budget and plan for water and sanitation facilities for menstruation management adequately.

Female students' perception that water and sanitation facilities for menstruation management aren't publically discussed and demanded for by students may serve as a basis for the Gender directorate at the university to sensitize students about their rights to participate in public discussions on accessibility, acceptability and utilization of water and sanitation facilities for menstruation management in Higher Education Institutions.

Finally, the findings are beneficial to the Ministry of Education and any other bodies interested in enhancing females access to Higher Education in Uganda. These findings can be used to inform evidence-based interventions as regards to provisioning and maintenance of water and sanitation facilities for menstruation management in HEIs Uganda.

1.7 Scope of the Study

This section involved the content, geographical and time scope.

1.7.1 Geographical Scope

The study was conducted in the teaching facilities of four faculties and one school at Kyambogo University. Kyambogo University is located in Nakawa Division in Kampala Capital City Authority (KCCA)

1.7.2 Time Scope

The study period was limited to the operation of Kyambogo University from August 2019 to December 2020.

1.7.3 Content Scope

The study basically focuses on the status of water and sanitation facilities for menstruation management, the integration of water and sanitation facilities for menstruation management in the planning and budgeting of Kyambogo University and female students' perception towards the utilization of water and sanitation facilities.

1.8 Theoretical and Conceptual framework

The theory that informed this study forms the basis of its conceptual framework. The study was based on Goffman's pollution theory.

1.8.1 Theoretical Framework

This study was guided by Goffman's (1971) pollution theory. Goffman is a prominent sociologist known for his work of symbolic interactions and the study of face to face interactions. In the context of this study, the theory asserts that any stain sets people apart from others. Meaning that, stains are the source of stigmatisation to female students in HEIs. According to this theory, stains stigmatise people because they spoil the appearance or identity of people in the eyes of others (Goffman, 1971). In theorising stigma, Goffman established three distinct types of stains from menstrual blood namely: 1) Abominations of the body 2) Blemishes of individual character, and 3) Social markers associated with marginalized groups. According to Goffman, abominations of the body are perceived in physical bodies due to changes

in life and may be caused by hormone changes or in rituals and hygiene practices. In this case menstrual blood is constructed as a substance very intimately associated with concepts of dirt. In the context of this study, the idea of provisioning facilities, planning and budgeting for effective menstruation management should therefore be part of the public realm. This is because its negligence causes girls' contamination that can lead to avoidance and social distancing.

On the aspect of stains blemishing the individual's character, Goffman (1971) states that beliefs motivated by culturally determined and stigmatized understandings, undesirable or "unnatural" beliefs, values, attitudes about menstruation commonly represent menstruating women as; ill, disabled, out-of-control and unfeminine and hence show a very narrow conception of menstruation (Goffman, 1971). This view makes menstruation management strictly 'a females' personal to holder's affair' and a private affair. It's not clear whether this perspective may contribute to limited discussions about menstruation in HEIs. Therefore, this could limit awareness about the significance of planning and provisioning of facilities for effective menstruation management at institutional level.

On social markers associated with marginalized groups, Goffman, (1971) asserts that such groups often lack basic tools and resources that are readily available to non-marginalized groups. In this study, such resources may include water and sanitation facilities for menstruation management like sanitary disposable bins. They may also encompass policies and regulations governing menstruation, prioritization of menstruation management in the planning and budgeting processes, commitments and capabilities to enforce and make available the required menstrual facilities. By

prioritizing such tools and resources, HEIs can remove some of the oppressive barriers and increase access and utilization of water and sanitation facilities for menstrual management by all categories of students, including female students with disabilities.

Furthermore, basic tools and resources may serve as a springboard for gender sensitive activists to advocate for sanitation facilities that provide women with the capacity to manage menstruation without any stigmatization. Such water and sanitation facilities help to normalize an alienated experience of menstruation maintained through “emphasizing secrecy, freshness, and avoidance of embarrassment and a discourse of self-consciousness (Goffman, 1971). According to the pollution theory, water and sanitation facilities for menstruation management are equally needed by female students in Universities because they, too, need to avoid the different forms of stains associated with the menstruation period. Thus, provisioning adequate and relevant water and sanitation facilities for menstruation management in the Universities is one of the many ways of enhancing female students’ access to higher education. It is therefore imperative that University budgets and strategic plans affirmatively provide water and sanitation facilities for menstruation management to female students.

According to this theory, stains stigmatise people because they spoil the appearance or identity of people in the eyes of others (Goffman, 1971). This theory stresses that water and sanitation facilities for menstruation management are needed by female students in Universities because they, too, need to avoid the different forms of stains associated with the menstruation period.

Chrisler and Johnston-Robledo (2011) also applied Goffman's theory. Through marketing and instructional materials, the authors argue that women experience societal shame related to menstruation. After reviewing psychological research on the beliefs and experiences of mostly American girls and women, the authors discovered that the stigma associated with menstruation had a significant negative impact on these individuals' health, sexuality, and general well-being. The authors came to the conclusion that women's lower social standing is both a reflection of and a cause of the stigma around menstruation.

Furthermore, Nettleton and Uprichard (2013) used Goffman's pollution theory in their theoretical perspective of their study of Risk, Individualization and the Genealogical Imaginary in Epigenetics. The authors drew on Goffman's pollution theory to understand the social implications of epigenetics and its potential impact on individual identity-changes that can be influenced by environmental factors and can have implications for health and disease. The authors further demonstrate that the knowledge of epigenetic risks and individualized understandings of genetic inheritance could potentially stigmatize individuals or alter their self-perception. The concept of pollution, in this context, could refer to the idea that certain epigenetic markers or risks may be seen as contaminating an individual's genetic heritage, leading to the potential for social exclusion, discrimination or negative perceptions. By employing Goffman's pollution theory, the study might have sought to understand the ways in which individuals negotiate and manage their epigenetic risks and how these risks intersect with broader social and cultural narratives related to identity, family history, and the "genealogical imaginary" (which refers to the collective imagination and beliefs about genealogy and heredity). However, none of the above

studies has used the Goffman's theory to investigate water and sanitation facilities for menstruation management in HIEs.

Goffman's theory therefore, will be used in this study to investigate the status of water and sanitation facilities for menstruation management by female students at Kyambogo University. The theory will be used to question key variables like the availability of toilets and water for menstruation management, disposal facilities of used sanitary towels, whether the locations of these facilities are safe at all times, status of toilets for instance, whether they are maintained clean. The theory will further assess female students' perception of access and utilization of water and sanitation facilities for menstruation management in HEIs; whether the facilities are accessible, appropriate and utilised by heterogeneous groups of female students, whether the facilities provide privacy and dignity to the users. The other aspects to be investigated are the planning and budgeting of water and sanitation for menstruation management. Key questions of investigation are; whether the university employs a gender and equity planning and budgeting and participatory processes, engagement of key stakeholders in the planning and budgeting, whether funds are allocated for water and sanitation facilities for menstruation management.

1.8.2 Conceptual Framework

Provision of water and sanitation facilities for menstruation management is a key concept in this study that was expected to minimise the social stigma (discrimination) women receive from the public due to menstruation stains (Goffman, 1971). In this study the planning and budgeting process was expected to cater for water and sanitation facilities for menstruation management and include females in its activities. Planning and budgeting for adequate water and sanitation

facilities for menstruation management was expected to ensure; accessibility, availability, acceptability and utilisation of these provisions by female students to use (Brown et al., 2023; USAID, 2015). In this context, planning and budgeting was the explanatory variable (construct) which determines the quality of the response variables (constructs). These included the status of; water and sanitation facilities, access, availability, acceptability and utility of water and sanitation facilities for menstruation management (Akanzum & Pienaaah, 2023; Daniel et al., 2016).

Figure 1. 1: shows the aforementioned Conceptual Framework of the Study

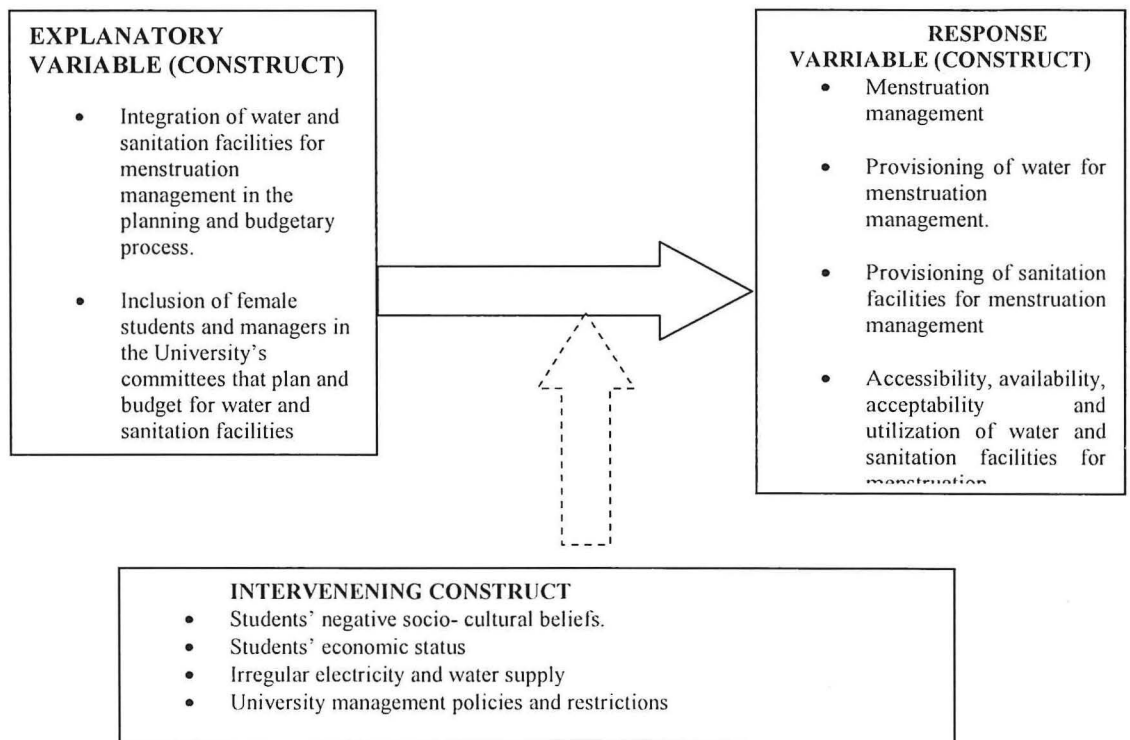


Figure 1.1: A diagram of the Conceptual Frame work Source: Author's creation

2021

Fig.1.1 indicates that integrating water and sanitation facilities for menstruation management in the planning and budgeting process determine the status of their provisioning and in turn their availability, accessibility and utility. Inadequate

budgetary provisions for water and sanitation facilities for menstruation management makes them unavailable and inaccessible in educational institutions (Adeleya and Olumayokun 2014; Giurco et al., 2010; Akanzum & Pienaaah, 2023; Kebirungi, 2015b; United Nations, 2010). According to Giurco et al. (2010) deficiency in the budgets and plans for access and utilization of water and sanitation facilities by females is brought about by the absence of water efficiency measures that affirmatively integrate sanitation for menstruation management into their plans. In addition, available literature also indicates that inadequate representation of females in the planning and budgeting committees accounts for the inadequate provisioning of water and sanitation facilities for menstruation management in educational institutions (Daniel et al., 2016; Mollinga, 2008; Shah et al., 2023; Sugden, & Ryley, 2014; Torondel and VanLeeuwen, 2018; USAID, 2015; Uwimana, 2014). The aforementioned observations form the basis upon which the integration of water and sanitation facilities for menstruation management in the planning and budgeting process is the explanatory concept in this study.

According to Hennegan et al. (2020) and Sommer and Armah (2012), menstruation management refers to the behaviours and practices, processes and resources that individuals utilise to address menstrual bleeding. It includes the use of various materials and products to absorb or collect menstrual blood, as well as the adoption of hygiene practices, such as washing the genital area and changing menstrual products regularly to prevent infections. In the context of this definition, menstrual management encompasses both the physical management of menstrual bleeding and the hygienic practices associated with it. It emphasizes the importance of addressing the practical aspects of menstruation management, such as the availability and

accessibility and acceptability of appropriate menstrual water and sanitation facilities for menstrual hygiene practices. These facilities include; disposable materials, mirrors, soap, changing rooms and flat irons in the toilet facilities at the University. These facilities can only be provided adequately in HEIs when the planning and budgeting processes affirmatively cater for them.

Water and sanitation facilities influence the menstruation management by female students at the university. Failure to provide, maintain and access water and sanitation facilities in toilet facilities at the university by female students results into absenteeism spread of urinal infections and trauma. This means that; accessibility, availability, acceptability and utilization of water and sanitation facilities enhance menstruation management. This enables female students just like their male student counterparts to also accomplish their academic endeavors favourably. When these amenities are integrated into the planning and budgeting processes of HEIs, they enhance menstruation hygiene of female students.

Generally, female students prefer water and sanitation facilities for menstruation management that ensure privacy and dignity (Kebirungi, 2015b). However, the diversity of students induces variations in their preferences for water and sanitation facilities for menstruation management. These preferences vary with the socio-economic and cultural backgrounds of students (Kebirungi, 2015b). This study was also cognisant of the other factors that determine the status of access, availability, acceptability and utilisation of water and sanitation facilities for menstruation management. These include; students' low income, irregular water supply by National Water and sewage Cooperation and irregular electricity supply. However,

these were not the focus of this study and therefore formed a limitation in this study and a basis for further research.

1.9 Limitation and Delimitation

- i) Inadequate funds limited the study scope to teaching facilities and excluded the Halls of residence at KyU. The researcher overcame this by involving both resident and nonresident students in the study.
- ii) The sample population was limited to only third year female students, excluding second and first year female students. These findings cannot be generalized to second and first year students.
- iii) The study concentrated more on environmental factors and ignored the individual factors that affect the menstruation management by students in HEIs. This will be addressed in another for purposes of enriching understanding available knowledge on menstruation management by students in HEIs.

1.10 Operational Definition of Terms

In this study, the following key words have been defined.

Integration of Sanitation facilities for menstruation management:

Refers to including sanitation facilities for menstruation management in the planning and budgeting of Kyambogo University (Kebirungi, 2015a).

Integration of Water facilities for menstruation management:

Means including water for menstruation management in the budgeting and planning of the University (Adeleya & Olumayokun, 2014).

Utilisation of Water and Sanitation facilities for menstruation management:

Refers to accessibility of water and sanitation facilities to be utilised for menstruation management by female students (Sommer, & Armah, 2012).

Perceptions of female students towards Water and Sanitation facilities for menstruation management:

It refers to females students' views towards the availability, acceptability, and accessibility of the water and sanitation facilities for menstruation management in educational institutions (UNICEF, 2012).

Academic activities:

These refer to learning actions/undertakings used to determine academic credit. These include; examination, writing project, revision, academic conferences, informal academic group discussions, public lectures, attending lecturers, or other or competition activity (UNESCO, 2012).

Menstrual privacy:

This refers to lockable toilets, private places for changing and drying under garments (Kebirungi, 2016).

Socio cultural beliefs:

Refer to social and cultural factors like common traditions, habits and patterns presented in a certain population group. This implies the major influence of how people make decisions in a society (UNICEF, 2012).

Tap water: Tap water is supplied through a tap

Piped water: Piped water is a system of making water accessible

Menstrual hygiene: It involves maintaining cleanliness and taking necessary precautions to ensure comfort and health during menstruation. Proper menstrual hygiene is essential to prevent infections, discomfort, and other health issues associated with menstruation.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter presented information on literature related to the study. The literature was reviewed and presented according to the objectives of the study which are; the status of water and sanitation facilities, integration of water and sanitation facilities for menstruation management into planning and budgeting, and female students' perception toward the availability, access and utilization of water and sanitation for menstruation management.

2.1 Status of Water and Sanitation Facilities for Menstruation Management in HEIs

Availability, accessibility, utilization, and acceptability serve as indicators that explain the status of water and sanitation facilities for menstruation management (Hassan et al., 2023; Kebirungi, 2015b; Lenton & Muller, 2012; Sommer, & Armah, 2012; United Nations, 2017; United Nations 2015).

The UN General Assembly has declared that having access to clean water and proper sanitation is a stand-alone global human right (United Nations, 2015). Furthermore, because access to safely managed water and sanitation is a worldwide concern, the Sustainable Development Goal 6 stipulates that it should be available to all people (United Nations, 2017). Similarly, the UN's Mar del Plata Conference of 1977 and the 1992 Earth Summit held in Rio de Janeiro operationalise the principle of water as a public good with both social and economic values (Lenton & Muller, 2012). This serves as the reason why focus on water and sanitation is benchmarked in pre-university educational institutions like primary and secondary schools in developing countries (Gebre at el., 2023; Mohammed, 2020; Sommer & Armah, 2012).

According to WHO (2019) and UNICEF (2016), 844 million people globally do not have access to basic sources of water and 2.3 billion people have no access to basic sanitation facilities. Since water and sanitation are essentials of life they require to be provided at a community level through tube wells, flush toilets, and pit latrines for sanitation at the household level (Cumming et al, 2014). However, unlike the communities and homesteads, higher institutions of learning in East African countries that use different sources of water like tap and piped water for flushing toilets have not been captured in global water statistics (Mulugeta, 2023; Sommer & Armah, 2012).

In Kenya, water and sanitation facilities for menstruation management include tapped water for washing hands and flushing toilets (Kebirungi, 2015a). In Kenya still, piped water, water in the bath rooms and toilets is relevant in menstruation management for; washing soiled clothes, refreshment after changing disposable materials, and flushing toilets (Githinji et al., 2016). However, the literature in Ethiopia does not declare whether sanitation access and utilization as a human right have been realized by higher institutions of learning (Sommer & Armah, 2012). In these institutions, male and female students have different needs and interests related to access and utilization of sanitation facilities. Female students require more water and sanitary facilities for bathing and washing more, especially, during menstruation than male students (Angmo et al., 2023). Therefore, female students are more affected by inadequate water and sanitation (Daniel et al., 2016; Kebirungi et al., 2017).

In some instances, in Tanzania, facilities are available in primary schools, secondary schools, and HEIs but are not enough to be used for menstruation management by the available population (Hassan et al., 2023; Sommer & Armah, 2012).

Acceptability of sanitation facilities is important in menstruation management (Daniel et al., 2016). Daniel et al. (2016) explains that acceptability to sanitation involves functional facilities, convenient disposal methods, and hygienic practices during menstruation. In addition, UNICEF (2008) explained the acceptability of sanitation facilities for menstruation management as the provision of privacy and hygiene facilities for female students through separate toilets for males and females as well as water and wash areas. Further still, inability to access clean toilet facilities, dustbins, incinerators, and water affects female students' health and academic performance and can cause several complications such as diarrhoea, urinary tract infections, worms' infestation, lymphatic filariasis, bowel complications, and malnutrition (Bartram & Cairncross, 2010; Brahmanandam & Bharambe, 2023; Chambers et al., 2016; Demsash et al., 2023; Grimes et al., 2015; House et al., 2012; Kebirungi, et al., 2017). Further still, a study conducted in Ethiopia found that, most girls in rural primary schools are at a high risk of getting genitourinary tract infections due to their lack of adequate sanitation facilities to use during menstruation which influence them to use unhygienic practices during menstruation which lead to further complication if left untreated (Molla et al., 2014). Furthermore, inadequate sanitation provisioning and management lead to mental stress, stigma, and conflicts to school going girls in Sub Saharan Africa (House et al., 2012; Rugimbana & Mwila, 2023). It can also lead to risks of violence, for example, when someone is assaulted or raped on the way to a distant toilet facility at night, all

of which can negatively affect the academic performance of students (Chambers et al. 2016; Girmay et al., 2023).

In addition, the report by Water Aid (2010) indicated that 355 million women and girls in India lack access to toilets. It was also noted that they were to stand in a line and the queue could be very long (Senapathi & Kumar, 2018).

Inadequacy of sanitation facilities for menstruation management is a prevalent phenomenon in many primary schools world over (Kassaw et al, 2014; Kebirungi et al., 2017; Molla et al., 2014; Njue & Muthaa, 2015; Rugimbana & Mwila; 2023; Schmitt et al., 2019). For instance, Jewkes and Connor (1991) reported that primary schools in the United Kingdom did not have the minimum number of toilets and basins, toilet papers were also not available and some did not have sanitary towels disposal units. According to UN (2016) majority of schools in developing countries do not provide adequate sanitation facilities that assure functionality and gender segregation to help females manage their menstruation by maintaining personal hygiene. For instance, in Nigeria according to (Njue & Muthaa, 2015), most primary schools did not have adequate toilets and did not provide adequate sanitary pads. According to Kassaw et al (2014), in Kenya, girls in primary had difficulty managing their menstrual periods at school due to lack of adequate privacy and sanitary facilities; girls were supposed to carry soiled absorbents back home. Furthermore, according to Esau et al. (2023) and Sommer and Armah (2012), female students with disabilities are the most affected by the inadequacy of sanitation facilities for menstruation management.

At the level of higher education institutions, Kebirungi et al., (2017) found that sanitation was inadequate at Makerere University. She found that Zones under inadequate sanitation conditions represented 66.85% with 17.37% adequate for male students and 15.7% for female students while the rest of the university is inadequate at 84.22%. Water and sanitation facilities at Makerere University were characterized by blockages, burst pipe leakages as a result of aged pipes and over load of water and sanitation wastes causing flow backs (Kebirungi, 2015a). Kebirungi (2015b) observed that although Makerere increased female students' admission in the early 1990s, it has done nothing much to make the environment comfortable for them. The existing structures were constructed before the numbers of female students increased to the current numbers. This is because universities do not consider the special interests of females which promote gender inequality (Kebirungi et al., 2017). According to Jasper et al, (2012) adequate sanitation systems contribute to successful educational experiences in school by supporting good health and school attendance. Conversely, inadequate sanitation systems in schools contribute to increased absenteeism, decreased academic performance, and delays in academic development (Hassan et al., 2023; Mills & Cumming, 2016).

Lack of privacy makes sanitation facilities and water for menstruation management inaccessible (Rugimbana & Mwila 2023; Schmitt, et al., 2017; Kebirungi, et al., 2017). Sommer and Armah (2012) in a study conducted in primary and secondary institutions in northern Tanzania found that forcing girls to share the same sanitary facilities with the males denied them access to toilets and bathrooms because it makes them more vulnerable to rape and other forms of gender-based violence. Schmitt et al., (2017) too, found that in secondary institutions in India, toilet rooms lack privacy and are not easily accessed by females. Also, in a study conducted in

Syria, Crichton et al (2013) indicated that girls and women resist the use of waste bins placed in latrines because of the strong cultural belief that perceives it is as taboo for others to see their used pads in the bins. This situation was worsened by using the same toilets both by women and men which makes women and girls more uncomfortable (Margret et al., 2017 & Jasper et al., 2015). Jasper et al (2012) also found that most secondary school and primary school women and girls in primary schools decide to carry dark colour plastic bags for secretly putting in the used materials to be later disposed of in the household trash or some even choose to stay home during menstruation (Margret, et al, 2017). Similarly, Kebirungi, et al, (2017) too found that in Makerere and Dar es Salam Universities in East Africa, placing sanitary bins outside the toilet, close to the hand, wash basins made female students uncomfortable to carry used sanitary towels from the toilets to open areas. Other students waiting in the line to use the toilets could see them dropping these towels in the bin. Students then resorted to leaving them on the floor, placed them on the toilet water cisterns, or dropped them in the toilets due to the fear of being seen by other fellows which resulted in the blockage of toilets (Kebirungi, 2015a).

Unhygienic sanitation facilities make them inaccessible for menstruation management (Boosey & Wilson, 2014; Esau et al., 2023; Gabizon, 2009; Kebirungi et al., 2017; Montgomery & Elimelech, 2009). According to Gabizon (2009), in-door toilet facilities for proximity with female-friendly facilities would help to improve the status of sanitary facilities for menstruation management. However, both indoor and outdoor toilets in higher institutions of learning in East Africa display inadequate sanitation with floors covered with waste water making the environment not favourable and unhygienic for female students to manage menstruation. This affects female students' comfortable stay at the universities. This is because women and

girls don't need toilets and bathrooms just for defecation but also for privacy and dignity when menstruating. A study conducted in the East African Universities of Makerere and Dar es Salaam by Kebirungi, (2015b) found that disposal of used sanitary bins are few compared to the number of female student users whereby they end up getting filled faster than expected. Her study further revealed that whenever the sanitary bins filled up, female students resorted to throwing the used sanitary materials on the floor or placing them on cisterns which resulted in littering of the place and consequently attracted flies. Keburungi, (2015b) further found that, for some female students, such a scenario led to continuous menstruation by the mere looking at blood. This affects students both economically by spending on sanitary towels continuously and psychologically by feeling that their reproduction health has been affected to the extent of thinking they will never have children when they get married. The aforementioned scenario is not exclusive to Makerere University. Globally, (Anbesu & Asgedom, 2023; Montgomery & Elimelech, 2009) found that in many developing countries water and sanitation for menstruation management have not received enough attention. Toilets in other higher institutions of learning in East Africa were also reported to be cramped, dirty and lacking in separate space for disposal (Montgomery & Elimelech, 2009). This has been caused by a lack of awareness and social taboos which appeared to be significant factors contributing to health complications in young girls when they reach puberty (Boosey & Wilson, 2014). This scenario, too, explains why most of the sanitation facilities in schools or workplaces in developing countries are unsafe and unhealthy (Boosey & Wilson, 2014).

There is a lot of literature on water and sanitation in educational institutions. Girmay et al., (2023) on factors influencing access to basic water, sanitation, and hygiene (WASH) services in schools of Bishoftu Town, Ethiopia: a cross-sectional study; Imalele et al (2023); environmental contamination by soil-transmitted helminths ova and subsequent infection in school-age children in Calabar, Nigeria. Also, Effiom et al., (2023), analyzed psycho-cognitive variables of principals and faeces management practices in Secondary Schools in Cross River State, Nigeria: The Need for Guidance and Counselling Imperative; investigated living with Endometriosis: A Narrative Analysis of the Experiences of Kenyan Women; Rugimbana and Mwila (2023) studied school dropout among Girls: Reasons and Measures in Community Secondary Schools in Temeke Municipality, Tanzania. Esau et al. (2023), assessed grassroots action for improved menstrual health and educational justice with girls in East Kwaio, Solomon Islands. *Sex and Gender in the Pacific*; Hassan et.al, (2023), menstrual health and hygiene among young Palestinian female university students in the West Bank: a cross-sectional study. Influences on water source selection and use among women in rural Odisha, India; Anbesu and Asgedom (2023). Menstrual hygiene practice and associated factors among adolescent girls in sub-Saharan Africa: a systematic review and meta-analysis; and Kebirungi et al. (2017), studied gender responsiveness of access to and utilisation of water and sanitation facilities at Makerere University and University of Dar es Salaam. Based on the aforementioned literature, it is evident that available scholarly documentation does not raise the profile of the status of water and sanitation facilities for menstruation management by female students at Kyambogo University. It is thus important to establish the status of water and sanitation facilities for menstruation management at KyU. This is the basis upon which this study seeks to investigate the provisioning of water and

sanitation facilities at Kyambogo University for menstruation management by female students.

2.2 Integration of Water and Sanitation Facilities for Menstruation Management in HEIs' Planning and Budgeting

Inadequate budgetary provisions for water and sanitation facilities for menstruation management makes them unavailable and inaccessible in educational institutions (Adeleya & Olumayokun 2014; Akanzum & Pienaah, 2023; Giurco et al 2010; Kebirungi, 2015a; United Nations, 2010). Inadequate budgetary provisions for sanitation facilities are also existent in Universities (Kebirungi, 2015a). Universities in East Africa face fiscal problems in maintaining infrastructures for menstruation management because the available resources are constrained by teaching and learning financial demands (Kebirungi, 2016). The aforementioned scenario leaves Universities in developing countries with small budgets to address the water and sanitation emergencies (Adeleya & Olumayokun 2014). According to Giurco et al. (2010) no similarities in the deficiency in the budgets and plans for access and utilization of water and sanitation facilities by females is brought about by the absence of water efficiency measures that affirmatively integrate sanitation for menstruation management into their plans. According to the United Nations (2010), there has been an increase in budget allocation for sanitation facilities in primary schools in Africa from 6% to 10%, although the amount of the overall budget spent is not available. This increase is equally gender blind. It does not indicate the budget allocation for water and sanitation facilities for menstruation management by the girl child. Daniel et al, (2016) also mentioned that in Cambodia the main obstacle to teachers' support for girls' regularity at school was the lack of a budget to purchase

new materials and supplies for menstruation management since the bigger part of the budget was allocated to academic staff. According to the study conducted by Kebirungi, (2015b) in Makerere and Dar es, Salaam universities, water supply, and sanitation financial resource management are not augmented with gender, academic achievement, and public health benefits. In addition, Munro et al., (2021) stressed that higher education in Bangladesh has failed to provide funds according to the varying needs of the diverse population groups in the universities.

Inadequate representation of females in the planning and budgeting committees accounts for the inadequate provisioning of water and sanitation facilities for menstruation management in educational institutions (Daniel et al., 2016; Mollinga, 2008; Shah et al., 2023; Torondel & VanLeeuwen, 2018; Uwimana, 2014; USAID, 2015; Sugden, 2014). The aforementioned scenario is experienced in HEIs in African countries. USAID (2015), too, reported that Universities in Sub-Saharan Africa have failed to differentiate student categories and their needs for sanitation facilities. This is partly due to the inadequate representation of females in the planning and budgeting committees. Cultural attitudes, social norms, historical and systemic gender discrimination against females contribute to females' invisibility in water provisioning, access, and management (Sugden, 2014). Similarly, Daniels (2016) found that male teachers who are the majority in administration in secondary schools in Cambodia have ended up allocating few resources to budget for sanitation facilities because they are not aware of the menstruation management needs for female students. Patel et al., (2023); Torondel and VanLeeuwen, (2018) and Nunbogu et al., (2023) too, found that in Kenya the inclusion of males in planning for females' sanitation facilities for menstruation management resulted in inadequate acknowledgment of their needs for menstruation hygiene. A similar situation was

found in Bonn University Germany, where the exclusion of women's gender perspectives in sanitation resource management hindered the delivery of sanitation facilities, especially for menstruation (Mollinga, 2008; Sagardoy, 2023). While at Makerere and Dar es Salaam universities in East Africa, due to the exclusion of women in the planning and budgetary processes, the majority of students are not aware of the importance of gender relations, benefits accumulated in the provision, safeguarding, and management of water and sanitation facilities to meet female student's needs (Kebirungi, 2015a).

Adequate representation of women's participation in the water supply and sanitation program's planning and budgetary local management increases the availability, accessibility and utility of water and sanitation facilities for menstruation management (House et al., 2012; Melese & Fenta, 2009; Rose et al., 2003; Telmo, 2002; Sagardoy, 2023; USAID, 2015; Uwimana, 2014). According to Brown et al., (2023) and House et al., (2012) to minimize the risks of adequate sanitation facilities for menstruation management in institutions of learning, it is important to ensure equal women's participation in the water supply and sanitation program's planning and local management activities. Alda-Vidal et al., (2023); and Telmo (2002), too, observed that equal participation of stakeholders in planning, budgeting, and implementation of water and sanitation resources management in higher institutions of learning ensures appropriate recording and reporting mechanisms for financing water and sanitation resources development. Uwimana (2014) reported that in Rwanda, there is gender inequality whereby few women are involved in planning for the emergency management of their society which leaves sanitation facilities for menstruation management unplanned for or given a very small budget. The

aforementioned situation is worsened by the prevalent unwillingness by stakeholders in Sub-Saharan Africa to discuss menstruation hygiene in public (Anbesu & Asgedom, 2023; Daniel et al., 2023; USAID, 2015). In addition, the above situation entirely affects education institutions and their programs, especially the female students' participation in educational activities. In Ethiopia, a strategy is used to change attitudes towards the role of sanitation facilities in education institutions by recruiting, training and involving female teachers in the budgeting and planning for water and sanitation facilities in schools and giving them financial support to raise participation of female students in educational activities and even during menstruation (Rose et al., 2003). In addition, women's policies like the political, economic and social rights policies have been made in developing countries which aim at ensuring equitable participation of females and males in the education activities (Melese & Fenta, 2009).

According to the above literature, integration of water and sanitation facilities in the plans and budgets of education institutions is limited and gender blind. This is basically due to the meagre funding existent in the education institutions. Limited provision of water and sanitation facilities for menstruation management is aggravated by the scarce participation of females in the planning and budgeting processes. Available literature indicates experiences of such scenarios only in primary schools, secondary schools, and universities. The available literature presented in this section in higher education institutions on this subject is scarce. Thus, there was the need to specifically establish the status of inclusion of female students in the planning and budgeting process for the integration of water and

sanitation facilities for menstruation management in higher institutions of learning. This study intends to do this with specific reference to Kyambogo University.

2.3 Access and Utilization of Water and Sanitation Facilities for Menstruation Management in Higher Education Institutions

In this section, perception about access and utilization of water and sanitation facilities refers to females' views towards the availability, acceptability, and accessibility of water and sanitation facilities for menstruation management in educational institutions.

Silence about menstruation by females in education settings limits the provisioning of water and sanitation facilities for menstruation management in educational settings (Brown et al., 2023; Daniel et al., 2016; Mahon, 2011; UNESCO, 2014; Schmitt et al., 2019; Castaneda, 1996). UNESCO (2014) stresses that silence about menstruation by females in education settings is cultural since it is taken as a shameful subject that needs to be hidden because it might cause misunderstandings. In India and elsewhere in the world, these socio-cultural perceptions play a role in the choice regarding the use of sanitation facilities in schools by female students during menstruation (Mudi 2023; Sato et al., 2023). Among the Gujjar tribe in India, soiled clothes could only be washed in secret and then buried or reused without being seen by any other person other than the owner (Schmitt et al., 2019). In North Eastern Niger, women and girls were observed washing their used rags only at night because they thought it is shameful and dangerous to associate with menses (Iornumbe et. al., 2023). Similarly, in Kenya, Ghana, and Tanzania, girls and females have the same perception towards menstruation which makes it hard for school girls to manage their menstruation at school Kasiva, (2023); Mahon, 2011); Ngonyani and

Kamando (2023). In rural Mexico, menstrual flow was also seen as dirty and shameful and issues concerning menstruation had to be hidden away from men in the community (Castaneda, 1996).

Girls' fear to drop used sanitary pads in disposable bins because they could be bewitched limits their utilization of available sanitation facilities for menstruation management in educational settings (Kebirungi et al., 2017; Melaku et al., 2023; Umeora, 2008). The belief that disposal of menstrual waste was attached to witchcraft In Nigeria and Ethiopia, disposal of menstrual waste was attached to witchcraft where females in Higher Education Institutions of learning are scared to dispose off their used rags since they could be used to bewitch them (Idoko et al.; 2023; Mulugeta, 2023; Umeora, 2008). In Uganda as well, school girls at all levels fear to drop their used rags in disposable bins because they could be bewitched. Therefore, most of them prefer to carry them home from school (Kebirungi et al., 2017).

The distant location of the sanitation facilities makes them inaccessible for menstruation management (Brown et al., 2023; Kebirungi, 2015b; Sneha & Sen, 2023; Sommer and Armah, 2012; UNESCO, 2015; WHO, 2009). In Kenya, latrines are located far from classrooms in higher institutions of learning. Most girls find it hard to use such sanitation facilities because they are inaccessible, especially during menstruation, therefore they decide to stay home (UNESCO, 2015). In addition, girls living on campus suffer the challenge of distant location of sanitation facilities in northern Uganda (Kebirungi et al., 2017; WHO, 2009). These facilities were very few and are far away from resident tents where they were staying making them inaccessible by girls to use due to the fear of being captured more especially at night. Still in Mozambique, sanitation facilities in primary schools were located very far

away from classrooms and were very few whereby girls had to line up to use the toilets (Sommer & Armah, 2012). This condition made many school going girls to drop out of school especially during menstruation. In some school settings in Uganda, sanitation facilities are located near teaching rooms whereby some female students fear to use them during menstruation because to them, it requires total privacy (Kebirungi, 2015b).

The unusable state of the sanitation facilities made them inaccessible, unavailable and unutilizable for menstruation management (Chin, 2017; Haque, et al., 2018; Kassaw et al., 2014; Molla et al., 2014; Winkler, 2014). Kassaw et al. (2014) found that in Ethiopia, sanitary facilities in primary schools were not user-friendly for girls especially during their menstruation. The facilities lacked privacy, hygiene, and safety because they were very dark and had no water and bins to dump used rags. Most girls perceived sanitary facilities in their schools as inaccessible for use, especially during menstruation and this caused their irregularity at school. According to Haque, et al. (2018), in Bangladeshi, toilet facilities in secondary and primary schools were un-accessible by female students during menstruation since they were located so far away from the main teaching buildings. They added that owing to this, female students, most especially in primary feared to go alone to clean themselves during menstruation and therefore had to be in the company of a friend yet menstruation requires privacy (Haque, et al., 2018). Haque et al. (2018) continued to explain that school going girls have developed a negative attitude towards menstruation because of the hardships they face during menstruation. In India, 69% of girls use old pieces of cloth and therefore they need to constantly check and wash them for menstrual hygiene yet sanitation facilities in their schools do not provide changing rooms which makes it very hard for these students during menstruation

(Chin, 2017 & Molla et al., 2014). Girmay et al., (2023) demonstrate that sanitation facilities in schools in Ethiopia cause psychological trauma to female students to worry when they start their menstruation during school hours because the sanitation facilities are in a sorry state in secondary schools. In Malawi, 90% of girls miss school during menstruation because of unusable sanitation facilities in educational institutions (Pilliteri, 2011). The dirty and unclean toilet facilities in educational institutions in developing countries has led to fear, stigma and shame to school girls during menstruation and most of them have resorted to staying home during menstruation period to avoid the embracement especially from their male classmates (Winkler, 2014). According to Myers (1999) empowering schoolgirls through Participatory Learning and Action (PLA) could help them to know more about menstruation through discussions about menstruation management issues to enable them change their perception towards it.

The aforementioned literature indicates an absence of documented literature about female students' perception on the access and utilization of sanitation facilities for menstruation management at Kyambogo University (KYU). The findings from the two East African Universities of Makerere and Dar es-Salaam by Kebirungi, (2015a) and the University of Bonn in Germany do not apply to Kyambogo University because of the differences in their settings. Kyambogo is a young university, that is, only seventeen years, while the universities of Makerere, Dar es Salaam and Bonn are all over fifty years old. The student population, infrastructure, social amenities, and government funding in these public universities are significantly different.

In the aforementioned context, this study sought to provide documentary evidence on female students' perception concerning the access and utilization of sanitation provisioning for menstruation management at KyU. Such awareness will provide the basis for planning and budgeting units at the university to ensure availability of adequate water and sanitation facilities for better menstruation management by female students and ultimately improve their access to higher education.

2.4 Summary of the Literature Review

The literature reviewed above highlights that the availability, accessibility and usability of water and sanitation facilities are important factors for menstruation management. However, most of the studies reviewed on the aforementioned aspects were conducted at Pre-University Education Institutions. These studies did not clearly reveal the prevailing status of the availability, accessibility and utilisation of water and sanitation facilities for menstruation management in higher institutions of learning. This study thus sought to examine the status of water and sanitation facilities for menstruation management in higher education institutions.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

This chapter contains a detailed description of the methodology that was used in the study. It specifically indicates the research design, methodology, location of the study, target population, sample size and sampling techniques, research instruments, measurement of study variables, validity and reliability of the instruments, data collection procedures, data processing and analysis, and ethical considerations.

3.1 Research design

The study was conducted using a descriptive qualitative research approach because of its exploratory nature. The researcher's primary goal was to explore, understand, and provide a detailed description of the phenomenon in question, without manipulating or changing it. Wyse (2011) states that "Qualitative Research approach is primarily exploratory research." It is used to gain an understanding of underlying reasons, opinions, and motivations. This research approach enabled the researcher to enter the natural worlds of people and collect in-depth information about social phenomena under investigation (Creswell, 2014). This approach was important in this study in that the University campus in which the female students were studying from provided a natural setting. The female students and administrators provided a real picture of the provisioning of water and facilities for menstruation management at the university. The researcher used semi-structured interviews, Focus Group Discussions (FGDs), observations and documentary analysis was used to collect the qualitative data. The qualitative approach of data collection and analysis was also employed to give a detailed description of lived experiences of the respondents.

3.2 Location of the Study

The study was conducted at Kyambogo University. Geographically, the University is located in the Division of Nakawa in Kampala Capital City Authority (KCCA). Kyambogo University is one of the thirteen public universities. Kyambogo University was established in 2003 by the Universities and Other Tertiary Institutions Act, 2001 by merging Uganda Polytechnic Kyambogo (UPK), the Institute of Teacher Education, Kyambogo (ITEK), and the Uganda National Institute of Special Education (UNISE) (Kyambogo University, 2019). Kyambogo was selected because the provision of water and sanitation facilities for menstruation management by female students seems to be inversely proportionate to its growing female students' population. This growth is partly due to the government's initiative of enabling more female students to join public universities through the 1.5 Affirmative Action Policies of 1990 (Okidi, 2014). Since KyU's inception in 2003, the number of female students has risen from 700 to 11,529 in 2018 (Kyambogo University, (2019). However, despite the increase in the number of students, it is not certain if the planning and budget processes at Kyambogo University prioritize investment in water and sanitation facilities for menstruation management for access and utilisation by female students. The study was specifically conducted in the learning facilities of the respective faculties because these are the locations where all the female students (the non-residents and resident students) learn from.

3.3. Target Population

The study involved the following categories of participants; third-year female student course coordinators from the six faculties and school, female Guild officials (ministers and GRCs) and university managers. Student leaders and university

management participated in the study because of their respective leadership capacities in the university, they are deemed to be more knowledgeable about all the University affairs. This implied that they are equally knowledgeable about the status of provisioning, accessibility, utility, availability and acceptability; and planning and budgeting of water and sanitation facilities for menstruation management at Kyambogo. Female students participated in the study because they are the ones who experience menstruation. They voluntarily provided personal information about water and sanitation for menstruation management at Kyambogo, thus strengthening the reliability and validity of the study findings.

3.4 Sample size and Sampling Techniques

In this section information on the sampling techniques and sample size for the respective categories of study participants are presented.

3.4.1 Sampling Techniques

Purposive sampling was used to select participants with relevant information (Creswell, 2012). The purposive sampling is a technique where the researcher selects a sample basing on personal knowledge and experience of the group. This was based on the assumption that the respondents were knowledgeable about the status of provisioning, accessibility, utility, availability and acceptability of water and sanitation facilities for menstruation management at Kyambogo (Creswell, 2012). Thus the sample chosen for this study was able to provide the data needed to answer the research questions.

The participants for the study included 42 female course coordinators (7 from each of the five faculties and school, five (05) female guild officials (02 Guild Representative Coordinators (GRCs) from the faculty of Special Needs and

Rehabilitation, the Vice Guild President, Minister of Gender and Minister of Campus Affairs) and five (05) University Managers (02 females and 03 males). These included the; Deputy Vice Chancellor Academic Affairs (DVC -AA), Director of the planning Directorate, Dean of students, University Engineer and the Estates officer-plumbing. Samples in qualitative research tend to be small for in-depth case-oriented analysis (Morse, 2015). This is because, the experience of most qualitative researchers shows that little new information is generated after interviewing about 16 people (Green & Thorogood, 2004). Consequently, the sample size determination in this qualitative research was largely guided by the notion of saturation. Therefore, a sample size of 16 participants comprised the initial sample pending saturation. The summary of participants from each sample category is tabulated below.

Table 3. 1: Summary of Study Participants

Participant Category	Females	Males	Research Method
Student course coordinators	42	00	FGDs
Student Guild officials	05	00	IDIs
University Managers	02	03	KIIs
Total	49	03	52

3.5 Data Collection Methods

The data collection methods comprised of observation, interviews and Focus Group Discussions.

3.5.1 Observation

Observations enable researchers to collect data in its context through viewing (Creswell, 2014). An observation checklist (Appendix I) was used to collect data to establish the real situation of the status of water and sanitation facilities at Kyambogo

University without bias. The researcher observed the following female students' water and non-water facilities in the four faculties; toilet rooms, incinerators, waste bins, privacy assistive devices, cleaning agents, hygienic status, wash basins, detergents and the cleaning equipment. The observation method helped in getting more information that could not have been provided by the other methods. A checklist guide and a camera were used in the observation method.

3.5.2 Interviews

The researcher conducted Key Informant Interviews (KIIs) with the University managers and In-depth Interviews (IDIs) with the Guild Officials to obtain accurate, more reliable and first-hand information (Appendix II). Interviews allowed participants to discuss situations from their point of view (Rubin & Rubin, 2012), also making it possible for the interviewer to probe, thereby enhancing comprehensiveness of data collected (Creswell, 2012). Secondly, through open and sincere communication between the interviewee and the respondent, very sensitive and private information can be obtained from the latter during an interview. They are more widely applicable, allowing for inquiries, clarifications, and the addition of detailed information, making them appropriate for our study.

3.5.3 Focus Group Discussions

Focus Group Discussions (FGD) were conducted by the researcher with female student course coordinators. Seven people participated in the conversation from each faculty and school. All participants were able to completely voice their opinions during the conversation due to the size of these focus group discussions. Hoyle et al. (2002) suggested that six to fifteen people should typically participate in a FGD. They justify this group size by stating that fewer than six study participants may

make it more difficult to elicit the appropriate diversity of viewpoints, and more than fifteen participants may make it more difficult for each participant to properly express their opinion. The researcher used a written guide (Appendix III) to conduct the FGDs, which lasted, between forty-five minutes to one hour. FGDs enabled the researcher to get a wide range of views and ideas on provisioning of water and sanitation facilities for menstruation management at KyU's learning facilities.

3.5.4 Document Analysis

Two documents were reviewed to extract data on the integration of water and sanitation facilities in the budgets of Kyambogo University. The documentary guide (Appendix II) was used to analyse documents which included; the Kyambogo University budget allocation book (2019/ 2020) as cited in Kyambogo University (2019) with a focus on Estates department. This method was used to find out whether there was a specific budget allocation for water and sanitation facilities for menstruation management. The document analysis was done in an effort to complement data collection for research question two. The analysis of documents as a method of data collection is acknowledged by Ellison (2010), who argues that documents provide direct and large amounts of information. Document analysis also helped in triangulating data from other sources.

3.6 Validity and Reliability of the Instruments

Validity is a measure of how correct the results are from the perspective of the investigator, the participants, or the readers of the report. Rather than using the term validity, "trustworthiness" is utilized in qualitative research. However, consistency in a researcher's approach across several projects and researchers is indicative of

reliability. Qualitative research uses the term “credibility” in its place (Creswell, 2012).

3.6.1 Trustworthiness of the Instruments

Establishing the validity of the instruments in this study involved the use of content and face validity and a pilot study.

Content Validity: This involved a thorough examination of the instruments’ content by ten experts in the field of research. These experts assessed the relevance, representativeness and clarity of the items or questions in relation to the research constructs in the interview guides. Feedback from experts was used to refine and revise the instrument to enhance content validity (Polit & Beck, 2021).

Face Validity: It involves assessing whether the items or questions were relevant and appropriate to the construct without conducting a pilot test analysis. The researcher evaluated face validity by considering whether the questions, prompts or procedures used in the research instrument aligned with the intended constructs being studied. It involved assessing whether the items appeared to capture the content or meaning they are supposed to represent (Streiner, 2003).

Piloting the study: In this study, the pilot study involved pre-testing the instruments for the identification of any ambiguities, misunderstandings or inadequacies in the instruments. According to Amin (2005), pre-testing helps to anticipate all the ambiguities, difficulties with the wording and order of the questions as they will be presented as a whole. Pre-testing helped to anticipate all the ambiguities, difficulties that the wording, presentation, and order of the questions as they will be presented as a whole (Amin, 2005). In addition, pre- testing the instruments helped to determine

how long the interviews and FGDs took and it also helped the researcher to know whether the participants were able to interpret questions correctly.

The pilot study was carried out in the Science Faculty at Kyambogo University on seven participants, namely; 05 female Course Coordinators, 01 female Head of department and 01 female Guild representative. The pilot study was done in the Faculty of Science because it has characteristics similar to those in the faculties of the study area (Osborne & Waters, 2019).

3.6.2 Credibility of the Instruments

Establishing the reliability of qualitative instruments involves ensuring consistency, dependability, and stability in the data collection process and analysis. Three methods were employed to assess and enhance reliability of the qualitative research instruments in this study. These included member checking, triangulation and use of detailed documentation and clear procedural guidelines for ensuring the stability and reliability of the research.

Member checking: This involved returning the transcribed data to the participants for verification. By allowing participants to review and confirm the accuracy and authenticity of the interpretations, the researcher aimed at increasing the dependability and credibility of the findings (Lincoln & Guba, 1985).

Triangulation: This involved utilizing multiple methods to examine the research questions (interviews, observations and Focus Group Discussions). By combining different data collection techniques, the researcher was able to compare and contrast the findings, thereby increasing the reliability of the results.

Use of detailed documentation and clear procedural guidelines: In this study log books were used to achieve detailed documentation and clear procedural guidelines

were also used for ensuring the stability and reliability of the research (Creswell & Miller, 2000). In this context, the researcher maintained an audit trail by recording all decisions, steps, and modifications made during the data collection and analysis process. This documentation allowed for transparency and facilitated the evaluation of the study's rigor and trustworthiness (Creswell & Miller, 2000).

3.7 Data Collection Procedures

The researcher obtained an introductory letter from the Head of Department, Foundations of Education of Kyambogo University, introducing her to the study participants at the university. This letter gave her access to the different categories of the study participants who included university managers, the female Guild officials and student course coordinators. It was during the different interview sessions that the researcher explained the purpose and objectives of her study.

During the data collection, the researcher started with observation of the water and sanitation facilities in the learning premises in the different faculties and school. The researcher took notes on the status of the water and sanitation facilities for menstruation management including in terms of their; availability, acceptability, utility and accessibility.

The interviews came next, starting with female guild officials, and then followed by the university managers.

With the respondents' consent, the researcher recorded the individual interviews.

Finally, the researcher conducted Focus Group Discussions with the female student course coordinators to affirm information about water and sanitation facilities for menstruation management from the interviews. With the respondents' consent, the researcher recorded the FGDs.

3.8 Data Analysis

Data from observations, Focused Group Discussions and interviews was analyzed using Creswell's (2014) six-step data analysis procedure. The first step, which involved organizing and preparing the data for analysis, involved transcription of interviews and FGDs to produce written transcripts. This step also included typing up field notes, cataloguing all the visual materials such as observation checklists, sorting and arranging the data.

The second step involved reading through the data, in order to reflect on the overall meaning and to gain a general sense of the information and ideas that the observations and participants conveyed.

Thirdly, coding of notes from the observations and Focus Group Discussions as well as interview transcripts followed, to reflect emerging ideas. In the fourth step, which is generalization, the researcher integrated the codes and sought to establish relationships between them in a bid to form broader themes.

Fifthly, the researcher provided descriptions of the themes and included quotable quotes (participants' voices) from the transcripts to illustrate them. The sixth step, which is interpretation, then followed, where the researcher used relevant literature to make sense of, as well as support the themes. During the interpretation process, the researcher's own experience as a menstruating university female student informed her understanding of the participants' stories. To convey the participants' perceptions of their experiences accurately, the researcher focused specifically on what they were saying, the conclusions they drew, and their intentions for future practice.

3.9 Ethical Considerations

The researcher followed ethical guidelines in accessing the research sites (Merriam, 2009). The approval to conduct the research was granted by the Head of Department, Educational Foundations, Kyambogo University. Each participant signed a written informed consent (Appendix VIII) to ensure voluntary participation. Pseudonyms were used instead of the real names of participants to ensure confidentiality. The Faculties and schools were given alphabetical names of A to F, the six student FGDs were given number names of 'FGD # 01 to # 06', the two GRCs were given number names of 'GRC # 01 to # 02', the three Guild ministers were given number names of 'Guild minister # 01 to # 03' and the five University Managers were given number names of 'University manager # 01 to # 05'. The researcher also explained the purpose of the study and research process to the study participants and then proceeded to get informed consent from them.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

4.1 Introduction

The study findings were presented, analyzed, and interpreted according to the Study objectives. The chapter also presents analyses and interprets demographic data of the Study participants.

4.2 Participants' Demographic Information

This section presents the demographic characteristics of the respondents.

Table 4. 1: Distribution of the Study Participants by Categories and Sex, n=52

Category	Female	Male	Total	%
Student course coordinators	42	00	42	80.8
Guild officials	05	00	05	9.6
University Managers	02	03	05	9.6
Total	49	03	52	100

Source: Researcher's design

The findings in table 4.1 show that 52 participants took part in the study, whereby 47(90.4%) were students and 05 (9.6%) University staff (University Managers). In regard to the student respondents, they comprised of 42 (80.8%) student course coordinators and 05 (9.6%) Guild Officials. All the students were female as per the study design because it is women who experience menstrual periods. This therefore implies that it is the female students who are directly affected by the status of water and sanitation facilities for menstrual management and thereby having the capability of sharing from firsthand experience.

Concerning University Managers, only 05(9.6%) were enrolled for the study, of which 02 were female and 03 male. Regarding how long the University managers had worked at Kyambogo University, table 4.2 indicates that 04 (80%) managers had been at the University for between 1 - 15 years while 01 (20%) had been there for over 15 years. These findings imply that the Administrator participants in the study were knowledgeable about the planning and budgeting processes of Kyambogo University considering their work experience at the University.

Table 4. 2: Kyambogo University Administrators' Work experience at the University, n=5

Duration at Kyambogo University	No. of Staff	Percentage %
01-15years	04	80
Over 15years	01	20
Total	05	100

Source: primary Data

Two (02) female students (4.8%) with visual and mobility disabilities were part of 42 female students in the study population. These students were Guild representative coordinators from the faculty of Special Needs and Rehabilitation. Inclusion of students with disabilities in the study ensured that the views of this vulnerable category were also heard and incorporated in the findings. This means that recommendations concerning female students with disability in this regard were captured and any response plans would have them covered as well.

4.3 Status of Water and Sanitation Facilities for Menstruation Management by Female Students

The first objective of the study sought to assess the status of water and sanitation facilities for menstruation management by female students in the five faculties and school at KyU. These include; Education, Arts and Social Science, Engineering, Vocational studies, Special Needs and Rehabilitation and School of Management and Entrepreneurship (SOME). The sources of data for this objective were information gathered by the researcher using the; document analysis, observation, in-depth interviews and Focus Group Discussions.

Observation findings indicate that the number of toilets and pit latrines in the respective faculties and School are still inadequate, as indicated by the findings in table 4.4. This implies that the student toilet ratio is high. This makes accessibility and availability of toilet facilities for menstruation management unacceptable as shown in the subsequent findings of the study.

Table 4. 3: Distribution of Flush Toilets and Pit Latrines across the Faculties and School

Faculty/ School	Number of Female Students	Number of flush toilets for Females	Ratio of Toilets to Female Students	Pit Latrines for Females	Ratio of pit Latrines to Female Students
C	702	10	1: 70	1	1: 702
E	3,852	4	1: 963	2	1: 1,926
A	835	4	1:209	0	0: 835
B	954	10	1: 95	4	1:239
D	2,676	11	1: 243	4	1: 669
F	682	05	1: 136	1	1:682
Total	9,701	44	1: 221	12	1:808

Source: primary data

The findings in table 4.4 indicate that the total number of female toilet facilities in the five faculties and school at Kyambogo University is fifty six (56). Forty four (44) flush toilets and twelve (12) pit latrines. It is worth noting that the aforementioned flush toilets are located in the old and new lecture buildings. It is important to note that the toilet student ratio is generally very high. The highest flush toilet to student ratio is 1:963, that is, school E and the highest pit latrine student ratio is 1,926, still for school E. The lowest flush toilet student ratio is 1:95 for Faculty B and the lowest pit latrine student ratio is 1:239, still for Faculty B. It should be noted that even the lowest student flush toilet and pit latrine ratio in this study is still very high. This is because the recommended student toilet ratio for university female students is typically around 1 toilet for every 15-25 female student (American Restroom Association, 2004).

The FGD findings similarly indicated that the available number of toilet and pit latrine facilities did not tally with the increasing number of female students at the university. A female student commented that;

In our faculty E, we mostly have pit latrines which are almost full and moreover they are just two despite the high number of female students. We end up making queues for the toilet, so if am in my periods, I just go back to the hostel. **(FDG, Student Course Coordinator, Faculty E)**

4.3.1 The General Status of the Toilets

Observation findings revealed that the status of the available water and sanitation facilities in the faculties and School do not support menstruation management in various ways. These included the toilets' uncleanness and lack of privacy.

The Unclean Status of the Toilets

FGD participants at Faculty A explained that; “toilets are always cleaned very early in the mornings and during the examination period cleaners do not even bother cleaning at all.” (FGD, Student course coordinators, Faculty A). The Student course coordinators in this FGD further explained that the unclean toilets smell, hence making it hard for female students to use them, more especially during menstruation.

Female students in FGD # SS01 also confirmed that toilets are cleaned irregularly. They further revealed that sometimes, cleaners tend to dodge cleaning the toilets and that this makes the toilet facilities very dirty and unusable by female students. Participants from FGD # 07 also affirmed that the toilet facilities in the old buildings of the different faculties and the School are irregularly cleaned, while those in the new buildings are regularly cleaned.

However, students’ access to the regularly cleaned toilets in the new teaching structures is limited. This is because students are scheduled to have lectures in the new lecture buildings only twice a week. This teaching arrangement leaves female students with the option of mainly using the irregularly cleaned toilets in the old buildings of their respective faculties and school because that is where they have most of their lectures. In addition, students in FGDs # 03 and # 04 also observed that the unclean state of the toilet rooms in these old lecture buildings is worsened when it rains because the floors get filled with mud from the shoes of the users which makes them very dirty.

Students in FGD # 01 said that dirty toilets are not user-friendly to females in their menstruation period. A female student in FGD # 07 also explained this discomfort when she narrated her experience in the following way;

When I enter the toilets and I find them dirty I ask myself if the boys' side is clean so I slowly move to the males' side looking side by side and use their toilets but the problem is coming out and meeting a male course mate, I feel like the ground should swallow me up **(FDG, Student Course Coordinator, Faculty C)**

The FGD findings were in agreement with the observation findings. The researcher too, observed irregularity in the cleaning of toilet facilities. The observation findings revealed that, three pit latrines in Faculty B had been turned into dumping places for rubbish by students which have made them fly-infested and smelly.

Toilets Lack Privacy

The observation findings revealed that some toilet rooms lack privacy due to broken doors. For example, it was found that the doors of 4 toilets in Faculty C, 3 doors in faculty A and 2 doors in Faculty B were broken and six toilets in Faculty A and C had no doors, while 20 toilets in Faculties A, B, C, and D had doors with no locks. Such toilet room conditions make the utilisation of toilet facilities for menstruation management unacceptable and inaccessible.

The FGD findings corroborated the existence of toilet rooms with lack of privacy at KyU. In the FGDs female students revealed difficulties they face when they use toilets with no privacy. In this FGD with students from faculty A, one student said:

Sometimes you have no option other than holding the door of the toilet. And at the same time easing yourself, in the process, you end up staining your underwear with blood and it is also very uncomfortable... For sure me, I just go home if I feel like changing my pad or going for a short call. **(FDG, Student Course Coordinator, faculty A).**

Female students in FGD # 01 also explained that broken toilet doors limit their freedom and confidence to use toilet facilities at the university, especially, during menstruation because it feels uncomfortable to enter a toilet with everyone watching.

In conclusion, the data in this section (4.3.1) indicates that students' toilet and latrine facilities at Kyambogo University are generally unclean and lack privacy due to the absence of locks and or doors on some of them coupled with irregular cleaning routines. Consequently, the current status of the toilet facilities deters female students from comfortably using them during their menstrual periods, when attending lectures.

4.3.2 The Status of the Disposable Bins

The findings on the status of the disposable bins was reported in terms of their; availability, location and usability.

Availability of Disposable Bins

Observation data revealed that sealed disposable waste bins were available in only four (04) female students' toilets out of the 54 toilet facilities at their faculties and school. This finding indicates that the disposable bins were fewer than the available number of female students' toilets.

Location and Usability of the Disposable Bins

Observation findings further revealed that the disposable bins in the toilet facilities were not put inside the toilet rooms. They were placed at the corner of the toilet facility which was outside and a bit distant from the toilet rooms. This means that a female student has to move out of the toilet room with a used pad to where the bin is. Consequently, some students may decide; "to put their pads on the floor, behind the doors, or dump them inside the toilets which cause blockage of toilets" In addition, female students in faculty A and B explained that; when the bin gets full, students continue dumping pads in it until they end up falling off and scatter all over the floor

with flies all over the place. A female student in an FGD attested to this when she said that;

Sometimes you find the bin full and I can't just put my pad on the floor or in an open place, it's uncomfortable for me. The only option I have is to go back to my hostel and it is not easy to move back to campus so I just chill the day off. **(FDG, Student Course Coordinator, School E).**

Absence of Disposable Bins

In instances where toilet rooms lack disposable bins, female students have to find a way to dispose of their used pads. A female student commented and said:

In my School, I have never seen a disposable bin so I make sure when am in my menses I move with a black kavera I put my used pad and return it to my bag and dispose it off when I go back home but this is very uncomfortable you fear someone might see it or the smell might be felt by other people so at the end of the day you just decide to leave campus and go home. **(FDG, Student Course Coordinator, Faculty C).**

Another female student in FGD # 01 continued to explain that; “This makes us dread to use university toilets and to live under constant fear and panic when one may need to use them”.

In conclusion, the data in this section reveals that; the disposable bins are lacking in some toilet facilities for female students and where they are available, they were very few and thus do not facilitate female students to manage menstruation comfortably. Consequently, due to the aforementioned inadequate status of the disposable bins in the female students' toilets at KyU, some of them end up missing lectures.

4.3.3 Provisioning of Water for Menstruation Management

Generic Water at the Hand Wash Basins and in the Toilet cisterns

Observation findings revealed that there is a provision of generic water in Kyambogo University. According to one male University manager, there is provision of water through the National Water and Sewage Cooperation in the toilet facilities of Faculties in Kyambogo University. It was also observed that water is accessed through the hand wash basins in the toilet facilities which were used by female students to wash their hands after using the toilets. Still, according to the observation findings, there was no water allocated for menstruation management in the toilet rooms, water was only allocated for flushing the toilets. This was echoed by a female student of Faculty C who said that:

There is no specific provision of water for menstruation management at the university. All the water provided is for every university student but they have not put up something specifically for ladies. Water is only accessed on taps in the toilet rooms but this water can only be used for washing hands. **(IDI, GRC, Faculty C)**.

Emergency Water Placed on the Toilet Verandahs

Observation findings also revealed that in Faculty C, water for Sanitation management was placed in tanks on the verandah of the toilet facility. It was also observed that there were no small jerry cans that could be used to carry water inside the toilet rooms. A student

FGD participant explained that; “because of this, toilets are not flushed by most of the female students”. Another female student in FGD # 06, too, confirmed that; “this makes most students leave the toilets un-flushed and some stained with blood which makes them stink and dirty, whereby they cannot be used by another person”.

Irregular water supply

According to students in FGD # 04, the provision of water in the toilet facilities is irregular. Meaning that, sometimes water is available, while other times it is off. A female student in FGD #5 explained that, this is the reason why; “when female students enter the toilet facility, they have to first cross-check if water is available in the tap such that they do not leave the toilets stained with blood and dirty for other people to use”.

In conclusion, the data in this section shows that at KyU, provision of water at the toilet facilities does not facilitate effective and comfortable sanitation and menstruation management for female students. Sometimes it is irregular and when it is available, it mainly helps in the washing of hands after toilet use than for menstruation management. The regularly available water is usually provided in the hand wash basins outside the toilet rooms and in the compounds of latrine facilities. When it is irregular, it is placed in water tanks placed on the verandahs of the toilet facilities. In such instances the water is distant from the toilet rooms with no small jerry cans for scooping it.

4.3.4 Availability of Changing Rooms

Observation data revealed that the toilet facilities in the Faculties and School did not have changing rooms for females to have some privacy while changing their pads or washing up in case they had soiled clothes. According to a female student in FGD # 04; in case they want to change their used pads they have to use the toilets. This scenario was confirmed by a University manager who explained that;

If we were to put changing rooms for toilets; that could mean reconstruction of all toilet facilities which cannot

be possible but again if it was to be considered, still students could misuse them by urinating and defecating there. So I think what the university has constructed is enough to accommodate the students' needs. **(KII, Female University Manager).**

In conclusion, the data in this section revealed that female students' toilet facilities at KyU lack changing rooms and the university is okay with the prevailing status quo on this aspect.

4.3.5 Availability of Incinerators

Observation findings revealed that the university has only 04 incinerators located in the Halls of Residence. A female university Manager confirmed that incinerators are only found in the Halls of Residence. She added that; there was only one incinerator that is functioning for now in Nanziri Hall of Residence and the rest are in the process of being repaired. As a result,, students in FGDs # 02 and # 03, unanimously revealed that used pads are collected in buckets which are later collected by cleaners and taken to a public dumping place. They further explained that the unclear destination of these used pads stops some female students from disposing off their used pads in the University. Students in these two FGDs also revealed that; to some female students, it is not acceptable in their cultures to dispose-off used pads in a manner that allows them to be seen by anybody else apart from the owner. For example, a student in FGD # 02 affirmed the beliefs above in explaining that:

I have never heard of anything like an incinerator in Kyambogo, otherwise, I could not be struggling to carry a polythene bag to take my pad to the hostel. Am scared to leave my pad just there, what if something happens to it! You know this is something secret to me. Someone can use it for witchcraft and I get complications in the future without me even knowing the cause. **(FDG, Student Course Coordinator, Faculty D).**

Considering the discomfort in the current menstrual waste disposal measures and the length to which female students go through to circumvent them, like using polythene bags to carry used pads back home, the guild Administration felt compelled to come up with a solution as the GRC explained:

As the guild administration, we want to put up an incinerator as our guild project for this academic year because we have seen at least the university administration has tried to put up other facilities for menstruation management like water but we are still looking at our budget to see and to allocate the place where to put it which will be convenient for all faculties. **(IDI, GRC, Faculty D)**

The GRC also observed that: due to the high population of female students and the long distances between the different faculties, the university faculties need more than one incinerator. She was quick to add that the incinerators need to be located far away from the lecture rooms to avoid air pollution and to provide privacy during the process of burning the used pads.

Absence of Faculty-based Incinerators

A female Guild minister said that disposable bins are not placed in female students' toilet facilities because the cleaners have nowhere to dispose-off these used pads. She continued to explain that there are no incinerators at the faculties. Therefore, faculties do not budget for disposable bins to be placed in the toilet facilities for used pads because cleaners have nowhere to dispose them off. A male University manager key informant # 5 also informed that incinerators are only located in the halls of residence. He further added that most of the incinerators are broken and are out of use and are awaiting repairs. He reported that; "we have just finished repairing the incinerator at the Nanziiri Hall of residence and we are planning for the repair of that one of Pearl Hall in our next budget". He enlightened that the Estates department had

not put in place any incinerator in the faculties because the department assumes that incinerators in the halls of residence are enough for burning off used pads.

In conclusion, data in this section revealed that there is only one functional incinerator at one out of the available four halls of residence 'at KyU which hampers the final disposal menstrual material waste. In addition, it was found that cultural beliefs hinder some female students from disposing-off their used pads in the available open disposal bins in the toilet facilities. This is because it is a taboo for them, for someone else to see their used pads or have fears that it can be used for witchcraft.

4.3.6 Availability of Mirrors, Soap, and Toilet paper

Availability of Mirrors

Observation findings revealed that out of the 44 flush toilet facilities; 10 had new clear mirrors, 15, had old- faded ones while 19 had no mirrors. Observation findings further revealed that in the newly built teaching facility, all the female students' toilet facilities had good mirrors. The necessity of mirrors in the toilet blocks for menstruation management was supported by a female student in FGD # 03, who explained that:

Somehow mirrors are important because it's shameful to ask someone to check you behind during periods even in the toilet areas. But I cannot say all toilets do not have mirrors but some are faded because they are worn out, others are just broken by students, but some toilets completely do not have, though I think it's the role of the university to repair or replace in case of damages. **(FDG, student Course Coordinator, School E).**

Having old-faded mirrors or the total absence of mirrors depicted in the observation and the FGD findings inhibit effective menstruation management by female students because they need clear mirrors to check their clothes during menstruation. This

observation was also affirmed when one female student in FGD # 06 said that “having clear mirrors in the toilet facilities saves them from moving in public with soiled clothes and bearing the shame that comes along with it” **(FGD, Student Course Coordinator, Faculty C)**.

Availability of Soap and Toilet papers

Observation findings also revealed that in all the Faculties and School, soap and toilet paper were not provided in any of the female students’ toilet facilities meaning that apart from breaching the hygienic standards, proper menstrual management is affected in this regard. This therefore necessitates female students to carry their materials as this FGD participant shares:

Water could be provided at times, but soap no way!!! ...
And also toilet paper has never been provided in any of the toilets in Kyambogo University. Some of us have to carry toilet paper with us especially during menstruation. **(FDG, Student course coordinator, Faculty B)**.

Another FGD participant concurred that, they always use water without soap for cleaning up during menstruation.

In conclusion, the data in this section revealed that very few female students’ toilet facilities have user-friendly mirrors and none of them have toilet paper and soap. The absence and scarcity of provisioning of these sanitation facilities for menstruation management in the female students’ toilets compromises the highly required hygienic conditions and facilitation which female students need to uphold during their menses.

4.4 Integration of Water and Sanitation Facilities for Menstruation Management in the Planning and Budgeting Processes of HEIs

This study sought to establish whether the university’s management incorporates female students’ water and sanitation needs for menstruation management into its planning and budgeting considerations. Information for this objective was elicited from Key Informant and in-depth interviews that were conducted with the university managers and Guild officials respectively and from the documentary analysis of the University’s budget book for the financial year 2019/2020.

The Estates department is the planning center responsible for provisioning of water and sanitation facilities at KyU. Data from the documentary analysis of the Estates department’s budget allocations in the financial year 2019/ 2020 is presented in Table 4.5

Table 4. 4: Estates Department Budget allocation for the financial years 2019/2020

Description Budget Items	Amount	Percentage (%)
Electricity	746,408,854	44 %
Water	242,325,287	14%
Furniture and fixtures	0	0
Non-residential buildings	0	0
Other structures (sanitation/ Toilet facilities)	272,845,106	16%
Roads and Bridges	450,000,000	26%
Grand total	1,711,579,247	100%

Source; University Budget book 2019/20/20

Generic allocation of Water and Sanitation funds

Data from table 4.5 indicates that the percentage of funds the University allocates to the Estates department to spend on water and sanitation facilities is generic (non-specific). The statistics in Table 4.5 reveals that budget allocation for water is 14% and other structures (sanitation and toilet facilities) is 16%. These allocations do not indicate the specific percentage of funds entitled for menstruation management. Meaning that, it is left to the discretion of the Estates department to extend this money without taking into consideration of the menstruation management concerns of female students.

According to a female University Manager, the Estate department does not budget and plan for water for menstruation management, she said that water is budgeted as a whole or generally without separating it according to its use. Her male counterpart added that as a department, they did not see the necessity but hastened to add that it was being taken in consideration owing to the demand from certain categories of students as he expounds;

We do budget for water but not for menstruation management. I did not understand the necessity of water for menstruation management but due to the demand of female students and Muslim students, we have planned to install taps inside toilet rooms to help female students during menstruation. But this implies only in the new buildings **(KII, Male University Manager)**.

Another Manager corroborated strongly on the aspect that it is not necessary for specific consideration given the complexity of the matter as he explains, “this is a big institution and I think the administration is trying its best. Well we cannot single out female students, we plan for the university as a whole and regarding the facilities, and I have never seen any student failing to graduate because of poor water and sanitation facilities.” (KII, Male University Manager). He advised that since students

spend a few hours at the university, the female students could change and clean up from where ever they stay. He also added that, “I have worked here for over ten years but we have always used the same water and sanitation facilities, the facilities are even more improved now compared to the previous years.”

While it is known that it is the role of the Estates Department to do the necessary budget allocations based on the needs of the university community, there is a responsibility for other University staff to plan accordingly and to inform the Estates Department of the prevailing needs another University Manager asserts:

At faculty level there is nothing much we can do because we plan and budget for water and sanitation generally. It’s the Estate department that is responsible for budgeting and planning for these facilities. In fact water and sanitation carries 5% on our budget so in case of any need we just write to the Estates and Works for them to handle. Besides when planning we consider both male and female students to be equal; that is, they both need water and sanitation facilities. **(KII, Female, University Manager)**.

From the above assertions, it is clear that the Estates’ department funds, for water provisioning are allocated generically. There are no funds allocated specifically to water and sanitation facilities for menstruation management.

Inadequate Funds

A University Manager explained that water in the old structures was designed to be accessed from taps in the toilet facilities and flushing water is inside the toilet rooms. Therefore, any adjustments would call for changing the whole structure or building which cannot fit within the current budget. Still, another University Manager advised students to bear with what is available and suggested ways on how they can

go about it. However, also decried the irresponsible use of the available facilities as he narrates:

Water is available, if it's not inside the toilet let them carry it inside, simple. If the toilet next to you is dirty you look for a clean one because we have many toilets here, simple. Each building has at least two toilets. You see even the water and sanitation facilities you are talking about are spoilt and misused by these very students especially the toilets. These are mature people!! Who is going to direct them on how to use toilets? I mean this is a university. We work on a limited budget and water and sanitation facilities for menstruation management cannot be the university's priority during budgeting and planning. **(KII, Male, University Manager)**

Absence of Funds for Awareness Campaigns on the Usage of Water and Sanitation

The study findings also revealed that during the planning and budgeting process, no funds are allocated for carrying out awareness campaigns for both female and male students on the use of water and sanitation facilities. According to a female Guild Minister, the university assumes that since all the students are mature they know how to use water and sanitation facilities. A female University Manager, explicitly stated that the university does not plan and budget for sensitization of female students about the use of water and sanitation facilities. Female students in FGD # 02 also reported that female students in faculty A have not received any sensitization program on the use of water and sanitation facilities for menstruation management. A University Manager explained that sensitization was limited by the absence of financial resources.

Absence of Female Representatives in the Planning and Budgeting Committee

A male university Manager observed that there is no female representation during the processes of drawing budgets as well as planning for water and sanitation facilities at the Estates department. A female university manager confirmed the aforementioned observation when she said, “there are no female members of staff in the Estates department, therefore; all of the decision-makers in this department are males” (KII, Female, University Manager). She recommended that there is a need to include females on the planning and budgeting board of the Estates department so that they can advocate for the female students’ water and sanitation facilities’ needs to be considered in the planning and budgeting processes of this department.

Presence of a Budget for Cleaning and Maintenance of Sanitation Facilities

A male University manager explained that when planning and budgeting, funds are allocated for cleaning and maintaining toilet facilities. He explained that funds from the budget of the Estates department are allocated to secure different cleaning companies that are also contracted to clean the toilet facilities. He added that the companies are allocated supervisors from the Estates department. However, he revealed that these cleaners are reported on several occasions for not; cleaning toilets, emptying disposable bins, carrying water to some toilet facilities and reporting to Estates about the presence of broken toilets.

Absence of Students’ Guild Representatives in the Planning and Budgeting Committee

According to a male University manager, female students’ guild leaders are not involved in the University’s water and sanitation’s planning and budgeting processes

because they do not deal directly with students during planning and budgeting for water and sanitation facilities. He explained that the Estate department involves the Dean of students who is closer to students in case of any consultations on their water and sanitation affairs. On exclusion of female students from the planning and budgeting processes, a faculty GRC commented thus:

We only work as watchdogs to look at what is taking place on the ground and report to the Estates office. But literally, we do not know what takes place after. But we keep on reminding them, for example, we have been writing about the latrines which are full in faculty F, but how I wish we get a chance to be included in the planning and budgeting such that we help the Estates officers to know the things they should prioritize but they just assume what is on the ground and it's the students who suffer especially females. **(IDI, GRC, Faculty F)**

Exclusion of students, especially female students, from the planning and budgeting process of the estates department partly explains why provisioning of water and sanitation facilities for menstruation management is not taken into account.

This view was affirmed by a GRC from faculty F, who raised a concern that the Estates department budgets and plans for water and sanitation facilities without awareness of the particular situation of these facilities. She said that; “sometimes the department is misled due to lack of information. Therefore, the department needs ground information for better planning and budgeting of these facilities” **(IDI, GRC, Faculty F)**.

In conclusion, the data in this section indicates that Kyambogo University does plan and budget for water and sanitation facilities for menstruation management but not adequately. This is due to various reasons like; the non-allocation of specific funds for this aspect, the non-involvement of students, especially female students, in the planning and budgeting processes for water and sanitation facilities for menstruation

management, inadequate funds and the university administrators' limited knowledge of the dire need to improve the provisioning of water and sanitation facilities for menstruation management at the university. These factors have made the challenges involved in the provisioning and maintenance of water and sanitation facilities for menstruation management by female students remain unsolved.

4.5 Female Students' Perception of Access to Utilization of Water and Sanitation Facilities for Menstrual Management in HEIs.

This objective sought to establish female students' views towards the access and utilization of water and sanitation facilities for menstruation management in HEIs. The source of data for this objective the IDIs and FGDs with female students specifically; course coordinators, faculty GRCs, and Guild ministers. Their views were sought concerning the availability, acceptability, and accessibility of water and sanitation facilities for menstruation management.

Attitude of Indifference

According to FGD participant of faculty A, female students at Kyambogo University view the topic of menstruation as a secret affair due to the influence of their different cultural backgrounds. For some female students the topic is shameful and hidden. They said some female students regarded menstruation as dirty, therefore discussing it could make the male students discriminate against them. To some female students, the issues of water and sanitation facilities for menstruation management are not important and do not need to be discussed in public. According to such students, every female student can handle and find a way to stay and finish their studies. In FGD # 4, a female student commented and said:

I have been menstruating since my primary; you cannot tell me that I can fail to deal with it at the university level. For sure let's discuss more appealing issues, menstruation, we can and we shall leave with it. **(FGD, Student Course Coordinator Faculty C).**

The perspective revealed above indicates that some female students disregard the study's concern of seeking to establish if the water and sanitation facilities at the university is acceptable, available, and accessible for menstruation management. According to the student from Faculty C, female students can manage to handle themselves during menstruation regardless of the nature of the university's environment, since they have been menstruating for a while now.

Irregularity of Water Supply Makes Facilities Inaccessible, Unusable and Unacceptable

It was found that tapped water was available in all the corners of Kyambogo University and it is used to wash hands, freshen up and for cleaning up. However, the water supply in the toilet rooms is not regular thereby making it hard for female students to wash up when they need to. A female student shares her experience about the unpredictable supply of water in the toilets:

During menstruation I can be stressed, you know sometimes I feel like my head is spinning around and I only feel better if I pour water in my head but ooh you can just get to the toilet only to find no water. This is worsened by cramps; you know I just reach a point whereby I cannot stay at the university. Sometimes if you make a mistake and use the toilet before checking for water you can imagine how you can look! You know some people even think we do not know how to use the toilets because sometimes you can leave it not flushed simply because there is no water. **(FGD, Student Course Coordinator, Faculty C)**

Such experiences by female students go on to underscore the fact that the irregular supply of water in the toilet rooms makes some female students to leave the university premises pre-maturely, thus missing some lectures probably until they are

done with their periods. This scenario also partly explains why the toilet facilities for females may be dirty.

The predicament of irregular and unpredictable water supply is execrated by female students who experience heavy menstrual flows as this FGD participant narrates:

For us who have a heavy flow, you cannot imagine what we go through. I need to change a pad at least every after three hours so I have to check up constantly but sometimes I have to get to the toilet and find no water that means I have to keep on moving to different buildings to find a toilet with water but when I leave the lecture still goes on, that means I still have to come back and ask for what has been covered when am away which is stressing. **(FGD, Student Course Coordinator, School E).**

The irregular availability of water in the toilet facilities contributes to the interruption of the learning activities on the side of female students because like she said, as one moves around looking for a toilet facility with flowing water, the Lecture is continuing. As mentioned earlier, if this search for usable facilities becomes unbearable, one may choose to keep away from the lecture rooms until they feel comfortable to resume.

The poor state of some water pipes brings about leakages resulting in constantly wet toilet surfaces. Wet toilet floors are unsightly and this may deter female students from using the toilets as this student explains:

Sometimes you enter the toilet and have nowhere to stand when it is full of water and you just decide to go away with your issues. **(FGD, Student Course Coordinator, Faculty A).**

Toilet Structures are Unacceptable and Un-useable for Students with Special Needs

The flushing systems of the toilet facilities for students with disabilities are the same as toilets facilities of other students. A Student with disability explained that the

handles for flushing these toilets are placed up, so they cannot easily be reached by students with disabilities. This makes them use toilets with the help of their friends. This takes up their privacy, especially during menstruation. According to the two female GRC student interviewees with disabilities, it is shameful to use the toilet in the presence of another person, more especially during menstruation. In this context, the toilet facilities are not conducive for menstruation management by students with disabilities.

The high student toilet/latrine ratio makes them inaccessible

As noted earlier on, the ratio of sanitation facilities like toilets and pit latrines to students is very high at Kyambogo University. For example, it was observed that each floor in the faculty buildings has a toilet room for both male and female students. However, due to the big number of students at Kyambogo University, the toilet facilities are not enough to accommodate all the students. Students were seen in queues for toilets especially during the examination period as explained by a Guild minister. It was also observed that some toilets were closed in School E, yet the school has the largest number of female students in the University. Female students from school E have to use toilets from faculty C which are also always having so many students and are a bit far from their lecture rooms. According to the female student FGD # 03 respondents, this is a form of toilet inaccessibility, especially during menstruation when the need for toilets that are near the lecture rooms is paramount.

The Unhygienic Conditions and State of the Toilets/Latrines make them Inaccessible and Un-useable

It was noted by the FGD participants that in some faculties like faculty C and school E, toilets are cleaned twice a week. They also revealed that Faculty D has pit latrines

that are worn out and are almost full making it difficult for female students to use them as this participant shared on the state of the latrines, “they smell and there are maggots on their floors” (FGD, Student Course Coordinator, Faculty D). A Guild minister also observed that most of the students perceive the use of these latrines as taking a high risk on their health and life. She noted that they pose a threat to one’s life because the latrine may break and one falls into it during the process of using it. The fear of using the pit latrines was also expressed by a faculty course coordinator from faculty D who said that:

In our faculty we use pit latrines since the flush toilets are only two and yet our faculty has most of its population as females, therefore you may find that lining up for toilets is inevitable. And to make matters worse these latrines are seriously worn out. I cannot use them I fear dying. (FGD, Student Course Coordinator, Faculty D).

The inadequate number of available flush toilets and dilapidated status of the available pit latrines is unacceptable for menstruation management.

According to the FGD participants, unclean students’ toilet facilities are a common phenomenon at Kyambogo University. In this context, the available toilets in the teaching facilities are unacceptable for menstruation management because they are perpetually dirty.

Earlier on, it had also been noted that the toilet facilities in the new lecture buildings are regularly cleaned but these buildings are few and are not commonly used by students for lectures since they use them twice a week. This implies that that female students’ access to the available clean toilets in the new lecture blocks is limited. In the FGDs, female students revealed that they avoid using dirty toilet facilities by moving around the University looking for clean toilet facilities. In addition to the

above, female students in FGD # 01 in faculty B asserted that looking for clean toilets is a hard thing to do for female students who are in menstruation since it becomes so uncomfortable for them to move around the campus.

The psychological effects of unhygienic sights hinders use of available facilities. A female student from faculty A complained that she always menstruates because of mere looking at blood from pads of other students in un covered disposable bins and so such scenes make them uncomfortable to even use the toilets at the university. Some female students perceive this situation as being an unhealthy and so may decide to stay in their hostels and at home during menstruation. In this context, the toilet facilities are inaccessible and unusable to such students.

The toilets' lack of Privacy makes them inaccessible and un-useable

Some female students fear using toilet facilities at the university due to lack of privacy. Observation findings revealed that; thirteen (13) toilet doors in the faculties of A, C, and B are broken; six (06) toilets have no doors at all while twenty (20) toilets have doors but with no locks. In a FGD # 02 with female students from Faculty A, one student said:

Sometimes you have no option other than holding the door of the toilet and at the same time easing yourself, in the process, you end up staining your underwear with blood and it is also very uncomfortable to imagine the panic. For sure me, I just go home if I feel like changing my pad or going for a short call. **(FDG, student Course Coordinator, Faculty A).**

Unlockable toilet doors make these sanitation facilities unacceptable for menstruation management. Female students perceive such facilities as an unbearable and therefore decide not to use them, especially during menstruation.

In conclusion, based on the data presented in this section, it is evident that female students perceive water and sanitation facilities for menstruation management as available. However, the water is sometimes inaccessible due to the irregular supply and the toilet facilities are usually inaccessible, unacceptable and unusable due to their hygienic state, unlockable doors and the dilapidated, risky state of the pit latrines.

It is from the data presented in chapter four that the discussion, conclusion, and recommendations of the study findings were made in the next chapter.

CHAPTER FIVE: DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

The summary, conclusion, and recommendations in this chapter are based on the results of the following study objectives as presented in chapter four; to assess the status of water and sanitation facilities for menstruation management by female students in HEIs, to examine the integration of water and sanitation facilities for menstruation management in the planning and budgeting processes in HEIs and to assess female students' perception of access and utilization of water and sanitation facilities for menstruation management in HEIs.

5.2 Discussion of the Study Findings

The findings presented in this chapter are discussed in relation to the objectives of the study.

5.2.1 Status of water and sanitation facilities for menstruation management in HEIs

In this study, findings revealed that there was inadequate supply of water and sanitation facilities in toilet facilities for menstruation management for female students in learning buildings at Kyambogo University. As a result this limits female students from managing menstruation appropriately while at the university. This finding collaborates with a study conducted by Wash MHM- Resource guide (2015) which revealed that water and sanitation facilities for menstruation management are referred to as the basic needs for every female. Still, the Sustainable Development Goal 6 states that access to safely managed water and sanitation should be

universally available because it is a global priority (United Nations, 2017). Therefore, according to United Nations General Assembly, access to safe water and sanitation is a standalone universal human right (United Nations 2010). Also, Kebirungi (2015a) observed that despite the increase in the number of students in Universities over the years, the strategic plan of the Universities do not prioritize investment in water and sanitation facilities for menstruation management by female students.

Secondly, there was provision of water in the toilet facilities of the faculties in Kyambogo University, however, the water supply was found to be irregular. Irregular water supply in the toilet facilities is a great set back to effective menstrual management for female students at HEIs. This is because constant supply of water in these facilities is the bedrock for the other aspects of menstrual management such as personal hygiene and facility cleanness. Further still, the study revealed that there was no provision of water in the toilet rooms specifically for menstruation management, the tap water was situated outside the toilet rooms yet water for menstruation management needs to be placed inside the toilet rooms. Samwell and Gabizon (2009), recommended indoor water in toilet facilities for proximity purposes to be friendly to female students. The presence of water in the toilet rooms for female students is not a luxury as perceived by some but rather a necessity that goes along way in ensuring their comfort as they go through their menstrual period while at school.

In addition, the water pipes in some toilet facilities were old, worn-out and leaked, resulting in water logging on the floors of the toilets. Wet floors are a nuisance and an inconvenience at the same time because no one would like to step on wet floor surfaces as those revealed in this study.

Regarding disposable bins, there was provision of sealed disposable bins in six (6) female students' toilet facilities at the University. However, these bins were not in every toilet facility, twenty nine (29) toilet facilities did not have sealed disposable bins which left some female students with no choice other than dumping their used pads in the toilets or placing them on the floors of the toilet rooms. Wrong and or careless disposal of menstrual waste material compromises the already wanting hygienic state of the toilet facilities, but worse still, it may results into blocked toilets.

Further still, female students reported that cleaners tend to delay disposing off used pads even when the bins are full. This is totally unacceptable because, apart from the foul smell and dirty environment, they can be a breeding place for infection. So these bins should be emptied daily.

It was also observed that disposable bins were placed outside toilet rooms, which made female students, feel uncomfortable to dispose off their used pads in the presence of other students. Similarly, a study conducted in Syria by Crichton et al (2013) indicated that school girls resist the use of waste bins placed inside latrine rooms because they fear to be exposed in front of other girls since it's a taboo for others to see their used pads in the bins.

The above mentioned findings indicate that the sanitation and toilet facilities at Kyambogo University are not user-friendly for menstruation management in terms of hygiene and privacy. UNICEF (2008) explained that acceptability of sanitation facilities for menstruation management as provision of privacy and hygiene facilities for female students.

In relation to the above, Kyambogo University has incinerators but these are located in the halls of residences and yet most faculties are located far away from the halls of residence. This makes it hard for cleaners to carry used pads every day to these incinerators and therefore wait for the bins to be full before they are emptied. In case they are not emptied in time, the students resort to throwing pads on the floor and behind doors. Keburungi et al., (2017) found that this leads to littering of the place which attracted flies. Regular emptying of the waste bins for sanitary pads into the incinerator cannot be over emphasized.

It was noted that there were five incinerators in Kyambogo University but that four of these incinerators are broken and cannot be used to burn used pads. As a result, cleaners resorted to openly burning used pads with paraffin which in turn leads to air pollution. This according to scholars like; Bartram and Cairncross (2010); Grimes et al., (2015) and Kebirungi et al., (2017) makes the environment uncomfortable for students to stay in. Burning sanitary pads with paraffin is not sustainable because it will require constant supply that the University may not support but also negatively affects the environment due to the air pollution.

Lack of changing rooms in the female students' toilet facilities thereby denying them an opportunity to comfortably change their clothes if the need ever arose has been also illustrated in other studies. UNICEF, (2008) explained that the acceptability of sanitation facilities for menstruation management as the provision of privacy for female students. According to Kassaw et al (2014) in Kenya girls in primary had difficulty managing their menstrual periods at school due to lack of adequate privacy and sanitary facilities; girls were supposed to carry soiled

absorbents back home. Changing rooms in female students' toilet facilities is a welcome gesture for enhancing menstrual management in HEIs.

The study also found that soap is not provided in female students' toilet facilities at the faculties for washing up after changing their soiled pads or using the toilets. The female students use only water to wash their hands after using the toilets which exposes them to diseases. Availability of soap for hand washing is the bare minimum, yet very critical hygiene standard which should not be compromised under any circumstance.

In addition, there are mirrors in some toilet facilities, especially in the new buildings. However, some of the toilet facilities, 14 out of the 42 in the old teaching buildings, do not have mirrors yet these are places of convenience mostly used by female students while at the university because half of their lectures are conducted in the old lecture rooms. It is uncomfortable for female students to ask their fellows whether they have soiled their clothes or not due to the absence of mirrors in some toilet facilities. While dressing mirrors seem to be used to ensure smartness or one's presentability, they are essential in menstrual management, in that one can be able to ascertain that their clothes have no menstrual blood stains. For this reason, all female toilet facilities in HEI should have dressing mirrors.

5.2.2 Integration of water and Sanitation Facilities for Menstruation Management in HEIs' Planning and Budgeting Processes

According to the study findings, the Approved Estimates of Revenue and Expenditure, (Recurrent and Development) of Kyambogo University, 2019/2020 Electricity is 44%, Water is 14%, other structures (sanitation and toilet facilities) is

16% and Roads and Bridges is 26%. These are the funds that are allocated to the Estates and Works department. The Estate and Works department plans and budgets for water and sanitation facilities generally with no special consideration for menstruation management. This means, the department does not give a specific allocation of funds for the provisioning of water and sanitation facilities for menstruation management. Yet, this is a very important aspect in female students' welfare as guided by Gebre et al., (2023) and Mohammed (2020) who emphasized that provisioning of generic and special facilities and services promote learning and good academic performance for all categories of students.

The study also found out that the rate of female students' enrolment increase at Kyambogo University is higher than that of the provisioning of the water and sanitation facilities. In 2015-2016, 54% were females and 46% were males. In 2016/2017, the report showed that 54% of the students enrolled were females while 46% were males. In 2017-2018 according to the report, 55% were males and 45% were females in 2018-2019 54% were males and 46% were females. According to Kyambogo University budgetary allocation (Kyambogo University, 2019), there has been a steady increase in students' enrolment by gender from 2015/16 to 2018/19. This clearly shows that the number of female students at Kyambogo University keeps on increasing. This implies that students have to line up in the usage of toilet facilities. The situation is worse in the old teaching facilities which were originally built to be used by few students. In this scenario, female students still have to use the same water provisions, and the same toilet facilities. This scenario violates female students' requirement for more water and enhanced access to toilet facilities for proper and comfortable menstruation management.

In addition, both male and female students' toilet facilities are constructed the same way with the same provision of water minus changing and wash rooms, yet female students have a high demand for water and freshening up facilities than male students. There are limited resources allocated for water and sanitation facilities for menstruation management in the planning and budgeting processes of the Estates department at the university as revealed by the study. Therefore, water and sanitation facilities for menstruation management scarcely catered for. The aforementioned findings are similar to Munro et al., (2021), who, too, found that higher education in Bangladesh has failed to provide funds according to the varying needs of the diverse population groups in the universities. These findings and scenario indicate that Kebirungi et al., (2017) observation that different groups of individuals have different requirements and interests in water and sanitation facilities has hardly influenced the provisioning of water and sanitation facilities in the planning and budgeting processes at Kyambogo University. Meaning that, the Estates department at Kyambogo University needs to provide water and to construct toilet facilities according to the needs of the users to avoid misusing these toilet facilities. This will help female students to manage their menstruation periods and study effectively and comfortably.

A study by Munro et al., (2021) which focused on showing the diversity in water and sanitation needs of each population stressed that higher education institutions in Bangladesh have failed to provide funds for water and sanitation facilities according to the varying needs of the diverse population in the universities. Also kebirungi (2016) in her study about gender perspective on water and sanitation facilities revealed that Universities in East Africa face fiscal problems in maintaining

infrastructures for menstruation management because the available resources are constrained by teaching and learning financial demands. Still, there are no funds allocated for awareness campaigns to inform both female and male students about how to use water and sanitation facilities, especially during menstruation management. According to the United Nations report (2010), the limited awareness students have of their responsibilities and managers have of their obligation in the provisioning and management of water and sanitation facilities for menstruation management worsens the conditions of these facilities in many institutions. The aforementioned scenario leaves Universities in developing countries with small budgets to address the water and sanitation emergencies (Adeleya & Olumayokun 2014).

Additionally, all decision makers were males in the Estate and Works department yet they lack experiential (primary) knowledge about the females' menstruation management needs as revealed by the study. This finding is supported by Kebirungi, (2015a) who in a similar study at Makerere and Dar es Salaam universities affirmed that males have limited awareness of the females' need of water and sanitation facilities for menstruation management. This scenario leaves most of the female students' needs for water and sanitation facilities for menstruation management unsolved because to male administrators, these are not critical or necessary. This explanation is supported by Uwimana (2014), who reported that in Rwanda, few women are involved in planning for the emergency management of their society and this has left water and sanitation facilities for menstruation management unplanned for or given a very small budget.

Female students, as the key stakeholders in the usage of the university's water and sanitation facilities are excluded from the planning and budgeting processes of the Estate and Works department of the university. This is substantiated by a study by USAID (2015) that reported that Universities in Sub-Saharan Africa have failed to differentiate student categories and their needs for sanitation facilities. This is partly due to the inadequate representation of females in the planning and budgeting committees. Cultural attitudes, social norms, historical and systemic gender discrimination against females contribute to females' invisibility in water provisioning, access, and management (Sugden, 2014). Similarly Mollinga (2008) in his study in Sub Sahara Africa revealed that there is restriction on the participation of male and female students and other users in water and sanitation programmes in the planning and budgeting for them. Daniel et al (2016); Shah et al., (2023) and Torondel & VanLeeuwen, (2018) like Mollinga (2008) also found out that exclusion of females from the budgeting process affected the distribution of funds allocated to the provisioning and maintenance of water and sanitation facilities especially for menstruation management. This finding indicates that the planning and budgeting processes at the Estates department disregard the recommendation by some scholars like Kebirungi et al., (2015a); and Krantz, (2010) who noted that students need to be involved in water resource management planning and issues of gender awareness creation. Similarly, Daniel et al. (2016) found that male teachers who are the majority in administration in secondary schools in Cambodia have ended up allocating few resources to budget for sanitation facilities because they are not aware of the menstruation management needs for female students.

5.2.3 Female students perception towards access and utilization of sanitation facilities for menstruation management in HEIs

To some female students the provisioning of water and sanitation facilities for menstruation management is perceived as a minor need as revealed by the study. This collaborates with a study by Castaneda (1996), found that; girls in rural Mexico believed that issues concerning menstruation had to be hidden away from the community because they perceived menstruation flow as dirty and shameful. The researcher attributes the mindset trivializing this issue to the students' lack of sensitization and awareness that water and sanitation facilities for menstruation management are basic needs of life which they need to access at the university as pointed out by the United Nations report (2010). Students' unwillingness to discuss menstruation issues in public is in line with the UNESCO report (2014) which explains that silence about menstruation by females in education settings is cultural since it is taken as a shameful subject that needs to be hidden because it might cause misunderstandings. Because of this mind set, water and sanitation facilities aren't publically demanded by students at the university. This may partly explain the lack of prioritization of provisioning and maintenance of water and sanitation facilities for menstruation management at the university as also established by Brown et al., (2023) and Daniel et al., (2016).

The irregular supply of water in toilet facilities at the university made female students to perceive water and sanitation facilities as unacceptable by the students because it causes a lot of stress to female students during menstruation. Since they are not sure if they will find water in the toilets or not, some female students decide to stay in their hostels and miss lectures until they are done with menstruation.

According to the United Nations General Assembly declares access to safe water and sanitation as a standalone universal human right (United Nations, 2015). The Sustainable Development Goal # 6, also states that access to safely managed water and sanitation should be universally available because it is a global priority (United Nations, 2017); which in the context of this study is a pre-requisite for the hygienic management of the menstruation process by female students.

The toilet facilities at the university are perceived as unacceptable for menstruation management by students with disabilities of walking and seeing because the handles for flushing them are too high for these students. This makes them use toilets with the help of their friends, thus making it shameful and uncomfortable for them to use the toilet, especially during menstruation. This is because no female likes to clean up during menstruation in the presence of the other. These students, like those in rural Mexico, perceive menstruation flow as dirty and shameful; therefore, it has to be hidden away from the public eye (Castaneda, 1996). In this context; female students with disabilities in Kyambogo are traumatized when they are in menstruation because of the unacceptable lack of privacy caused by the high toilet handles that necessitate them to have another able person to flush the toilet for them.

Female students also perceived the available toilet and latrine facilities at the university as inaccessible and unacceptable due to their dirty state, inadequate numbers, dilapidated status and lack of privacy. Every female's desire is to use a clean toilet and latrine especially during menstruation. This assertion is also supported by Brahmanandam and Bharambe (2023) and Demsash et al., (2023) who explain that unacceptable toilet facilities, dustbins, incinerators, and water affects human beings and can cause several complications and diseases like diarrhoea,

urinary tract infections, worms' infestation, lymphatic filariasis, bowel complications, and malnutrition. Molla's study in Ethiopia (2014), also confirmed that the sorry state of sanitation facilities in secondary schools caused psychological trauma to female students and made girls to worry when they started their menstruation during school hours. Therefore to avoid such complications, some female students in this study chose to stay at home or in their hostels during menstruation.

Furthermore, the unsealed disposable bins in the toilet facilities in Kyambogo University were also perceived as unacceptable by female students. The uncovered disposable bins make female students uncomfortable to dump their used pads inside them especially when someone else is near the bin. Also in a study conducted in Syria, Crichton et al (2013) found that girls and women resist the use of waste bins placed in latrines because of the strong cultural belief that perceives it is a taboo for others to see their used pads in the bins. More so these bins are placed out the toilet rooms with no privacy, yet menstruation is something which requires maximum privacy. Similarly, Kebirungi et al (2017) too, found that in Makerere University in Uganda and Dar Es Salam University in Tanzania, placing sanitary bins outside the toilet, close to the hand wash basins made female students uncomfortable to carry used sanitary towels from the toilets to open areas. Still, some toilet facilities do not have disposable bins therefore, some female students decide to move with polythene bags or dump the pads inside the toilets which causes blockage. Kassaw et al. (2014) also found that in Kenya girls in primary schools carried soiled absorbents back home due to lack of adequate privacy and sanitary facilities. In this study, some female students who dislike carrying something to keep their used pads chose to stay

at home or in their hostels until they are done with menstruation. Any feeling of infringement on one's privacy may cause them to step back, the reason some female students may skip classes. Therefore, measures to ensure privacy must be upheld and catered for during planning and budgeting processes.

The absence of mirrors in toilet facilities in Kyambogo University was also unacceptable by female students. The study discovered that thirty toilet facilities had broken mirrors out of the forty eight and ten toilet facilities did not have mirrors. Female students need these mirrors to check if their clothes are soiled or not during menstruation such that they clean up to avoid embracement because menstruation is considered to be shameful and dirty by female students. This observation is supported by Rasmussen (2009) who in north eastern Niger women and girls were observed washing their used rags only at night because they thought it is shameful and dangerous to associate with menses.

Furthermore, the study also discovered that incinerators in Kyambogo University are perceived as inaccessible by female students. All incinerators are located far away from lecture buildings. They are located in the halls of residence yet most female students are non-residents. This is critical because some female students fear disposing of their used pads in disposable bins in the toilet facilities due to their cultural background that prohibits them to do so. Such students need to personally dispose off their used pads in the incinerators. This finding is similar to Umeora's (2008) who also found that, in Nigeria females in Higher Education Institutions of learning were scared to dispose off their used rags in the toilet waste bins because they could be used to bewitch them. In this study, such students miss lectures during menstruation because of the fear to drop off their used pads in the disposable bins

and the burden of moving for a long distance to the halls of residences where incinerators are. More so, most of the female students are not even aware of the existence of these incinerators. To make the situation worse, most of the incinerators are broken and there is only one functional incinerator in the whole university. This incinerator cannot be accessed by every female in Kyambogo University because some faculties are located far away from this hall of residence. While increasing the number of functional incinerators is imperative, debunking the myths and cultural beliefs of individuals is especially important. So that, like in this case, female students with such beliefs can be able to use the available facilities without any fear.

5.3. Conclusions

This study has come up with the following conclusions. Firstly, the study has established that the status of water and sanitation facilities for menstruation management are either; missing, quantitatively insufficient, in poor condition or offers no privacy. Still, cleanness and maintenance of water and sanitation facilities are irregular whereby the care takers clean only in the mornings which makes the toilets smell and unusable. This has resulted in absenteeism, stress, and trauma to female students. The poor status of water and sanitation facilities for menstruation management has resulted into absenteeism of female students during lectures at the university.

Secondly, the study looked at the integration of water and sanitation facilities for menstruation management in the planning and budgeting of the university. According to the findings, water and sanitation facilities are planned and budgeted for by the Estates Department but generically without specify consideration for water and sanitation facilities for menstruation management by female students. Also,

major stakeholders like female students or Administrators are not involved in the planning and budgeting for funds' allocation to water and sanitation facilities for menstruation management.

Lastly, the study established that female students perceive the water and sanitation facilities for menstruation management as generally available but inaccessible and unacceptable in various ways. This therefore leaves some students with no option, but to stay back in their homes or hostels till they are done with their menstruation period. The findings further indicate that some students perceive discussing water and sanitation facilities for menstruation management as something shameful, secret, and not important. According to them, this is not an issue to be discussed publically. This is because most of them are not aware of their rights to water and sanitation while at the university. This has discouraged the university from prioritizing the female students' need for water and sanitation facilities, for menstruation management.

5.4. Recommendations

In this study, it was established that the status of water and sanitation facilities for menstruation management in Kyambogo University are inadequate because they are; quantitatively insufficient, in poor condition or offer no privacy. It is recommended that the the department of Estates and Works continues to improve on the provision and maintenance of water and sanitation facilities for menstruation management.

Still, the only source of water to KyU is the National Water and Sewerage Cooperation, whose supply may be, interrupted occasionally thereby resulting in lack of water in the toilets. However, the university could erect tanks to collect rainwater

which could be linked to toilet rooms as a supplementary source of water. This suggestion is supported by Cumming et al, (2014) who also affirm that since water and sanitation are essentials of life, they require to be provided at a community level through all means possible.

In addition, female students in Kyambogo University also recommended that at least used pads should be disposed off every day from the toilet facilities to avoid the bad smell in the toilets so that they are able to use the toilets comfortably.

The study also disclosed that female students are not involved in the planning and budgeting processes of the Estates Department. It is recommended to policy makers of the university that there is a need to come up with approaches to involve female student guild officials and female Estate staff the in planning and budgeting processes of the Estates Department. This will enable the department to budget and plan for water and sanitation facilities for menstruation management adequately.

There is also a need to sensitize students about their rights to participate in public discussions on accessibility, acceptability and utilization of water and sanitation facilities for menstruation management in Higher Education Institutions by the Gender Directorate. This will address female students' belief that water and sanitation facilities for menstruation management aren't publically discussed and demanded for by students at the university. This should be achieved through continuous sensitization throughout the academic year.

Finally, to make the water and sanitation facilities at the university accessible and acceptable for female students' menstruation management, various measures are

required. There is a need for the Estates and Works department to carry out continuous supervision of the status, utilization, and access of water and sanitation facilities. This will help to improve the status of these facilities for proper students' health and participation in academic activities. This will also help female and male students to effectively use water and sanitation facilities at the university. There is also need for the University management and the Estates department to increase on the budget for provisioning and maintenance of water and sanitation facilities for menstruation management so that it is proportionate to the increasing number of female students at Kyambogo University.

5.5. Suggestions for Further Research

Based on the findings of the study, there is need for researchers to conduct further research on the following areas; Effects of water and sanitation facilities for menstruation management on the, academic activities of female students, lecture attendance of female students in higher education institutions, health status of female students and Water and sanitation facilities for menstruation management in the female Halls of residence in Higher Education Institutions.

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Appendix I: Observation Guide

Date of observation

Faculty... ..

Questions	Faculty Education	Faculty Engineering	Faculty Arts & social sciences	Faculty Special needs	Faculty of Vocational studies	SOME
Are there sufficient toilets for girls? YES/ NO						
Are girls' toilets easily accessible? YES/ NO						
Are there vault cover slabs for the toilets? YES/ NO						
Is there a mirror available in the toilets? YES/ NO						
Are the paths to access the toilets well maintained?						

YES/NO						
Is there sufficient light in the toilets? YES/ NO						
Is there an effective maintenance and cleaning routine in place for the toilets? YES/NO						
Are there water provisions in the toilets? YES/ NO						
Do the water points function well in toilet rooms? YES/ NO						
Are the girls' toilets separate from the boys' toilets? YES/ NO						

Are there locks on doors of the toilets? YES/ NO						
Are there toilets for girls with disabilities? YES/ NO						
Is there a dustbin available in toilet facilities to dispose of used sanitary Products? YES/ NO						
Is there an incinerator in the faculty for menstrual materials? YES/NO						
Is there a basin in the toilet						

<p>Facilities to wash their soiled cloths or rags after use? YES/ NO</p>						
<p>Is there a flat iron in the toilet facilities to dry up their clothes after wash? YES/ NO</p>						
<p>Is there soap in the toilet facilities? YES/ NO</p>						
<p>Is there a changing room for a refresh and change used pads or cloths? YES/ NO</p>						

Appendix II: Documentary Analysis Guide

1. Do the university budget guidelines have specific votes for sanitation facilities for menstruation management by female students in the faculties?
2. Do the University budget Guidelines have specific votes for water for menstruation management by female students in the faculties?
3. Does the university budget have specific votes for provisioning water in the faculties for menstruation management by female students?
4. Does the university budget have specific votes for provisioning sanitation facilities in the faculties for menstruation management by female students?

Appendix III: Focused Group Discussion Guide For Students Course Coordinators

DEMOGRAPHIC DATA

Faculty:

.....

Department:

.....

SECTION A: OBJECTIVE 1

1. Is there a provision of water for menstruation management in the faculties at Kyambogo University?

2. Do sanitation facilities for menstruation management exist in faculties at Kyambogo University?

3. Do sanitation facilities in your faculties adequately support female students in the management of menstruation periods in terms of providing them with Hygiene (ii). Privacy (iii). Safety

Give reasons for each of your answers in (ii) to (ii)

4. Does water in your faculties adequately support female students in the management of menstruation periods in terms of providing them with: Hygiene (ii), Privacy (iii). Safety

Give reasons for each of your answers in (ii) to (iii)

5. Are the incinerators at the University adequate for managing the disposal of female students' soiled sanitary towels? Give reasons for your answers. Please indicate the total number of these facilities in the University.

SECTION B: OBJECTIVE 2.

6. Mention the sanitation facilities the University has put in place for female students to use for menstruation management in the faculties.

7. Mention the provision of water the University has put in place for female students to use for menstruation management in the faculties.

SECTION C: OBJECTIVE 3

1. In your view, are sanitation facilities for menstruation management in your faculties accessible to female students? Yes/No. Give reasons for your answers.
2. In your view, is water for menstruation management in your faculties accessible to female students? Yes/No. Give reasons for your answers
3. In your view, are sanitation facilities for menstruation management in your faculties usable by female students? Yes/No. Give reasons for your answers.
4. In your view, is water for menstruation management in your faculties usable by female students? Yes/No. Give reasons for your answers.
5. In your view, what water do female students in your faculties need for menstruation management?
6. In your view, what sanitation facilities do female students in your faculties need for menstruation management?
7. Mention the categories of these facilities that are adequate and those that are inadequate. Give reasons for each of your answers.
8. Does the status of sanitation facilities for menstruation management in your faculties affect female students' participation in academic and co-curricular activities? Give reasons for your answers and illustrate them with examples.

9. Does the status of water for menstruation management in your faculties affect female students' participation in academic and co-curricular activities? Give reasons for your answers and illustrate them with examples.

Appendix V: Interview Guide for University Managers.

DEMOGRAPHIC DATA

Sex: 1. Male 2. Female

Work experience duration at KyU: 1-5 yrs; 6-10 yrs; 11-15 yrs; over 15 yrs

SECTION A: OBJECTIVE 1

1. Is there a provision of water for menstruation management in the faculties at Kyambogo University?
2. Do sanitation facilities for menstruation management exist in faculties at Kyambogo University?
3. Do sanitation facilities in your faculties adequately support female students in the management of menstruation periods in terms of providing them with Hygiene (ii), Privacy (iii). Safety Give reasons for each of your answers in (ii) to (iii)
4. Does water s in your faculties adequately support female students in the management of menstruation periods in terms of providing them with: Hygiene (ii), Privacy (iii). Safety
Give reasons for each of your answers in (ii) to (iii)
5. Are the incinerators at the University adequate for managing the disposal of female students' soiled sanitary towels? Give reasons for your answers. Please indicate the total number of these facilities in the University.

SECTION B: OBJECTIVE 2.

6. Mention the water facilities the University has put in place for female students to use for menstruation management in the faculties.
7. Mention the sanitation facilities the University has put in place for female students to use for menstruation management in the faculties

8. Do you participate in the planning of sanitation facilities for menstruation management?.

8. Do you participate in the planning of water for menstruation management?

9. How many female staff are in the planning directorate?

10. Does the planning unit ensure that departments involve females when planning and budgeting for sanitation facilities in the faculties? Give reasons for your answer.

11. Does the planning unit ensure that departments involve females when planning and budgeting for water in the faculties? Give reasons for your answer.

12. Does the planning directorate ensure that the estates' department plans and budgets for faculty sanitation facilities in a way that promotes safe, private, and hygienic menstruation management by female students? Give reasons for your answers and illustrate them with examples.

13. Does the planning directorate ensure that the estates' department plans and budgets for faculty water in a way that promotes safe, private, and hygienic menstruation management by female students? Give reasons for your answers and illustrate them with examples.

SECTION C: OBJECTIVE 3

14. In your view, what sanitation facilities do female students at Kyambogo need for menstruation management in the faculties?

15. In your view, what water do female students at Kyambogo need for menstruation management in the faculties?

16. Mention the categories of these facilities that are adequate and those that are inadequate. Give reasons for each of your answers.

17. Mention the categories of these facilities that are adequate and those that are inadequate. Give reasons for each of your answers

Appendix vi: Interview Guide For Students Guild Officials.

DEMOGRAPHIC DATA

Sex: 1. Male 2. Female
Year of Study: 1. 1st year 2. 2nd year 3. 3rd year 4. 4th year 5. 5th year
Faculty.....

SECTION A: OBJECTIVES 1

1. Does water at the faculties adequately support female students in the management of the menstruation period in terms of providing them with: Hygiene(ii). Privacy (iii). Safety. Give reasons for each of your answers in (ii) to (iii).
2. Do sanitation facilities at the faculties adequately support female students in the management of the menstruation period in terms of providing them with Hygiene(ii). Privacy (iii). Safety. Give reasons for each of your answers in (ii) to (iii).
3. Are the incinerators at the University adequate for managing the disposal of female students' soiled sanitary towels? Give reasons for your answers. Please indicate the total number of these facilities in the University.
4. Do female students use faculty toilets for the disposal of their sanitary towels? Give reasons for your answers.

SECTION B: OBJECTIVE 2

1. Mention the water the Guild administration has put in place for female students to use for menstruation management in the faculties, yours inclusive.
2. Mention the sanitation facilities the Guild administration has put in place for female students to use for menstruation management in the faculties, yours inclusive.
3. How many female students are Faculty GRCs?
4. Does the Students' Guild Administration involve female students when planning and budgeting for sanitation facilities in the faculties? Give reasons for your answer.

5. Does the Students' Guild Administration involve female students when planning and budgeting for water in the faculties? Give reasons for your answer.

6. Does the guild administration plan and budget for faculty sanitation facilities in a way that promotes safe, private, and hygienic menstruation management by female students? Give reasons for your answers and illustrate them with examples.

7. Does the guild administration plan and budget for faculty water in a way that promotes safe, private, and hygienic menstruation management by female students? Give reasons for your answers and illustrate them with examples.

SECTION C: OBJECTIVE 3

8. In your view, what sanitation facilities do female students at Kyambogo need for menstruation management in this faculty?

9. In your view, what water do female students at Kyambogo need for menstruation management in this faculty?

10. Mention the categories of these facilities that are adequate and those that are inadequate. Give reasons for each of your answers.

11. Mention the categories of these facilities that are adequate and those that are inadequate. Give reasons for each of your answers.

12. Do female GRCs encourage the students' Guild Administration to plan and budget for the provisioning of sanitation facilities for menstruation management?

13. Do female GRCs encourage the students' Guild Administration to plan and budget for the provisioning of water for menstruation management?

Appendix VII: Interview Guide For Students With Special Needs.

DEMOGRAPHIC DATA

Faculty:

.....

Department:

.....

SECTION A; OBJECTIVE 1

1. Is there a provision of water for menstruation management in the faculties at Kyambogo University?
2. Do sanitation facilities for menstruation management exist in faculties at Kyambogo University?
3. Do sanitation facilities in your faculties adequately support female students with disabilities in the management of menstruation periods in terms of providing them with Hygiene (i). Privacy (ii). Safety
Give reasons for each of your answers in (i) to (ii)
4. Does water in your faculties adequately support female students with disabilities in the management of menstruation periods in terms of providing them with: Hygiene (i), Privacy (ii). Safety
Give reasons for each of your answers in (i) to (ii)
5. Are the incinerators at the University adequate for managing the disposal of female students' soiled sanitary towels? Give reasons for your answers. Please indicate the total number of these facilities in the University.

SECTION B: OBJECTIVE 2.

6. Mention the sanitation facilities the University has put in place for female students to use for menstruation management in the faculties.
7. Mention the provision of water the University has put in place for female students disabilities to use for menstruation management in the faculties.

SECTION C: OBJECTIVE 3

10. In your view, are sanitation facilities for menstruation management in your faculties accessible to female students? Yes/No. Give reasons for your answers.
11. In your view, is water for menstruation management in your faculties accessible to female students? Yes/No. Give reasons for your answers
12. In your view, are sanitation facilities for menstruation management in your faculties usable by female students? Yes/No. Give reasons for your answers.
13. In your view, is water for menstruation management in your faculties usable by female students? Yes/No. Give reasons for your answers.
14. In your view, what water do female students in your faculties need for menstruation management?
15. In your view, what sanitation facilities do female students in your faculties need for menstruation management?
16. Mention the categories of these facilities that are adequate and those that are inadequate. Give reasons for each of your answers.
17. Does the status of sanitation facilities for menstruation management in your faculties affect female students' participation in academic and co-curricular activities? Give reasons for your answers and illustrate them with examples.

18. Does the status of water for menstruation management in your faculties affect female students' participation in academic and co-curricular activities? Give reasons for your answers and illustrate them with examples.

Appendix VIII: Consent Form

Human Participant Informed Consent Form

Research Project Title: Water and sanitation for menstruation management in Higher Educational Institutions; A case of Kyambogo University.

Principal Researcher: Nassozi Pomlet

Sponsor:

Keep this copy of the consent form for your records and reference. It gives you a basic idea of what the research is about and what your participation will involve. Please take the time to read this carefully and to understand any accompanying information.

Dear Participant,

I am a student in the faculty of Education and am based in the Department of Foundations of Education at Kyambogo University. I will be researching to explore the status of water and sanitation facilities for menstruation management, the integration of water and sanitation facilities into planning and budgeting of the university, the students' and students' perception of the status of water and sanitation facilities for menstruation management.

The information you give will strictly be used for publication and for advocating for the institution to involve in the provision of water and sanitation facilities for menstruation management in higher institutions of education. It will not be used for any other purposes without your express consent.

You will be asked to participate in a one hour and a half audiotaped interview and, with your permission. The interview will allow you to reflect on and share your

experiences with water and sanitation facilities. Interviews will then be transcribed. If anything is unclear in a transcript, your permission to follow it up will be required. Your participation in the study is completely voluntary. You have the right to stop answering questions at any time. Should you decide to withdraw from the study at any time, the decision not to volunteer will not influence the nature of your relationship with the researcher, Kyambogo University, or any other group associated with this project either now or in the future.

All information you supply during the research will be held in confidence, and unless you specifically indicate your consent, your name will not appear in any report or publication of the research. You will be assigned a unique code to keep all responses anonymous. I will assign your name a pseudonym to protect your identity. Your data will be safely stored on a password-protected home computer and I will be the only one with access to this information. Digital audio recordings will be transcribed immediately after the interviews into my computer and then permanently deleted from the digital audio recorder. If you withdraw from the study, all associated data collected will be immediately destroyed wherever possible. All data will be kept for five years. Confidentiality will be provided to the fullest extent possible by law.

This research has been reviewed and approved for compliance to research ethics protocols by the Mildmay Research Ethics Committee. If you have any questions about this process or your rights as a participant in the study, please contact the Deputy Vice-Chancellor Academic Affairs, Kyambogo University: dvc@kyu.ac.ug or feel free to email Elizabeth Opit:bethopit@gmail.com

Legal Rights and Signatures

I, _____, consent to participate in the study on
“water and sanitation facilities for menstruation management by female students in

higher education institutions; a case of Kyambogo University.” by Nassozi Pomlet. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

Signature _____ Date

Participant _____

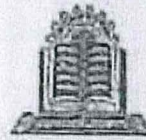
Signature _____ Date

Principal

Investigator

Appendix Ix: Letter of Introduction From Graduate School

APPENDIX IX: LETTER OF INTRODUCTION FROM GRADUATE SCHOOL



KYAMBOGO UNIVERSITY

P. O. BOX 1 KYAMBOGO
Tel: 041 - 4286792 Fax: 256-41-220464
Website: www.kyu.ac.ug

Office of the Dean, Graduate School

19th November, 2020

To Whom It May Concern

RE: LETTER OF INTRODUCTION

Dear Sir/Madam,

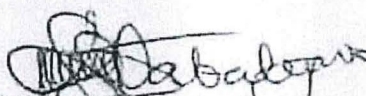
This is to introduce **Nassozi Pomlet** Registration Number **16/U/13429/GMEF/PE** who is a student of Kyambogo University pursuing a Masters Degree.

She intends to carry out research on "Water and Sanitation Facilities for Menstruation Management by Female Students in Higher Education Institutions." A case of Kyambogo University as partial fulfillment of the requirements for the award of the Master of Foundations of Education.

We therefore kindly request you to grant her permission to carry out this study in your institution.

Any assistance accorded to her will be highly appreciated.

Yours sincerely,


Assoc. Prof. Muhamud N. Wambede
DEAN, GRADUATE SCHOOL

APPENDIX X: MAP OF UGANDA SHOWING KAMPALA DISTRICT



WATER AND SANITATION
FACILITIES FOR
MENSTRUATION
MANAGEMENT BY FEMALE
STUDENTS IN HIGHER
EDUCATIONAL INSTITUTIONS.
A CASE OF KYAMBOGO
UNIVERSITY

Submission date: 20-Oct-2023 05:03PM (UTC+01:00)
by NASOZI POMLET

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Word count: 31349

Character count: 178745

WATER AND SANITATION FACILITIES FOR MENSTRUATION MANAGEMENT BY FEMALE STUDENTS IN HIGHER EDUCATIONAL INSTITUTIONS. A CASE OF KYAMBOGO UNIVERSITY

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