

Integration of water and sanitation facilities programs for menstruation management: a focus on university planning and budgeting processes at Kyambogo University, Uganda

Pomlet Nassozi¹ | Elizabeth Opit¹ | Harriet Kebirung¹ | Charles Muweesi^{1,2}  | Lawrence Sserwadda³

¹School of Education, Kyambogo University, Kampala, Uganda

²Faculty of Science and Education, Busitema University, Busia, Uganda

³Institute of International and Comparative Education, Zhejiang Normal University, Jinhua, China

Correspondence

Elizabeth Opit, Foundations of Education, Kyambogo University, Kyambogo, Kampala, Uganda.
Email: bethopit@gmail.com
Charles Muweesi, Faculty of Science and Education, Busitema University, Busia, Uganda.
Email: cmuweesi@gmail.com

[Correction added on 3 December 2024, after first online publication: Elizabeth Opit and Harriet Kebirungi were added as authors and Elizabeth Opit as co-corresponding author.]

Abstract

This study investigated the integration of water and sanitation facilities' programs for menstruation management with a focus on university planning and budgeting processes at Kyambogo University. The study employed qualitative methods of data collection and analysis from students and members of the university's top management. Findings revealed that there is limited engagement of female and male students in the budgeting and planning of water and sanitation facilities for menstruation management by the estates department; more so, the generic budget does not adequately cover all the requirements for menstruation management by female students, and female students perceive water and sanitation facilities for menstruation management as generally available but inaccessible and unacceptable in various ways. Thus, the study generates knowledge about the status of water and sanitation facilities for menstruation management to enable female students to participate in academic activities in higher education institutions by recommending that the Directorate of Planning and Development at Kyambogo University should promote a participatory and gender-equity inclusive plan and budget that ensures that water and sanitation facilities for



menstruation management become 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 specific water in toilet rooms including changing rooms, replacement of broken doors to provide privacy, and other required facilities to enhance effective menstruation management.

KEYWORDS

Kyambogo University, menstruation management, water and sanitation

1 | INTRODUCTION

Menstruation is a normal and common occurrence for women during their reproductive years, and it is accompanied by considerable physiological and mental changes (Dogoli et al., 2023). Women have experienced menstruation periods since before humans were completely evolved as a species (Zellner, 2014). In ancient history, little is documented about menstruation probably because most of the scribes were men who chose not to record information on menstruation management among women (Zellner, 2014). In the ancient era, menstruating women were associated with magic and sorcery, and people were scared of seeing menstrual blood even women themselves (Zellner, 2014). 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 (Zellner, 2014). 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 (Dogoli et al., 2023). The negative perspective towards menstruating women made organizational institutions and educational institutions inclusive to be silent about issues concerning menstruation management Chrisler and Johnston-Robledo (2011). For instance, according to WHO (2022), menstrual health was not on the agenda of the International Conference on Population and Development and the Millennium Declaration nor was it explicitly stated in the Sustainable Development Goals targets for goals of health, gender, water, and sanitation.

The silence of educational institutions about issues concerning menstruation management has made them irresponsible to menstruation management by female students. Consequently, by the 20th century, girls in primary schools in developing countries could not attend school during menstruation due to a lack of clean and private toilet facilities for female students in these institutions (Tegegne & Sisay, 2014). In the same era, UNICEF (2016) also confirmed that about 1 in 10 female students in primary in Africa did not attend school during menstruation (Rose et al., 2022; Thomas & Charles, 2022).

Jasper et al. (2012) define sanitary facilities for menstruation management as necessities for women and girls to manage menstruation. These include private safe toilets, latrines, and the availability of toilet paper. Sanitary facilities also involve urinals; washing facilities for hands,

clothes, and the body; and changing rooms for girls (Johnston-Robledo & Chrisler, 2020). 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 (2018), 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. Menstruation is an integral and normal part of human existence and severely affects the quality of life of women and girls (Dogoli et al. (2023). Menstrual hygiene is fundamental to the dignity and wellbeing of women and is girls and an important part of basic hygiene, sanitation, and reproductive health services to which every woman (Rose et al., 2022) and girl has a right (Tegegne & Sisay, 2014). Globally, about 64% of the women and girls' population is of reproductive age and menstruate each month for a period of 2 to 7 days (Charles & Khan, 2022). Some menstruating women and girls are engaged in different spaces including educational institutions Kebirungi, Kabonesa, Kimwaga, et al., 2015) In addition, there is recognition among academics, feminist activists, policymakers, and practitioners about the importance of menstruation due to the required outcomes across health, education, employment, and gender equality for all people who menstruate (Kebirungi, Kabonesa, Kimwaga, et al., 2015).

However, there are still significant knowledge and understanding gaps in menstruation and its management in educational institutions. Open discussions about menstruation and its management have not met the required attention (Mohammed & Larsen-Reindorf, 2020). For instance, there has not been menstrual education starting from primary to prepare girls for menarche, improve their knowledge about menstruation, and teach boys how to support girls (Charles & Khan, 2022 and women during the menstrual period (Mohammed & Larsen-Reindorf, 2020). Due to this knowledge gap, menstruating women and girls are considered "unclean," "contaminated," and "impure" (Mohammed & Larsen-Reindorf, 2020). The situation could be due to a lack of supportive workplace and public health policies to promote accessibility and equal access to facilities to accommodate menstruating women and girls in educational institutions (Zellner, 2014). If not properly managed, menstruation can disrupt the 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 (Dogoli et al., 2023; Munro et al., 2021; Zellner, 2014).

Globally, there is a steady increase in the enrolment of students in different higher education institutions (United Nations Human Rights, 2010) due to the MDGs and SDGs that mandate all the world countries to provide Education For All (EFA) at all levels (UNESCO, 2015; UNICEF, 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, Kabonesa, Kimwaga, et al., 2015), and Kyambogo University is no exception to this experience. Consequently, the aforementioned scenario forms the basis for the inclusion of menstruation management facilities in the processes and arrangements of university routines to mitigate the personal hygiene of students in higher education institutions (Anbesu & Asgedom, 2023).

In Sub-Saharan Africa, the provision of water and sanitation facilities for menstruation management for female students in public institutions is not commensurate with the growing student population (Anbesu & Asgedom, 2023; Kebirungi, Kabonesa, Luboobi, et al., 2015). Yet, in these educational institutions, female students require more water and sanitary facilities for bathing and washing, especially during their menstruation periods than their male counterparts (United Nations Human Rights, 2010).

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 on Sub-Saharan Africa have only focused on gender responsiveness in the provisioning and management of water and sanitation facilities in East African universities: a case of Makerere University, Uganda, and the University of Dar es Salaam, Tanzania (Kebirungi, Kabonesa, Luboobi, et al., 2015); water conservation at primary and secondary levels in Sub Sahara Africa and East Africa (Zellner, 2014); understanding the menstrual hygiene management challenges facing displaced girls and women in primary schools in Nairobi Kenya (Ellis et al., 2017); menstrual hygiene management among adolescent girls in Sub-Saharan Africa in primary and secondary schools (Anbesu & Asgedom, 2023); water and sanitation in schools; a systematic review of the health and educational outcomes in developing countries (Jasper et al., 2012); and 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.

The call for equal and equitable access to education by all in MDG #8 and SDG #4 coupled with the 1.5 points has increased global demand for higher education leading to the increase in female students' enrolment in HEIs Kyambogo University inclusive (UNESCO, 2015). Kyambogo University has had an increase in female students' enrolment from 700 in 2003 to 11,529 in 2019 (Factbook, 2019). The above increase may have put a strain on the already existing water and sanitation facilities for menstruation management. However, available studies (Kebirungi, Kabonesa, Kimwaga, et al., 2015; Sommer, 2010; Zellner, 2014) 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 the 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 (Anthony et al., 2022; Johnston-Robledo & Chrisler, 2020).

2 | 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.

2.1 | Objectives

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

2.2 | Theorizing the study

This study was guided by Goffman's (1971) pollution theory. Goffman is a prominent sociologist known for his work on 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. This means that stains are the source of stigmatization to females in HEIs. According to this theory, stains stigmatize people because they spoil the appearance or identity of people in the eyes of others (Goffman, 1971). In theorizing 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 life changes 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, which can lead to avoidance and social distancing.

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 by "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 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 stigmatize 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.

Furthermore, Tegegne and Sisay (2014) 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 how 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 Goffman's theory to investigate water and sanitation facilities for menstruation management in HIEs.

Goffman's theory, therefore, was used in this study to investigate the status of water and sanitation facilities for menstruation management by female students at Kyambogo University. The theory was 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, and the status of toilets, e.g., whether they are maintained clean. The theory further assesses female students' perception of access and utilization of water and sanitation facilities for menstruation management in HEIs: whether the facilities are accessible, appropriate, and utilized by heterogeneous groups of female students and whether the facilities provide privacy and dignity to the users. The other aspects investigated are the planning and budgeting of water and sanitation for menstruation management.

2.3 | Review of related literature

Inadequate budgetary provisions for water and sanitation facilities for menstruation management make them unavailable and inaccessible in educational institutions (Adeleye et al., 2014; Akanzum & Pienaaah, 2023; Kebirungi, Kabonesa, Kimwaga, et al., 2015; Sumpter & Torondel, 2013; UN Report, 2010). Inadequate budgetary provisions for sanitation facilities also exist in universities (Kebirungi, Kabonesa, Kimwaga, et al., 2015). 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, Kabonesa, Luboobi, et al., 2015). The aforementioned scenario leaves universities in developing countries with small budgets to address water and sanitation emergencies (Adeleye et al., 2014). According to Brewster (2006), no similarities in the deficiency in the budgets and plans for access and utilization of water and sanitation facilities by females are brought about by the absence of water efficiency measures that affirmatively integrate sanitation for menstruation management into their plans. According to the UN Report (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. Zellner (2014) 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 stuff. According to the study conducted by Kebirungi, Kabonesa, Kimwaga, et al. (2015) 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, Hossain (2016) 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., 2023; Mollinga, 2008; Sugden, 2014; Sumpter & Torondel, 2013; USAID, 2015; Uwimana, 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, and historical and systemic gender discrimination against females contribute to females' invisibility in water provisioning, access, and management (Sugden, 2014; Sumpter & Torondel, 2013). Similarly, Daniel et al. (2023) 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 of female students. Anbesu and Asgedom (2023), Nunbogu and Elliott (2023), and Sumpter and Torondel (2013), 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 at 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; Sumpter & Torondel, 2013). 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, Kabonesa, Luboobi, et al., 2015).

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 (Anbesu & Asgedom, 2023; Melese & Fenta, 2009; Sumpter & Torondel, 2013; USAID, 2015; Uwimana, 2014). According to Anbesu and Asgedom (2023) 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 planning and local management activities. Alda-Vidal et al. (2023), Dogoli 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 where few women are involved in planning for the emergency management of their society leaving sanitation facilities for menstruation management unplanned for or given a very small budget. The aforementioned

scenario is worsened by the prevalent unwillingness of 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 even during menstruation (Anbesu & Asgedom, 2023). 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).

3 | METHODOLOGY

The study was conducted using qualitative research approach because of its exploratory nature. Wyse (2011) states that the “qualitative research approach is primarily exploratory research.” It was used to gain an understanding of underlying reasons, opinions, and motivations. This research approach enabled the study to enter the natural worlds of people and collect deep information about social phenomena under investigation (Creswell, 2014).

From Table 1 above, purposive sampling was used to select participants with relevant information (Creswell & Creswell, 2017). The purposive sampling is a technique where the researcher selects a sample basing on personal knowledge and experience of the group that will be sampled. 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 & Creswell, 2017). Thus, the sample chosen, in this study, was able to provide the data needed to enhance the research study.

The participants for the study as indicated in Table 1 included 42 female course coordinators: 7 from each of five faculties and school; 5 female guild officials; 2 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 5 University Managers (2 females and 3 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 qualitatively were 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 (Thorogood & Green, 2018).

TABLE 1 Summary of participants of the study

Participant category	Females	Males	Sampling technique
Student course coordinators	42	00	Purposive
Student guild officials	05	00	Purposive
University managers	02	03	Purposive
Total	49	03	

Source: Researcher's design.

The findings in Table 2 above show that only female student respondents (80.8%) with no male student respondents (00%) were represented in the study sample because they are the ones directly affected by the status of water and sanitation facilities during the menstruation periods. So collecting data from many more female students than male students was also another way of strengthening the validity of the study findings because the female students' views were more primary (first hand experiences) than those of the males would have been. Of the respondents, 94.2% were females and 5.8% males. It is also worth noting that the 5.8% male respondents in this study were University managers. These findings imply that the data for this study were collected from both the male and female University managers. This made it possible to triangulate the male and female opinions about the study's topic as a means of strengthening the validity of the findings. Male university managers got to know the challenges female students go through during menstruation at the university because they get reports from the lower administrative cadre and also interacted with the female student guild representatives. Therefore, their knowledge about the phenomenon under investigation was less experiential-based than that of their female counterparts.

3.1 | Status of water and sanitation facilities for menstruation management by female students

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

Data from the document analysis of the records from the Academic Registrar's office revealed the number of students enrolled at KyU from 2015/2016 to 2019/2020 as presented in Table 3.

Statistics in Table 3 indicate that there is a steady increase in students' enrolment by sex. From the 2015/2016 academic year to the 2018/19 academic year, the female students' enrolment rose from 45.4% to 46.0%, and the male students' enrolment rose from 54.0% to 55.0%. These statistics clearly show that the number of female students at Kyambogo University is increasing as evidenced by the 2015/2016 to 2018//2019 increment.

At this point, it should be noted that growth in a population's size should equally be matched with the growth of resources required to support its needs. However, available observation findings indicate that the number of toilets and pit latrines in the respective faculties and

TABLE 2 Distribution of the study participants by categories and gender

Category	Nos.	%	Males	%	Female	%
Student course coordinators	42	80.8	00	00	42	80.8
Guild officials	05	9.6	00	00	05	9.6
University managers	05	9.6	03	5.8	02	3.8
Total	52	100	03	5.8	49	94.2

Source: Researcher's design.

TABLE 3 Students' enrolment in Kyambogo University by sex from 2015/2016–2018/2019

1.	2015–2016	11,290	9,412	20,748	54	46
2.	2016–2017	11,278	9,444	20,732	54	46
3.	2017–2018	13,254	11,248	24,263	55	45
4.	2018–2019	17,812	14,912	32,724	54	46

Source: Records from Kyambogo University Academic Registrar's office.

TABLE 4 Distribution of flash toilets and pit latrines across the faculties and school

Faculty/ school	Number of female students	Number of flash 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	01	1:682
Total	9,701	44	1: 221	12	1:808

Source: Primary data.

schools is still inadequate, as indicated by the findings in Table 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.

The findings in Table 4 indicate that the total number of female toilet facilities in the five faculties and schools at Kyambogo University is 56: 44 flash toilets and 12 pit latrines. It is worth noting that the aforementioned flash toilets are located in toilet rooms found in the old and new lecture buildings. It is important to note that the toilet-student ratio is generally very high. The highest flash toilet-student ratio is 1:963 for School E, and the highest pit latrine-student ratio is 1,926, still for School E. The lowest flash toilet-student ratio is 1:95 for Faculty B, and the lowest pit latrine-student ratio is 1:239 and still for Faculty B. It should be noted that even the lowest student flash 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 one toilet for every 15–25 female students.

The Focus Group Discussion, 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 they are just two despite the high number of female students. We end up making queues for the toilet, so if am in my period I just go back to the hostel.

(FDG #1, Faculty E; December 2, 2020)

3.2 | Integration of water and sanitation facilities for menstruation management in the planning and budgeting processes of HEIs

This study sought to establish if 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 in-depth interviews that were conducted with the university managers and guild officials 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 the 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 are presented in Table 5

3.2.1 | Generic allocation of water and sanitation funds

Data from Table 5 indicate 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 5 reveal budget allocation for water is 14% and, for other structures (sanitation and toilet facilities), 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 spend this money while minding or not minding about the menstruation management concerns of the female students.

According to female key informant university manager #3, the Estate department does not budget and plan for water for menstruation management; water is budgeted as a whole or generally without separating it according to its use. Male key informant university manager #5 at the estates department explained that

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.

(IDI: male university manager key informant #5; December 4, 2020)

TABLE 5 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%
Total	1,711,579,247	100%

Source: University Budget Framework book 2019/2020.

The aforementioned excerpt indicates that the university only plans and budgets for water and maintenance of sanitation facilities in general but not for menstruation management provisioning. Similarly, key informant university manager #1 explained that

At the 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. Water and sanitation carry 5% of 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.

(IDI: female key informant university manager #1; December 4, 2020)

The above quotation, too, reveals that the Estates' department funds for water provisioning are allocated generically. There are no special funds allocated to water and sanitation facilities for menstruation management.

3.2.2 | Inadequate funds

University manager key informant #2 explained that water in the old structures was designed to be accessed from taps in the toilet facilities and flashing water is inside the toilet rooms. Therefore, changing it means changing the whole structure or building, which cannot fit within the current budget. Still, key informant university manager #2 made a similar observation in the following narrative:

Your topic is somehow tricky now because 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, I have never seen any student failing to graduate because of poor water and sanitation facilities. Besides, they spend a few hours at the university so they can change and clean up from wherever they stay. 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. 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.

(IDI: male university manager #2; December 4, 2020)

3.2.3 | 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 to inform both female and male students about

how to use water and sanitation facilities, especially during menstruation management. According to female guild minister #2, the university assumes that since all the students are mature, they know the use of water and sanitation facilities. Female university manager key informant #3 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 #2 also reported that female students in Faculty A have not received any sensitization program on planning and budgeting for water and sanitation facilities for menstruation management. University manager key male informant #1 explained that sensitization was limited by the absence of financial resources.

3.2.4 | The absence of female representatives in the planning and budgeting committee

Male university manager key informant #4 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. Female university manager key informant #3 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.” 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.

3.2.5 | Presence of a budget for cleaning and maintenance of sanitation facilities

University manager male key informant #4 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 further explained that these 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.

3.2.6 | Absence of faculty-based incinerators

Female guild minister key informant #2 said that disposable bins are not placed in female students' toilet facilities because the cleaners have nowhere to dispose of 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 of them. Male university manager key informant #5 also informed that incinerators are only located in the halls of residence. He further explained that most of the incinerators are broken and are out of use and awaiting repairs. He reported, “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 explained that the estates department

has 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.

3.2.7 | Absence of students' guild representatives in the planning and budgeting committee

According to male university manager key informant #4, female students' guild leaders are not involved in the University's water and sanitation 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 adjustments and consultations on their water and sanitation affairs. On the exclusion of female students from the planning and budgeting processes, female faculty GRC #1 commented and said:

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: female GRC #1; Faculty F, December 2020)

The finding in the aforementioned excerpt indicates that the exclusion of students, especially female students, from the planning and budgeting process of the estates department partly explains why the provisioning of water and sanitation facilities for menstruation management is a marginalized issue at the university. This view was affirmed by female GRC #2 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: female GRC #2; Faculty F; December 2020)

In conclusion, the results in this segment indicate 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 | DISCUSSION OF THE STUDY FINDINGS

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 of female students' welfare as guided by Anbesu and Asgedom (2023), who emphasized that the provisioning of generic and special facilities and services promotes learning and good academic performance for all categories of students.

The study also found that the rate of female students' enrolment increase at Kyambogo University is higher than that of the provisioning of 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 the fact book of Kyambogo University, there has been a steady increase in students' enrolment by gender from 2015/2016 to 2018/2019. 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 a 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 washrooms, yet female students have a higher demand for water and freshening-up facilities than male students, during menstruation (Rose et al., 2022). 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 are scarcely catered for. The aforementioned findings are similar Hossain et al. (2017) 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, Kabonesa, Kimwaga, et al. (2015) 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. This means that the estates department at Kyambogo University needs to provide water and 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 Hossain (2016), 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, Kabonesa, Kimwaga, et al. (2015) 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 UN 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 (Nansubuga et al., 2019). The aforementioned scenario leaves universities in developing countries with small budgets to address water and sanitation emergencies (Adeleye et al., 2014).

All decision-makers were males in the estate and works department, yet they lacked experiential (primary) knowledge about the females' menstruation management needs as revealed by the study. This finding is supported by Kebirungi, Kabonesa, Kimwaga, et al. (2015), who in a similar study at Makerere and Der Es universities affirmed that males have limited awareness of the females' need for 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 just by-the-way issues. 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 yet are excluded from the planning and budgeting processes of the estate and works department of the university as discovered by the study. A study by 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, and 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 a restriction on the participation of male and female students and other users in water and sanitation programs in the planning and budgeting for them. Mollinga (2008) found out that this has 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, Kabonesa, Kimwaga, et al. (2015), Mansbridge, 2010, Johnston-Robledo and Chrisler (2020) who noted that students need to be involved in water resource management planning and issues of gender awareness creation. Similarly, Zellner (2014) 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 of female students.

The department of estates allocates funds for sealed disposable bins to be placed in the toilet facilities of Kyambogo University. However, these facilities are not placed in all toilet facilities, and some toilet facilities have disposable bins, which are not sealed as discovered by the study. This makes the toilet rooms dirty and smelly and exposes female students to diseases that might affect them in the long run. This is affirmed by Kebirungi, Kabonesa, Kimwaga, et al. (2015) in a study at Makerere and Dar Es Salaam universities that inadequate provisioning of water and sanitation facilities in academic institutions mostly affects female students and others with special needs because this denies them access to hygiene, safety and comfortable menstruation management.

5 | CONCLUSIONS

The study in conclusion has established that the status of water and sanitation facilities for menstruation management are either missing, quantitatively insufficient, in poor condition, or offer no privacy. Still, cleanness and maintenance of water and sanitation facilities are irregular whereby cleaners 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 in the absenteeism of female students during lectures at the university. Second, 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 specific consideration for water and sanitation facilities for menstruation management by female students. Also, major stakeholders like female and male students 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 scenario leaves some students with no option but to stay back in their homes or hostels till they are done with their menstruation cycle. 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 publicly. 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.

6 | RECOMMENDATIONS

Arising out of 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 Gender Directorate at the University should review and supervise closely the Department of estates and works to improve the provision and maintenance of water and sanitation facilities for menstruation management. The study also disclosed that female students are not involved in the planning and budgeting processes of the estates department. It is recommended to policymakers of the university that there is a need to come up with approaches to involve female students 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.

Universities in Uganda as mandated thru the office of Dean of Students, Gender Mainstreaming Directorates, and Directorates for Public Relations 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 university. This will address female students' belief that water and sanitation facilities for menstruation management aren't publicly demanded by all students at the university. This should be achieved through continuous sensitization throughout the academic year. 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. Also, the university management and the estates department should increase their effort to maintain a constant supply of water to avoid shortage and inadequacy of water supply at the university. There is a need for the university management and the estates department to increase the budget for the provisioning and maintenance of water and sanitation facilities for menstruation management to concur with the increasing number of female students at Kyambogo University.

The Government of Uganda thru the National Council for Higher Education, NCHE should design strong governance and legal frameworks to uniformly enhance the appreciation by all higher education institutions by encouraging them to set up gender equitable facilities for menstrual and hygiene management. This can be emphasized even at planning level whole developing and setting up building structures, official students social center like guild parks, conferences halls, lecture, and laboratory facilities among other. This will bridge the access and usage gap in the area of water and sanitation facilities for menstruation management across all higher education institutions in Uganda and beyond.

ORCID

Charles Muweesi  <https://orcid.org/0000-0002-5411-2505>

REFERENCES

- Adeleye, B., Medayese, S., & Okelola, O. (2014). Problems of water supply and sanitation in Kpakungu area of Minna (Nigeria). *Glocalism: Journal of Culture, Politics and Innovation*, 1–2.
- Akanzum, J., & Pienaaah, C. K. (2023). Review of the effects of adequate sanitary facilities on the participation and performance of the school girl child in Ghana. *ISABB Journal of Health and Environmental Sciences*, 8(1), 1–14. <https://doi.org/10.5897/ISAAB-JHE2021.0073>
- Alda-Vidal, C., Lawhon, M., Iossifova, D., & Browne, A. L. (2023). Living with fragile infrastructure: The gendered labour of preventing, responding to and being impacted by sanitation failures. *Geoforum*, 141, 103724. <https://doi.org/10.1016/j.geoforum.2023.103724>
- Anbesu, E. W., & Asgedom, D. K. (2023). Menstrual hygiene practice and associated factors among adolescent girls in sub-Saharan Africa: A systematic review and meta-analysis. *BMC Public Health*, 23(1), 33. <https://doi.org/10.1186/s12889-022-14942-8>
- Anthony, W., Charles, M., Robert, T., Mugenyi, D. K., Namagero, T. S., & Christopher, I. (2022). Does learners' school security and safety measures impact on learners academic performance? Tales with focus on selected primary schools in Majanji Sub-County, Busia District. *Research and Advances in Education*, 1(6), 14–22. <https://doi.org/10.56397/RAE.2022.12.02>
- Brewster, M. (2006). A gender perspective on water resources and sanitation. *Wagadu: A Journal of Transnational Women's & Gender Studies*, 3(1), 2.
- Charles, M., & Khan, B. M. (2022). Gender and participation in sexuality extra-curricular education in primary schools in Bugiri Municipality, Uganda. *Studies in Social Science & Humanities*, 1(3), 1–8. <https://doi.org/10.56397/SSSH.2022.10.01>
- Chrisler, J. C., & Johnston-Robledo, I. (2011). Pregnancy discrimination.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications.

- Daniel, N., Kejela, G., Fantahun, F., Desalegn, M., & Guteta, F. (2023). Menstrual hygiene management practice and its associated factors among in-school adolescent girls in Western Ethiopia. *Contraception and Reproductive Medicine*, 8(1), 1–12. <https://doi.org/10.1186/s40834-022-00196-7>
- Dogoli, M. A., Nunbogu, A. M., & Elliott, S. J. (2023). Attention to the needs of women and girls in WASH: An analysis of WASH policies in selected sub-Saharan African countries. *Global Public Health*, 18(1), 2256831. <https://doi.org/10.1080/17441692.2023.2256831>
- Ellis, B. J., Bianchi, J., Griskevicius, V., & Frankenhuys, W. E. (2017). Beyond risk and protective factors: An adaptation-based approach to resilience. *Perspectives on Psychological Science*, 12(4), 561–587. <https://doi.org/10.1177/1745691617693054>
- Factbook for Kyambogo University. (2019). <https://kyu.ac.ug/fact-book-2018-2019/>
- Goffman, E. (1971). The presentation of self in everyday life. In *Social theory re-wired* (pp. 482–493). Routledge.
- Hossain, M. M. (2016). Environmental reporting practices in annual report of selected pharmaceuticals and chemicals companies in Bangladesh. *International Journal of Business and Management Invention*, 5(7), 20–28.
- Hossain, S., Sharma, P., & Sen, V. (2017). A study of the knowledge and practice regarding menstrual hygiene in rural adolescent school going girls in an Indian cosmopolitan city. *Journal of Pharmacy Practice and Community Medicine*, 3(3), 185–187. <https://doi.org/10.5530/jppcm.2016.3.37>
- Jasper, C., Le, T. T., & Bartram, J. (2012). Water and sanitation in schools: A systematic review of the health and educational outcomes. *International Journal of Environmental Research and Public Health*, 9(8), 2772–2787. <https://doi.org/10.3390/ijerph9082772>
- Johnston-Robledo, I., & Chrisler, J. C. (2020). The menstrual mark: Menstruation as social stigma. In *The Palgrave handbook of critical menstruation studies* (pp. 181–199). Springer. https://doi.org/10.1007/978-981-15-0614-7_17
- Kebirungi, H., Kabonesa, C., Kimwaga, R. J., Majaliwa, J. G. M., & Livingstone, L. S. (2015). A gender perspective of the status of water and sanitation landscape in East African universities.
- Kebirungi, H., Kabonesa, C., Luboobi, S. L., Kimwaga, R., & Majaliwa, J. G. M. (2015). Gender perspectives of student's perceptions to access and utilization of water and sanitation facilities in East African universities. *International Journal of Recent Scientific Research*, 7(11).
- Kyambogo University. (2018/2019). Annual report to the parliament of Uganda.
- Mansbridge, J. (2010). Beyond the tragedy of the commons: A discussion of governing the commons: The evolution of institutions for collective action. *Perspectives on Politics*, 8(2), 590–593. <https://doi.org/10.1017/S153759271000040X>
- Melese, W., & Fenta, G. (2009). Trend and causes of female students dropout from teacher education institutions of Ethiopia: The case of Jimma University. *Ethiopian Journal of Education and Sciences*, 5(1).
- Mohammed, S., & Larsen-Reindorf, R. E. (2020). Menstrual knowledge, sociocultural restrictions, and barriers to menstrual hygiene management in Ghana: Evidence from a multi-method survey among adolescent school-girls and schoolboys. *PLoS ONE*, 15(10), e0241106. <https://doi.org/10.1371/journal.pone.0241106>
- Mollinga, P. P. (2008). Water, politics and development: Framing a political sociology of water resources management. *Water Alternatives*, 1(1), 7.
- Morse, J. M. (2015). Critical analysis of strategies for determining rigor in qualitative inquiry. *Qualitative Health Research*, 25(9), 1212–1222. <https://doi.org/10.1177/1049732315588501>
- Munro, A. K., Hunter, E. C., Hossain, S. Z., & Keep, M. (2021). A systematic review of the menstrual experiences of university students and the impacts on their education: A global perspective. *PLoS ONE*, 16(9), e0257333. <https://doi.org/10.1371/journal.pone.0257333>
- Nansubuga, O. K., Muweesi, C., Zhao, L., & Mutebi, A. (2019). Constructs in leadership style's choice based on workplace experience in Ugandan secondary schools. *European Educational Researcher*, 2(3), 165–171. <https://doi.org/10.31757/euer.231>
- Nunbogu, A. M., & Elliott, S. J. (2023). COVID-19 brought the water struggles in Ghana into our homes in Canada: Collective emotions and WASH struggles in distant locations during health emergencies. *Health & Place*, 83, 103099. <https://doi.org/10.1016/j.healthplace.2023.103099>
- Rose, N., Charles, M., Muhamadi, K., Robert, T., Cuiying, W., Christopher, I., Kuteesa, D. M., & Jessica, K. (2022). School policy commitments to staff and Students' welfare: A case study of public secondary schools

- in Iganga District, Uganda. *Research and Advances in Education*, 1(4), 1–7. <https://doi.org/10.56397/RAE.2022.10.01>
- Sommer, M. (2010). Where the education system and women's bodies collide: The social and health impact of girls' experiences of menstruation and schooling in Tanzania. *Journal of Adolescence*, 33(4), 521–529. <https://doi.org/10.1016/j.adolescence.2009.03.008>
- Sugden, F. (2014). Feminization of agriculture, out-migration and new gender roles: An imperative to change conventional engagements with women water users. Presentation. International Water Management Institute (IWMI), Nepal.
- Sumpter, C., & Torondel, B. (2013). A systematic review of the health and social effects of menstrual hygiene management. *PLoS ONE*, 8(4), e62004. <https://doi.org/10.1371/journal.pone.0062004>
- Tegegne, T. K., & Sisay, M. M. (2014). Menstrual hygiene management and school absenteeism among female adolescent students in Northeast Ethiopia. *BMC Public Health*, 14(1), 1118. <https://doi.org/10.1186/1471-2458-14-1118>
- Telmo, A. C. (2002). A water supply and sanitation study of the village of Gouansolo in Mali, West Africa (Doctoral dissertation, Michigan Technological University).
- Thomas, W., & Charles, M. (2022). Innovative pedagogical approaches in enhancing health, safety & well ness of students in secondary schools. A case study of 'A' level students of Jinja College, Jinja City, Uganda. *Research and Advances in Education*, 1(3), 30–44.
- Thorogood, N., & Green, J. (2018). Qualitative methods for health research. In *Qualitative methods for health research* (pp. 1–440). Sage.
- UN Report. (2010). Resolution on the human right to water and sanitation. (A/64/L.63/Rev.1), 26 July, 2010.
- UNESCO. (2015). Regional GENIA meeting: Linking research findings and policy.
- UNICEF. (2016). Strategy for water, sanitation and hygiene 2016–2030.
- UNICEF. (2018). Drinking water, sanitation and hygiene in schools: global baseline report 2018.
- UNICEF Joint Water Supply and Sanitation Monitoring Programme. (2015). *Progress on sanitation and drinking water: 2015 update and MDG assessment*. World Health Organization.
- USAID. (2015). Water and development strategy: Implementation brief.
- Uwimana, A. (2014). Menstrual hygiene management in emergency situations: A case study of Kigeme Refugee Camp, Southern Rwanda (doctoral dissertation).
- WHO. (2009). Water, sanitation and hygiene interventions and the prevention of diarrhoea.
- WHO. (2022). Right to water, health and human rights, Publication Series No. 3. A thorough introduction to the topic.
- Wyse, S. E. (2011). *What is the difference between qualitative research and quantitative research* (pp. 16–11). Snap Surveys.
- Zellner, H. M. (2014). Water conservation on campuses of higher education in Texas (Doctoral dissertation).

How to cite this article: Nassozi, P., Opit, E., Kebirung, H., Muweesi, C., & Sserwadda, L. (2024). Integration of water and sanitation facilities programs for menstruation management: a focus on university planning and budgeting processes at Kyambogo University, Uganda. *Sexuality, Gender & Policy*, 7(1), 65–84. <https://doi.org/10.1002/sgp2.12086>