

MENSTRUAL CUP INTERVENTIONS FOLLOW UP STUDY, UGANDA



March 2019







ABOUT WOMENA:

WoMena is an NGO working with implementation of innovative, evidence-based reproductive health solutions in low-resource settings. We develop and implement strategic plans for increasing the use of selected solutions in partnership with local and international implementing partners and technical experts (www.womena.dk).

WoMena

Olufsvej 30 2100 Copenhagen Denmark info@womena.dk +45 22619843

WoMena Uganda

Plot 2150 Kaduyu Close Ntinda Kigowa Zone, Kampala, Uganda P.O Box 40198 info@womena.dk +256 (0) 200 902 098

For more information, please visit: www.womena.dk.



Principle Investigators:

Dr Viola Nyakato – Mbarara University of Science and Technology, Marianne Tellier, WoMena

Research Coordinator:

Laura Hytti, WoMena

Senior Research Officer:

Simona Simkute, WoMena

ACKNOWLEDGEMENTS

This report was prepared by WoMena Uganda, with support from the Knowledge Management team and is property of WoMena. The study was funded by WoMena members via membership donations as well as a contribution towards transport costs by DanChurchAid.

WoMena would like to thank the Ministry of Health, Uganda and DanChurchAid for their support to the study, Transcultural Psychosocial Organisation in Katawki, Christine Lagoon for Uganda Red Cross Society in Kitgum, school management and teachers at the three intervention schools in Gulu, for mobilising participants and facilitating the study and our excellent volunteer research assistants in Kitgum, Gulu and Katakwi. WoMena would also like to thank the countless community members who have shown their support to the study and above all the girls, women and parents who gave up their time to share their experiences and thoughts with us.

Photos credits: WoMena, Tom Saater

Recommended citation: Hytti L. Simkute S and Jahangir, A. 2019. "Menstrual Cup Interventions Follow-

up Study Report, Uganda." WoMena Uganda



EXECUTIVE SUMMARY	7
INTRODUCTION AND BACKGROUND	8
STUDY JUSTIFICATION AND OBJECTIVES	12
RESEARCH METHODOLOGY AND DATA COLLECTION	13
Participant Selection	13
Consent Process	
Data collection	14
Data analysis	14
Ethical Approval	15
Limitation of Study	
FINDINGS	16
1. Overview of participant characteristics	17
2. Continued use of the menstrual cup	
3. Patterns of adaption to menstrual cup use	17
4. Summary of MHM Facilities Assessment	21
5. Risks, Secret Routines and Missing Connectors	23
Theme One: The Notion of Risk	
Theme Two: Secret Routines	
Theme three: Missing Connectors in the Support Network	
SUMMARY OF FINDINGS	31
RECCOMENDATIONS	32
REFERENCES	35



Photo credit Tom Saater

LIST OF FI	GURES	
Figure 1: R	Puby Cup and storage bag, Ruby Life Ltd	9
_	Map of study sites – Kitgum, Gulu, Katakwi	
	Data collection process	
Figure 4: I	mages from data collection process	15
Figure 5 : 1	Menstrual Cup use based on year of receipt	17
	Adaptation Process	
Figure 7: L	Jse of other MHM methods	19
Figure 8: E	Benefits and challenges of using the menstrual cup	19
Figure 9: F	Recommended hygiene practices of continued MC users	20
	Latrines in Gulu and Katakwi	
Figure 11:	Themes of Long-term use of menstrual cups	23
Figure 12:	Key learning points for implementation	33
LIST OF TA	ABLES	
Table 1: O	verview of interventions followed up in this study	11
Table 2: D	ata collection modalities	13
Table 3: P	articipant Characteristics	17
ACRONY	MS Control of the con	
DCA	DanChurchAid	
FGD	Focus group discussion	
GEM	Girls Empowerment Movement	
IITR	Institute of Interdisciplinary Training & Research	

MC Menstrual Cup

MHM Menstrual Health Management

MOH Ministry of Health

MUST Mbarara University of Science and Technology

National Drug Authority NDA Randomised Control Trial **RCT** Research Ethics Committee REC

RH GHU Rigshospitalet Global Health Unit

Serious Adverse Event SAE **SWT** Senior Women Teacher

TPO Transcultural Psychosocial Organisation

TSS Toxic Shock Syndrome

UNCST Uganda National Council of Science and Technology

Uganda Red Cross Society URCS

UGX Ugandan Shilling USD **United States Dollars** UTIs **Urinary Tract Infections** Water, Sanitation and Hygiene **WASH**

EXECUTIVE SUMMARY

Globally many women and girls do not have access to appropriate Menstrual Health Management (MHM) methods that are effective, comfortable, convenient, affordable and safe to use and dispose of. Inadequate facilities, social support and knowledge of menstruation combined with prevalent taboos and stigma related to menstruation, the lack of appropriate MHM methods can impact the physical, social and mental well-being of women and girls. The menstrual cup is increasingly considered a sustainable alternative to improve MHM for women and girls - a single product that can last for up to ten years. However, to date, only short-term studies on menstrual cup acceptance have been conducted, and there is limited evidence on long-term user experiences. The full spectrum of individual and community benefits and challenges of using menstrual cups, including health and social aspects, have yet to be fully described.

This study aimed to capture the long-term experiences of girls and women from three menstrual cup interventions conducted by WoMena in the rural Kitgum, Gulu and Katakwi districts in Uganda between 2012 and 2015. The study employed a mixed methods approach using questionnaires, semi-structured interviews, focus group discussions and observations with girls and women who had received menstrual cups as part of those three previous interventions as well as their relatives and teachers. The study was conducted in collaboration with Mbarara University of Science and Technology's Institute of Interdisciplinary Training & Research.

Results

Results from the study suggest that menstrual cups, for those who continued to use them, were a comfortable and convenient MHM method that supported better body literacy and allowed girls and women to carry out their daily activities without restrictions during their periods. Out of the 117 women and girls surveyed, 82.1% still used the menstrual cup to manage their menstruation. All interviewed menstrual cup recipients reported following the recommended safe use and care practices (hand washing before insertion and removal, disinfecting the cup between periods and safe storage of the cup).

A qualitative analysis of the data showed that adapting to menstrual cup use was considered risky, but also revealed that girls and women made active choices, ultimately believing that the benefits of menstrual cup use outweighed the risks. Over time, menstrual cup users developed routines of use, allowing them to take control of their time and activities as they no longer needed to worry about leakages and knew when, where and how to empty their menstrual cup. Menstrual cup use also allowed women to keep their "menstrual status" private from others. Knowledge was recognized as a driver of change, and different forms of knowledge (authoritative and self-established) influenced the effectiveness of intervention, reduced the notion of risk and gave menstrual cup users confidence in using the cup. Findings also emphasised the need to maintain access to knowledge post-intervention.

Recommendations

To ensure uptake and continued menstrual cup use, impactful training is essential. Identifying the right support persons and building their capacity by providing them with a menstrual cup to try themselves can also help build a supportive environment. However, as support networks can weaken overtime, alternative modes of support should also be considered. When employing interventions through schools, consideration should be given to support provided by family members and friends outside the school context. Most importantly, as girls and women learn to value their menstrual cup as an asset, they develop their own methods to cope with contextual constraints, for example adapting new ways of disinfecting their cups using available resources. Consulting girls and women in the initial stages of an intervention and brainstorming available resources rather than concentrating solely on barriers or constraints could allow for better implementation and improve product uptake.

INTRODUCTION AND BACKGROUND

In Sub-Saharan Africa, many women and girls do not have access to appropriate Menstrual Health Management (MHM) methods, i.e. methods that are effective, comfortable, convenient, affordable and safe to use and dispose of. They, therefore, resort to using other methods, for example strips of cloth, tissue paper, school exercise books, pieces of sponge torn from mattresses, bark cloth and others (Acharya et al., 2006; APHRC, 2010; Khanna et al., 2005; Mason et al., 2013; Tellier et al., 2012).

The lack of adequate mestrual health knowledge and appropriate MHM methods may impact the physical, social and mental well-being of women and girls. Inappropriate MHM has also been associated with school absence and exclusion from or reduced participation in income-generation and social activities (APHRC, 2010 and Hennegan & Montgomery, 2016). In Uganda, school absenteeism and dropout rates are high for female adolescents after reaching puberty for reasons often linked to their reproductive health and menstruation (Miiro et al., 2018).

The menstrual cup is increasingly considered to be a sustainable alternative to improve MHM for women and girls, providing a single product that can last for up to ten years. However, to date, only short-term studies on menstrual cup acceptance have been conducted, and there is limited evidence on long-term user experiences. The full spectrum of individual and community benefits and challenges of using menstrual cups, including health and social aspects, have yet to be fully described. WoMena first introduced menstrual cups in Uganda in 2012 and has since supported a number of partners in implementing and evaluating menstrual cup projects.

The mixed methods study presented here aimed to follow up on the long-term experiences of girls and women from three menstrual cup interventions and studies conducted by WoMena in rural Kitgum, Gulu and Katakwi districts, Uganda, from 2012 to 2015. The study provides insight into menstrual cup users' daily routines, the perceived impact of menstrual cup use by users and their communities, and critically assesses these MHM interventions.



THE MENSTRUAL CUP

The menstrual cup is a flexible, bell-shaped cup worn inside the vagina during menstruation. Unlike pads and tampons which absorb menstrual fluids, the menstrual cup collects the menstrual blood, is emptied and then reinserted. The menstrual cup can collect between 15 and 45 ml of menstrual fluid, depending on brand and cup size (2-3 times more than absorbed by disposable pads and tampons) and has less reported leakage than other methods if used correctly. Menstrual cups are most often made of medical-grade silicone and can be washed and reused for up to ten years dependent on the brand. Manufacturers recommend that the menstrual cup is boiled (disinfected) between menstrual cycles and inserted correctly for optimal function. The menstrual cup is an effective, reusable, and sustainable environmentally alternative to disposable sanitary products (Cheng et al., 1995).

There are on-going menstrual cup studies but evidence on the potential use, acceptability and safety of menstrual cups in low-income contexts is limited. Systematic reviews on assosiations between menstrual health products and urogenital infections in general have not made robust conclusions (WoMena, 2018a). In a review of 14 articles, Sumpter et al. (2013), found seven reporting an



Figure 1: Ruby Cup and storage bag, Ruby Life Ltd

association between menstrual hygiene and urogenital infections, but the association was weak with varying methodologies.

There are two studies, both from Kenya, that evaluate the use of menstrual cups and urogenital risk factors or infection. In a cluster randomised pilot study, Philips-Howard et. al (2016) found that bacterial vaginosis was less common (12.9%) among girls using cups compared to those using disposable pads (20.3%). An observational study nested in a randomised controlled feasibility study involving 604 school girls found no significant difference in levels of S. aureus or Toxic Shock Syndrome (TSS) toxin-1 in girls provided either menstrual cups, disposable pads or 'usual practice' (Juma et al 2017).









Menstrual Cup Basics

- Made of medical grade silicone (a few brands made of rubber or Thermoplastic Elastomer)
- Worn internally to collect menstrual fluids
- Hundreds of brands sold globally
- Can last for up to 10 years
- Come in various sizes, most brands have a small and regular size
- Needs to be disinfected between menstrual cycles (by boiling or alternative)
- Potentially uses less water and soap than other menstrual health products
- Hand washing is very important as the menstrual cup is vaginally inserted
- Can be worn without underwear
- Often requires some practice before girls and women become comfortable using the menstrual cup
- May interact with the vaginal corona (coloquially referred to as the hymen)

Documented cases of medical complications arising from the use of menstrual cups are few (Day, 2012, Mitchell et al., 2015) and the associations have not been systematically evaluated. TSS (commonly assiociated to use of high absorbancy tampons) in menstrual cup users, has not been systematically studied. There has been only one case of TSS associated with MC use, in published peer-reviewed literature (Mitchell et al., 2015). Although, there are studies examining the theoritical possibility of increased risk fo TSS when using a menstrual cups (Nonfoux, et al. 2018, Mitchell 2015), we could find no evidence that menstrual cups actually have caused TSS, and only limited evidence of increased risk factors such as growth of S. aureus or increase in TSS toxins (WoMena, 2018b).

Other menstrual cup acceptability studies conducted in Kenya (Mason et al., 2015), South Africa (Beksinska et al., 2015), and Uganda (Hyttel et al., 2017, Tellier et al., 2012) following short-term menstrual cup user experience (between four months to one year since receipt of a menstrual cup) also found that initially, menstrual cup users experience difficulties using the cup, but gradually overcome difficulties and often prefer the menstrual cup to other available MHM methods. Users reported experiencing increased comfort and mobility, reduced fear of leakage and improved focus at school (ibid).



PREVIOUS WOMENA INTERVENTIONS

This study follows up menstrual cup recipients in interventions/studies during participating girls and women received both menstrual health education and a donated menstrual cup for personal use. WoMena first introduced menstrual cups in Uganda in 2012 in Kitgum, in collaboration with the Uganda Red Cross Society (URCS) to 31 adult women. Following the high level of acceptability among adult women in Kitgum, WoMena conducted a school-based study in Gulu among 194 schoolgirls aged 12-18. The study was conducted with ethical approval from Gulu University Research Ethics Committee and Uganda National Council for Science and Technology (UNCST). Between 2014 and 2105, in collaboration WoMena with DanChurchAid. provided implementation support Transcultural to Psychosocial Organisation (TPO) to implement a menstrual cup project in four schools in Katakwi, to 140 primary girls aged 12-18. A summary of the components of each intervention/study is included in Table 1.

The three study sites represent a mix of ethnic and religious backgrounds. Both Kitgum and Gulu districts are located in Northern Uganda in the Acholi sub-region, where the main spoken language is Luo. Katakwi is located in Eastern Uganda, in the Teso region. The main spoken language is Ateso. All study sites were originally chosen through collaboration with implementing partners, who had identified the appropriateness of an MHM intervention in those sites.

Figure 2: Map of study sites – Kitgum, Gulu, Katakwi



Project Title	Location	Duration	Participant s	Pilot Intervention	Pilot Intervention Outcomes
Assessing Acceptability and Hygienic Safety of Menstrual Cups for Vulnerable Young Women in Uganda Red Cross Society's Life Planning Skills Project. 2 (Pilot study)	Kitgum	2012 3 -5 months	31 Women aged 18-32, participants in URCS Life Planning Skills Project	First introduction of MCs in Uganda, in collaboration with URCS. Participants attended a half-day training session facilitated by WoMena, on hygienic use and cleaning of the cup, and were given a menstrual cup each. Data collection: Baseline and end line, including gynaecological check-ups, questionnaires and, semi-structured interviews.	 High acceptability (75% very good, 25% good). Generally considered more comfortable, less time consuming and more affordable than other MHM methods. No increase in the risk of RTIs or UTIs detected. Some participants found it difficult to insert and remove the cup in the beginning. Benefits reported: increased mobility and attending social gatherings, not having to worry about leakages and embarrassment.
School Girls Use of Reusable Menstrual Cups in Rural Uganda – Acceptability, Safety and School Attendance. (Research Study)	Bungatira Sub- county, Gulu	2013 6 months	194 Schoolgirls aged 12-18	Two intervention schools (104 girls) and 1 control school (90 girls). Participants in (intervention and control) schools attended a training session on puberty and MHM, girls from intervention schools received a menstrual cup and training on usage. Data collection : Baseline and end line including gynaecological checks, FGDs and in-depth interviews.	host experienced challenges inserting and removing the cup in the
Menstrual Cup Intervention (with DanChurchAid, (DCA) and TPO	Katakwi, Magoro Sub- district	Phase 1: Mar - Nov 2014 Phase 2 Mar 2015	140 schoolgirls aged 12-18	Implemented through DanChurchAid (DCA) gender-based violence-HIV/AIDS program in 4 primary schools with Girls Empowerment Movement (GEM) meetings. Activities included community sensitization meetings, distribution of menstrual cups to senior women teachers (SWT) and schoolgirls, and training of trainers (ToT). Data collection: MHM facility assessments, baseline and follow up questionnaires and routine M&E.	 Baseline results suggested that girls did not experience restrictions in mobility due to menstruation but only 22% had soap available all the time. 62% stated they missed school at some point during menstruation due to lack of MHM materials and menstrual pain. Girls reported difficulties in obtaining pots to disinfect their menstrual cups. As a result, girls were provided with sterilisation tables for 8 to 12 months of use. At follow up a majority of girls reported using MCs and school management supported the use of MCs.

STUDY JUSTIFICATION AND OBJECTIVES

Evaluations of prior WoMena interventions identified the menstrual cup as an accepted method for MHM. However, these evaluations were carried out within a relatively short period (4-5 months) after the delivery of training and provision of menstrual cups. It is important to understand long-term compliance to safe use and care guidelines and experiences regarding menstrual cup acceptability and MHM method preference, for a variety of reasons:

- Many menstrual cup recipients take several months to initially try the cup, with acceptability and use increasing with personal and peer experience. Short-term studies may underestimate uptake and user satisfaction.
- It is essential that appropriate hygiene is consistently practiced in relation to menstrual cup use, however motivation and capacity to do so may decrease in the months after intervention.
- Several challenges to menstrual cup use were identified in previous evaluations. There is a need to better understand the long-term structural and social barriers faced by girls and women when using menstrual cups to strengthen future interventions and training methods.
- Identifying factors which promote and support the use and acceptability of the menstrual cup may be particularly useful in contributing to future community mobilisation and sensitisation components of interventions.



Definitions

Long-term use:

For the purpose of this study long-term use is defined as six months and more (6 to 36 months).

Preference and acceptability: Continued use of menstrual cups, social and cultural norms and perceptions of appropriateness and perceived comfort.

Health and hygiene: Perceived health issues related to using menstrual cups and to maintaining adequate hygiene.

Empowerment: Perceived impact on social and income-generating activities and possibilities.

Impacts on family and community: Perceived impacts on and by family and community.

The overarching goal of this study was to examine the long-term perceptions, experiences and impact of introducing menstrual cups as an MHM method among girls, women and family and community members in Kitgum, Gulu and Katakwi, Uganda.

The specific objectives of the study are to:

- Understand whether participants continue to use their menstrual cups and comply with the safe use and care guidelines after the initial intervention
- Identify the benefits and challenges experienced by girls, women and their families/communities due to long-term use of menstrual cups
- Identify the impact of menstrual cup use on girls and women's participation in social and economic activities and/or school attendance
- Report on factors that may promote and support long-term use and acceptability on menstrual cups and formulate recommendations for future research on menstrual cups and menstrual cup interventions.

RESEARCH METHODOLOGY AND DATA COLLECTION

The study employed methodological triangulation using both qualitative and quantitative methods including questionnaires, semi-structured interviews, focus group discussions (FGDs), and MHM facilities assessments at each study site. Questionnaires were conducted with menstrual cup recipients and collected participants' experiences of use and non-use of the menstrual cup. Semi-structured interviews held with menstrual cup recipients aimed to explore subjective experiences, narratives and practices of continuing and discontinuing menstrual cup use. FGDs were used to explore perspectives from a wide range of stakeholders and observe "collective" language and attitudes towards MHM and the menstrual cup. MHM Facility Assessments: observed the appropriateness of MHM facilities

Table 2: Data collection modalities

Tool	Participants	Kitgum	Katakwi	Gulu	Total	Collection
MHM Facility Assessments	Schools/ households	6	11	6	23	Direct observations with school staff, students and MC recipients. Convenience sampling.
Questionnaires	MC recipients	12	73	32	117	Questionnaires were conducted using paper-based questionnaires by trained local research assistants in Ateso and Luo. Convenience sampling.
Semi-structured interviews	MC Recipients	7	5	11	23	Conducted by trained research assistants in Ateso and Luo. 5 interviews were conducted in English with Luo translation. Digitally recorded. Random selection of participants based on questionnaire responses.
FGDs	Mothers Fathers Teachers Community Leaders	4	5	5	14	Moderated by trained research assistants in Luo and Ateso. Digitally recorded. Participants were convenience sampled.

Participant Selection

- Participants were purposively sampled from among the girls and women who had received MHM
 education and a menstrual cup in one of the three prior interventions and were available to take part in
 data collection activities.
- Participants for semi-structured interviews were then selected based on questionnaire responses in order to interview both continued and discontinued menstrual cup users.
- Participants were asked to refer a female or male relative to take part in FGDs. This was done to ensure
 that menstrual cup recipients were comfortable with the study team discussing menstrual cup use with
 their relatives. Teachers selected for FGDs had either participated in one of the previous interventions or
 were working in one of the participating schools at the time of the data collection. Participants for
 community FGDs including community leaders (traditional, religious or political) had either been
 previously involved in one of the interventions or were involved with the communities where girls and
 women who have received menstrual cups at the time of data collection.

Consent Process

All potential participants were invited to an information session regarding the study. Information sessions were held separately for schoolgirls and parents in Katakwi and Gulu. All written information on the study and all consent documents were provided in the local language or in English when preferred by participants. Written parental consent was obtained for all participants under the age of 18. Written assent from minors was obtained at point of data collection.

Data collection

All questionnaires and interviews were conducted by young female Ugandans, speaking either Luo (Kitgum and Gulu) or Ateso (Katakwi). Five interviews were conducted by a student volunteer with the assistance of one of the research assistants for translation. FGDs with men were conducted by male research assistants. All research assistants were trained in use of the study tools and data quality checks were carried out throughout the data collection process. The study tools were all piloted. Data was collected in four stages and tools were pilot tested separately in each setting due to differences in language and context. During data collection in Katakwi, issues with data quality were identified and another data collection visit to the site was arranged to recollect the data.

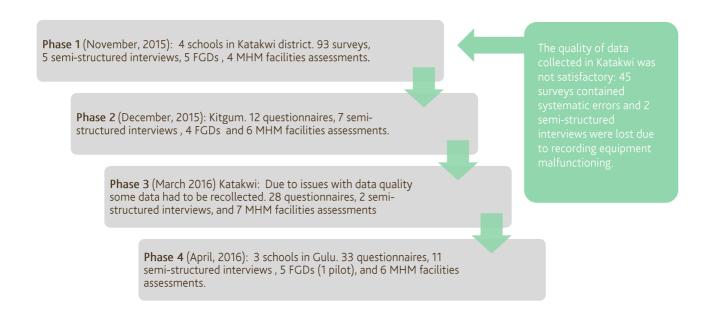


Figure 3: Data collection process

Participants who during the questionnaires or semi-structured interviews reported having symptoms related to reproductive infections were referred for a medical check-up. Two participants were referred during the study. Neither participant was diagnosed with any medical issues related to the use of menstrual cups.

Data analysis

- The total analysed data set included 117 questionnaires, 23 MHM facilities assessments, 14 FGDs, and 23 semi-structured interviews. One questionnaire was excluded from the final data set since the participant lost the cup soon after receiving it.
- Questionnaire data was manually entered into EpiData V3.1, using double entry and analysed in SPSS
 19. To meet the objectives of the study, the statistical methods used for data analysis were descriptive,
 reflecting the frequency distributions of the variables analysed. Missing values accounted for 0.8% of
 the quantitative data.
- Data from the MHM facility assessments was manually entered into an Excel database. The results of were analysed in relation to the qualitative data.
- The semi-structured interviews and FGDs were transcribed from digital recordings from Ateso and Luo into English. All transcriptions were double checked and verified. Thematic analysis as described by Braun and Clark (2006) was utilised for the analysis. QDA Miner Lite v.2.0.1. was used to manage qualitative codes. Qualitative quotes presented in this report use fictional names for participants.

Ethical Approval

Ethical approval for this study was obtained from the Mbarara University of Science and Technology Research Ethics Committee (Ref: 01/08-15) and the Uganda National Council of Science and Technology (UNCST) (Ref: HS 1929).

LIMITATIONS OF THE STUDY

As a long-term follow up study, ability to trace participants of previous interventions was challenging. This was further exasperated by the limited funding and resources available for the study leading to two main limitations:

- 1. Limited quantitative sample size and sampling bias: Due to loss to follow-up and lack of resources to follow-up participants who had left the intervention sites, the quantitative sample was smaller than planned. The sample also consists largely of school girls from Katakwi, where the most recent intervention took place as most school girls were still in the same schools. In Gulu, only a handful of girls were traced, it is likely that those girls who have ceased to use their menstrual cups chose not to take part in the research activities. This is supported by information from qualitative interviews.
- 2. **Data quality issues**: Due to quality issues at one of the research sites, several questionnaires had to be recollected. However, upon return to the study site, a new fee had been introduced in one of the schools resulting in a number of the originally interviewed girls dropping out. Due to resource constraints it was not possible to trace all the girls, leading to a further reduction on sample size.



Figure 4: Images from data collection process

- 1. Conducting FGD in Gulu
- 2. Research Assistant Eunice doing data quality checks
- 3. Research assistant training
- 4. Male FGD in Kitgum



1. Overview of participant characteristics

Out of 117 questionnaire respondents 10.3% were from Kitgum, 27.3% from Gulu and 62.4% from Katakwi.

83.1% of participants were between the ages of 13 and 18, 14.4% were above the age of 18, with a mean age of 18. Approximately 99% of respondents were Christian and 1% Muslim. 15.4% of participants had children and 52.1% of participants were currently employed.

Approximately 49% of participants had completed some primary education, 23% had completed primary school and 17% had completed some secondary school. No participants had finished secondary school.

2. Continued use of the menstrual cup

Out of 117 respondents, 82.1% were considered continued cup users (participants who used the menstrual cup during their last period or stated that still use the menstrual cup). 79.5% of the continued cup users reported using the menstrual cup during their last period and 21.2% of participants stated that they used the menstrual cup as their only MHM method.

In total, 17.9% of the respondents were considered discontinued menstrual cup users (participants who indicated that they did not have their menstrual cup anymore or stated they no longer used the menstrual cup). Of the discontinued users, 10 of them stated that they did not have their menstrual cup anymore, 4 of whom reported they would have liked to receive a new cup if it was available. Reasons given for discontinued use were misplacing or losing the cup, dropping it in mud, the cup being eaten or taken by rats and getting damaged or burnt. Other reasons for not continuing to use the cup were difficulty in cleaning, inserting, and removing the menstrual cup, leakages and that family/friends of the participant did not like the menstrual cup. A higher percentage of participants who had received their cup in 2014 and 2015 continued to use their menstrual cups compared to those participants who received their cups in 2012 and 2013 (however no

3. Patterns of adaption to menstrual cup use

Table 3: Participant Characteristics

Characteristic	% (N)			
Age [mean ((± SD)]	17.66 (± 4.43)			
Level of education				
Some primary	49.2% (58)			
Completed primary	22.9% (27)			
Some secondary	16.9% (20)			
Status of employment	• •			
Currently employed	52.1% (40)			
Not currently employed	39.3% (46)			
Not employed in the last	2.6% (12)			
12 months				
Employer of participant				
Family member	22.2% (26)			
Non-family member	12.8 % (15)			
Self-employed	16.2% (19)			
Marital Status				
Never married/never	88% (103)			
lived together				
Married or living	7.7% (9)			
together				
Participant has children				
Yes	15.4% (18)			
No	84.6% (99)			
Religion				
Christian	99.1% (116)			
Muslim	0.9% (1)			

statistically significant correlation was identified) as shown in Figure 5.

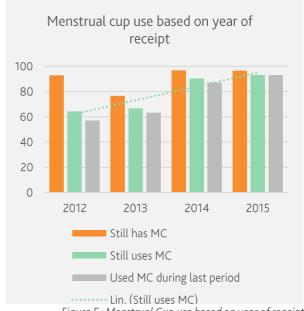


Figure 5 : Menstrual Cup use based on year of receipt

The adaptation to use of the menstrual cup was a gradual process. Overtime, girls and women's satisfaction with the product increased as they gained trust in the menstrual cup and became more confident using it. The observed adaptation period took between two to six months, with routines built over a longer period of time. The adaptation can be described in three stages:

- 1) Trying and Testing: Initial reactions to the menstrual cup and cautious testing
- 2) Transitioning to Trust:
 Transitioning from other MHM
 methods to the menstrual cup
 and gaining trust in it
- 3) Confidence: Comfortable, continuous use of the cup



Figure 6: Adaptation Process

Semi-structured interview respondents stated that in the beginning, they experienced difficulties inserting or removing the cup, combined with some pain or physical discomfort. Almost all girls from Katakwi and Gulu stated that they experienced pain inserting and/or removing the cup when they first tried it. They reported varying degrees of pain from mild to severe. Some noted that this pain lasted only one day, whilst others felt discomfort for a full period. For the interviewees who discontinued using the cup the two main reasons were that they lost it or something else happened to the cup and that they felt pain.

There were different reasons for continuing to use the cup despite initially experiencing pain such as necessity (nothing else to use or lack of financial resources to purchase other MHM products) or perceived benefits of using the cup. The two factors that seemed to be most influential were the notion of individual agency and attitude. Interviewed girls and women expressed setting their minds to using the cup or persisting despite challenges. The quantitative data also shows that 82.3% of all questionnaire respondents stated having no experience of physical discomfort using the menstrual cup at the time of data collection. The data suggests that girls and women who tried the cup several times, were more likely to continue using the menstrual cup. Of the participants who tried using the cup several times, 93.5% continued using the cup.









"My first month of menstruation to use the cup was painful – those were the three days...The next month I didn't feel anything...I started feeling the pain the first time I inserted. But the second time, the pain was now decreasing. I was now not feeling it."

Faith, 16, semi-structured interview, Gulu

"When it was first given, I first feared using it. The first month I missed (using) it, I went for these other pads... The second month, I say I will try this cup today, because there was no money. I started inserting the cup, I found that when putting it in, it pains, at the outer entrance.... I got up to remove the cup, I go and bath and try the cup again because pad was not there, money also was not there, I feared using pieces of cloth. I stayed. Then came a time when I bought a pad. I found that using the pad was hard, because you need to bathe frequently. I put back the cup. When I got used (to it), I continued with it, and I did not waste money on pads then."

Mercy, 17, semi-structured interview, Gulu

In the second stage of the adaptation process, transitioning to trust, inexperienced users used the cup interchangeably with other MHM products. In qualitative interviews, participants described feeling the need to give their bodies a "rest" by using other MHM methods (mainly disposable pads). During this stage, the users reported checking their menstrual cups often, emptying them frequently and not yet feeling confident with the cup whilst moving.

Once users gained trust and confidence in using the cup, they reported using the menstrual cup as their main MHM method and valued it as an asset. However, almost 70% of questionnaire respondents who continued using their cups still reported sometimes using disposable pads alongside the cup at the time of data collection. For example, two of the interviewees stopped using their menstrual cup when they received disposable pads from their school and other NGOs.

Use of other MHM methods (with or without MC)

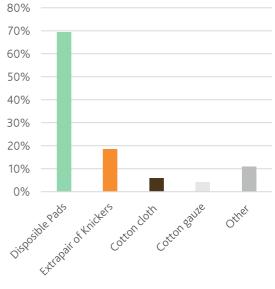
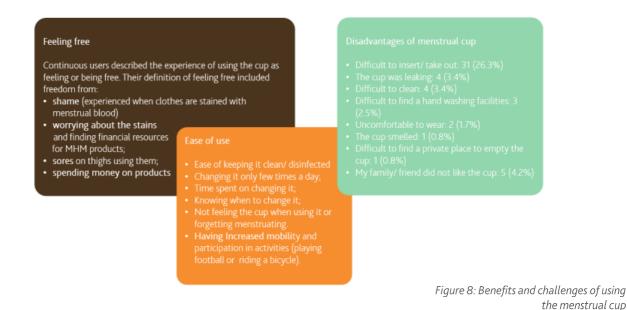


Figure 7: Use of other MHM methods

Benefits and challenges of menstrual cup use

When asked about the disadvantages of using the menstrual cup, 70.3% of questionnaire respondents reported no challenges and stated that they "just like using the menstrual cup". The most common challenge reported by participants was difficulty inserting and/or removing the cup (26.3%). Other challenges were that family or friends not like the cup (4.2%), leaking (3.4%), challenges in keeping the cup clean (3.4%) and limited access to facilities (2.5%). The main benefits reported by respondents were saving money (76.3%), avoiding leakages (62.7%), being able to do more things (51.7%), comfort (45.8%) and that it is reusable (22%). The quantitative analysis found no evidence that discontinued use of the menstrual cup was related to dislike nor other complaints about the cup. There was a positive relationship between continued menstrual cup use and being able to do more things (p=0.004) and saving money (p=0.02).





"I can run very well without any problem, I ride bicycle without any problem, I sit well on the motor cycle and I feel free."

Sharon, 21, semi-structured interview, Kitgum

"I love the cup, cause when I'm wearing it, I feel free. I don't have to, like, bother myself that I'm going to buy maybe pads this has saved me money that I used to spend monthly"

Angel, 14, semi-structured interview, Gulu

"The way I started feeling the comfort (was seeing) how you are using it and the benefit you get out of it, you don't waste resources for long time. And when I have it, I used it and keep it the way it is supposed to be kept. That's why I feel using it is easy".

Peace, 38, semi-structured interview, Kitgum

Adherence to hygiene guidelines

Describing their routines for maintaining the menstrual cup, semi-structured interview respondents provided detailed accounts of how they followed the instructions received during the training on menstrual cup use. The interviewees remembered training details, regardless of the duration of time since the training was delivered. All interviewed menstrual cup recipients narrated complying with the hygiene guidelines for using the cup such as hand washing, cleaning and disinfecting the cup.

96.60% 84 60% 82.60% 78% 29.90% 1.75% Wash hands with Rinse with water Either rinse or wipe Boil cup just before Store MC in cotton Boil cup soap before before reinserting with toilet paper immediately after periods bag empyting the MC the MC before reinserting periods

Reccomended Hygiene Practices of Continued MC users

Figure 9: Recommended hygiene practices of continued MC users

The qualitative data collected in interviews and FGDs showed that most menstrual cup users and/or their family members considered boiling the menstrual cup in a saucepan used for cooking inappropriate. Where cup users could not acquire a separate saucepan for disinfecting the cup for five minutes in between periods, many reported pouring boiling water over the menstrual cup. They would place the cup in a plastic bucket or other container, pour boiling water over it, and keep the menstrual cup in the water for a few minutes and repeat three to five times. Menstrual cup users also preferred to disinfect the cup in privacy without others seeing, which was not always possible. In Katakwi girls reported difficulties acquiring a pot to disinfect the cup in and were provided with sterilization tablets as part of the intervention. Although the interviewed girls had used the tablets provided, they also reported disinfecting the cup by boiling or pouring boiling water on the cup.

4. Summary of MHM Facilities Assessment

MHM facility assessments were carried out at each study site to better understand the structural opportunities and constraints to comfortably and safely using the menstrual cup. In total 23 MHM facility assessments were carried out.

School environments in Gulu and Katakwi

- Latrine to pupil ratio: The latrine to female pupil ratio ranged from 50 to 216 per stall at the time of data collection. According to teachers, the ratio of latrine stalls varied throughout the year due to fluctuation in the number of students and disrepair of latrines. All facilities were below the National WASH standard in Uganda according to which the acceptable ratio for toilets is 40 pupils per toilet (Ministry of Water and Environment, 2016). The recommended ratio for schools according to UNICEF is 25 girls or female staff per toilet (UNICEF, 2012).
- Lighting and privacy: All of the toilets had natural light during the day, however on cloudy days, it was difficult to see in the stalls. In a majority of assessed latrines, the door could be closed, and the user could not be seen from outside. Apart from broken doors in one school in Katakwi and another in Gulu, the toilets could be locked and provided users with some privacy. All toilets were gender segregated and there were separate toilets for the teachers. However, due to the insufficient number of toilets, boys and the girls sometimes used the same latrine blocks and teachers were reported to use the pupils' toilets. Community members also used the latrines located in the school compound.
- Emptying and reinserting the menstrual cup at school: Although a majority of girls stated needing approximately five minutes to empty and reinsert their menstrual cup at school, some needed up to 20 minutes. The high ratio of girls per toilet created queues and made it difficult for girls to empty their menstrual cups during the available breaks. Queues were reported to be the longest during the lunch break. In semi-structured interviews, some girls stated that they preferred not to empty their cups at the busiest time and often waited until other pupils were not using the latrines. Girls often went to the latrine with a friend or in groups to ensure privacy. In one of the schools in Gulu, the Senior woman teacher (SWT) designated a latrine specifically for the menstrual cup recipients. Seasons also influenced usability of latrines, for example in one Katakwi school the latrines often flooded during rainy season and faeces from the latrines came up to the surface. Girls would often go to the bush, dig a hole or use a bathroom to dispose of their menstrual waste.





Figure 10: Latrines in Gulu and Katakwi

- Availability of toilet paper and soap: Toilet paper was not regularly provided for the pupils inside the
 latrines and during data collection, toilet paper was only observed in one school, outside the latrine.
 Some pupils reported using paper from their notebooks instead. In two schools in Gulu, soap was
 available at the time of the assessment and was regularly refilled. No soap was available in the Katakwi
 schools.
- Water availability: Water was not available inside any of the observed latrine blocks. In some schools, water tanks were located a few meters from the latrines, whilst in others, the distance from the latrine to the closest water source was 20-30 meters. Although water tanks were present, they were not always functional. In Katakwi, at the time of the assessment, there was no water in the tanks and in one school in Katakwi, the water tank pipe connecting the rain water and the tank was missing. Washrooms were located next to the latrines in only one school in Gulu. None of the schools provided girls with the access to facilities in which they could disinfect the menstrual cup.



"When they gave us the cup at school, the SWT decided that they should leave for us one door for the latrine. For those ones, who are using the cup and they want maybe to go and change or clean themselves, so they could... She had the key with her. So, whenever you want to use the latrine you go and get the key from her, then you go and use it... The teacher also made me believe in myself for using the cup, because she made us also feel special because these other toilets, they are very dirty but for ours was left very clean and we could feel special."

Faith, 16, semi-structured interview, Gulu

- Cleanliness: The evaluation of general hygiene standard in the schools varied from poor to clean. The schools evaluated as having poor hygiene standard also had the highest ratio of pupils per latrine and were used by community members on a regular basis. All schools reported cleaning the latrines daily. Pupils contributed to maintenance and cleaning of latrines. In one school in Gulu, students organised meetings to discuss and provide feedback about the cleanliness of the latrines to school management. This school had the best conditions in terms of MHM facilities among all assessed schools.
- Changing rooms: Teachers expressed concern about the lack of changing rooms in schools in both Gulu
 and Katakwi. Only one of the four schools in Katakwi has a changing room for girls which they could use
 in case of menstrual emergency. Often the girls would use the private toilet of their SWT. One school in
 Gulu had a changing room for girls and the rest had plans to construct changing rooms in the future.

Household Facilities - Kitgum

In Kitgum, MHM facility assessments were carried out in participants homes. The most common type of toilet in homes was the pit-latrine, usually with one stall for five to seven people. Only one of the assessed latrines was shared by community members. Lighting in the latrines was sufficient during the day only. All of the assessed latrines could be locked from inside. Soap and toilet paper were usually kept inside the house and carried to the latrine. Water for hand washing was available outside the latrines in a jerrycan. The main water source for the households assessed were boreholes and taps located from 20m to 1 km away. Rain and river water were used as alternative sources of water. In five of the six assessed households, women had access to boiling water. For menstrual emergencies, bathing shelters and private rooms were used as an alternative for changing the cup.

5. Risks, Secret Routines and Missing Connectors

A thematic analysis of semi-structured interviews and FGDs identified three overarching themes in relation to adaption of menstrual cups and their long-term use: 1) the notion of risk; 2) secret routines; and 3) missing connectors in the support network.



Figure 11: Themes of Long-term use of menstrual cups

The first theme discusses the prevalence of risks surrounding the use of menstrual cups perceived both by menstrual cup users and community members. Perceived risks were related to the effect of menstrual cup use on the body, exposure of one's menstrual status and risk of losing the cup. It entails factors that either increased or decreased the notion of risk and acceptance of these risks over time.

The second theme depicts the development of routines by long-term menstrual cup users and how these affected their menstrual experience. This theme also discusses how the cup enabled girls and women to choose to keep their menstruation status hidden from others. This is closely related to the discreetness of the menstrual cup as an enabler for self-policing due to the protection it provides against having ones' menstrual status revealed.

The third theme identifies factors which influence the uptake and continued use of the menstrual cup by recipients and community members before, during and after the menstrual cup intervention. It demonstrates that these human and non-human factors are closely interlinked and connect other actors and facilities related to MHM. Further, the theme explores barriers to the optimal operation of the support network established or initiated during the intervention, often because some of the network connectors cease to function properly or are missing.

Theme One: The Notion of Risk

Several perceived risks related to the use of the menstrual cup were identified by menstrual cup recipients, their relatives and community members, including the risk of harm to one's body and health, the risk of having one's menstrual status exposed, and risk of losing the cup. A variety of factors influenced users' willingness to accept or defy these risks. Misconceptions harbored by community members increased the notion of risk, whilst education, support and personal user experience reduced the perceived level of risk. Ultimately, the perceived practical benefits prompted users to defy risks and to continue using the menstrual cup.

The Risk of Harm to One's Body and Health

The notion of risk was strongly linked to vaginal insertion and internal use of the menstrual cup by both menstrual cup recipients and community members. Health risks included the cup being sucked into or getting lost in the body, the risk of cancer, damage to the reproductive system, infertility, and even death.

Some of the health risks associated with the use of the menstrual cup were connected not solely to wearing the cup, but to the combination of the method and circumstances in which it was used; for instance, inserting the cup with dirty hands was believed to result in infection. Latrines were considered risky places for one's health in general due to the existence of germs and dirt. Menstrual cup users worried that the cup would come into contact with this dirty environment. To protect themselves and avoid risk of infection, girls and women looked for clean latrines, bathrooms or other places to empty their cup. If school latrines and bathrooms were not clean, girls preferred to empty the cup at home or in some cases, considered the bush a safer option compared to school latrines.

Despite often being perceived as an important community level concern with menstrual cups, the risk of loss of virginity for younger girls was not mentioned by either menstrual cup recipients, relatives or community members.





"It lasts longer, and the disadvantage comes when it's wrongly inserted, and it causes harm inside"

Brenda, 21, FGD with female relatives of menstrual cup users, Kitgum



When inserting it, you should squat in a clean place, not in a dirty bathroom where people always urinate.

Gloria, 14, semi-structured interview, Katakwi

"If I find the latrine is clean, I will use it. But if I guess that the latrine is not clean, then I will just follow the road to look for the bush. I just request for water only or I put water in my bag then I just keep on going till I find the bush where I can change."

Harriet, 18, semi-structured interview, Gulu

Protecting oneself from being identified as menstruating and the gossip that could ensue was of primary importance to the schoolgirls interviewed. This was linked not solely to the menstrual cup but was seen as a risk by participants both before and after starting to use the menstrual cup. For schoolgirls, emptying and reinserting the cup at school introduced the risk of being "caught" menstruating by other pupils. As all schools in the study experienced occasional water shortages and long distances to the functional water sources, girls reported









"What happens when the children are many (at school)? They will obviously get you there in the act...These children will shout with your name, this one will tell the other one, the other one will tell another one and you will just realize that everybody knows about it.

Mercy, 17, semi-structured interview, Gulu

carrying a water bottle with them to the latrines to rinse their cups and wash their hands. Other pupils were said to recognize this as a sign of being on your period. Due to the perceived lack of privacy at school, interviewees also expressed feeling stressed and rushed whilst emptying their cup at school. During an FGD in Katakwi, some teachers also noted that although the school had basins for girls to use for bathing, girls were reluctant to use them for the same reasons

Adult women expressed some level of concern of having their menstrual status exposed prior to use of the cup. However, this was not mentioned as a significant risk after starting to use the menstrual cup.

The Risk of losing the cup

Menstrual cup users expressed various fears of losing their cup. These included dropping the menstrual cup in the latrine, having it taken by rats or having it stolen by someone who knew they used the cup.

Interviewees feared dropping the cup in the pit of a latrine whilst emptying it or the cup falling out when squatting to defecate (although only one participant reporting this happening). This risk was linked to feeling rushed when using shared facilities. The perceived risk of dropping the menstrual cup in the pit reduced with time as users learnt that the cup would not fall out and they became more skilled at emptying the cup. Some cup users reported having their cups stolen or eaten by rats, likely due to the ferrous smell that the cup develops with time. Storing the cup properly was seen as a way to protect it from rats, insects and dirt and in this way, users protected themselves against possible infections.

Interviewees expressed that other people who knew about the cup also wanted one. As menstrual cups were not available for people outside the intervention groups, this introduced a risk of having your menstrual cup stolen. Menstrual cup recipients felt reluctant to tell others that they were using the cup, as this put them at greater risk of having it taken by others. Girls, more than the women, lacked ownership over their belongings and ability to speak up if other people took things from them. As a result, the menstrual cup recipients felt a need to protect their cups and store them carefully.

"I would tell them [girls] to know how to keep their cups properly because back at our different homes, there are fathers who are drunkards and will feel happy that their child has brought them a cup for his waragi [local gin]. So, they should keep them properly."

Joyce, 13, semi-structured interview, Katakwi, Gulu

"On my side, using this cup is really very good which has even made my sisters to feel bad since we are around six girls at home... Sometimes I feel like moving with it to everywhere I go, because this has made them [sisters] to threaten me that they will steal my cup that I brag about.

Gloria, 14, semi-structured interview, Katakwi

Accepting and Defying Risks

Community opinions and attitudes towards the cup increased the perception of risk, whilst, education, support systems and personal user experiences over time decreased the level of risk related to using the menstrual cup.

FGD participants (relatives and community members) harbored some concerns about the menstrual cups' effect on health. Despite their concerns, many felt that it was a practical solution given the existing challenges with water access and conditions of sanitation and disposal facilities within their communities. The cup was not seen as a device that could be intuitively used and training was considered essential. Cup recipients reported feeling safer and more confident in using their cups after training and asking questions to support persons.

Menstrual cup recipients were persistently influenced by the opinions of others despite having used the cups for an extended period. For instance, Juliet, 16, who had used her cup for two years was told by her aunt that the cup could cause cancer. Although she continued to use the cup, she was still unsure whether the cup could cause cancer. Some menstrual cup users who lacked access to an information source to check, confirm or dismiss the existence of the perceived risks, reported continuing to use the cup due to practicalities such as saving

"Ah, if you get infection, it is you who suffers... it is you to persevere because you might have not followed the instruction of how to use this cup. Because you were trained on how to use it. If you do not want to use, then buy something else and use, but if you want to use it, then the way you were trained, is the very way you should wash your hands and apply it, if you don't do it that way then you may get infection.

Priscilla, 17, semi-structured interview, Gulu

money. Over time menstrual cup users developed trust and confidence in the cup and actively rejected some of the preconceived notions about the menstrual cup. Users felt they were able to verify the safety of using the cup through their own experience and dispel fears of the cup getting lost in the body, the cup falling our or causing infertility.

Theme Two: Secret Routines

Menstrual cup users expressed being able to plan their time and concentrate on their activities better after developing routines of use with the menstrual cup. They felt free, more relaxed in their bodies, and self-confident in public. This in turn allowed them to live up to normative expectations of keeping their menstruation secret.

Developing Menstrual Cup Routines

Over time, women and girls developed routines of use, gradually gaining trust in the cup and learning how it worked with their bodies. This process included learning when the cup was in the right position and guessing when it would be full. More experienced users knew exactly when and how to empty the cup, what they could expect from using it and no longer had to check for leakages or the cup being full. This was contrasted to the use of disposable pads or cloths and not always being able to predict when they needed to be changed. Menstrual cup users expressed greater trust in the menstrual cup compared to other methods, particularly when being in public and carrying out activities.

Interviewees easily described how many times and at what time of the day they would empty the cup both on light, and heavy flow days and whether they could stay with the cup inserted overnight. Using the menstrual cup enabled them to discover their "inner clock". This led to menstrual cup users being able to plan their time and activities accordingly. This did not mean, however, that menstrual cup users were tracking their menstrual cycles or that the practice of tracking increased with the usage of the menstrual cup. Interviewees expressed that they did not know when they would start their periods and the notion that periods would start abruptly was common.



"If you have just put it [menstrual cup] and go with it in the garden or you have put it in the early morning when you have taken shower, you weed until you come back and then you change in the evening. This makes your work easier. But if it is these other pads, you have to change while in the garden."

Jane, 22, Kitgum

"For me, if I am in public, I do not think so much about this cup. Because I know the way I have it, it is enough to help me up to the time when I leave to go back."

Doreen, 23, Kitgum

"When I'm doing my periods after I lost my cup, I would not feel free, like among people. I would make sure that ... there's some cloth that you tie around your waist".

Harriet, 18, Gulu

Living up to expectations

Self-confidence in public during one's period experienced by the menstrual cup users was an outcome of feeling secure with the menstrual cup and most importantly, knowing that it would not leak. Not only were leakages perceived as embarrassing, but they revealed to others that one was menstruating. Participants described different signs that allowed others to guess a girl or women was on her period. Leakages were the most obvious and embarrassing sign, but it was also said that others could tell by girls and women's behaviour that they were menstruating. Women could tell when another woman was menstruating based on bodily changes such enlarged breasts, changes on a woman's face or skin, or body language. Some women were seen as being weaker or lazy during their periods. Bathing more frequently and women checking their skirts were also a sign of menstruation. These body language signs were also picked up by men and expressed in FGDs.

"Also, when all those signs show, you see a change in her behavior, for example carrying water all the time for her to take shower. This is a clear sign that...Yes, that she is in her menstrual period.

Godwin, 49, FGD with male relatives, Gulu

"<...>when you see women together once a woman gets up she first look behind and shake her cloth because she knows that she is on period."

Florence, 31, FGD with community leaders, Kitqum

Normative rules dictated that a woman's menstruation status should have been kept secret from the others, not only by herself but also by her husband and family. By letting the others know that she is menstruating, girls and women were seen to break social norms and it was largely considered to be a female responsibility to manage one's menstruation well to ensure no one knew they are menstruating. Girls and women were thus expected to refrain from activities during their menstruation. Men in FGDs also alluded to women being better at this than younger girls. Leaking could not only lead to individual shame but also bring shame to her family since people around would begin to gossip. Menstrual cup users stated that after using a menstrual cup for an extended period of time, their body language during their periods changed, they did not need to change their cups as often as other MHM products, they bathed less frequently and did not have to check their skirt for stains.

"Working with the cup is easy because I cook bread from home and walk to sell it, so it makes work easy and no one knows that you are on your menstruation and it does not show it out, even if I wear a white dress it does not show out".

Sharon, 21, semi-structured interview, Kitgum

"But after I got the cup I could sit without any problem no one could even notice that I was doing my menstrual period."

Faith, 16, semi-structured interview, Gulu

"Nowadays, I just stand up without checking my back because I know that there will be no problem. Even if it is to leak, it will not reach my cloth, but only my panties and that one only happens when I have delayed somewhere, and I had no time to change it.... But if it is not that, then I can stay anyhow and no one can predict and even from me, the thought I had those days of this thing soiling my cloth is no longer there."

Doreen, 23, semi-structured-interview, Kitgum



Theme three: Missing Connectors in the Support Network

Networks for knowledge sharing and social support structures were identified by participants as important to initial uptake and continued use of menstrual cups. However, some connecters central to WoMena's aim of building sustainable, supportive environments were missing on follow-up. Lack of access to menstrual cups and supply networks formed a barrier to adoption and limited sharing of experiences between menstrual cup users. The extent to which these networks were present or lacking impacted menstrual cup uptake and sustained use overtime.

Gaps in School Support Structures

In both Gulu and Katakwi, SWTs within the intervention schools were trained on menstrual health, menstrual cup use and how to create a supportive environment for the school girls. After the interventions, some SWTs were more active than the others, gathering the girls once a term to ask about menstrual cup use. These teachers were reported to actively help girls solve cup related issues, giving practical advice. Conversely, some interviewed schoolgirls stated that during the meetings their SWTs only asked about difficulties, conversations centered around technical issues related to cup use, rather than personal experience of use. They also expressed a sense of fear of approaching SWTs and that they would prefer peer support, as teachers could be rude, or their experiences were not seen as relevant to the girls.









"No, to teachers I have not gone. I have not even told the senior woman teacher. I have never reached her to say that this cup is like this, they help us like this, I never did.... Because with teachers, I fear. Ah, I am familiar with my fellow young people but not with teachers.... Yes, because the children we are of the same size, teachers are big.

Priscilla, 17, semi-structured interview, Gulu

SWTs were not always sufficiently equipped to provide the menstrual cup recipients with the needed support. Some teachers reported not receiving sufficient information on how to organise meetings or how to encourage girls to share their experiences. Interviewed participants reported feeling afraid to tell teachers they had lost their cup. Teachers also expressed being restricted by school procedures, for example not being able to allocate time within the school schedule for consultations with the girls and emphasized lack of facilities or materials for MHM as a challenge.

At the time of data collection, in the three schools in Gulu, all trained teachers had left the schools. The teachers who were at the schools knew about the intervention but had never seen a menstrual cup. As there had only been limited knowledge sharing from the trained teachers to the rest of the staff, the support system built in the schools was no longer present. In Katakwi, where only one year had passed since the start of the intervention, the trained teachers were still present in the schools and had a good level of knowledge about the menstrual cup.

Shared Experiences









"The four of us who come from that home got them. <... > I may change my mind and say hey, this thing, I will not use it this time, but I reason out within myself and I say let me use it because some of my friends, who use this thing also say that ... when you use it continuously you will get used to it. So, I also started using it and until I got used to, because I have my aunt, she also uses it.

Priscilla, 17, semi-structured interview, Gulu

Most respondents reported that girls and women did not usually share their personal experience of menstruation with others unless it was necessary, for instance when needing pain killers. Some menstrual cup recipients had told friends and relatives who had heard of the menstrual cup about it but were reluctant to share personal feelings and thoughts about the cup or show it to others. Although participants reported not sharing stories of personal experience, they were aware of practicalities, such as the potential risk of rats taking the cup, the need to cover the cup while disinfecting and storing it safely, and the risk of over-boiling and thus spoiling the cup, which they had either experienced or heard of from others indicating that some level of practical experiences had taken place.

The girls who had shared their menstrual cup experience with their peers mainly shared with their closest friends and relatives. Participants who had not shared their experiences often reported not having any close friends who had also received the cup. They rarely shared experiences with other classmates who had received the cup. Thus, experiences were more likely to be shared when a menstrual cup recipient already had an established social bond with another recipient, not necessarily within the school environment.

Authoritative and Supportive Knowledge Networks

Two types of knowledge were identified as impacting the uptake and continued use of menstrual cups. Knowledge that was seen to come from an authoritative source was important in the early stages of adaption. Participants in schools noted that they were able to address questions mainly during follow ups from the implementation (WoMena) team, rather than from the trained trainers. FGD participants also noted that information sessions carried out by trusted authorities, like known NGOs working (URCS and TPO) in the area or schools contributed to creating trust and confidence in the menstrual cup and parents felt that the introduction of the menstrual cup was positive and supported it's use among their daughters. However, particularly in Gulu, there were accounts of some menstrual cup recipients and community members being suspicious of information delivered by outsiders (the intervention team) and interviewees felt that some girls may not have used the cup because they did not trust this source of information.

Both members of the community and menstrual cup recipients continued to have questions post-









"And they told us: "If you don't like the cup, you should not even continue using the cup. But it is your own choice to choose whether to use the cup or not." So, for me I've realized that the cup is good, that is why I'm using it.

Otherwise, other people cannot bring for you the cup when they know the cup is not good...some of these girls, those ones who are talking ill about the cup, are those ones who did not listen. Who did not understand the instructions..."

Angel, 14, semi-structured interview, Gulu

"Betty (URCS trainer) she said she tried using this cup. She inserted it on the first day, she went and boarded the vehicle and she reached her destination...In the morning, she slept till morning, again she had doubt that this cup could have entered inside her, but she found this cup was there then she removed it and re-inserted it again. When she reached home, from there she knew that this cup was there, there was nothing that could happen to it. This cup can stay. So, everyone started saying: "for us, we also tried like that and we had some worries that this cup could enter inside them." From there Betty gave us advice that this cup will not enter, it only stays where you have put it. It doesn't enter".

Jane, 22, semi-structured interview, Kitgum

intervention but reported not always having access to a source of information to address these questions. As noted previously, school girls did not always feel comfortable approaching teachers or feel that their experiences were relevant to them. Community members did not mention seeking information proactively or knowing who to approach to address concerns.

In Kitgum, women identified the URCS office and staff as a clear source of support and information. One URCS volunteer was seen as particularly supportive and three years after the intervention, still acted as source of supportive knowledge. The fact that she was able to share her personal experience, was particularly helpful for women in overcoming their fears and keeping them motivated to use their cups. Overtime the need to consult reduced as the women learned to use their cups.

Lack of Access to the Menstrual Cups

The lack of access to menstrual cups beyond the direct intervention was identified by a majority of participants as a barrier to menstrual cup uptake. After learning about the menstrual cup, relatives, friends or community members expressed a desire to acquire menstrual cups. Menstrual cup recipients were sometimes seen as mediators, expected to provide information on where to get cups and to pass on requests to the intervention team about making more cups available. Menstrual cup recipients themselves did not have sufficient information about where to access menstrual cups, which placed them under pressure and seemed to impact recipient's willingness to talk about menstrual cups to others. Some of the girls did not see the point of talking about the cup when others could not access it. In Kitgum, some of the participants saw the menstrual cup as a business opportunity. They believed that other women, especially the ones working in the market, would be interested in using menstrual cup and wanted to act as mediators if such an opportunity were present.

"When we got the cup, some people used to tell us we should sell for them the cup. But even us, we could tell them that even us we were just given the cup, now how can I again give you? Or sell to you? So, we could refuse."

Harriet, 18, semi-structured interview, Gulu

"But even this cup, even if you're to share: it's useless because the cup is not even there, so there is no need to share about it because there is no way you can illustrate it when it's not there."

Elizabeth, 16, semi-structured interview, Gulu

"Friends are in need of the menstrual cup. I want to be the person who would be selling the cup if WoMena could bring the cup to the market."

Diana, 27, semi-structured interview, Kitgum

"<...> If that thing has been manufactured and it is out on the market, then it can increase its usage up because if it is here, in the office, or it has been given someone in award or in a village, while they have counted its number for that person to sell then it is important to for me to receive that opinion. It gives me time if that thing is there to pick that thing quickly to give them, while I give that money to those who brought this cup."

Stella, 32, semi-structured interview, Kitgum



SUMMARY OF FINDINGS

Results from the study suggest that menstrual cups, for those who continued to use them, were a comfortable and convenient MHM method that supported better bodily knowledge and understanding and allowed girls and women to carry out their daily activities without restrictions during their periods.

- Respondents reported feeling free, saving money, avoiding leakages and being comfortable whilst using the menstrual cup.
- Users continued to follow guidelines for safe use of the cup and developed their own routines and methods to facilitate this.
- Although a majority of the respondents (82.1%) continued using the menstrual cup, it is likely that those who had discontinued using their cups chose not to participate in the data collection activities.
- For those who discontinued cup use and participated in follow-up data collection, no statistically
 significant correlation was found to reported disadvantages of the cup, but participants did report
 discomfort whilst inserting and removing the cup and challenges related to keeping the cup clean
 and limited access to facilities.
- Menstrual cup users adapted to using the menstrual cup gradually, initially distrusting the cup, using it interchangeably with other products while slowly learning to trust the cup.

The qualitative findings suggest that menstrual cup recipients, relatives and community members identified various risks related to menstrual cups, including the effects of menstrual cup use on the body, disclosure of one's menstrual status and risk of losing the cup. Access to information, increased personal experience and the lack of alternatives, led menstrual cup users to either debunk or accept perceived risks. Relatives and community members, despite acknowledging risks and uncertainties, also recognised menstrual cups as a practical solution for their communities.

Once girls and women became familiar with the menstrual cup, they developed routines that allowed them to carry out their daily activities without restrictions and made them feel more in control during their periods. Whilst this enhanced girls and women's self-confidence during their periods, it also enabled them to live up to normative expectations and ensure menstruation is kept secret and thus essentially enhanced their ability to self-police their bodies.

This study also found that initial uptake and continued menstrual cup use was closely related to access to information and support systems. Lack of adequate support and information discouraged girls and women from trying to use their cups. Although participants recounted positive experiences of support networks, most of these support structures were lacking or missing at the time of data collection.

Photo Credit: 10th Salater

Photo credit: Tom Saater

RECCOMENDATIONS

Recommendations for Implementation of Menstrual Cup Projects



Delivering impactful training

- As noted in the findings of this study and others (Mason et al., 2015, Besinska et al., 2015, and Hyttel et al., 2017) training is a crucial part of working with menstrual cups. Not only is it important that girls and women learn to use the cup safely and comfortably, but the introduction of menstrual cups also offers a unique opportunity to support girls and women in learning to know their bodies better.
- Participants in this study continued to follow the hygiene guidelines that they had been trained in six months to three years prior the data collection, however some misconceptions on what the correct methods were persisted. It is thus imperative that understanding is checked throughout the initial intervention period to instil the right information.
- Support persons with personal user experience in menstrual cup use were seen as the most helpful type
 of support. It is important to allocate sufficient time at the start of the intervention to allow support
 persons to form their own user experiences.
- Discontinuation of menstrual cup use in several cases was related to difficulty in managing it properly.
 Clear information on management practices, including take home instructions could be used to ensure women and girls continue to use their cup successfully.



Identifying the right support networks

- Girls and women valued both authoritative and supportive knowledge, but not all felt comfortable utilising the knowledge networks that had been built during the intervention (schoolgirls and SWTs).
- In some intervention sites, the support networks had collapsed when trained persons left the schools. Failure to establish information access points for the beneficiaries, the SWTs, and their community members, also had an impact on uptake of the menstrual cup users' relationship with other beneficiaries, families, and community members.
- Girls and women should be consulted on who they would prefer to receive information and support on menstruation from, and when and how this information should be delivered.
- Trained trainers should be provided with adequate resources to provide information, including what to do if cups are lost or where cups can be purchased or acquired after the intervention.
- Consider alternative knowledge networks at community level and alternative access points for support (remote support, like a hotline, written material, take home educational resources etc.)
- Girls reported feeling stressed if they were seen as mediators for menstrual cup access. Consider having a clear focal point within the community and access to distribution points of menstrual cups.



Exploring and encouraging social bonds for a supportive menstrual cup environment

- Various participants noted that they did not necessarily share information with fellow schoolgirls but
 were more likely to share experiences with those closest to them (friends and relatives) with whom they
 already had a social bond. Jealousy and lack of access to the cups otherwise meant that girls did not
 always want to use these support structures.
- For future interventions it is worthwhile considering household level distribution and explore ways in which to increase engagement with family and friends and build alternative access to menstrual cups among the community.



Expanding the level of communication and delivering clear information

- Information about the interventions only reached a limited number of people. As community members did not have information about the cup, this created a space for rumours to spread. This may have affected relationships between the beneficiaries and their peers who wanted a menstrual cup.
- Ensuring wider community level communication to make the menstrual cup better known and enabling
 access to menstrual cups within the wider community could encourage menstrual cup recipients to share
 their experiences and increase peer support.



Leaving room for the beneficiaries to learn and learning from them

The girls and women in the three interventions developed their own methods to cope with contextual
constraints, for example adapting new ways of disinfecting their cups using available resources.
Consulting girls and women in the initial stages of an intervention on available resources rather than
concentrating solely on barriers or constraints could allow for better implementation and greater
product uptake.

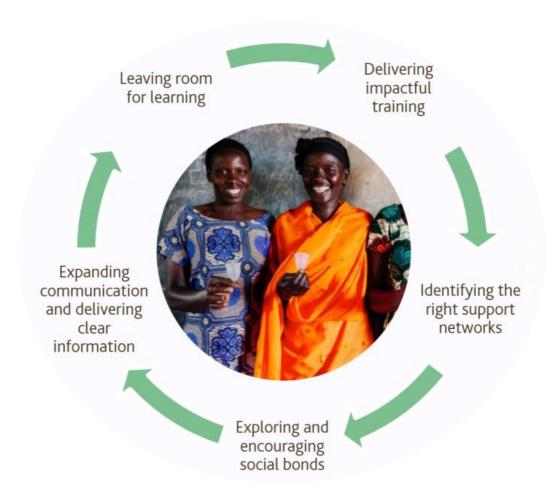


Figure 12: Key learning points for implementation

Photo credit: Siraj Muyinjo

Lessons Learnt for Menstrual Health and Menstrual Cup Research

In the process of conducting this research project, a number of lessons were learnt in relation to the sensitivities and nuances of menstrual health that were not considered in the initial research design. Key lessons are shared here that can contribute to future research on menstrual health and menstrual cups.



Social Desirability Bias

- The majority of menstrual health projects are carried out within a school environment. Sharing menstrual experiences and product use, includes discussing sensitive and personal information. Conducting research activities in schools may reinforce school-based hierarchies, leading schoolgirls to feel pressured to take part in research or increase the probability of socially desirable responses, if the intervention is viewed favorably by school management and teachers. These hierarchies may extend to parents as well, with parents being reluctant to share negative experiences in front of teachers. It may be more conducive to carry out interviews and FGDs outside the school environment.
- Participants may also feel an obligation to be positive about the product and reluctant to disclose nonuse or loss of cups. As observed in this study, girls and women who discontinued use of the menstrual cup may have been less willing to take part in the study. Asking participants to show their cups to the research team can act as a way of validating responses (as used cups often have visible signs of use through slight discoloration).



Investigating long-term experiences

- Menstruation is a personal experience and consideration needs to be given to how best to measure
 product use without homogenising girls' and women's menstrual experiences (Mdee, 2017). Menstrual
 patterns and irregularities in both adolescents and adult women may impact their experience of product
 uptake and use. If a participant only menstruates twice within a given time period, can use of the product
 be considered continuous?
- Results from this study show that girls and women also used other menstrual products to manage their
 menstruation, thus simply asking whether the menstrual cup was used or not may not give an accurate
 measure of extent of use. Previous menstrual cup studies have measured acceptability and use after
 shorter periods of time. Hyttel et al. (2017) conducted their follow up study in Uganda four months after
 the girls received cups, whilst a study in South Africa followed up after three cup cycles (Beksinska, 2015).
 A study conducted in Kenya (Juma et al. 2017) included selection criteria of having experienced three
 menses prior to participation in the study.
- Measuring uptake and use based on cycles rather than months and aggregating data according to how long participants have been menstruating may provide a more accurate understanding of use. A better understanding of menstrual patterns is required to understand experiences of product uptake and definitions of long-term or continued use.



Capturing Nuances

• Since menstruation is an individual and private experience, understanding product preferences throughout the menstrual life cycle and during a single cycle itself is important. Participants in this study reported using their cups interchangeably with other methods or not using their menstrual cup when other methods were available, despite reporting that the cup was comfortable to use. Further, researchers need to consider the complexity of menstruation. Menstruation encompasses cultural practices, emotional connections, social relationships and physical experiences. MHM interventions are often criticised for medicalizing menstruation (Mdee, 2017) or concentrating solely on product use. A better understanding of the nuanced experience of menstruating is needed to better understand product use and preference.



REFERENCES

Acharya, A., Yadav, K., Baridalyne, N. (2006): "Reproductive Tract Infections/Sexually Transmitted Infections in Rural Haryana: Experiences from the Family Health Awareness Campaign." Indian J. Community Med. Vol. 31.

APHRC (2010): "Experiences and problems with menstruation among poor women and School girls in Nairobi, Kenya." Policy Brief no. 20. African Population and Health Research Center.

Beksinska, M.E. et al. (2015): "Acceptability and Performance of the Menstrual cup in South Africa: A Randomized Crossover Trial Comparing the Menstrual cup to Tampons or Sanitary Pads." Journal of Women's Health, 24 (2), 151. Available at: http://online.liebertpub.com/doi/abs/10.1089/jwh.2014.5021

Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', Qualitative Research in Psychology, 3(2), pp. 77–101. doi: 10.1191/1478088706qp063oa.

Cheng, M. et al., (1995) *Menses Cup* * *evaluation study*. Fertility and Sterility, 64(3), pp.661 663. Available at: http://dx.doi.org/10.1016/S0015-0282(16)57812-1.

Day, S., (2012) A retained menstrual cup. International Journal of STD & AIDS, 23(5), pp.367–368. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22648895 [Accessed May 15, 2018].

Hennegan, J. and P. Montgomery (2016): "Do Menstrual Hygiene Management Interventions Improve Education and Psychosocial Outcomes for Women and Girls in Low and Middle Income Countries? A Systematic Review" PLoS One 11(2): e0146985). https://www.ncbi.nlm.nih.gov/pmenstrualcup/articles/PMENSTRUALCUP4749306/pdf/pone.0146985.pdf

Hyttel, M. et al. (2017) 'Drivers and Challenges to Use of Menstrual Cups Among Schoolgirls in Rural Uganda: A Qualitative Study', Waterlines, Practical Action Publishing, 36(2), p. 16. Available at: http://www.developmentbookshelf.com/doi/full/10.3362/1756-3488.16-00013.

Juma J., Nyothach E., Laserson K.F. et al. (2017): "Examining the safety of menstrual cups among rural primary school girls in western Kenya: observational studies nested in a randomised controlled feasibility study." BMJ Open, 7:e015429. doi:10.1136/bmjopen-2016-015429.

Khanna, A., Goyal, R.S., Bhawsar, R. (2005): "Menstrual Practices and Reproductive Problems - A Study of Adolescent Girls in Rajasthan." J. Health Manag. 7, 91–107.

Mason, L. et al. (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, e79132. doi:10.1371/journal.pone.0079132

Mason, L. et al. (2015): "Adolescent schoolgirls' experiences of menstrual cups and pads in rural western Kenya: a qualitative study." Waterlines, 34(1), pp.15–30.

Ministry of Water and Environment (2016): "Water and Environment Sector Performance Report 2016" http://envalert.org/wp-content/uploads/2016/09/SPR-2016_final.pdf

Miiro, G. et al., (2018) *Menstrual health and school absenteeism among adolescent girls in Uganda (MENISCUS): a feasibility study*. BMC Women's Health, 18(1), p.4. Available at: https://bmcwomenshealth.biomedcentral.com/articles/10.1186/s12905-017-0502-z [Accessed May 15, 2018].

Mitchell, M.A. et al., (2015) A confirmed case of toxic shock syndrome associated with the use of a menstrual cup. The Canadian journal of infectious diseases & medical microbiology 26(4), pp.218–20. Available at: http://www.ncbi.nlm.nih.gov/pubmed/26361491 [Accessed May 15, 2018].

Nonfoux, L. et al. (2018) 'Impact of currently marketed tampons and menstrual cups on Staphylococcus aureus growth and TSST-1 production in vitro.', Applied and Environmental Microbiology, p. AEM.00351-18. doi: 10.1128/AEM.00351-18.

North, B.B. & Oldham, M.J., (2011) Preclinical, Clinical, and Over-the-Counter Postmarketing Experience with a New Vaginal Cup: Menstrual Collection. Journal of Women's Health, 20(2), pp.303–311. Available at: http://www.liebertonline.com/doi/abs/10.1089/jwh.2009.1929.

Oster, E. & Thornton, R., (2011) *Menstruation, Sanitary Products, and School Attendance: Evidence from a Randomized Evaluation*. American Economic Journal: *Applied Economics*, 3(1), pp.91–100. Available at: http://pubs.aeaweb.org/doi/10.1257/app.3.1.91 [Accessed May 15, 2018].

Phillips-Howard, P. A. et al. (2016) 'Menstrual cups and sanitary pads to reduce school attrition, and sexually transmitted and reproductive tract infections: a cluster randomised controlled feasibility study in rural Western Kenya', BMJ Open, 6(11), p. e013229. doi: 10.1136/bmjopen-2016-013229.

Sumpter, C. & Torondel, B (2013): "A Systematic Review of the Health and Social Effects of Menstrual Hygiene Management" available from, http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0062004

Tellier, M., Hyttel, M., Gad, M. (2012): "Pilot study report: Assessing acceptability and hygienic safety of menstrual cups as menstrual management method for vulnerable young women in Uganda", Red Cross Society's Life Planning Skills Project.

Wiebe, E.R. & Trouton, K.J., (2012) *Does using tampons or menstrual cups increase early IUD expulsion rates?* Contraception, 86(2), pp.119–121. Available at: http://www.ncbi.nlm.nih.gov/pubmed/22464406 [Accessed May 15, 2018].

WoMena (2018a): "FAQ: Is there any connection between menstrual cups and infections?", viewed 20 March 2019, http://womena.dk/is-there-any-connection-between-menstrual-cups-and-infections/

WoMena (2018b): "FAQ: Does the use of menstrual cups increase the risk of toxic shock syndrome?", viewed 20 March 2019, http://womena.dk/womena-faqs-use-menstrual-cups-increase-risk-toxic-shock-syndrome/