THE MENSTRUATION PARADOX: MENSTRUAL HYGIENE MANAGEMENT OF WOMEN LIVING IN RURAL AREAS OF EASTERN UGANDA.

Eline De Becker, 5292900
International Development Studies
Faculty of Geosciences

Supervisor: Prof. Ajay Bailey
Data of submission: 28 June 2024
Word count:14.682

Utrecht University

Abstract

Comfortable management of menstruation is fundamental and a basic right for all women. Unfortunately, there are still around 500 million women in the world that lack access to adequate menstrual products and facilities, affecting their physical health and causing frustration, confusion and embarrassment. Women's menstrual practices are also shaped and restricted by social norms and cultural taboos on menstruation, which can increase women's anxiety, and feelings of shame and disgust. Both Water, Sanitation and Hygiene (WASH) and Gender Equality are important in the development field, with Sustainable Development Goal (SDG) 5 aiming to ensure the availability of water and sanitation, and SDG 6 aiming to achieve gender equality by 2030. This thesis aims to contribute to further achieving these SDGs and to address the gap in the Menstrual Hygiene discourse by focusing on rural women's experiences, while most existing studies in Uganda focus on school girls or women in an urban context. This research will explore 'how social norms on menstruation and the availability of adequate menstrual needs shape women's experiences of their menstrual hygiene management in villages of Iganga district, Uganda.' Secondly, the aim is to understand how the menstrual hygiene practices of these women affect their mental and physical health. To uncover this, in-depth interviews were conducted with 33 women living in 5 villages in Iganga district, and 4 stakeholders, such as medical and NGO staff. These interviews were transcribed and analyzed using both deductive and inductive coding methods to seek patterns in the participant's answers. A paradox in the treatment of menstruation was found. In terms of social norms, women were expected to keep the handling of their menstruation a secret but lacked access to the menstrual products and needs to do so. The combination of the social norm and lacking access to menstrual needs creates challenges for women managing their menstrual hygiene, which affect their mental and physical health, leading to infections, burns and sores, and feelings of shame and anxiety. Addressing and improving these challenges requires a multifaceted approach, focused on both improving access to menstrual products and medication, and enhancing community-wide education on menstrual hygiene to normalize menstrual and improve menstrual hygiene for all women.

Acknowledgments

First, I am extremely grateful to all my participants for sharing their time, energy and (personal) information with me, without all of you there would be nothing. Thank you for welcoming me with an open and kind heart, and giving me the patience and opportunity to learn along the way. Adding to this, I would like to express my deepest gratitude to the Balunywa Foundation and all the beautiful people and friends I met here. Thank you for welcoming me and providing me with accommodation in a warm and open community, assisting me through the research, and teaching me about regional cultural values. Without the assistance of the Foundation, I wouldn't have been able to finish this thesis.

I would like to extend my sincere thanks to two people in particular. Nasser, I am deeply grateful for your assistance and support in this process. Thank you for sharing your experiences and skills in doing research with me, and being an energetic, enthusiastic and knowledgeable member of our little team. Remy, thank you for believing in me and being welcoming to me from the first moment up until the last. I greatly appreciate your critical questions, feedback and support throughout the research process.

Lastly, I want to express my appreciation for my supervisor, Professor Ajay Bailey, who guided me through this research and provided great knowledge on qualitative research. Your feedback, knowledge and advice have consistently pushed me to create something to be proud of.

List of abbreviations

IDI	In- Depth Interviews
MHM	Menstrual Hygiene Management
SDG	Sustainable Development Goal
STD	Sexually Transmitted Disease
UBOS	Uganda Bureau of Statistics
UTI	Urinary Tract Infection
VHT	Village Health Team
WASH	Water, Sanitation and Hygiene

List of tables and figures

Tables

Figures

Utrecht University

Content

1. Introduction

Comfortable management of menstruation is fundamental for all women and its absence is a denial of their basic rights (Jalali, 2019; Budhaktoki et al., 2018). Comfortable and effective management of menstruation for women requires access to water, sanitation and hygiene facilities, affordable menstrual hygiene materials, information on good practices, and a supportive environment without embarrassment or stigma (World Bank, 2023). The WHO/UNICEF JMP (2012) created a definition for adequate *Menstrual Hygiene Management* (MHM), which is defined as women and adolescent girls using a clean menstrual management material to absorb or collect blood that can be changed in privacy as often as necessary for the duration of the menstruation period, using soap and water for washing the body as required, and having access to facilities to dispose of used menstrual management materials (Sommer & Sahin, 2013; Budhathoki et al., 2018). Unfortunately, an estimated 500 million women lack access to menstrual products and adequate facilities for MHM (World Bank, 2023). Lack of access to adequate menstrual facilities can cause frustration, confusion and embarrassment (Caruso et al., 2017), is the leading contributor to school absenteeism for girls (Corburn & Hildebrand, 2015) and the reason women report missing work during their menstruation (Hennegan et al., 2020). Women's menstrual practices are not only shaped by access to menstrual facilities but are also shaped and restricted by social norms and cultural taboos on menstruation. These social norms on menstruation increase women's anxiety of being exposed and feelings of shame and disgust (Hennegan et al., 2020; Sahoo et al., 2015; Jalai, 2019). Thus, both physical and sociocultural factors may shape women's menstrual hygiene management, which increases risks for their physical health, may affect women's well-being and may interfere with women's education and work attendance.

1.1 Literature on Menstrual Hygiene Management

The literature shows that due to social norms on menstruation and lacking access to physical needs women experience fear, shame, and anxiety during menstruation (Hennegan et al., 2020; Caruso et al., 2017; Sahoo et al., 2015). In the case of Uganda, menstruation is viewed as a deeply personal women's issue that should not be discussed with others (Hennegan et al., 2020). This norm of secrecy is seen in other cultures as well, such as Sweden (Brantelid et al., 2014), India (Jalali, 2019) and with young girls in Kenya (Mason et al., 2013). This secrecy interferes with when and where women's bodies and menstrual materials are washed and

dried, so that others should not see blood, which can lead to unhygienic practices, such as poor washing and drying practices of menstrual cloth in damp and dark places (Hennegan et al., 2020; Jalali, 2019; Sahoo et al., 2015; Mason et al., 2013). Additionally, secrecy might influence women's knowledge of menstruation and a lack of knowledge can lead to inadequate MHM and cause anxiety. (Miiro et al., 2018). The norm of handling menstruation in secret affected women's physical and mental health in the workplace, resulting in increased anxiety of being exposed, feelings of shame, disgust, discomfort, and embarrassment (Hennegan, 2020; Sommer et al., 2016). However, the study by Hennegan (2020) suggests women felt pride in successfully enacting menstrual requirements on their own, which indicates that it might be a unilateral way to view social norms on menstruation purely as negative.

On top of that, physical factors, such as unequal access to menstrual products, water, soap and sanitation facilities, have health-related, social and economic consequences (Rossouw & Ross (2021); Jalali, 2019). Access to these factors can be wealth-related, where less wealthy women have less access to certain factors. Rossouw & Ross (2021) found that women from less wealthy households are less likely to have access to safe and lockable spaces to manage their menstrual hygiene. On top of that, those who live in wealthy households are more likely to access sanitary pads and other menstrual products compared to those in less wealthy households (Rossouw & Ross, 2021). Lacking access to water, soap and sanitation creates problems performing personal, vulvar, and perineal hygiene and washing menstrual materials (Jalali, 2019; Sahoo et al., 2015). Two studies found that menstrual-related school absenteeism due to the lack of access to soap, water and privacy was prevalent among girls living in rural areas in Uganda (Boosey et al., 2014; Miiro et al., 2018). A study by Miiro et al. (2018) shows that a lack of access to adequate protection methods affects MHM, resulting in poor genital hygiene. Poor genital hygiene, such as using reusable pads and changing outdoors, is a risk factor for reproductive tract infections, bacterial vaginosis and even the development of cervical cancer (Jalali, 2021; Das et al., 2015).

1.2 Gap in evidence and relevance

Menstrual hygiene is embedded in the Water Sanitation and Hygiene (WASH) sector, which hardly addresses issues of menstrual and personal hygiene (Jalali, 2021). Additionally, almost

all existing studies on menstrual hygiene studies have focused on girls (Jalali, 2019) and rarely on menstrual hygiene practices of rural women (Sommer et al., 2016; Hennegan et al., 2019). Research on MHM in Uganda has been done before but mostly focused on younger school girls. A systemic review by Hennegan et al. (2019) shows that out of five studies on MHM in Uganda, four focus on schoolgirls and one focuses on working women in an urban context. This thesis will try to add to this gap by focusing purely on rural women's experiences of how certain factors shape their MHM (See Research questions in chapter 3). The research aims to contribute to further achieving Sustainable Development Goal (SDG) 5 and 6. SDG 5 aims to achieve gender equality and empower all women and girls by 2030 (Goal 5 | *Department of Economic and Social Affairs*, n.d.) while SDG 6 aims to ensure availability and sustainable management of water and sanitation for all by 2030 (Goal 6 | *Department of Economic and Social Affairs*, n.d.). Understanding how MHM is affected by different factors might help shape a ground for creating interventions fostering healthier, easier and safer menstrual hygiene practices. Additionally, research on menstruation contributes to broader discussions surrounding sexuality and women's bodies. Addressing the topic creates a supportive environment, free of stigmas and taboos for women and girls.

2. Theoretical framework

2.1 Perspective of embodiment

This research will explain the way sociocultural and physical factors affect women's MHM by employing a phenomenological feminist lens, utilizing Young's (2005) view on embodiment and female bodies. On top of that, this research will combine this lens with Hennegan's et al. (2019) integrated model of menstrual experience. The framework of phenomenology tries to give a direct description of our experience as it is (Merleau-Ponty, 2013) and sees the lived body as the central category. The lived body is the idea of a physical body acting and experiencing in a specific sociocultural context. Feminist theory enhances this framework by stating that unequal power relations shape the social context and therefore the practices of the body, specifically the female body (Young, 2005). In patriarchal societies, these unequal power relations are present by which men dominate women. These societies characterize a system whereby women are kept subordinate in a number of ways (Bhasin, 1993). *Embodiment* is a phenomenological feminist perspective that explains how cultural norms governing bodies undermine women's hygiene but privilege men's in communities that lack water, toilets, and bathing spaces (Jalali, 2021). The experience of embodiment is embedded within an environment and therefore the product of the social situation (De Beauvoir, 1997). Thus, in patriarchal societies the experience embodiment is shaped by the unequal power relations between men and women.

2.2 Social norms on menstruation

Young (2005) stated that women's embodiment is shaped by social norms that determine female bodily comportment. Women monitor and police their own bodies to comply with social norms. The social norms on menstruation are defined by Laws (1991) as a certain *menstrual etiquette*, or in traditional societies even seen as *menstrual taboos* (Jalali, 2021). The menstrual etiquette is a set of rules governing interactions, negotiating the material manifestations and cultural meanings of menstruation (Laws, 1991). The etiquette concerns who can say what to whom about menstruation, and regulates how, what and when products should be acquired, carried, stored, and disposed of. Young (2005) argues that in order for women to be deemed as 'normal' in a society where menstruation isn't the norm, the signs of their menstrual processes have to be concealed. "The normal body is not bleeding from the vagina. Thus, to be normal and to be taken as normal, menstruating women must conceal evidence of it" (Young, 2005, p.107). In societies where women are subordinate, they have to

conform to ‘male’ norms by suppressing their natural menstrual cycle (Bobel et al., 2020). These norms share a normative enforcement that produces shame. Women, as young girls, are taught to conceal and hide their menstrual processes, since menstruation is labeled as dirty, disgusting and defiling. Menstruation being perceived as disgusting, while having dominant disembodied norms of clean and proper, creates an experience of being defiled (Young, 2005).

2.3 The availability and accessibility of menstrual needs

Women need time, space, and equipment to keep their menstruation hidden. These needs are constructed by the intersection of bodily processes and the social norms and taboos that women as well as the infrastructure and facilities need to conform to. Young (2005) argues a ‘misfit’ between women and public places. Public institutions assume a standard body with standard needs, neglecting the reality of menstruation. leading to school and workplaces failing to provide the physical and social needs for menstruating women (Young, 2005). Young’s view is heavily inspired by Beauvoir’s work as well as other research investigating mostly Western women’s experiences, meaning it puts little to no attention on different cultural and economic contexts. The integrated model of menstrual experience by Hennegan et al. (2019) explains how both socio-cultural context and resource limitations affect the menstrual experience of women in low- and middle- income countries. The model argues that in these contexts, lack of financial means to purchase menstrual products, medication, affordable cloth or commercial menstrual products influence women’s menstrual practices and individual menstrual symptoms. Inadequate access to preferred, comfortable materials as well as medical care compels women to seek other alternatives, or to manage without these resources (Hennegan et al., 2019). This research will synthesize the availability of access to water, sanitation facilities, menstrual products, social and physical needs into the overarching concept of *availability to menstrual needs*. All these terms describe an influence of access to certain needs on menstrual hygiene practices and management.

Thus, in a society that proposes norms, rules and taboos surrounding menstruation but that does not offer proper infrastructure to meet the needs to conform to these norms, women are not allowed to follow these norms, rules, and taboos (Jalali, 2021).

2.4 Conceptual Model

The theory of embodiment and the integrated model of menstrual experience shows how MHM is affected by the intersection of availability to menstrual needs and social norms on menstruation. The relationships between the concepts are visually presented in Figure 1 below. Social norms on menstruation interfere with women's hygiene practices, such as washing and drying practices, and may affect influence knowledge on menstruation, potentially resulting in inadequate MHM (Hennegan et al., 2020; Jalali, 2019; Sahoo et al., 2015; Mason et al., 2013; Miiro at al., 2018). These social norms on menstruation also impact women's mental health, producing feelings of shame, disgust, embarrassment and stress (Young, 2005; Hennegan, 2020; Sommer et al., 2016). Additionally, social norms have an effect as well on what is available in society, and therefore on the availability of access to menstrual needs. These menstrual needs are categorized into three environments which all in their own way affect the MHM of women (Hennegan et al., 2019); the economic environment includes economical access to products and medication (Rossouw & Ross, 2021), the physical environment includes physical access to water, good infrastructure and sanitation facilities (Jalali, 2019; Sahoo et al., 2015), and the social environment includes time, safety and privacy to change and bathe during one's menstrual period (Rossouw & Ross, 2021; Young, 2005). Inadequate MHM and poor hygiene practices can affect the mental and physical health of women, poor hygiene can lead to infections and bacterial vaginosis (Jalali, 2021; Das et al., 2015) and negatively impact women's well-being by causing feelings of stress, embarrassment and anxiety (Sommer at al., 2016; Jalali, 2019).

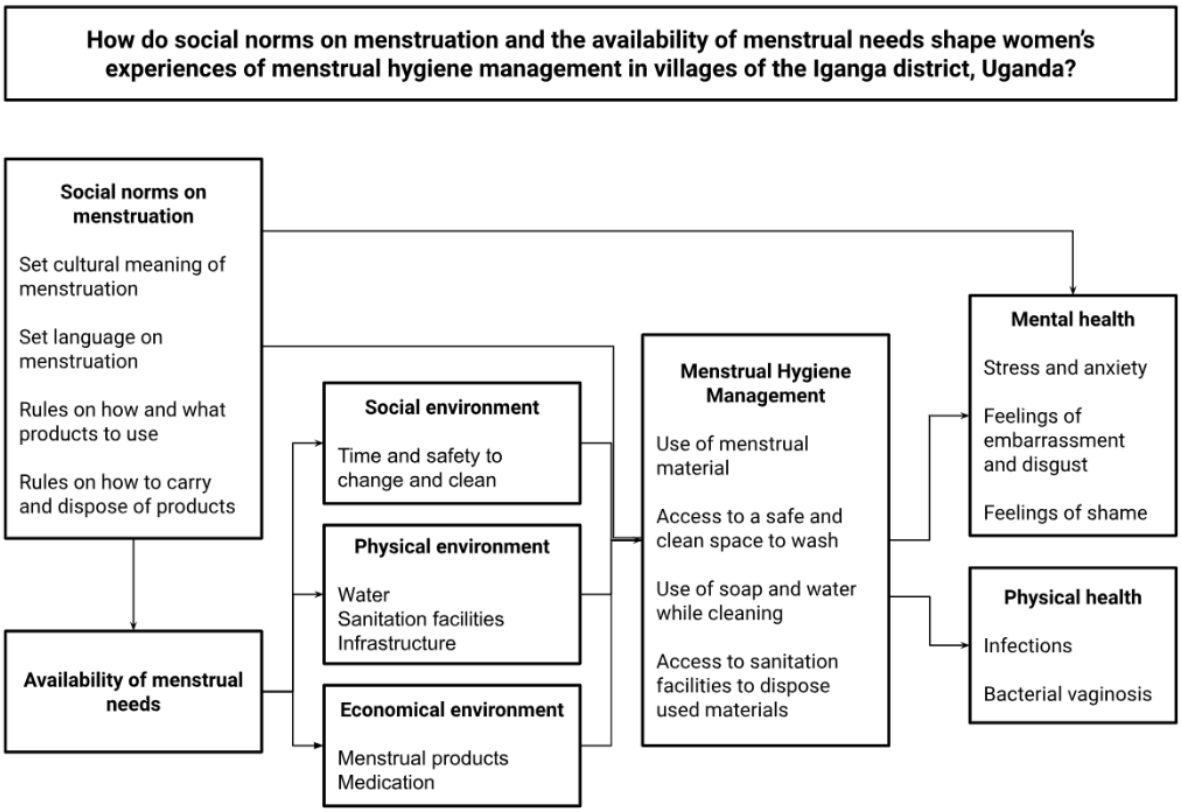

Figure 1 Conceptual model of MHM based on the perspective of embodiment and the integrated model of menstrual experience

3. Research objective and questions

The primary goal of this research is to explore how physical and sociocultural factors, such as availability to menstrual needs and social norms on menstruation, shape how women living in rural areas of Iganga district in Uganda manage their menstrual hygiene. A crucial part of this will be to uncover the menstrual hygiene practices of women in rural Eastern Uganda and to understand how these practices are shaped by social norms on menstruation and the availability of certain menstrual services and materials. This leads to the primary research question:

How do social norms on menstruation and the availability of adequate menstrual needs shape women's experiences of menstrual hygiene management in villages of Iganga district, Uganda?

Secondly, this research aims to understand women's experiences of the factors, and how the adapted menstrual hygiene practices affect women's daily lives in terms of their mental and physical health. Therefore, this research poses two sub questions.

1) How do women in rural Eastern Uganda manage their menstrual hygiene, and how do these practices affect their mental and physical health?
2) How do women experience the social norms on menstruation and the availability of adequate menstrual amenities in their community, and how do access inequalities play a role in these experiences?

4. Methods

The data collection consists of a 12-week fieldwork period in Uganda from February until April in the year 2024, using a qualitative methods design. Qualitative methods are used because Menstrual Hygiene and Menstruation are multifaceted topics shaped by biological, sociocultural and technical factors. The use of qualitative methods provides a more nuanced in- depth understanding of the complex topic by showing the multiple sides of menstruation and menstrual hygiene. This research will conduct in-depth interviews to show the bigger story by providing individual experiences in the broader social and cultural context.

4.1 Operationalization of concepts

The concepts from the conceptual model are operationalized in the table below. These operationalizations laid the foundation for the interview guide that was used during data collection, attached below in appendix 3.

Concept	**Definition**	**Operationalization**
Menstrual Hygiene Management (Adequate)	Women's and girls use of a menstrual management material to absorb or collect blood that can be changed in privacy as often as necessary for the duration of the menstruation period, using soap and water for washing the body as required, and having access to facilities to dispose of used menstrual management materials (Sommer & Sahin, 2013; Budhathoki et al., 2018).	-what are women's menstrual hygiene practices, -which menstrual materials are used -how are these menstrual products used, washed, dried and disposed of -where and how do they change and clean.
Availability and accessibility of menstrual needs	The concept includes physical, social and economical availability and accessibility to water, sanitation and menstrual facilities, menstrual products and time and safety to change and clean. Inspired on Young (2005) and Jalali (2021).	-how do women access water/ sanitation facilities -what menstrual products are available -how do women experience this availability.
Social norms on Menstruation	An intricate set of rules governing interactions, negotiating the material manifestations and cultural meanings of menstruation The rules concerns who can say what to whom about menstruation, and regulates how, what and when products should be acquired, carried, stored, and disposed of. (Young, 2005; Laws, 1991).	-what do women think of menstruation -what does the community thinks of menstruation -to whom do women talk about menstruation -is there pressure on how products should be acquired, carried, stored and disposed of.

Mental health	Mental health is a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community. It underpins our individual and collective abilities to make decisions, build relationships and shape the world we live in (World Health Organization: WHO, 2022, 17 October)	-how is the women's overall state of well- being -how do they cope with their menstrual hygiene - do they experience feelings of shame, stress, embarrassment and anxiety -how do women cope with these feelings
Physical health	Physical health can be defined as normal function of the body at all levels; a normal course of biological processes that ensures individual survival and reproduction; a dynamic balance between the body's functions and the environment; participation in social activities and socially useful work; performance of basic social functions; the absence of diseases, painful conditions, and changes; and the body's ability to adjust to the constantly changing conditions of the external environment (Koipysheva et al., 2018).	-how is the women's overall normal function of the body -is there an absence or presence of diseases, painful conditions and changes in the body and private parts -strategies on individual survival and reproduction, -how is the participation in social activities overall and during menstruation

Table 1: Operationalizations of main concepts

4.2 Qualitative methods

In- depth interviews (IDI) capture the experiences and perceptions of the participants surrounding menstruation and MHM. The IDI are semi-structured and open-ended questions are asked on how and if participants are affected by both social norms on menstruation and availability of menstrual needs and if they change their MHM according to these factors or not. The interviews take place in five different villages of Iganga district, Uganda; three of these villages are close to the main town of the district; Kasolo, Ngangali and Butokolo, and two are more remote villages further from the main town; Kinawanswa – Igulamubili and Buyubu- Budebela (see chapter 5 for map). This creates a comparison between resources available to women in less and more remote villages. The gatekeepers of the villages, such as chair members and important leaders, are contacted and informed about the aim of the research accompanied by a fee that they request, before conducting the interviews. All the gatekeepers from the five different villages agreed to help with the research and went around the village to announce the research with the inhabitants, prior to the arrival of the researcher and assistant.

4.3 Participants and key demographics

The sample for the interviews consists of a total of 33 women aged between 17 and 68 years old (see table 1 for key demographic factors), living in one of the five villages in Iganga district and 4 female stakeholders representing the medical and development sector, above the age of 18 years old that live or work in the Iganga district or nearby districts. Three of the stakeholders consist of medical staff, including one doctor specialized in contraceptives and two midwives one from a government hospital and one from a private hospital. The last stakeholder is an employee of an NGO focused on supporting struggling youth in the district. By including both the women and stakeholders, this research aims to provide a holistic understanding of the ways women shape their MHM in the local context. Most of the research on menstrual hygiene is focused on girls (Jalali, 2019). Therefore this research only focuses on adult women, classified as adults if they are above the age of 18, with one exception of a 17-year-old whose husband gave permission for the interview. Women typically experience menopause between the ages of 45 and 50 years old (World Health Organization: WHO, 2022, 17 June). However, an age range above 50 is chosen, since it feels of importance to incorporate past experiences and understand how the circumstances may have changed in some villages. The interviews with older women also give context on the social norms in the villages and on how elders view young women managing their menstrual hygiene. The women above 50 include an important councilor on the board of women empowerment of multiple villages, meaning that she can speak on behalf of the community. Therefore, their opinion is valued as an important contribution to the research. The biggest age group of the participants remains between the 20s and 30s. A sample of 33 participants is assumed to achieve saturation.

Table 1: key demographics IDI participants

Name (pseudonym)	Age	Daily activities	Highest finished educational level	Place of residence	Marital status	Children
1 Hayat	60	Farmer	Primary 2	Kasolo	Married	Yes
2 Sara	32	Tailor & farmer	Primary 7	Kasolo	Married	Yes
3 Yasmin	68	Farmer	Did not attend school	Ngangali	Married	Yes
4 Haniya	57	Farmer	Senior 4	Ngangali	Married	Yes

5 Amina	39	Teacher	Senior 6 & certificate	Ngangali	Married	Yes (2)
6 Grace	37	Farmer	Senior 2	Ngangali	Married	Yes (2)
7 Nadia	30	Charcoal seller	Senior 4	Ngangali	-	-
8 Aisha	40	Shopkeeper	Senior 2	Ngangali	-	-
9 Mariam	40	Farmer	Primary 7	Ngangali	Married	Yes
10 Alisha	23	Farmer	Primary 6	Butokolo	Married	Yes (2)
11 Fatima	30	Tailor	Senior 3	Butokolo	Married	Yes (3)
12 Fatuma	30	Farmer	Primary 5	Butokolo	Married	Yes
13 Hannah	45	Farmer	Primary 7	Butokolo	Married	Yes (9)
14 Beatrice	23	Farmer & shopkeeper	Primary 5	Butokolo	Married	Yes (1)
15 Zainab	28	Farmer	Primary 6	Butokolo	Married	Yes
16 Theresa	23	Farmer	Primary 7	Butokolo	Married	Yes (1)
17 Hajira	30	Farmer	Primary 7	Butokolo	Married	Yes (4)
18 Farah	38	Farmer	Primary 4	Buyubu-Budebela	Married	Yes (7)
19 Margaret	25	Hairdresser	Senior 3	Buyubu-Budebela	Married	-
20 Catherine	28	Farmer	Primary 7	Buyubu-Budebela	Married	Yes (4)
21 Mary	25	Farmer	Primary 5	Buyubu-Budebela	Married	Yes (5)
22 Suzan	25	Nurse	Senior 4	Buyubu-Budebela	-	-
23 Dolores	23	Farmer	Senior 3	Buyubu-Budebela	Married	Yes (1)
24 Diana	38	Famer	Senior 1	Buyubu-Budebela	Married	Yes (7)
25 Nakitende	26	Farmer	Senior 3	Buyubu-Budebela	Married	Yes (1)
26 Lucy	17	Farmer	Primary 6	Kinawanswa-Igulamubili	Married	Yes (1)
27 Edith	24	Farmer	Primary 7	Kinawanswa-Igulamubili	Married	Yes (2)
28 Ritah	32	Farmer	Primary 6	Kinawanswa-Igulamubili	Married	Yes (3)
29 Faith	24	Farmer	Senior 4	Kinawanswa-Igulamubili	Married	-
30 Irene	27	Shopkeeper	Senior 4	Kinawanswa-Igulamubili	Married	-
31 Esther	23	Farmer	Senior 1	Kinawanswa-Igulamubili	Married	Yes (3)
32 Hope	21	Stays at home	Primary 6	Kinawanswa-Igulamubili	Married	Yes (2)
33 Rose	30	Farmer	Primary 7	Kinawanswa-Igulamubili	Widow	Yes

Table 2: Pseudonym, age, educational level, place of residence, marital status and (number of) children of the participants

4.4 Sample and informed consent

The participants are selected via the convenience sample and through gatekeepers. The researcher and assistant will go into the village and select women who are home, in between the age range and willing to participate. The women are mostly visited at home and the interviews are mainly conducted on their family land. Another way of selecting participants is through gatekeepers. This research was supported by the Balunywa Foundation, who provided a research assistant with excellent knowledge of the focus communities. The Foundation is a non-profit organization committed to improving the wellbeing of the youth in Busoga subregion. Both the research assistant and the members of the foundation act as gatekeepers. The researcher is introduced in person to the communities by the research assistant. Trust is paramount when approaching participants, especially with a sensitive topic. Thus, since the Foundation already operates and helps people in these places, there is more trust when the researcher gets introduced through them. An informed consent is signed by the participants prior to the interview. The informed consent, attached in Appendix 1, contains information on the data processing, participants' rights and the handling of the audio recording. This informed consent is translated by the translator into the local language, Lusoga. The translated version is attached in Appendix 2.

4.5 Data coding and analysis

The stakeholder and participant IDI are recorded on an electronic device to ensure accuracy and completeness of the data. In between each field day of interviews, a transcribing day is planned. This allows the researcher to refine the interview guide based on the feedback and emergent topics highlighted by the participants. The transcripts are later analyzed to seek patterns in the participant's answers using NVivo software version 14. The transcripts are analyzed using both deductive and inductive coding methods to systematically interpret the data. First, a set of deductive codes is developed based on the concepts of the conceptual model and its definitions. The transcripts are reviewed and segments of text are coded according to these concepts. This step ensures that the analysis is based on the existing theoretical framework and the conceptual model. In parallel with this deductive approach, an inductive coding process is used to capture new and emerging themes that are not covered by the initial deductive codes. These statements and stories are assigned to new inductive codes, to discover new insights and themes, enhancing the depth of the analysis. After the coding process, the codes are organized according to overlapping themes. Codes that represent

similar ideas or concepts are grouped together to form categories. These categories form a code tree showing relationships within the categories, attached in appendix 5.

4.6 Data storing and sharing

This research will work along with the data sharing and storing guidelines of Utrecht University. The data is stored on the university's data management service called Yoda. The data is anonymized, which means that all names, personal characteristics or information that could lead to an individual are removed. The participants are given a pseudonym, based on the religions prevalent in these communities and villages. A copy of the final research and research findings will be shared with the Balunywa Foundation, the participants and the communities in which the research was done if they request so. All parties involved can share feedback and create discussions on these findings to validate the relevance and accuracy of the results from these parties' perspectives. This will ensure that the research remains relevant, impactful and responsive to the needs of diverse audiences.

4.7 Positionality

The social identities of the researcher, such as educational background, gender and geographic location, can influence this research through implicit ideas and biases. Being a young woman might have made me more approachable for girls and women to be open about the sensitive and taboo topic of menstruation. However, coming from Europe and thus a different cultural and geographical context, my worldview may differ from that of the participants, making it difficult to understand cultural cues, biases and habits. I understand my responsibility that I had to dedicate my efforts to understand and respect the local context, customs, and perspectives. Efforts were made to be aware of the power dynamics that occur in the researcher- participant relationship, with the aim of establishing trust, and promoting open communication without fear or judgement. Prior to an interview, the aim and intentions were clearly explained, and informed consent was obtained to ensure confidentiality, anonymity and the well-being of the participants. My cultural and educational background might have influenced the data analysis through potential biases. Hence, why I tried to be transparent of every step in the data analysis process to prevent incorrect interpretation and make efforts to be aware of certain biases during the data analysis.

5. Geographical contextual framework

The conceptual model indicated that both strong social norms on menstruation and low availability of menstrual needs shape MHM in a negative way. Therefore, the research aims to take place in a region with present social norms on menstruation and a lower availability of menstrual needs. In 2022, in Uganda, 74 percent of the population lived in rural areas (*World Bank Open Data*, n.d.). Compared to urban settings, rural areas are more affected by a lack of Water, Sanitation and Hygiene (WASH) facilities due to a lack of WASH infrastructure (T'Seole et al., 2022). Besides, almost half of the households *(47%)* in Uganda experienced multidimensional poverty in 2020, focusing on the eastern rural population this percentage increased up to 67 percent (UNICEF, 2020), which can play a role in the economic access to menstrual needs. According to the UNDP (2021), Uganda has a gender inequality index of 0.530, which can be considered as relatively high. Uganda's conditions on gender equality and empowerment might play a role in the regional social norms on menstruation. A high level of gender inequality can indicate traditional gender roles in the focus communities, which could influence women's access to resources and good infrastructure.

5.1 The research area

As mentioned in the research question, this research takes place in Iganga district, a district located in the eastern part of Uganda. Iganga district is located in the Busoga region, one of the main kingdoms in Uganda. Busoga kingdom houses eleven districts, including Iganga district, the highlighted area on the map below shows the location of the Busoga region. The kingdom is currently ruled by the Kyabazinga (King) William Kadhumbula Gabula Nadiope IV, and acts as a cultural institution which boosts social participation and hosts development programs to improve the standard of living throughout the region (Lubogo, 2020). The research villages, being part of the Busoga region, honor and adhere to both their tribal traditions, customs and rituals as well as their religious beliefs. In the region, the biggest religion is Christianity *(84%)*, with Islam being the second-biggest religion *(15%)* (Joshua Project, n.d.).

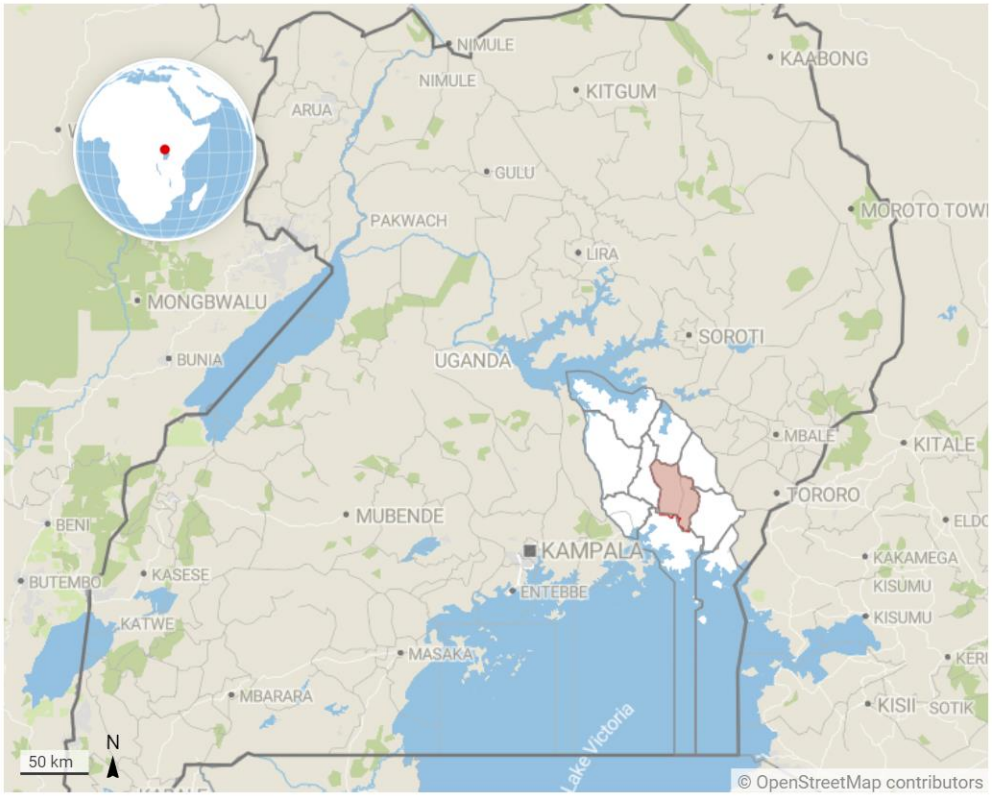

Figure 2: Map of the Busoga region and Iganga district (red)

The research area is located in the southwestern part of Iganga district. The villages, while some are closer than the others, are all relatively close to Iganga town, the main town of the district where around 55.000 people live and many more work (UBOS, 2017). In the southwestern part of Iganga district, 73 percent of households rely on boreholes for water, as opposed to having piped water, and 4 percent of household lack access to any toilet facilities (UBOS, 2017). Furthermore, 22 percent of households in the same area need to travel five kilometers or more to access public health care facilities (UBOS, 2017), indicating barriers to medical care. Meaning that in the researched villages, there might be a lack of WASH infrastructure and barriers to medical care, which can both affect women's MHM. Map 2, below, shows the location of the research villages and Iganga town. Kinawanswa- Igulamubili and Buyubu- Budebela were classified as more remote villages. They were further away from the main town as it took about 20 minutes by *boda-boda (motorcycle)*, the main means of transport, to reach Iganga town. From Kasolo and Ngangali it took about 7 minutes to reach Iganga town by motorcycle, while the distance from Butokolo was in between 10 to 15 minutes.

Figure 3: Map of the research villages in proximity to Iganga town

5.2 Relevant processes in Uganda

Over the years, efforts by the government as well as numerous NGOs have been made to improve MHM of women in Uganda, showing the recognition of MHM as a challenge faced by girls and women in the country. In 2015, the Ugandan government launched the Menstrual Hygiene Charter which was put in position to improve MHM of women and girls. The initiative is meant for Ministries and Civil Society Organizations to work together and promote the rights of girls and women during and after their menstrual cycle and menstrual hygiene management (Government of Uganda. Menstrual Hygiene Management Charter, 2015). The government argued that girls and women suffer from stigma, lack washrooms, clean water and materials, and are inadequately prepared to manage menstrual hygiene.

6. Empirical findings

6.1 Menstrual Hygiene Management

6.1.1 Products

The participants stated that they mostly used cloths, or sanitary pads, to manage their menstrual hygiene. Only a few women used other products, such as reusable pads, or just their underwear. Understanding the accessibility of these products requires examining the structure of shops and markets available to these women. The research villages are small and mostly consisted of houses and personal land. Each village has a small center where some 'shops' were located that sell household items, including powdered detergent and sometimes sanitary pads and medication. In larger villages or areas where two or more villages merge, there are *trading centers* that house several small businesses, such as boutiques, food stalls and retail shops. In these trading centers there are shops to purchase detergents and sanitary pads as well as small pharmacies that sell medication. Lastly, there is the main town, Iganga town is a major center with markets, a general hospital, pharmacies and small to larger supermarkets. These places provide medication, sanitary pads, detergents and sometimes reusable pads. For the women, the village centers and the trading centers were accessible by foot or by bike, yet the town was often further away and harder to reach.

The women mostly buy sanitary pads from local drug shops and small pharmacies in the villages. Most women prefer sanitary pads compared to the cloths even the ones that don't always use them. They prefer pads since they are more 'comfortable' to wear, are able to absorb all the blood and stick to the underwear, meaning that they won't shift or fall out of the underwear. However, not everyone agrees that the pads are the most comfortable. They were reported to be uncomfortable and create a burning feeling in the private parts if they are worn for long periods of time. The women who use cloths get them by tearing up bedsheets and old clothes. The women report the cloths to be uncomfortable and unable to absorb the blood well. Cloths are made from old fabrics that are not designed to absorb large amounts of blood, meaning that blood can leak onto clothing or even other objects. Cloths are tied, laid, or twisted around the underwear, which can cause them to fall out, create wounds in the thighs and genital area and even alter the way you walk. One of the participants explains these issues:

"When you delay to change the cloth it will burn you … Due to that it burns you, it changes the way you walk, because you have gotten wounds from the burns so you end up not walking so well" (Diana, age 38, Farmer)

The quote above shows the issues women, like Diana, struggle with having to use cloths to manage their menstruation. On top of that, cloths and even reusable pads must be continuously washed during the menstrual period, which was reported to be a burden for some women. In this particular context, washing clothes is done by hand with water that first has to be fetched, making it a time-consuming and physically tiring process. In addition, some women have few cloths or reusable pads available for them. Limited access to menstrual products means that women must wash frequently to ensure they have clean products available for changing. Frequent washing also means that women use and have to buy a significant amount of detergent, which for some can be expensive. For the reusable pads, women either buy them from bigger supermarkets or got them while they were still in school. Besides the burden of washing as explained above, the women reported the reusable pads to be comfortable and easy to use. The main reason participants gave for not using reusable pads is that they are hard to access. They are not common and therefore not sold in the local drug shops, only in some of the bigger supermarkets in town, where they are more expensive.

6.1.2 Washing, drying and disposing of the products

Women who use sanitary pads dispose of them in a pit latrine, close to their house, where they later burn the pads. Some participants said that it is frowned upon and socially unaccepted in their community to dispose of your pads somewhere visible to others, hence the preference to dispose of pads in the pit latrine. Haniya explains how it is culturally unacceptable to dump the pads where others can see:

> *"For us with our toilets you can dump in anything. Not throw it everywhere. Dump the pads. … In our culture you don't spread everywhere. You don't throw your pad everywhere where people can see. If people see it, it looks very bad" (Haniya, age 57, Farmer)*

The women who use cloths and reusable pads reported washing them with water, soap and sometimes powdered detergents. However, as noted in chapter 6.1.1 washing can be burdensome and detergents are not always accessible. Different washing techniques were used to handle the blood, such as soaking the cloths or pads in warm water before washing them. The medical and NGO staff provided guidance on the most hygienic way to wash cloths and reusable pads. They recommend first soaking the product in warm water to remove the blood, and after soaking, to use detergents while washing to kill the bacteria and germs. On top of that, they advised that the products should be dried outside in the sunshine, to eliminate

bacteria and prevent odors. Drying the product inside means that it might be dried in dusty, unhygienic places and that it will take longer to dry, increasing the chances of women using the product while damp and getting infections. However, most participants dry their washed products and underwear inside the house, they explained that these are supposed to be kept private, as will be further discussed in chapter 6.2.2. In contrast, some women reported that they dry their products outside, near the bathroom.

6.1.3 Hygiene practices

There are certain poor hygiene practices, as explained by the medical and NGO staff, which can increase the chances of infections. These poor hygiene practices include not bathing frequently during menstruation, not washing your hands properly, pushing fingers inside the vagina while bathing and not using soap while washing the body. The women reported always washing their bodies using water and soap. Hygiene is an important topic for the women, especially during their menstruation. This became clear when they stressed the importance of proper care and preparation before and during the menstrual period to prevent unwanted odors, pain, infections and other illnesses. This preparation involves buying menstrual products beforehand, gathering clean cloths and fetching enough water. Preparation for the menstrual period enables the women to manage their menstrual hygiene more easily by ensuring that necessary products and water are available to them when needed. Women also reported preparing their daughters for their menstrual period by teaching them about hygiene, ensuring that they bathe frequently during menstruation and sending them to school with products in their bag.

6.2 Social norms on Menstruation

6.2.1 Cultural meaning of menstruation

Almost all participants perceived menstruation as a good and healthy phenomenon happening to the body. The women emphasized that experiencing menstruation regularly is strived for and considered a sign of good health and fertility. In these communities, households often consist of big families with a lot of children. The responsibilities of bearing and caring for these children lie with the woman in the household. Being unable to produce children puts pressure on one's reputation as a good wife and mother. Some participants believe that menstruation is something created by God for women to enable them to conceive. This belief pushed a sense of pride and acceptance regarding menstruation. The participants did not

perceive menstruation as dirty. The women emphasized that menstruation '*takes dirty things out of the body'*, preventing diseases this way. The cleanliness of one's menstruation is based on their own personal hygiene, as Theresa expresses:

"It (menstruation) is not dirty and whoever says that 'it is a dirty thing' it is according to their perspective and the way they conduct themselves if you don't clean yourself of course you will be dirty but if it comes and you clean yourself it doesn't make you dirty." (Theresa, age 23, Farmer)

The quote above shows the belief that if you yourself are a clean and hygienic person, your menstruation cannot be dirty. However, according to the participants, the menstrual blood itself could be labeled as dirty, reasons being that it is thick and can smell.

6.2.2 Language on menstruation

This study found that menstruation is perceived as a private and secretive topic within the research communities. This manifests in various ways, including the use of coded language when discussing menstruation. Women reported sometimes speaking to younger girls in codes about menstruation and hygiene practices instead of using actual terminology. The codes are about daily tasks but can indicate a certain hygiene practice or that someone is experiencing their menstruation. Yasmin gave an example of what codes elders used for specific hygiene practices when she was younger:

"We used to speak in codes. They can tell you to go and fetch firewood, but they mean a different thing maybe go and clean your vagina." (Yasmin, age 68, Farmer)

The quote above shows how the code 'fetching firewood' was used to describe the hygiene practice of washing your private parts. The women were expected and expected others to communicate and handle their menstruation in secret, meaning that the norm of secrecy around menstruation that was also found in many other communities is applicable. Women reported that they believed menstruation should remain a private matter and sharing about it openly was considered inappropriate and embarrassing. The norm is funded by cultural and religious beliefs, with some women expressing that God created menstruation to be a secret and that in their culture it is supposed to be private. This norm was further reinforced by a fear of gossip and judgment from others when one would share their menstrual and medical conditions. The women were afraid of other village members or even medical staff gossiping and sharing their medical and personal status. It seemed to come from a mistrust towards

others, whereby it was often stressed that others could not help you but only judge if they knew what you were going through. Edith noted:

"Don't waste your time with telling people outside. They will not buy you anything or help you with anything what they will do most of the time is to laugh at you so don't engage them." (Edith, age 24, Farmer)

The quote above shows the fear of social judgment and mistrust towards others, stating that others will not help you but only laugh at you. This mistrust and fear of the women was also observed by medical staff, who noted that the thought of doctors sharing one's medical condition to the community is an obstacle for women to share with medical staff. They could see patients suffering from wounds or infections, but the patient still wouldn't tell them directly that it was caused by using cloths, or poor menstrual hygiene. Esther explained her mistrust against medical staff in the quote below, highlighting that she is willing to share her medical condition but scared that the information would be spread in the village:

"There are times when you have a problem and you wish to share with a doctor but some doctors they like gossiping. You share something and they share it back to other people. You are staying in the same village and they go and tell others." (Esther, age 23, Farmer)

Despite the norm of secrecy, some participants did share about menstruation with others for different reasons or under certain circumstances. The women tell their husband that they are experiencing their menstruation to declare that they cannot have intercourse during that period. Another instance when women talk about menstruation is when they are giving advice on how to handle menstruation, mostly to younger school girls, their daughters or even to their friends. Sharing also occurred when seeking help for (medical) problems or severe cramps and pain. In these cases, women would speak to their mother, a doctor or their close friends to seek solutions to the problems they are experiencing. This woman shared how she would only share her menstrual status if she experienced complications:

"It embarrasses you, telling people your state. Unless when you have a huge problem which is on you, maybe you want to share the problem and they give you the solution. Maybe that, but if not that you don't share. You have to keep it safe from other people." (Rose, age 30, Farmer)

The need for secrecy extended beyond communication to the physical management of menstrual hygiene as well. Participants describe taking secrecy into account during practices, such as drying cloths, pads and underwear inside the house to prevent others, especially male members of the community, from knowing their menstrual status. Hannah explained that in their culture it is a taboo for their male relatives to notice drying menstrual products:

"In Basoga culture if you have a son who is old…, the culture doesn't allow you to expose to them because it is against the culture to see this. It is a taboo for a male kid to see that." (Hannah, age 45, Farmer)

Several participants reported experiencing instances where menstrual blood leaked on their clothes in public, which sometimes led to ridicule from others, reinforcing their fear of judgement if menstruation isn't handled in secret. However, it also happened that other women helped them by informing them that blood had leaked onto their clothes and tying a lace around them to conceal the stain.

6.2.3 Rules on how to carry and use products

The participants did not mention explicit pressure or rules governing how to carry, dispose of and use menstrual products. However, an interview with a midwife revealed that even though some women knew how to handle their products in the most hygienic way, they still actively choose to handle them differently due to social pressure. For instance, some women knew that drying menstrual products outside is more hygienic, but they still chose to dry them indoors. The knowledge that cloths and pads are private things and hanging them outside might cause the community to look down on you, creates a pressure to use and handle them in a certain way, leading to women keeping them inside. Women also perceived this social pressure from the community when malfunctions, or inconveniences with their menstrual products occurred. It is the women's responsibility to properly handle her menstruation in a private way, and 'failure' of this can result in ridicule from the community:

"Yesterday when I was in the trading center they brought a woman to be treated by the time she left the motorcycle the cloths went out of her and fell down, people were laughing, nobody will care and be sorry for you, some people will laugh and she was embarrassed" (Suzan, age 25, Nurse)

The quote above shows that the community will show no concern or sympathy when any inconveniences with the cloths happen. This reaction shows that there might be a socially acceptable and unacceptable way of using, carrying, disposing and handling menstrual products, where using cloths that can fall out is socially unacceptable. It was observed during the interviews that women were initially hesitant to admit their use of cloths for managing their menstruation. In the beginning of the interviews, some participants claimed to use sanitary pads exclusively to manage their menstruation, but later admitted to using cloths because they were unable to afford pads. This could indicate a certain pressure on which

products were considered as socially acceptable and which were not. However, it could also reflect a shame associated with financial struggles and the inability to afford sanitary pads.

6.3 Availability of menstrual amenities

6.3.1 Economical access to products, medication and detergents

One of the main challenges reported by the participants is the lack of financial means to access menstrual products, such as sanitary and reusable pads. The communities in which the participants live are affected by poverty. Households typically subsist on agriculture, with the women in the household earning no income and the overall household income being minimal. The women noted the sanitary pads from local pharmacies and shops to be relatively inexpensive (about € 0.50 – 0.75 cent per pack), but to be expensive to them since they had no income. As mentioned above, most households in these communities are large, with many children, where the father is the primary breadwinner earning little income. As a result, menstrual products or medication are not prioritized over other essential financial needs such as paying school fees and other expenses for the children. The women reported feelings of stress in general due to the financial situation of their families, but lacking financial means to access menstrual products added extra stress on how they were going to manage their menstruation. Financial constraints affected the choice of menstrual product of the women. Despite preferring sanitary pads, women resorted to using cloths or only their underwear in times when money was absent, even though cloths had many disadvantages for the women, as explained in chapter 6.1.1.

"*The biggest challenge I normally get is going into periods without money, when I cannot afford the pads. At times I tends to lose a lot of blood, when I'm using cloths the blood is going through me."(Catherine, age 28, Farmer)*

The quote above shows how Catherine struggles with purchasing sanitary pads, leaving her to resort to cloths and deal with its disadvantages. Besides using cloths, women coped with these financial limitations by buying sanitary pads in bulk when money was available or by wearing pads for extended periods to reduce the number of packs needed. Amina expressed her opinion on some parents at her daughter's school that instructed their daughter to minimize the amount of pads they use, because they don't have the financial capacity to access more:

"The real issue is poverty because I thinks that no parent would want to give a girl one pack, but because that is what they can afford … being that they even know that is will not be enough because they will tell you be very careful with it but it is what they can afford." (Amina, age 39, Teacher)

Both participants and stakeholders spoke about adolescent girls that resort to relationships with older men for money to access pads, which can indirectly lead to early pregnancies and early marriages. The staff from an NGO on empowering local youth highlighted the issue:

"This issue has brought a lot of early pregnancies and early marriages. The fact is that girls do not have access to these products. These men of ours seduce them with small moneys and they are caught up here and there. These cases are very common in villages. Once a girl is in that stage of menstruation but wants to feel comfortable, they reach out to any man and they provide for them."

Participants reported that they also lacked money to buy medication, such as painkillers, when they were experiencing cramps and other pains. Although people from the community could access medication for free at the government hospitals in Iganga town, shortages of supplies at the hospital forced them to purchase medication from local drugs shops for € 2,50 – 3,00 per package. In these instances, the women declared the medication to be expensive to them. Being unable to buy and use medicine restricted women's movements, as further discussed in chapter 6.5.1. Some participants stated that they struggled with buying detergents to wash their products, causing them to solely use water and soap. Even though medical and NGO staff recommended using detergents to kill bacteria when washing cloths, underwear and pads, as mentioned in chapter 6.1.2.

6.3.2 Physical access to water and sanitation facilities

All the participants had quite good access to water, mostly through boreholes, but also via solar-powered taps and wells. Some participants, especially those from one of the more remote villages, spoke about the far distance and scarcity of water sources, making it more difficult to fetch water. In contrast, with most other villages where water sources were relatively close to participants' homes, making it easier to fetch water. During menstruation, women had to fetch more water to maintain proper menstrual hygiene, which involves extra washing, cleaning and bathing. Women expressed that fetching more water during menstruation was a burden. The women experienced feelings of weakness, cramps and other pains during menstruation, making it more difficult to walk long distances and carry heavy jerrycans of water. Despite these challenges, the women declared that they needed water to take care of themselves and their families. Therefore, fetching water was something they did daily, meaning that they were used to walking far distances and carrying the water. In these communities all the responsibilities of the women involve water, such as washing, cooking,

and cleaning, making it women's responsibility to fetch the water as well. Dolores voiced this concern:

"It burdens me but I have nothing to do so I definitely have to go and fetch the water. it could have been better if the water was closer because where we go to fetch is so far so if it is near it makes more sense" (Dolores, age 23, Farmer)

The quote above expresses how her responsibility of fetching water is burdensome for her, and how this pressure increases due to the far distance from the water source. To cope with and ease this responsibility, some women used a bicycle so they could carry multiple jerrycans at once over longer distances or asked their children to help fetch the water.

The participants had generally good access to sanitation facilities in the form of a pit latrine. This facility was relatively close to their homes, clean and often only shared by their own family. This proximity and cleanliness facilitated easier management of menstrual hygiene, by making it easier to dispose of used products and safer to change and clean without catching infections.

6.3.3 Social access to safety and privacy

Many participants reported having good access to a clean and safe place to change and clean themselves at home, typically in the form of an outdoor bathroom. In the village setting, the bathroom is situated on the land, close to the house and often consists of a short brick wall for privacy, and stones on the ground to prevent water from splashing. The bathroom was labeled as safe by the participants if they provided sufficient privacy and prevented people from peeping. The women stated that these bathrooms were often only shared with their family and cleaned by the women themselves to ensure their cleanliness. However, it was noticed during the interviews that participants could be vague about the cleanliness of the bathroom, displaying visible emotions or laughing when explaining the state of the bathroom. This reaction suggests that it might be a sensitive topic for some women, or that it may be difficult to admit that one's bathroom is not clean, as it is women's responsibility to maintain the cleanliness of the bathroom. Those who did report their bathroom being unclean experienced feelings of stress about the potential of them and their children catching diseases from using that bathroom. Some participants had even caught infections from using dirty bathrooms. Participants who felt their bathrooms were unsafe, stated that they experienced feelings of stress due to own their and their children's safety being at risk. They stated that people were

able to peep at them while bathing themselves, and everyone could come and urinate or dump something in their bathroom. As is highlighted in the case of Alisha, who was hesitant to speak about her situation:

> Alisha, a 23-year-old mother, lives in the village of Butokolo with her husband and their two children. Butokolo is a small village, located relatively close to Iganga town. Her husband's family owns land and a house in this village, where they currently live. On this family land, an outdoor bathroom is located, made of a small 100 cm mud wall surrounding some stones on the sandy floor. Behind this wall Alisha and her family bathe and clean themselves.
>
> The family land and the bathroom are located close to a local 'bar', where men from the village come to drink alcohol. You can hear the music and loud voices from the bar, sitting outside in front of her home. The proximity of the bar to the bathroom caused problems for Alisha and her family. There are times when drunk people from the bar come and urinate in the bathroom or disturb Alisha and her children while they are bathing, invading their privacy in the process.
>
> Alisha feels as if her bathroom is not clean and safe for her and her children to use. She worries about the potential health risks and diseases they might catch from using the dirty bathroom. The lack of a secure and sanitary bathroom is a source of anxiety for Alisha, but there is no other bathroom she can use. To cope with the situation, Alisha tries to keep the bathroom clean by sweeping, but she is never sure if the bathroom will be disease free or safe.

This case highlights the feelings of stress about the potential of catching diseases from a unclean bathroom, as well as the stress due to one's safety being at risk due to people invading their privacy. The case shows that there are often no other safer options for women to use, being a source of anxiety for some.

6.4 Affects on Mental and Physical Health

6.4.1 Mental health

6.4.1.1 Feelings of embarrassment and shame

Participants reported that they experienced feelings of shame and embarrassment due to menstruation. The feelings often arose when blood had leaked onto their clothes, making their menstrual blood and menstruation visible to others. Even the act of tying a lace around your waist to cover the blood could be embarrassing for some. Although there were also women who stated that they had never experienced feelings of shame and embarrassment in regard to menstruation. This seemed to stem from a sense of confidence and pride in their ability to

manage and prepare their menstruation in a way that kept it hidden for others. The women felt as long as others were unaware of their menstrual status, there was no reason to feel embarrassed, as they conformed to the present social norm, which states that menstruating is supposed to be a secret (see chapter 6.2.2). Two participants express their opposite experiences:

"My friend told me to go and change the dress … I turned the behind part of the dress in front to watch and blood had gone through and I was embarrassed and felt shy, so I had nothing to do, went home and even failed to get back." (Edith, age 24, Farmer)

"I cannot feel embarrassed and shy because I will protect myself from others and they will not know. You cannot get ashamed because they will not know that I am in that situation. I will totally protect myself." (Amina, age 39, Teacher)

The quotes above show a contrasting perspective. However, both quotes highlight that feelings of shame and embarrassment are tied to whether others can notice one's menstrual status or not.

6.4.1.2 Feelings of stress and anxiety

Feelings of stress and anxiety were mainly experienced in combination with concerns about menstrual health. Women reported feeling stressed and worried about cramps, pain, and other menstrual-related implications, as well as anxiety caused by missing one or multiple menstrual cycles. These health concerns could be attributed to regular menstrual complaints, underlying diseases and infections or side effects of contraceptives. Observations during the interviews as well as by the medical staff indicated that some participants lacked knowledge on health issues and contraceptives, which will be further explained in chapter 6.5.2. This lack of knowledge could cause the women to worry about potential illnesses or health problems. Other sources of stress included the financial burden of buying menstrual products when money was absent, and the extra washing that has to be handled during menstruation. Despite these challenges, it has to be stated that these women, just like most women on earth, have been experiencing, handling and coping with their menstruation every month since adolescence. This seemed to create a sentiment of acceptance for some, stating that they could not be stressed since menstruation is a regular occurrence that they must deal with and '*it will happen'* every month. The quote below illustrates this sentiment, due to the fact that menstruation is something women are created to experience:

"Even though you are stressed, even though you are not, … it will happen. So that is a waste of time. Us women we were created to experience that, so we have nothing to do… It is

part of you so I think it is better not to even be worried. It is better to just be ready" (Beth, age 20, Farmer)

6.4.2 Physical health

6.4.2.1 Sores, burns and wounds

Women reported experienced sores, burns and wounds on their thighs and private parts due to the use of sanitary pads, but especially the use of cloths. The duration for which a product is worn and the amount of blood absorbed plays a role in the development of burns, sores and wounds. Medical staff indicated prolonged use of blood-soaked products soaked without changing causes wounds, sores and burns. The women reported several reasons for delaying the removal of their menstrual product. One of the reasons was long hours of heavy work or travel without access to a safe and clean space for changing. Another reason was that women tried to conserve their limited supply of pads or cloths by wearing the ones they had for extended periods. The material of the cloth also contributed to these wounds, when rough materials are used as cloths it causes chafing in the thighs. The physical demands of the women's lifestyle, such as digging in the garden in hot climates, further increased the development of these complaints. Hajira stressed the importance of changing and cleaning your cloth after working in the garden to avoid burns:

"If you went early in the morning in the garden, you have put them (cloths) and you have worked, you are using your body so by the time you get here (at the house) you have to clean yourself and remove them, if you prolong it, it will burn you. It is about the delay to change, keeping them on you body for a long time." (Hajira, age 30, Farmer)

The quote above explains that the combination of working in the garden with delaying of removing menstrual products can create complications. Both the women and stakeholders explained that during physical work cloths or pads filled with blood can heat up, leading to itching and burning sensations. However, medical staff noted that, instead of those products causing complications, it could be other undiagnosed and untreated diseases, such as STDs or UTIs, that cause and worsen sores, wounds and burns.

6.4.2.2 Pain, cramps and infections

Women also reported experiencing cramps and/or other pains, such as backpain and headaches, during their menstrual period. The physical responsibilities of these women, including childcare, water fetching, farming, cleaning and cooking were limited by menstrual pain and cramps. Participants indicated that, due to pain their ability to farm, fetch water or

even perform their job was hindered. Those with paid jobs lost income during their menstruation due to their decreased productivity caused by menstrual pain. This financial loss further limited their ability to financially access menstrual products, medication and detergents. To cope with this pain, women used medication, such as painkillers. However, as mentioned in chapter 6.3.1, some participants cannot afford the medication, meaning that they have to endure the pain without any relief. Farah explained in the following quote, how in their community some women have to endure heavy pain due to financial constraints:

"Due to the village setting most of the times these things happen when you don't have a penny, so when you don't have money you just have to bear. You go through this pain … when you don't take anything. Some people may have the pain in the stomach which is so continuous, they even loose appetite and stop eating but due to the village standards they just have to bear, due to God's grace they will be fine." (Farah, age 38, Farmer)

While few women actually reported experiencing infections, others described symptoms such as wounds, itching, burning sensations and heavy or prolonged menstrual bleeding, which can all be potential symptoms of infections. NGO and medical staff explained that poor hygiene practices, such as using dirty cloths and using public toilets can also worsen already existing infections, leading to additional pain and complaints. This, in combination with the hesitation of women to share their medical issues with healthcare providers (see chapter 6.2.2), could indicate that women might be suffering from undiagnosed infections.

6.4.2.3 Challenge of contraceptives

The use of contraceptives, to regulate menstruation and pregnancy, was an important factor interfering with both women's mental and physical health. Participants experienced various physical side effects from contraceptives, such as heavy menstrual bleeding, missed cycles, spotting and extreme cramps. As stated by Zainab

"The main issue is family (contraceptives), that sometimes maybe it can affect us. It has a lot of side effects. There are times when you bleed much. There was time where I bled for almost an entire month non stop due to the family (oral contraceptives) I was using." (Zainab, age 32, Tailor)

The quote above shows how certain contraceptives had serious side effects on Zainab. To cope with this, she quit using oral contraceptives and switched to injections which don't cause the same effects on her. A doctor specialized in contraceptives said that, partly due to these side effects, there is a widespread ignorance about contraceptives in these communities. This

ignorance fostered myths and skepticism about contraceptives, causing women to be even more suspicious of using contraceptives.

6.5 The menstrual paradox

6.5.1 Lack of access to pads

Both the stakeholders and the participants identified one of the biggest and most affecting challenges being lack of access to menstrual products, especially sanitary pads, mainly due to financial constraints as discussed before in chapter 6.3.1. The lack of access to proper menstrual products, medication, and other needs restricts women's movement and confines them to their homes during their menstrual periods. Esther explains how the lack of access to sanitary pads influences her movements during her period:

> *"I avoid being in public when I am in p's (experiencing menstruation) unless if I have a pad. If you don't have a pad, a cloth can get out and fall in the public so I try to limit my interactions in public places" (Esther, age 23, Farmer)*

Others, like Ester, report that they avoid public places and going far from the house during their menstrual period when they use improper products, to avoid embarrassment by potentially showing one's menstrual state to someone. As detailed in Chapter 6.2.2, the norm of secrecy surrounding menstruation is prevalent in these communities. However, the combination of the norm of secrecy surrounding menstruation and the lack of financial resources to access menstrual products creates what this research terms as 'the menstrual paradox'. Women are expected to conform to the norm and maintain their menstruation a secret but lack access to the means to properly do so. This paradox between societal expectations and the ability to meet them due to access inequalities might increase women's feelings of shame and embarrassment, as women reported to fear social judgment if their menstrual status is revealed to others due to the use of inadequate products (see chapter 6.4.1.1). The social expectation of maintaining privacy becomes unattainable without proper resources, intensifying the emotional burden on women.

6.5.2 Education of menstruation

Another major challenge identified is the lack of knowledge and information about menstruation in the community. Medical and NGO staff reported that women in this area lack the necessary information to properly handle their menstrual hygiene, causing them to believe and spread misconceptions about pads and contraceptives. During the interviews, it was

observed that participants frequently sought advice from the researcher and research assistant on which products to use, hygiene practices and even shared their symptoms to seek medical advice, indicating a lack of knowledge and access to information on menstruation. Some participants are not connected to any institutions in the area, such as schools, companies and other initiatives, where they could access education and knowledge on menstruation. One participant, who was the councillor of the community's women empowerment board explained:

"The challenge is people are not getting what they are meant to do. Some know how to use, because they called us to schools and we are taught. In the hospital they call the community on the last days of the month, they teach us, the women, the children. … We learn how to make pads but for those here (in the village) they could not even tell you how to make pads. It is now familiar to the younger girls and they even don't get ashamed. They just go to the teacher and asks for permission, when it is through she goes home and gets her pads. (Name, age range 40-60, Farmer)*

**= Name and exact age are hidden to ensure anonymity and confidentiality*

This quote shows the contrast of how information on menstruation has helped younger girls and women in the project to manage their menstrual hygiene, but how some women in the villages lack this knowledge. The NGO staff noticed that the biggest difference between younger girls and adult women in their projects were the opinions and misconceptions about using pads. Adult women could refuse sanitary pads provided by the NGO, due to the beliefs that they cause cervical cancer, prolonged menstrual bleeding and other side effects. The medical staff also highlighted that many people in the communities don't know where to seek medical help. This was exacerbated by drug shops and small pharmacies in the villages, where unlicensed people give out medical advice and potentially spread wrong information in the process.

Access to knowledge and information go hand in hand with education on menstruation. Some women explained that they received education on menstruation in school which especially helped them properly handle their first menstruation. Education on menstruation is a third factor contributing to this menstrual paradox, mentioned above. The norm of secrecy makes it harder to access information, seek advice and give education on menstruation. While lacking information and education on menstruation can lead to and foster unhygienic menstrual practices. As a solution, the medical and NGO staff mentioned community-wide sensitization, advocating education for young boys and girls as well as women and men, to normalize menstruation and improve menstrual hygiene for everyone.

7. Discussion & conclusions

7.2 Discussion

The women in this study as well as in Hennegan's et al. (2020) article indicated that in Uganda menstruation is seen as a personal and private women's issue. The women in this study expected others and were expected to communicate and handle their menstruation in secret. This secrecy around menstruation is found in many other articles, in different cultural contexts and societies (Hennegan, 2020; Brantelid et al., 2014; Jalali, 2019; Mason et al., 2013). Young (2005) argues that this secrecy can be explained by the fact that menstruators are seen as deviating from the standard since menstruation is labeled as dirty, disgusting and defiling, leading to women as young girls being taught to conceal and hide their menstrual processes to be deemed as normal. Contrary to this belief, this study found that in these communities women conform to the social norm of secrecy, but deem their menstruation as normal and don't classify it as dirty, disgusting or defiling. The women in the study believe that the cleanliness of one's menstruation is based on their own personal hygiene and that experiencing regular menstruation is a sign of good health that prevents diseases.

This study argues that this norm of secrecy as found in many cultural contexts, is constricting women in contexts where women have limited financial means to access products, medication and other menstrual needs. The term *menstruation paradox* was introduced, explaining that women are expected to conform to the norm and keep their menstruation a secret but lack access to the means to properly do so. A similar idea was found by Jalali (2021) who stated that in a society that proposes norms, rules and taboos surrounding menstruation but that does not offer proper infrastructure to meet the needs to conform to these norms, women are not allowed to follow these norms, rules, and taboos. The results of this study show that women lack knowledge and information on menstruation, which as a third factor adds to this menstruation paradox. Secrecy around menstruation makes it harder to access information and give education on menstruation, while lacking information on menstruation can lead to inadequate MHM. Miiro et al. (2018) found as well that lack of information and lack of products are intertwined, by noting that confidence in managing menstruation was undermined by both lack of adequate products and lack of knowledge.

Additionally, this research found that both the norm of secrecy and lacking access to menstrual needs, influence the menstrual hygiene practices of women, resulting in affects on their mental and physical health. Just like this research, many other articles found that the

norm of having to handle one's menstruation in secret creates feelings of anxiety, shame, discomfort, and embarrassment (Hennegan et al., 2020; Caruso et al., 2017; Sahoo et al., 2015; Sommer et al., 2016). On top of that, this study found that use of inadequate products due to lack of access to proper menstrual products can increase the chances of catching infections, creating burns, sores and wounds, and increase pain. Other articles, such as Jalali (2021) and Das et al. (2015) agree that poor genital hygiene is a risk factor for infections and physical symptoms (Jalali, 2021; Das et al., 2015).

7.2.1 Limitations

There are several limitations to this research which are important to note when interpreting the results and final conclusions. In this research, qualitative interviews were the sole method of data collection, even though this method provides rich and in-depth data, it is also vulnerable to various biases. Firstly, the research assistant, who was present during the interview and responsible for translating, was a man. This might have caused the participants to be more hesitant to share about menstruation since it is a sensitive topic, especially between genders. However, efforts were made to mitigate this by ensuring that it was a safe and judgement-free space to share. An example of this is that the research assistant didn't look the women in the eyes, or looked down during the sensitive questions to show respect. Secondly, the researcher was present during the interviews, which might promote researcher bias. As this was the researcher's first experience conducting qualitative research, the phrasing and manner of the questions may have influenced participants' responses. On top of that, due to the fact that the gatekeepers of the villages announced the researchers' arrival to the participants, they were perceived as 'important visitors' which might have created an imbalance between the researchers and participants, potentially making the participants feel uncomfortable. This status of 'important visitors' was reinforced by the culture of hospitality already present in the research communities. This culture showed a different side of humanity and way communities live together than experienced growing up in the Netherlands, where the hospitality towards strangers is quite low. In contrast the participants in this research were welcoming and immediately provided chairs upon arrival of the researcher and research assistant. However, they themselves sat on the ground instead of chairs. This might have added to this imbalance between the researcher and participants and have limited the participants sharing their experiences openly since they were not fully comfortable sharing their personal information with their 'important visitor'.

The qualitative analysis and coding process is subject to and dependent on the researchers' interpretation, which could lead to a implicit focus on topics they or the theory deemed important. This has to be taken into consideration while interpreting the final results. To combat this, there was active communication between the researcher and research assistant during the analysis and coding process to check these interpretations. Additionally, the results and findings are context-specific to the studied communities and therefore should not be generalized to other contexts and communities. The cultural and social dynamics of these communities might not reflect those of others.

7.2.2 Menstruation paradox and the SDGs

The primary goal of this research was to investigate how physical and sociocultural factors, such as availability to menstrual needs and social norms on menstruation, shape how women living in rural areas of Eastern Uganda manage their menstrual hygiene. This study hoped to contribute and provide information to help further achieve the Sustainable Development Goals 5 (Gender Equality) and 6 (Clean water and sanitation). The results reveal that both access to water, sanitation and hygiene (WASH) and factors on gender equality are intertwined goals that remain far from being realized. Women in the researched areas lack adequate access to menstrual products, medication and detergents, influencing their hygiene practices, resulting in effects on their mental and physical health. On top of that, women face norms surrounding menstruation that further prevent them from receiving menstrual needs as well as education on menstruation, affecting their mental and physical health in the process. This research stresses the importance of approaching the SDGs with a dual perspective, by introducing the paradox that menstruation in these communities entails. A dual or multifaceted approach can ensure that efforts to achieve the SDG's include, consider and empower all groups involved. Menstrual hygiene serves as a perfect example since it connects multiple sectors and has consequences on whole communities, but especially women's lives if not properly handled.

7.1 Key conclusions

This research conducted in-depth interviews to answer the main research question 'How do social norms on menstruation and the availability of adequate menstrual needs shape the menstrual hygiene management of women living in rural villages of Iganga district, Uganda?'

The findings show that both social norms on menstruation and the availability of menstrual needs shaped and affect women's hygiene practices and the way they manage their menstruation. To understand how these factors shape and affect women's MHM the main conclusion will be explained by answering the two sub questions: 'How do women experience the social norms on menstruation and the availability of adequate menstrual needs in their community, and how do access inequalities play a role in these experiences?' and 'How do women in rural Eastern Uganda manage their menstrual hygiene, and how do these practices affect their mental and physical health?'

7.1.1 Experiences of social norms on menstruation and availability of menstrual amenities

The most influential norm that affected women's menstrual hygiene management in the research communities was the norm of secrecy. The norm pushed women to portray certain hygiene practices and restricted women's movements, affecting their mental and physical health in the process. The norm hinders women to seek medical advice, confines them to their homes during menstruation and stimulates poor drying hygiene practices, such as drying products inside in dark places. Additionally, secrecy might maintain misconceptions and ignorance about menstruation, due to the lack of spread knowledge and information. Education on menstruation and familiarity with the topic can help normalize and combat the taboos on menstruation.

The women had fairly good access to water, sanitation facilities, and privacy and safety while changing. The strongest factor affecting women's MHM and hygiene practices was the lack of access to menstrual products, medication and other needs, due to financial constraints. Sanitary pads were preferred for their comfort and effectiveness, but many women are unable to afford them every month. The lack of access to menstrual products restricted women's movement and pushed the women to resort to alternatives, resulting in poorer hygiene practices, such as using dirty and old cloths and delaying removing sanitary pads. The cloths come with the burden of washing and drying, which present additional challenges, such as having to cross long distances to fetch water, needed privacy for drying the products and the financial burden of buying detergents. The lack of access to medication restricted women's movement and limited them in their daily responsibilities, due to pain, cramps and illnesses they suffered.

7.1.3 Affects on mental and physical health

Both the norm of secrecy and lack of access to menstrual materials and other products pushed women to resort to poorer hygiene practices. In turn, these hygiene practices have negative affects of women's mental and physical health. Poor washing and drying practices increase the chances of catching infections and bacterial vaginosis. This can be backed up by other articles that state that poor genital hygiene is a risk factor for reproductive tract infections and bacterial vaginosis (Jalili, 2021; Das et al., 2015). Lacking proper products and medication pushes women to resort to alternative products and can increase women's experience of pain and cramps, leaving them bound to their house and even missing income. On op of that women experience feelings of stress, anxiety, shame and embarrassment during their menstruation, due to the pressure to conform to the norm of secrecy, and worries about money and their health. Cloths can be used in correct and save ways. However, when using cloths there is a possibility of developing burns, wounds, sores and increase the chances of infections. On top of that, using cloths can affect feelings of embarrassment and shame, due to them falling out or causing blood to leak through clothes, as well as feelings of stress and anxiety, due to the pressure of having to wash continuously, and the wounds and burns. The use of contraceptives to regulate menstruation had many complications for the women, with reported side effects, such as heavy bleeding, cramps and missed cycles.

In summary, this research hopes to show the challenges faced by women in villages in Iganga district regarding menstrual hygiene management. Social norms, emphasizing secrecy, in combination with lacking access to menstrual products and education, worsen these challenges women face, and affect women's mental and physical health in several ways. Addressing these issues requires a multifaceted approach, by improving access to menstrual products, enhancing education on menstrual hygiene and providing community-wide knowledge to normalize menstruation and change the social pressure from the norms.

7.2.4 Policy implication & future research

As mentioned above a multifaceted approach is needed, only distributing reusable and sanitary pads or providing education alone is insufficient. If women lack the knowledge on how to use a menstrual product, the product is wasted. On the other side if women are educated on menstruation but cannot access the needed products, the information is wasted. To fully understand the problem social norms, financial and physical constraints, and limited

knowledge should be taken into consideration. These factors are all connected: secrecy limits education and puts social pressure on women, lack of access to adequate products disturbs the conformation to social norms and a lack of knowledge hinder proper hygiene practices.

The existing Village Health Team (VHT) program, established by the Ministry of Health in 2001 to enhance health care in rural areas of Uganda, provides a framework that can be adjusted to address menstrual hygiene management. The VHT consists of Community Health Workers that create a team operating and making home visits in villages to provide medical advice and care. MHM could be incorporated in the already existing programs, by integrating the provision of menstrual hygiene products and information on menstruation. Local NGO's could work together with the VHT, since they both can reach the communities, to provide a all- round program for MHM. The Plan International, a NGO, already has programs in place to empower the VHT member to make reusable pads. However, the success of handing out menstrual products is heavily related with the provision of information and education on menstruation and proper menstrual hygiene. Educational initiatives on menstruation should include boys and men, to help normalize and shift social norms on menstruation, enabling women to openly discuss their menstrual health with husbands and sons. However, the incorporating of MHM and the cooperation of the VHT's and NGO's require extra funds from trustable and sustainable sources to ensure consistent availability of the menstrual products and medication. These fundings could potentially come from partnerships with bigger NGOs, international donors and even international governments through development cooperations. The aim is to improve the mental and physical health of women and create adequate menstrual hygiene management by enhancing both the availability of menstrual products and the education surrounding menstrual health.

This research aims to bring forward areas for future research that touch the topic of menstrual hygiene but that were not addressed in this research. Several participants raised concerns related to the use of contraceptives, suggesting a topic for further investigation. Participants reported experiencing side effects from contraceptives which made them worry about their overall health and cautious of contraceptive use in general. Future research could uncover the experiences of contraceptive use in a rural context, and how this interferes with misconceptions and concerns about contraceptives and menstrual hygiene. Understanding this topic is important for developing education programs on both contraceptive use and menstrual hygiene management. Furthermore, it has to be noted that in this research, as well as in the

interviews with the medical and NGO staff the access to sanitary disposable pads was emphasized as a challenge and solution. The solutions are centred around the provision and accessibility of the sanitary pads. Yet, these sanitary pads are not sustainable due to their disposable nature, which requires frequent purchases, imposing financial burdens, and contributes to environmental pollution, as they are disposed after single use. Future research could shift this focus and investigate the needs and characteristics of an ideal, comfortable, accessible, and sustainable menstrual product. This could provide insights into developing or focusing on innovative menstrual products that meet the needs of women, addressing both economic and environmental sustainability.

8. Refences:

Bhasin, K. (1993). *What is Patriarchy?*

Bobel, C., Winkler, I. T., Fahs, B., Hasson, K. A., Kissling, E. A., & Roberts, T. (2020). The Palgrave Handbook of Critical Menstruation Studies. In *Springer eBooks*. https://doi.org/10.1007/978-981-15-0614-7

Boosey, R., Prestwich, G., & Deave, T. (2014). Menstrual hygiene management amongst schoolgirls in the Rukungiri district of Uganda and the impact on their education: a cross-sectional study. *The Pan African medical journal*, *19*. https://doi.org/10.11604/pamj.2014.19.253.5313

Budhathoki, S. S., Bhattachan, M., Castro-Sánchez, E., Sagtani, R. A., Rayamajhi, R. B., P, R., & Sharma, G. (2018). Menstrual hygiene management among women and adolescent girls in the aftermath of the earthquake in Nepal. *BMC Women's Health*, *18*(1). https://doi.org/10.1186/s12905-018-0527-y

Brantelid, I. E., Nilvér, H., & Alehagen, S. (2008). Menstruation During a Lifespan: A Qualitative study of women's experiences. *Health Care for Women International*, *35*(6). https://doi.org/10.1080/07399332.2013.868465

Caruso, B. A., Clasen, T., Hadley, C., Yount, K. M., Haardörfer, R., Rout, M., Dasmohapatra, M., & Cooper, H. L. (2017). Understanding and defining sanitation Insecurity: Women's gendered experiences of urination, defecation and menstruation in rural Odisha, India. *BMJ Global Health*, *2*(4), e000414. https://doi.org/10.1136/bmjgh-2017-000414

Corburn, J., & Hildebrand, C. (2015). Slum sanitation and the social determinants of women's health in Nairobi, Kenya. *Journal of Environmental and Public Health*, *2015*, 1–6. https://doi.org/10.1155/2015/209505

Das, P., Baker, K. K., Dutta, A., Swain, T., Sahoo, S., Das, B. S., Panda, B., Nayak, A., Bara, M., Bilung, B., Mishra, P. R., Panigrahi, P., Cairncross, S., & Torondel, B. (2015). Menstrual hygiene practices, WASH access and the risk of urogenital infection in women from Odisha, India. *PLOS ONE, 10*(6), e0130777. https://doi.org/10.1371/journal.pone.0130777

De Beauvoir, S. (1997). *The second sex*. Random House.

Goal 5 | Department of Economic and Social Affairs. (z.d.). https://sdgs.un.org/goals/goal5

Goal 6 | Department of Economic and Social Affairs. (z.d.). https://sdgs.un.org/goals/goal6

Government of Uganda. Menstrual Hygiene Management Charter. (2015). https://www.ircwash.org/sites/default/files/menstrual_hygiene_management_charter_finalised_april_2015_1_.pdf Accessed Januari 7th 2024.

Hennegan, J., Kibira, S. P. S., Exum, N. G., Schwab, K. J., Makumbi, F., & Bukenya, J. (2020). 'I Do What A Woman Should Do': A Grounded theory study of women's menstrual experiences at work in Mukono District, Uganda. *BMJ Global Health, 5*(11), e003433. https://doi.org/10.1136/bmjgh-2020-003433

Hennegan, J., Shannon, A. K., Rubli, J., Schwab, K. J., & Melendez-Torres, G. J. (2019). Women's and Girls' experiences of menstruation in Low- and Middle-income Countries: A Systematic review and Qualitative metasynthesis. *PLOS Medicine, 16*(5), e1002803. https://doi.org/10.1371/journal.pmed.1002803

Jalali, R. (2021). The Role of Water, Sanitation, Hygiene, and Gender Norms on Women's Health: A Conceptual framework. *Gendered Perspectives on International Development, 1*(1), 21–44. https://doi.org/10.1353/gpi.2021.0001

Jalali, R. (2019). Poverty, Water, Sanitation Insecurities, and the Challenges of Maintaining Menstrual Hygiene. In *Gender and development: The Economic Basis of Women's Power*. (Eds.) Cohn, S., & Blumberg, R. SAGE Publications. 119 – 190.

Joshua Project. (n.d.). *Soga, basoga in Uganda*. https://www.joshuaproject.net/people_groups/14972/UG

Koipysheva, E., Lebedinsky, V., & Koipysheva, M. (2018). Physical Health (Definition, Semantic Content, study Prospects. ˜*The œEuropean Proceedings Of Social & Behavioural Sciences*. https://doi.org/10.15405/epsbs.2018.12.73

Laws, S. (1991). *Issues of blood: The Politics of Menstruation*. Springer.

Lubogo, Y. K. (2020). *History of Busoga*. https://ucudir.ucu.ac.ug/xmlui/handle/20.500.11951/890?show=full

Mason, L., Nyothach, E., Alexander, K., Odhiambo, F., Eleveld, A., Vulule, J., Rheingans, R., Laserson, K. F., Mohammed, A., & Phillips-Howard, P. A. (2013). 'We keep it secret so no one should know' – a qualitative study to explore young schoolgirls attitudes and experiences with menstruation in rural western Kenya. *PLOS ONE*, *8*(11), e79132. https://doi.org/10.1371/journal.pone.0079132

Merleau-Ponty, M. (2013). *Phenomenology of perception*. Routledge.

Miiro, G., Rutakumwa, R., Nakiyingi-Miiro, J., Nakuya, K., Musoke, S. N., Namakula, J., Francis, S. C., Torondel, B., Gibson, L., Ross, D. A., & Weiss, H. A. (2018). Menstrual Health and school absenteeism among adolescent girls in Uganda (MENISCUS): a feasibility study. *BMC Women's Health*, *18*(1). https://doi.org/10.1186/s12905-017-0502-z

Rossouw, L., & Ross, H. (2021). Understanding Period Poverty: Socio-Economic Inequalities in Menstrual Hygiene Management in Eight Low- and Middle-Income Countries. *International Journal Of Environmental Research And Public Health/International Journal Of Environmental Research And Public Health*, *18*(5), 2571. https://doi.org/10.3390/ijerph18052571

Sahoo, K. C., Hulland, K. R. S., Caruso, B. A., Swain, R., Freeman, M. C., Panigrahi, P., & Dreibelbis, R. (2015). Sanitation-related Psychosocial Stress: A Grounded Theory study of women across the life-course in Odisha, India. *Social Science & Medicine*, *139*, 80–89. https://doi.org/10.1016/j.socscimed.2015.06.031

Sommer, M., Chandraratna, S., Cavill, S., Mahon, T., & Phillips-Howard, P. A. (2016). Managing menstruation in the workplace: an overlooked issue in low- and middle-income countries. *International Journal for Equity in Health*, *15*(1). https://doi.org/10.1186/s12939-016-0379-8

Sommer, M., & Şahin, M. (2013). Overcoming the Taboo: Advancing the global agenda for menstrual hygiene management for schoolgirls. *American Journal of Public Health*, *103*(9), 1556–1559. https://doi.org/10.2105/ajph.2013.301374

T'Seole, N. P., Mindu, T., Kalinda, C., & Chimbari, M. J. (2022). Barriers and Facilitators to Water, Sanitation and Hygiene (WASH) Practices in Southern Africa: A scoping review. *PLOS ONE, 17*(8), e0271726. https://doi.org/10.1371/journal.pone.0271726

UNICEF (2020). Going Beyond Monetary Poverty: Uganda's Multidimensional Poverty Profile. https://www.unicef.org/esa/media/6146/file/UNICEF-Uganda-Multi-dimensional-child-poverty-2020.pdf

United Nations: UNDP. (2021). *Gender Inequality Index*. Human Development Reports. https://hdr.undp.org/data-center/thematic-composite-indices/gender-inequality-index#/indicies/GII

Uganda Bureau of Statistics (UBOS). (2017), The National Population and Housing Census 2014 – Area Specific Profile Series, Kampala, Uganda. https://www.ubos.org/wp-content/uploads/publications/2014CensusProfiles/IGANGA.pdf

World Bank. (2020, 24 September). *Equitable and Sustainable rural sanitation at Scale: a call to action*. World Bank. https://www.worldbank.org/en/news/feature/2019/10/07/rural-sanitation-matters

World Bank. (2023). Menstrual health and Hygiene. In *World Bank*. https://www.worldbank.org/en/topic/water/brief/menstrual-health-and-hygiene

World Bank Open Data. (n.d.). World Bank Open Data. https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=UG

World Health Organization: WHO. (2022, 17 October). *Menopause*. https://www.who.int/news-room/fact-sheets/detail/menopause

World Health Organization: WHO. (2022, 17 June). *Mental health*. https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response

Young, I. M. (2005). On female body experience : "Throwing Like a Girl" and other essays. In *Oxford University Press eBooks*. http://ci.nii.ac.jp/ncid/BA71644583

Appendix 1 : Informed consent

Universiteit Utrecht

Utrecht University,
Faculty Geosciences
International Development Studies
Eline De Becker
e.debecker@students.uu.nl

Informed Consent Form

Project:
Master thesis International Development Studies
Utrecht University

Name researcher:
Eline De Becker

Purpose of the research:
The aim of the research is to understand how women in Eastern central Uganda manage their menstrual hygiene.

Your participation:
I am collecting data through interviews for my master thesis. An audio recording will be made of the interview which will later be transcribed in written form. This data will be handled carefully and anonymously. Your name and any details that could identify you will not appear in the final report. The audio recording will be permanently deleted after the thesis is finished. The anonymized data will be stored in the Netherlands according to the Utrecht University guidelines for a 10 year period.

During the interview, you always have the option not to answer a question, to take a break or to stop. If, at any point even after the interview, you wish for your information to be deleted, this will be done immediately. If you have any complaints or questions about this study, you can always seek contact using the contact information at the top of this letter.

By signing this document you are indicating your agreement to participate in this master thesis. Even after signing, you still have the right to withdraw from participating. Thank you in advance for your cooperation!

By singing this form:

- I declare that I am informed about the aim of the research, my rights regarding participation, my privacy and how my information will be processed and saved.
- I give permission that the information I gave can be used for this research and may be published.
- I declare that I participate voluntarily in this research and that I am aware that I can withdraw from participating.

- I would like to be updated about the results of this research:
  - ☐ Yes, on the following e-mail address or telephone number: …….
  - ☐ No.

Name participant: …… Date: ……

Signature:

……..

This part to be filled by the researcher:

Name Researcher: …… Date: ……

Signature:

……..

Appendix 2 : Translated informed consent

Universiteit Utrecht

Utrecht University,
Faculty Geosciences
International Development Studies
Eline De Becker
e.debecker@students.uu.nl
Supervised by Ajay Bailey
a.bailey@uu.nl

Informed Consent Form

Project :
Master Thesis International Development Studies
Utrecht University

Name of researcher:
Eline De Becker

Omugaso gwo' kunonenkereza kuno:
Ekirubirirwa kyokunonenkereza kuno kya kutegeera butya abakyala nkani abaghala abo'mu Eastern Central Uganda yebagemaganhyamu ebyobuyondho nga bali mu nsonga dhaibwe edhekikyaala.

Engeri yolikwetaba mu kunonenkereza kuno:
Ndikugha amairuule nkani data nga mbita mu kubuuza ebibuuzo kulwa Master thesis yange. Amaloboozi agagemeibwa mu interview luvainuma gaidha kuteebwa mu bughandiike nkanhi transcribing.
Obubaka buno bwidha gemebwa nha buvunhanhizibwa era ebimugemaku tibyakusasanizibwa eri bantu bandi.

Amainha go ne'bikugemaku ebiyinza okusiiga ekifanani kyo tibiidha kuba mu aripoota enkulu . Amaloboozi agagemeibwa gakusangulwa oluvainhuma lwa alipoota nga eweire .Obubaka obukunghanhiziibwa bwidha kuteerekebwa mwighanga lya Netherlands okusinziira ku bukwakulizo obugobererwa Utrecht University okumala eibanga lya myaka ekumi.
Nga tuli kubuuza , olina eidembe obutairamu kibuuzo kikubuziibwa,okuwumulamu oba okusirika era nibwetuba tumaze okubuuza osobola okusaba ebikugemaku twabisasaamu ,kiidha kolebwa ghenhe agho.Bwoba olina okwemulugunha oba ekibuuzo ku nsoma eno gyetuliku ,osobola okwebuuza ,osobola okubita ku ndagiriiro eri wangulu webankaluwa eno.

Mukuta omukono gwo ku kighandiiko kino kiraga nti oyikiiriza okwenigira mu kikwekweto kino enkya Master Thesis .Nibwoba omaze okutaaku omukono ,okalinha olukusa okuva mu kikwekweeto kino .Tukwebaza olwo'kwenigira mu nsonga eno.

Mu ku saininga ekighandiiko kino:

Nangirira nti ntegezeibwa ku kirubiririrwa ekyo'kunonenkereza kuno, eidembe lyange mu kwenigira mu kikwekweto kino, ensonga edhekyama yendi ne'ngeri obubaka buno yebunakozesebwamu.

Mpa olukusa nti obubaka bwempaireyo busobola okukozesabwa ,okuterekebwa era no'kufulumizibwa kulwe kirubirirwa kyo'kunonenkereza kuno.
Nangirira nti nafunye olukusa okubuuza ebibuuzo kubigemagana ku kunonenkereza kuno nga nkaali kutandiika era ebibuuzo byange byona byona mbizeemu.

Nandyenze okufunha kubinaava mu kunonenkereza:

- **Yee**, nga obita ku mukutu guno ……..…...
- **Mbee**…….

Eriina……

Enhaku edhomwezi…….

Omukono…….…….

Ekifo kino kyooyo ali kunonenkereza.

Eriina lye……

Enhaku edhomwezi…….…….

Omukono gwe…….

Appendix 3: Information letter

Project title
The menstruation paradox: the menstrual hygiene management of women living in rural areas

Primary researcher: Eline De Becker
E.debecker@students.uu.nl

Supervisor: Ajay Bailey
A.bailey@uu.nl

Your invitation:

Dear Madam,

Introduction

You are being invited to take part in the above research study about menstrual hygiene management because you are a woman living in a village in the Iganga district. The research is conducted by Eline De Becker, an IDS master student from the Utrecht University. Before you make any decisions it is important to understand what the research will involve. Please take time to read the following information and contact me if anything is not clear or you would like more information.

Purpose

The purpose of this research is to explore how women in these districts handle and manage their menstruation and hygiene. The research will focus on hygiene practices, what facilities are available and what the social norms are on menstruation. This research is part of a master thesis and therefore the data will be collected by a student.

Study Procedures

If you take part in this research, you will be asked to be a one-time participant in an interview. The interview will take 20 to 30 minutes of your time. In this interview the researcher will ask you multiple questions about your experiences with menstruation and your menstrual and personal hygiene. More specifically the questions will be about what products you use, how you clean yourself, your mental and physical health and what facilities are available to you. The interviews will be recorded on a digital device.

Participation

The interview is entirely voluntary and you have every right to decline or withdraw from participating in this research, even after the interview. When you decide to participate in an interview, you always have the option not to answer a question, to take a break or to stop. The information gathered from the interview will be processed anonymously. This means that all names and personal details will be removed. If, at any point, you wish for all your information to be deleted, this will be done immediately. The researcher will not talk with anybody about what is said in each interview. The recording will be deleted after the research is finished, which will be after the first of July 2024. The anonymized data will be stored for at least 10

years in the Netherlands at the Utrecht University, following the universities guidelines for privacy.

Benefits

As a participant in this research, there may be no direct benefit for you; however, the results from this research will shared with the support organization and foundation, which may benefit you and other people in the future.

Risks

Keep in mind that if this is an sensitive topic for you some questions might be hard to answer. You can decline from answering these questions if you wish. The researcher will protect your information and will not collect any personal information and personal details that can identify you, to avoid potential risks and ensure confidentiality.

Costs

There will be no costs for you to participate in this research. There will also be no financial compensation from the researcher to you for participating in this research.

Thank you for reading this letter. For further information please email to e.debecker@student.uu.nl or call + 256 740 105 337

If you have any complaints about the research you will be able to contact a independent person that is not involved in the research or with the researcher. You can contact the secretary of the Ethical Review Board of the faculty Bèta-Geosciences of the Utrecht University: etc-beta-geo@uu.nl

If you have any concerns or questions about your privacy, how the data will be stored and the Utrecht University data storing guidelines you are able to contact this email: privacy-geo@uu.nl

Appendix 4: Interview guide

The questions have yet to be further defined when arrived in the field

Demographic factors:

- What is your age?
- In which village do you live?
- What is your level of education?
- What do you do in your daily life?

Menstrual Hygiene Management:

- What products do you use during your menstruation?
- How do you access these products? (make, buy wash)
- What is your preference (Cloths, sanitary pads, reusable pads) and why?
- How does money play a role in which materials/products you use?
- Would you say money is a problem for you?
- Is buying pads a priority to you?

- How do you access water? Is it easy/difficult? Do you have enough water to properly clean yourself and your products during menstruation?
- What do you use to clean yourself during menstruation? (Soap and water)
- When and where do you clean and change during menstruation? (Is it safe and clean?)
- What sanitation facilities are available for you?
- Does menstruation put a heavier burden on getting water? In what ways?

Social norms on menstruation:

- What is your opinion about menstruation?
- What do you think is the overall opinion of women in your village about menstruation? What do you think is the overall opinion of men in your village about menstruation?
- Some people say that they think menstruation is dirty, what do you think about that statement?
- Do you believe menstruation should be handled in secret? And why (not)?

- If you talk about the topic of menstruation to who do you talk about menstruation? What do you talk about to this person?
- How does talking about menstruation make you feel?
- Do you feel any kind of pressure handling your hygiene during menstruation? What is this pressure and from whom do you feel this pressure? How does it make you feel?
- Do you ever feel ashamed, or embarrassed during menstruation? When do you feel like this? Why do you feel like this?
- Do you feel stress handling menstruation?
- What would you say that the biggest challenges for women handling menstruation in this area are?

Physical Health:

- How is your overall physical health?
- Have you ever experienced health complaints due to certain hygiene practice? What was the complaint? Due to what practice?
- Have you been diagnosed with a urinary tract infection or a bacterial vaginosis? How did you contract the infection? When did it happen? Were you treated?

Experiences in the workplace: (if applicable)

- Does your workplace have access to soap and water?
- Does your workplace have access to sanitation facilities where you can change and wash yourself during menstruation?
- Does your workplace have access to menstrual products?
- How does it affect your work when you have your menstrual period?

Appendix 5: Code tree

IDS Thesis

Name	Description
Affects on health	
Family planning	
Challenges from family planning	
Myths about Family	
Stress due to Family	
Mental health	
Feelings of embarrassment and disgust	
Doesn't feel embarrassed because it is a women's thing	
Feelings of stress and anxiety	
Missing menstruation	
No stress because it is a women's thing	
Low(er) confidence	
Physical health	
Infections	
Overbleeding	
Pain and cramps	
Having to bear the pain	
Limited by pain	
Uses medication for pain	
Problems after menopause	
Sores, wounds and burns	

Name	Description
Burns during removing	
Wounds from overstaying	
Overstaying with pads or cloths	
Treatment	
Availability of menstrual amenities	
Economical environment	
Access to medication	
Paying for tabs when no supply	
Access to products	
Pads are cheaper than R pads	
Pads are expensive	
Resorting to boyfriend	
Physical environment	
Access to sanitation facilities	
Access to water	
Getting more water during M is a burden	
Getting water is problem	
Water is far	
Social environment	
Bathroom is not clean	
Privacy and safety to change	
Case story NGO	
Challenges of the community	
Access to pads	
Gov hospitals don't provide pads	

Name	Description
Restricted movements	
Education on menstruation	
Village medical centers	
Ignorance about menstruation	
Don't know where to get medical help	
Drug shops giving medical advice	
Myths about pads	
Daily activities	
Menstrual hygiene management	
Drying of products	
Drying inside	
Drying outside	
How dispose products	
Burn pads after disposing	
How washing themselves	
Opinions on menstrual products	
Opinions on cloths	
Blood goes through cloths	
Cloths can fall	
Washing is a burden	
Opinions on R pads	
Doesn't want to wash blood	
Reusable pads are hard to find	
Opinions on s pads	
Poor hygiene	

Name	Description
Poor hygiene practices	
Prepares for M	
Products used	
Use cloths because pads are expensive	
Use of sanitary pads	
Used banana fibre	
Uses nickers	
Uses reusable pads	
Social norms on menstruation	
Cultural meaning of menstruation	
Blood is dirty	
Dirty things coming out of the body	
It is something created for women	
Not dirty depends on own hygiene	
Language on menstruation	
Codes to describe M	
Menstruation is a secret	
Afraid of doctors sharing	
Afraid of gossiping	
It is embarrassing to share about M	
Secret between genders	
Shares about advices	
Shares about the problems	
Shares with daughters	
Shares with husband	

Name	Description
Shy to tell doctor	
Rules on how to carry and dispose products	
Rules on what products to use	