MEETING GENDER & MENSTRUAL HYGIENE NEEDS IN MSF-OCA HEALTH STRUCTURES

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by

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Abstract

Menstrual Hygiene Management has been neglected in MSF water and sanitation essential requirements for health structures during acute and chorionic emergencies but also in stabilized situations. To integrate MHM into those requirements; standards, indicators, essential requirements, a monitoring tool and a design & implementation tool have been developed to guide watsan officers, medics and logistician to plan, put in place and follow up a MHM program in MSF-OCA health centres. Menstruation is a sensitive topic and it is still a taboo in most countries; sociocultural aspects like religious, belief and myths must be considered before the design and implementation take place. Therefore, the MHM program requires consultation with women users to enable them to decide the type of sanitation facilities and sanitary material they might use and trainings on MHM for MSF-OCA national and international staff to ensure the staff are able to carry out the MHM program in MSF-OCA health centres.

Key words: MHM, health structures, emergency, MSF

Executive summary

MSF is a Non Governmental Organization (NGO) working in some 70 countries worldwide. As it is a medical organization, Water, Hygiene and Sanitation (WASH) play an important role in the overall goal of MSF that is 'to preserve life and alleviate suffering, while protecting human dignity and seeking to restore the ability of people to make their own decisions' (MSF, 2007)

Access to WASH has an important role in the prevention and control of a large number of diseases due to the intrinsic link between WASH and health. Furthermore, provision of safe water and sanitation helps to improve the quality of life, as well as, the dignity of those served (MSF, 2007). Therefore, MSF has developed policies, guidelines and WASH essential requirements to be implemented in its health structures all over the world.

The MSF water, hygiene and sanitation essential requirements (MSF, 2004) focus on water supply, medical waste management, safe excreta disposal, wastewater disposal, dead body management and vector control (control of vector-borne diseases such as malaria, dengue, leishmaniasis and sleeping sickness). However, gender specific requirements, including Menstrual Hygiene Management (MHM), have seldom been mentioned in those technical guidelines or policies.

Because of that, MSF-OCA (Operational Centre Amsterdam) has considered gender and MHM to be part of its strategic plan 2015 – 2019. Thus medical objective four, 'Improve the effectiveness and efficiency of health care management, with a focus on our hospitals and complex medical programmes' and action 4.3 'Define and meet standards for health care facilities and services, to be based on function, capacity and context' (MSF-OCA, 2015) address this issue.

Furthermore, the WHO recent report (2015) "WASH in health care facilities, status in low- and middle-income countries and way forward" has proposed a target of universal access to basic WASH services in health care facilities by 2030.
The target is that 'All health care facilities provide all users with menstrual hygiene facilities' and the indicator is 'Percentage of health care facilities with a private place for washing hands, private parts and cloths; drying reusable materials; and safe disposal of used menstrual materials (WHO, 2015).

The study, meeting gender and MHM needs in MSF-OCA health facilities focuses on:

- MSF Operational Centre Amsterdam interventions
- Acute emergencies settings through to chronic and stabilized situation
- Sanitation facilities in health structures
- Female patients and female carers

Principal research question

How can sanitation facilities in MSF-OCA Health Facilities meet the needs of women (focusing on MHM)?

Research objectives

Objective 1: To gain an overview of the current and best practices in gender and WASH, including assessment tools, with a focus on Health Facilities.

Objective 2: To develop a tool to assess the Gender and Menstrual Hygiene needs in MSF-OCA Health Facilities and to pilot it for further improvements.

Objective 3: To produce a list of essential requirements and indicators for gender and MHM including promotion, provision and management of specific hardware/consumables.

Objective 4: To provide recommendations in terms of infrastructure to improve the sanitation facilities to meet the needs of women within MSF-OCA Health Facilities

The most important driver for improving MHM provision is to prevent women succumbing to the health risks associated with MHM arising from the use of unclean sanitary material, changing pads infrequently, insertion of unclean material into the vagina, unsafe disposal of used sanitary material or blood and lack of hand-washing after changing sanitary pads (House et al., 2012). Moreover, a MHM program is part of the right to water, sanitation, dignity and privacy.

Data collection methods

Qualitative research was selected as most appropriate for understanding the situation and the experiences women face when using MSF-OCA sanitation facilities to manage their menstruation. Therefore, the research methodology focused on qualitative methods for data collection (Denscombe, 2007). Ethical clearance was obtained from Loughborough University, Ethics Approval (Human Participants) Sub-Committee, on June 21st 2015.

The data collection methods used were structured interviews with staff, semi-structured interviews with female patients and carers, Focus Group Discussions with female and male patients and carers, structured observation and documents.

Then, the author defined a set of criteria for a project to be considered for the fieldwork

- Health structures with in-patient department, meaning that people stay in the health facility and use the sanitation facilities on a daily basis.
- The type of MSF intervention, maternity/paediatric being the most relevant because of the high number of women affected.

MSF-OCA mission in Bangladesh was glad to take part in the research. So, the fieldwork took place in Kutupalong clinic located near to the Myanmar border. The clinic provides the Rohingya refugees, (going from Myanmar into Bangladesh) and the host community, with

basic health care throughout Kutupalog clinic located next to Kutupalong refugee camps (UNHCR registered camp and unregistered camp).

Results

During the fieldwork, it was observed that:

- Women changed their sanitary material in the shower.
- Users believe that the hygiene and sanitation facilities are appropriate
- Latrines and showers were not segregated.
- Men recognise women have a greater concern for privacy in terms of sanitation.
- Cloths/rags were the most common material being used by women during menstruation.
- Women identified the lack of sanitary material as the main challenge they face when they manage their menstruation at the clinic.
- Women wash their sanitary material in the shower and dry them underneath other clothes because there are no designated places for that.
- The staff members do not have much knowledge on MHM; however, they believe the clinic needs a female hygiene promoter
- The collection of used sanitary pads is a problem (women do not use waste bins); the final disposal is not a problem because the clinic has its own waste management area.
- A MHM monitoring tool was piloted; the initial trial exposed some lack of clarity and different understanding between evaluators but also it evidenced that some aspects were omitted. A final version with adjustments is presented in the recommendation chapter.

Discussion

Integrating MHM into the WASH program involves more than sanitary material and toilet facilities; as it was seen from the findings. The socio/cultural aspects play an important role; they determine the type of sanitation facilities women might prefer, latrines or shower; sanitary material they might use and the type of waste collection and final disposal.

Conclusion and recommendations

MSF-OCA needs to integrate MHM into the WASH program for health structures; therefore, the author recommends standards, indicators, essential requirements and tools to monitor and implement MHM.

<u>Standards in MHM for health structures</u>

All Health Structures supported by MSF-OCA should provide patients, carers and staff with proper sanitation facilities and sanitary material for safe MHM

There should be private facilities (latrine/showers), in all Health Structures supported by MSF-OCA, for women to change sanitary materials, to wash their hands, wash themselves,

wash and dry reusable sanitary materials. There should also be a system in place for proper collection and safe disposal of used sanitary materials.

Indicators in MHM for health centres

- All female patients, carers and staff have access to private sanitation facilities to safely manage their menstruation.
- All female patients, carers and staff have access to sanitary materials within the health facility if necessary.
- MSF-OCA carries out hygiene promotion activities on MHM in all its health centres
- All the sanitation facilities, sanitary material and collection of used sanitary material are culturally appropriate.

Essential requirements for MHM

18 aspects were identified as essential for women to manage their menstruation in a health facility.

MHM monitoring tool (essential requirements)

The tool has been designed to complement the WASH sanitary surveillance form to enable the integration of MHM into the watsan program

Design & implementation tool for MHM in MSF Health Facilities.

This tool is to be used at the initial stage to assess the situation regarding MHM in health facilities to help WatSan officers, medics and logisticians to design an action plan to implement the proposed standards and essential requirements on MHM for health structures

Implementation

- The sanitary material should not be provided as individual items; it is better to prepare a MHM kit according to findings from the MHM design & implementation tool.
- Organize hygiene promotion sessions on MHM to sensitize women to manage menstruation safely
- The showers and latrines must complete the requirements in terms of privacy, accessibility, safety and access to water described in the proposed MHM essential requirements and MSF WASH essential requirements.
- The collection of used pads must be discreet otherwise it can be embarrassing for women to dispose and unpleasant for the cleaner who disposes of the waste.
- The MSF-OCA staff members need to get some understanding of MHM to enable them to talk to patients and carers about the topic.

Conclusion

To provide sanitation facilities, which can meet the needs of women with a particular focus on MHM, requires the integration of MHM into the existing MSF-OCA WASH essential requirements for Health Structures. This study has proposed a MHM program including: standards, indicators, essential requirements and tools to be used to design, implement and monitor the MHM needs in MSF-OCA health structures worldwide.

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Abbreviations

ACF	Action Contre la Faim (Action Against Hunger)
ANC	Ante Natal Care
DTC	Diarrhoea Treatment Centre
HCWM	Health Care Waste Management
HQ	Head Quarter
ICRC	International Committee Red Cross
IFRC	International Federation Red Cross
IPD	In Patient Department
LGBTI	Lesbian, Bisexual, Gay, Transgender or Intersex
MDG	Millennium Development Goal
MHM	Menstrual Hygiene Management
MOH	Ministry of health
MSF	Médecins Sans Frontières/ Doctors without Borders
MSF OCA	Médecins Sans Frontières Operational Centre Amsterdam
MTL	Medical Team Leader
NGO	Non-Governmental Organization
OPD	Out Patient Department
PNC	Post Natal Care
RTI	Reproductive Track Infection
RUMP	Reusable Sanitary Pad
SDGs	Sustainable Development Goals
SHARE	Sanitation and Hygiene Applied Research for Equity
UNHCR	United nation High Refugee Committee
UNICEF	United Nation Children's Fund
WASH	Water Sanitation and Hygiene
WEDC	Water, Engineering and Development Centre
WHO	World Health Organization

1 Introduction

Médecins Sans Frontières (MSF) is an international, independent, medical humanitarian organization that delivers emergency aid to people affected by armed conflict, epidemics, natural disasters and exclusion from healthcare. MSF offers assistance to people based on need, irrespective of race, religion, gender or political affiliation.

MSF is also a Non Governmental Organization (NGO) working in some 70 countries worldwide. As it is a medical organization, Water, Hygiene and Sanitation (WASH) play an important role in the overall goal of MSF that is 'to preserve life and alleviate suffering, while protecting human dignity and seeking to restore the ability of people to make their own decisions' (MSF, 2007).

Access to WASH has an important role in the prevention and control of a large number of diseases due to the intrinsic link between WASH and health. Furthermore, provision of safe water and sanitation helps to improve the quality of life, as well as, the dignity of those served (MSF, 2007). Therefore, MSF has developed policies, guidelines and WASH essential requirements to be implemented in its health structures and emergency settings all over the world.

The MSF water, hygiene and sanitation essential requirements focus on water supply, medical waste management, safe excreta disposal, wastewater disposal, dead body management and vector control (control of vector-born diseases such malaria, dengue, leishmaniasis and sleeping sickness). However, gender specific requirements, including Menstrual Hygiene Management (MHM), have seldom been mentioned in these documents, technical guidelines or policies. The gender approach generally consist of a label 'female toilet' and 'male toilet' without any difference in terms of design and user needs. This situation is common not only to MSF health structures because generally, the water and sanitation standards for health centres are based on the World Health Organization (WHO) "Essential Environmental Health Standard for Health Care Settings in medium and low-income countries" (WHO, 2008) which itself are based on MSF requirements, and this one does not provide any recommendation on MHM. Fortunately, this situation is changing; a recent report published by WHO (2015) has included some requirements and target indicators for MHM in health care settings.

As part of the WASH procedures, MSF-OCA has developed assessment and monitoring forms, based on the MSF WASH Essential Requirements, to be completed every four months in all the health centres supported by the organization. It gives a general picture of the Water, Hygiene and Sanitation situation in the health centres and what needs to be done to meet those MSF WASH requirements. This is a systematic exercise conducted by international or national staff in the field; the results are used to plan and design the WatSan strategy to be implemented and to monitor the WASH situation in health structures, projects and countries

where MSF works. Those findings are shared with the watsan referents/advisors at HQs level. As mentioned before, these tools do not have any relevant information about gender and MHM.

MSF is conscious of the implications Gender and MHM have in its interventions in health facilities, not only for Water, Hygiene and Sanitation; but also for areas such as infection control, sexual violence and reproductive health. As a result of that, MSF-OCA (Operational Centre Amsterdam) has considered gender and MHM to be part of its strategic plan 2015 – 2019. Thus medical objective four. 'Improve the effectiveness and efficiency of health care management, with a focus on our hospitals and complex medical programmes' and action 4.3 'Define and meet standards for health care facilities and services, to be based on function, capacity and context' (MSF-OCA, 2015a) addressed this issue.

1.1 MSF aim and questions for this research

MSF-OCA set the following objectives and questions for this research

To improve MSF-OCA's capacity to address the specific needs of women who come for consultation and treatment in our Health Facilities and improve quality of care.

Questions?

- Are our Health Facilities safe for women and girls? Do they feel comfortable in our care?
- Are the water, hygiene and sanitation facilities culturally appropriate?
- Do the facilities provide adequate privacy and space for menstrual hygiene management?

1.2 Gender

According to House et al (2014) gender refers to the social norms between males, females and people of other gender identities; gender determines the roles, responsibilities, opportunities, privileges, expectations, limitations for males, females and other gender and sexual identities; Lesbian, Bisexual, Gay, Transgender or Intersex (LBGTI).

Health Facilities are public places that can be compared to schools with the difference that in health centres, women and men, are going in and out on a daily basis throughout the year. In addition to that, people come to the heath centres because they are sick or because they have a sick relative to take care of. Therefore, inadequate WASH facilities in a Health Centres can be translated into unhealthy hygiene practices that can put patients, carers and staff at risk.

A gender approach in WASH for places such as health centres, should guarantee that the facilities suit the needs of all users regardless of gender. 'Gender refers to the fact that people experience a situation differently according to their gender. Sex refers to biological attributes of women and men. It is natural, determined by birth and, therefore, generally unchanging and universal' (Sphere Project, 2011).

Access to appropriate and, most importantly, gender-sensitive WASH facilities would have a significant positive impact on both the daily lives and long-term prospects of millions of women and girls that are currently living without them (House et al., 2012). Improving sanitation facilities does not benefit only women; those interventions benefit the whole community.

As part of the WASH procedures, MSF has published the handbook "Public Health in Precarious Situation" which provides all necessary technical information in terms of software and hardware to be followed before, during and after construction of sanitation facilities, 'Gender has to be taken into consideration (separate excreta disposal for men and women might have to be constructed, certainly in public building like school and health structure)' (MSF, 2010a 189pp).

1.3 Menstruation and Hygiene Management

Menstruation is a natural process that occurs in women during their reproductive age. It comes every month and lasts on average five days. For women to handle menstruation in a hygienic way, it is essential to have access to proper sanitation facilities that can provide privacy, as well as, water, soap and proper waste management. Women need a private space to change their sanitary cloths/pads (disposable or washable) a waste container for disposal of single use pads, water and soap to wash and dry cloths/pads. Moreover, water and soap are essential for hand washing or to clean their bodies.

Currently, the sanitation facilities existing in MSF Health Facilities do not fully meet the gender and MHM needs of women. Furthermore, there is no clear information on how women, patients and carers, manage their menstruation while in MSF health structures; if they use sanitary pads, cloths or rags or; how they clean or dispose them. Although, the MSF technical guidelines recommend that special facilities for menstruating women and girls might have to be considered e.g. discreet washing places for sanitary towels' (MSF, 2010a:189).

MHM has been a neglected topic for years in the WASH sector, but it has gained an increase attention over the past 10 years, mainly for schoolgirls and humanitarian emergency responses (Sommer, 2012). Nevertheless, no research has been published on MHM specifically for Health Structures. The WHO recent report (2015) "WASH in health care facilities, status in low- and middle-income countries and way forward" has proposed a target of universal access to basic WASH services in health care facilities by 2030, as part of the post-2015 Millennium Development Goals.

The target is that 'All health care facilities provide all users with menstrual hygiene facilities' and the indicator is 'Percentage of health care facilities with a private place for washing hands, private parts and cloths; drying reusable materials; and safe disposal of used menstrual materials. (WHO, 2015).

1.4 Research topic

Gender and MHM needs in MSF Health Facilities.

1.4.1 Focus on MSF- OCA interventions

MSF as a movement is divided into five operational centres:

- OCG is the Operational Centre in Geneva.
- OCP is the Operational Centre in Paris.
- OCB is the Operational Centre in Brussels.
- OCBA is the Operational Centre Barcelona Athena based in Barcelona.
- OCA is the Operational Centre in Amsterdam.

As a movement, all the OCs shared the same standards in WASH expressed in the document "Essential requirements in Water and Sanitation for Health Facilities". (MSF, 2004) Furthermore, all the OCs work following the same technical guidelines described in the MSF handbook "Public Health Engineering in Precarious Situation", known as the 'WatSan bible' among the MSF WASH staff. The dissertation refers to MSF as the movement while the study focuses on MSF-OCA interventions.

1.4.2 Focus on emergencies

Harvey et al (2002) define emergency as a 'result of a man-made and/or natural disaster, whereby there is a serious, often sudden, threat to the health of the affected community which has great difficulty in coping without external assistance'.

MSF is a medical humanitarian organization that delivers emergency aid to people affected by armed conflict, epidemics, natural disasters and exclusion from healthcare. MSF OCA works principally to assist populations caught up in humanitarian crises where there is a high level of medical need, the majority of MSF-OCA activities take place in health facilities providing medical care to populations in acute emergencies through to chronic emergencies and established situation.

1.4.3 Focus on sanitation facilities in MSF-OCA Health Care Facilities

Adequate Water, Hygiene and Sanitation are essential for providing basic health care; they are essential for curative intervention but also for preventative interventions (MSF, 2004) Improving WASH in health care facilities is now beginning to get the attention of governments, donors and the international public health community (WHO, 2015) because poor sanitation in health facilities affects the health and dignity of patients and carers. Moreover, women can be at risk if there is a lack of sanitation facilities. Health facilities include hospital, clinics and practitioners facilities.

1.4.4 Focus on female patients and carers

Patients and carers are the beneficiaries of MSF interventions; they are the principal users of MSF's sanitation facilities in health centres. Therefore, the facilities must be culturally appropriate to ensure patients and carers use them but also with a good level of hygiene to minimize the risk of infections.

1.5 Research aims and objectives

1.5.1 Principal research question

How can sanitation facilities in MSF-OCA Health Facilities meet the needs of women (focusing on MHM)?

1.5.2 Research objectives

Objective 1: To gain an overview of the current and best practices in gender and WASH, including assessment tools, with a focus on Health Facilities.

Objective 2: To develop a tool to assess the Gender and Menstrual Hygiene needs in MSF-OCA Health Facilities and to pilot it for further improvements.

Objective 3: To produce a list of essential requirements and indicators for gender and MHM including promotion, provision and management of specific hardware/consumables.

Objective 4: To provide recommendations in terms of infrastructure to improve the sanitation facilities to meet the needs of women within MSF-OCA Health Facilities

1.6 Dissertation overview

The dissertation is divided into six chapters.

- Chapter one introduces the study and presents the objective and principal research question.
- Chapter two presents the literature review, the searching strategy, and the overview of situation on gender and MHM, WASH, emergencies response and health centres. Moreover, other important aspects to be considered in Gender and MHM.
- Chapter three presents the methodological approach of the study, the data collection methods used and information about the fieldwork.
- Chapter four presents the results of the fieldwork.
- Chapter five presents the discussion of the findings.
- Chapter six presents the conclusions and recommendations of the study.

2 Literature review

2.1 Introduction

Worldwide, women and girls have developed their own strategies to manage their menstruation, these strategies can be different from one country to another and also within one country. One of the main challenges for women in low-middle income countries is the lack of sanitation facilities to change, wash their hands and dispose of their sanitation material. Those challenges can be greater during humanitarian responses and in public places such health facilities.

The aim of this literature review is to get an overview of the available information clustered in three main aspects involved in this study; the Venn diagram, figure 2.1, was created to show the relationship between; WASH and health facilities, WASH and gender focus on MHM and WASH and emergency. The literature review explores the current situation; policy, indicators, guidelines, best practices and how the implementation takes place.

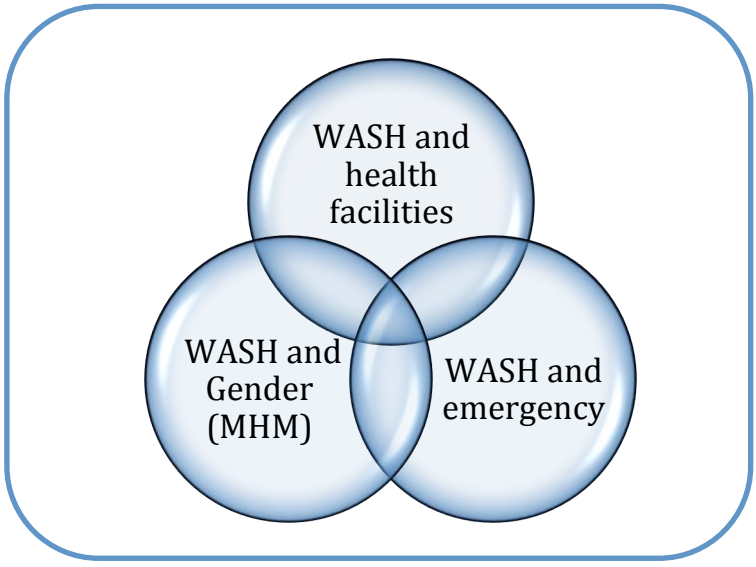

Figure 2.1 Literature review structure

Section 2.2 explains the methodology used to search for the information and section 2.3 the type of literature assessed. Sections 2.4 to 2.6 look at available literature divided into the three broad aspects shown in figure 2.1. Sections 2.7 to 2.9 refer to the point where the previous aspects overlap: **WASH, health facilities and emergencies**; **WASH, gender (MHM) and emergency** and finally **WASH, gender (MHM) and health facilities**. Section 2.10 refers to the point where the three aspects overlap, sanitation/gender (MHM) in health facilities in emergency. Sections 2.11 to 2.13 are the crosscutting issues, sanitary material for MHM, waste management for MHM and WASH/MHM relevant for this study. Comments about gaps are addressed at the end of each section. The review is concluded in section 2.14 with a

summary of the most relevant aspects taken forward in this study to assist in answering the research question and achieving the objectives.

2.2 Literature review methodology

The first step was to study the MSF internal and external documents, WASH policy, WASH requirements and WASH technical guidelines. Then, documents from other NGOs, WHO and UN agencies were examined; the interest was to find research, guidelines, standards and protocols of WASH and their recommendations in relation to Gender and MHM as well as the strategies used by those actors in the sector. The second step was to identify published studies on Gender and MHM, linked to WASH in middle and low-income countries, to gather information about best practices and recommendations based on existing and former projects. A Keywords list was developed to search for information starting from WASH in emergencies, health facilities and gender and MHM to narrow it down to MHM in health centres when responding to humanitarian crisis.

Table 2.1 is a summary of the search strategy. Appendix one presents a complete list of the keywords and their combinations used to search for information.

Table 2.1 Literature search strategy

Source of information	Justification
MSF research website	To find other research done in MSF related to this topic. There has been only one example, “Gender and sanitation tool for displaced population”.
MSF operational library and guidelines	To study the MSF WatSan protocols and guidelines to analyse what had been considered for MHM and gender.
NGO websites	ICRC, WaterAid, Oxfam, WASHplus, Share, ACF and others, have published documents about WASH, Gender or MHM in the humanitarian sector.
WHO website	To have a look at the guidelines for health centres.
WEDC resource centre	To look at previous dissertations on similar topics, MHM and gender.
WEDC knowledge base	To search all relevant documents published by WEDC on MHM and Gender.
PubMed	PubMed is a data base with lot of information on health, however, the search did not provide much results.
Library catalogue plus	Library catalogue is a useful tools for gathering information, however there were not many results on this particular topic.
Google scholar	Google scholar is easy to use and provides school literature with information about how many times a particular article/document has been cited by other researchers.
Metalib	This is also a database with information on different topics; some documents were found through to this site.
Bibliographies/references	This provides better keywords and directs the researcher to good sources of information.
Personal contact	To ascertain the point of view of people working in the sector, specially people from the WASH sector.
Mendeley	Mendeley is a reference program, when a document is imported is possible to track the correct reference, then the website shows documents related to the topic.

Additionally, the snowballing method was used; this was perhaps one of the greatest methods to search for information on WASH, MHM & gender and emergency responses. The process commenced by skimming the first information compiled and observing their references. Then, the cited documents were searched using Google scholar.

Mendeley, the citation program, was also useful for the snowballing method. However, some reports or guidelines cited by other researchers could not be found, as they were not yet public. The searching was a challenge because there is not much academic literature on MHM.

2.3 Type of literature

During the past years there has been an increasing interest on MHM in the WASH sector. Nevertheless, most of the available information comes from practitioner-based documents, called grey literature, developed by UN agencies and NGOs. Most reports and studies in MHM have been published during this century; it shows how this topic has been neglected for many years.

The situation is a bit similar when looking for information on WASH and emergency responses, as well as, WASH for health facilities. Most information is part of the grey literature developed by actors working in the humanitarian sector, NGOs, UN agencies, the World Bank and organizations doing development in middle and low-income countries.

Furthermore, the search provided some peer-reviewed studies published in journals like Gender & Development, Waterlines, Law and Gender, Municipal Engineering, Journal of Water, Sanitation and Hygiene for Development, Compare (a journal of comparative and international education), Agenda (empowering women for gender equity), Journal of the Royal Society of Medicine, Emerald Insight and PlosOne, which is a peer-reviewed public library online.

2.4 WASH and Emergency

Water and Sanitation are critical determinants for survival in the initial stages of an emergency (Sphere Project, 2011). Also, water is indispensable for human life, in adequate quality and quantity; without water human beings cannot live for more than a few days (MSF, 2004)

Sanitation has been defined by WHO as ‘the means of collecting and disposing of excreta and community liquid waste in a hygienic way so as not to endanger the health of individuals and the community as a whole’ (WHO, 1987).

The main objective of water and sanitation programs during humanitarian responses is to manage excreta to reduce the transmission of diseases from faeces to mouth through the

promotion of good hygiene practice, provision of safe water and the reduction of environmental risks (Brown et al., 2012; UNICEF, 2005; Harvey et al., 2002; Sphere Project, 2011; MSF, 1994; MSF, 2010) According to Harvey et al (2002) sanitation includes excreta disposal, solid waste management, waste management at medical centres, disposal of dead bodies, waste water management and hygiene promotion.

2.4.1 Guidelines and protocols

There are series of guidelines and protocols among the agencies and organizations doing WASH in the humanitarian sector. The main purpose of these protocols is to standardise procedures to be able to carry out the activities following some steps to fulfil a certain level of quality.

The most widely known and internationally recognized set of standards for humanitarian response is the Sphere Project since its first edition published in 1998 and the subsequent editions from 2000, 2003 and the current version from 2011 (Sphere Project, 2011). Chapter two of the Sphere project defined series of minimum standards in WASH providing key actions, key indicators and guidance notes for hygiene promotion, water supply, excreta disposal, solid waste management, vector control and drainage considered as minimum for the population affected by an emergency.

However, not all the organizations work based on the Sphere standards. That is the case of MSF who have defined their own WASH technical guidelines for setting up public health programs. The “Public Health in Emergency Situations” (MSF, 1994) and the current version “Public Health Engineering in Precarious Situation” (MSF, 2010). Then, in 2005 MSF developed the document “Essential Water and Sanitation Requirements in Camps”, to contribute towards reducing water, hygiene and sanitation diseases within the camps (MSF, 2010), these guidelines provided indicators for staff management, water supply, excreta disposal, wastewater disposal, domestic waste disposal, dead body management and control of vectors considered as essential during an emergency response.

The main difference between MSF WASH guidelines and the Sphere project standards is that MSF states that there is a difference between “essential” and “minimum”. MSF is of the opinion that if there is a minimum; it is because there is also a maximum. The Oxford dictionary definitions can explain better the differences

Essential: ‘Absolutely necessary; extremely important’

Requirement: A thing that is needed or wanted

Also, there are some differences in terms of indicators and procedures. The Sphere minimum standards in WASH (Sphere Project, 2011) and MSF essential requirements for camps (MSF,

2010) do not apply to health structures, for this reason they are not displayed in this literature review.

2.5 WASH and Health facilities

Water and sanitation in health facilities includes the same aspects mentioned previously for emergency responses; water, excreta disposal, medical waste disposal, hygiene promotion, dead body management, wastewater management and vector control.

2.5.1 Guidelines and protocols

The core guidelines for health facilities is the "Essential Environmental Health Standards in Health Care Settings" (WHO, 2008) which provides recommendations and guidance in terms of sanitation for large health care settings, facilities with outpatients and inpatients departments and small health care settings, facilities with out patients and outreach activities, with the difference that in facilities with inpatients department the disease transmission risks are substantial, given the presence of infectious patients and extended contact with other patients, staff and carers (WHO, 2008).

Table 2.2 shows a summary of the essential environmental standards to be implemented in health facilities.

Table 2.2 WHO standards in sanitation and hygiene in health care facilities (WHO,2008)

Item	Recommendation
Water quantity	5 to 400 litres/person/day.
Water access	On-site supply.
Water quality	Less than one E. coli per 100ml. Presence of residual disinfectant.
Sanitation quantity	In patients setting. One toilet for every 20 users
	Out patient setting. At least four toilets.
	Separate toilet for patients and staff.
Sanitation access	On-site sanitation facilities.
Sanitation quality	Facilities should be appropriate for local technical and financial conditions: safe, clean accessible to all users including those with reduce mobility.
Medical waste disposal	Health-care waste is segregated, collected, transported, treated and disposed of safely.
Wastewater management	Wastewater drainage from health facility is built and managed to avoid contamination of the health care setting or the broader environment.
Showering facilities	Separate showers may be needed for staff and patients, and for both sexes, to ensure that all groups have adequate privacy and safety.
Hygiene promotion	Correct use of water, sanitation and waste facilities is encouraged by hygiene promotion and by management of staff, patients and carers.
Hygiene	A reliable water point with soap or alcohol based hand rubs available in all treatment areas, waiting rooms and near latrines for patients and staff.

2.6 WASH and Gender (MHM)

Gender and WASH is about people benefiting from water and sanitation programs regardless of their gender. Gender equity is defined as parity between female and males in terms of fairness and justice in distribution of resources, benefit and responsibilities; men and women have different needs and those differences should be identified. (House et al., 2014).

2.6.1 Policy

The fact that menstruation is still considered as taboo in many parts of the world has implications at policy level (Winkler and Roaf 2014), most of the sanitation programs do not really consider strategies for MHM and the sanitation facilities do not address the specific needs for women and girls. Winkler and Roaf (2014) agree that even when MHM is a fundamental and integral part of WASH requirements, it is largely absent from the discourse, policy and practice on WASH.

In 2010 the United Nations General Assembly recognized the human right to water and sanitation and acknowledged that clean drinking-water and sanitation are essential to the realization of all human rights (UN, 2010); The UN General Assembly called for universal coverage, highlighting the need to address and monitor inequalities in access to proper sanitation. This resolution was part of the plan to achieve the Millennium Development Goal (MDG), the eight-target goals that UN state members committed to 'build a safer, more prosperous and equitable world' (UN, 2009) to be achieved by 2015. The post-2015 targets called the Sustainable Millennium Development Goals (SDGs) are under discussion and MHM for health care facilities has been proposed as an indicator for the United Nations programs (WHO, 2015).

Apart from the right to water and sanitation, Winkler and Roaf (2014) hint at the right to dignity and privacy and it may be in the aspects of dignity, privacy and gender equality where the human rights perspective helps most in developing the understanding of what is needed for women and girls to be able to manage their menstruation adequately and make menstrual hygiene a priority for decision makers. Privacy can be compromised if menstruating women do not have access to safe facilities to change their menstruation material, to wash or to dispose of the used material and clean their bodies. That is the situation most women face when attending public places such as sanitation facilities in Health Facilities. (Sommer, 2010; House et al., 2012; Tjon A Ten, 2007; Sommer et al., 2013).

Furthermore, it is difficult for women to maintain dignity if one of the aspects of being female (menstruation) is an embarrassment and shame; for women who do not have access to safe menstrual hygiene material, there is always the fear of smelling, staining and leaking (Winkler and Roaf, 2014) Dignity is not easy to maintain when women are forced to use unhealthy material to deal with their menstruation every month; when women use material that causes

discomfort, itching and infections; when women face restrictions and limitations based on cultural beliefs.

According to Winkler and Roaf (2014), in the context of menstrual hygiene, States are required to take the necessary measures to enable women and girls to deal with their periods adequately. Tjon A Ten (2007) suggests that developing countries must increase the accessibility, availability, affordability and acceptability of sanitary napkins and other protective material for menstrual hygiene because this action could help to achieve five of the eight MDM while House et al. (2012) state that the MHM is linked to seven of the eight goals because the MHM program is crucial for achieving universal primary education, promoting gender equality and empowering women, preventing child mortality, improving maternal health, combating HIV and ensuring environmental sustainability.

2.6.2 Practice

The empirical evidence on the importance of addressing MHM in school environments continues to grow as more researchers and practitioners undertake research and intervention projects in MHM for schoolgirls (Sommer, 2010).

The study done by Sommer et al. (2014) a “comparison of the menstruation and education experiences of girls in Tanzania, Ghana, Cambodia and Ethiopia” concluded that the primary challenges for girls to manage their menstruation at the school was insufficient latrines, lack of privacy, insufficient latrine segregation, insufficient water supply and the lack of emergency sanitary material. A UNICEF study in Niger and Burkina Faso made similar conclusions(West and Central Africa Regional Office, 2013). Therefore, the Unicef recommendation was to create a supporting environment for MHM to guarantee the provision of adequate WASH facilities at schools, with water, gender-segregation, clean latrines and hand washing facilities with soap as a necessary prerequisite for MHM, as well as, discreet disposal for sanitary materials and a place to wash / change for girls.

Nahar and Ahmed (2006) presented a report on how Bangladesh addressed the need for girls at schools; in that case a WatSan program was piloted in some schools; the latrine designs included washing and drying facilities of rags and the provision of cupboards to keep rags or sanitary napkins. The waste disposal systems were composting pits with cow dung to dispose used sanitary napkins as an alternative to the incinerators. Finally, the government recognized the special needs of girls and incorporated those results in designing water and sanitation facilities in schools.

On June 23rd, the Ministry of Education in Bangladesh (2015) published a circular to improve the condition of toilet and sanitary conditions in higher and secondary schools, as a result of a

study which showed that the ‘poor management of toilets in educational institutions adversely impact on female students health and attendance because during menstruation most of the female students miss the school and they miss opportunities because they cannot meet the pre-requisites of 80 per cent attendance at their classes’ (Ministry of Education Bangladesh, 2015).

A similar situation happens in Uganda, where according to WASHplus (2014) nearly half of Ugandan schoolgirls miss one to three school days every month during menses, affecting their overall performance and potentially contributing to drop out. The lack of sanitation facilities and poor access to sanitary material was the main factor affecting school attendance. In South West Uganda WASHplus started a MHM campaign to teach youths living with HIV and their carers to safely and hygienically manage menstruation. WASHplus teaches participants how to make their own Reusable Sanitary Pad, called RUMP, using cotton cloths, towelling, buttons, needles, and strings; the campaign involves boys and men.

2.6.3 Women participation

Women and girls are often excluded from decision-making. This also happens at household level where they have little control of whether they have access to a proper private latrine or if they can get money to buy sanitary material. Women can and do make a contribution to water and sanitation services and do have a right as human beings to participate in issues that affect their lives and those of their families.

Women participation is an essential part of any WASH intervention. It is crucial to know what women and girls usually use as sanitary material, rags/cloths, sanitary pads or any other material; this information needs to be part of the planning process so that the required materials are provided. Nawaz et al. (2010) suggest that as long as cloths are provided, these should be of a dark colour and never white. Furthermore, women and girls must be asked what they want in terms of facilities for managing their menstruation, if facilities are not exactly what women would feel secure to use, then it is unlikely that they will be used.

The evidence report “Putting women in the centres of water supply sanitation and hygiene” (Fisher 2006) presents different cases of successful projects in water and sanitation where women were involved, she also states that 122 water projects found that the effectiveness of a project was six to seven times higher where women were involved than where they were not.

2.6.4 Sanitation Infrastructure for MHM

Sanitation facilities are essential to manage menstruation hygienically and privately; access to toilets and water has a direct influence on MHM practice but in many cases engineers do not consider the needs of women. Worldwide, women are the majority users of properly design

latrines because of their higher concerns over privacy (Reed et al., 2007). Therefore, 'to design sanitation facilities without considering the needs of women when they are menstruating is poor engineering because it fails to meet the needs of more than half of the prospective users' (Reed et al., 2007pp28). Table 2.3 shows a compilation of guidance recommendations for MHM infrastructures based on the best practices suggested by different practitioners.

Table 2.3 Recommendations for a latrine to meet women demands for menstruation

	Recommendation	Document
Facility	For effective MHM it is essential to have toilet facilities along with water and soap so that females have a safe place to change and clean themselves. Especial facilities for menstruating women and girls might have to be considered (discreet washing places for sanitary towels). All health care facilities provide all users with hand washing and menstrual hygiene facilities.	(Mahon et al., 2015) (MSF, 2010) (WHO, 2015)
Location	The latrines must be located the way to minimise security threats to users, especially women and girls, throughout the day and the night.	(Sphere Project, 2011)
Privacy	Separate, internally lockable toilets for women and men are available in public places, such as markets, distribution centres, health centres and schools. Provide the necessary privacy for women to wash and dry sanitary protection cloths.	(Sphere Project, 2011) (UNICEF, 2005)
Hygiene	Ensure enough water is available for women to be able to wash themselves adequately and in private. 'In case the sanitary towels of menstruating women and girls are washed and reused, it might be appreciated if a discreet washing areas with drying lines is foreseen nearby the improve trench latrines for the ladies' There should be protected washing area for women to wash rags and other material used during menstruation. Proposed post-2015 indicator from WHO "percentage of health care facilities with a private place for washing hands, private parts and cloths; drying reusable materials; and safe disposal of used menstrual material"	(Eade and Williams, 1995) (MSF, 2010pp205) (Eade and Williams, 1995) (WHO, 2015)
Waste disposal	Sanitation facilities as latrines should allow for the disposal of women's menstrual hygiene materials and provide women with the necessary privacy for washing and drying menstrual hygiene materials. There have been initiative reported successful adapted latrines in Asia, which includes availability of sanitary napkins at the toilets and incinerator for disposal. If latrines get blocked with rags or other material used as sanitary protection, a container at all latrines might be appropriate.	(Sphere Project, 2011) (Mahon and Fernandes, 2010) (Eade and Williams, 1995)

In general all the guidelines agree on the same principles, privacy, access to water, discreet washing/drying places and waste disposal system. Some guidelines are more specific than others including provision of sanitary material and final disposal systems as part of the sanitation facilities.

2.7 WASH, Health Facilities and Emergency

Water and sanitation are essential for most of the curative procedures, e.g. water for surgical procedures, delivery room and rehydration. Water and sanitation are also essential for preventive intervention. WASH allows the curative actions to be undertaken and contribute to the reduction of nosocomial infections (MSF, 2004). Nosocomial infections, also called “hospital-acquired infections”, are infections acquired during hospital care, which are not present or incubating at admission (WHO, 2002).

Emergency or isolation health care settings include isolation or treatment facilities for routine emergencies as well as infectious diseases such as Cholera, Severe Acute Respiratory Syndrome (SARS) and Viral Haemorrhagic Fever (Marburg or Ebola), and Therapeutic Feeding Centres in emergencies. These settings may be stand-alone in crises (open situations) or set up under tents in refugee camps (closed situations); alternatively, they may be attached to, or part of, an existing health-care setting (WHO, 2008).

Intensive management of water supply, sanitation, hygiene and waste is required to protect staff, patients and carers from diseases such as Cholera and Viral Haemorrhagic Fever. Some specific measures are required for each situation (WHO, 2008).

2.7.1 Guidelines and protocols

MSF WASH interventions in health centres are based on the “Water and Sanitation Essential Requirements for Health Centres” (MSF, 2004) developed by MSF following the guidance recommendations given by WHO Environmental Essential Requirements for Health Care Settings (WHO, 2008). The MSF essential requirements are applicable to the smallest health posts through to the largest health structures and acute emergencies through to chronic emergencies and stabilised situations. Table 2.4 shows a summary of MSF essential requirements for health centre.

Table 2.4 Summary of MSF essential requirements (MSF,2004)

Item	Recommendation
Staff	Identified and trained staff in WASH. Provide necessary administrative and technical tools. Vaccine to all staff expose to health risk. Provide access to Post-Exposure Prophylaxis.
Water quantity	Between 2l to 400 l per/person/day depending of the health activity.
Water access	Water is accessible for patients, carers, visitor and staff. Reliable water point is accessible within the health facility.
Water quality	Max 10 E.coli/100ml. Residual disinfectant. Low Turbidity. Acceptable for the users.
Sanitation quantity	In-patients: 1 latrine/20 users. Considering each patient has a carer.
	Out-patients 1 staff + 1 male + 1 female + 1 children.
Sanitation access	Latrines are easily accessible.
Sanitation quality	Latrines are technically appropriate, appropriate for the users, safe located and convenient hand washing.
Medical waste disposal	Provide safe and secure segregation, collection and temporary storage, potential treatment and final disposal of all type of medical waste.
Wastewater management	Provide appropriate wastewater disposal considering the four categories, clean wastewater, dirty wastewater, black wastewater and rain and runoff.
Showering facilities	Provide bathing facilities in sufficient quantity, appropriate for the users, a safe location with water supply close and facilities connected to wastewater facilities.
Washing area for in-patients	Provide washing area for in-patients separate from the one for dishes, this must be appropriate to the users, with water supply close and facility connected to a wastewater system.

The MSF WASH requirements do not provide specific recommendations in terms of hygiene promotion because that is part of the medical activities. The requirements also give recommendations in terms of dead body management and vector control but those aspects are out of the scope of this study.

2.8 WASH, Gender (MHM) and Emergency

Providing basic needs such as food and medicine in emergency situations gets priority as they are essential for life while the pressing need of securing menstrual hygiene is often neglected (Wickramasinghe, 2012).

2.8.1 Guidelines and Protocols

The Sphere standard for Water, Hygiene and Sanitation includes indicators and guidance notes on MHM, under the excreta disposal section, since the first edition in 1998 to its subsequent ones from 2000, 2004 and the latest version from 2011. Table 2.5 shows the indicators and guidance notes for each Sphere throughout the years.

Table 2.5 Design and construction of toilets, differences between Sphere editions

1998 Edition	**Key indicator** Latrines allow for the disposal of women's sanitary protection, or provide women with necessary privacy for washing and drying sanitary protection cloths. **Guidance note** Women and girls of reproductive ages should have access to suitable materials for the absorption and disposal of menstrual blood. If these materials are to be provided by the agency, women should be consulted on what is appropriate. Where cloths are washed, dried and re-used, women should have access to a private place to do this in a hygienic way.
2000 Edition	Exactly the same as in 1998 edition.
2004 Edition	**Key indicator** The same from 1998 and 2000 **Guidance note** Women and girls who menstruate should have access to suitable materials for the absorption and disposal of menstrual blood. Women should be consulted on what is culturally appropriate
2011 Edition	**Key indicator** Latrines allow for the disposal of women's hygiene materials and provide women with necessary privacy for washing and drying menstrual hygiene materials. **Guidance note** Women and girls of menstruating age, including schoolgirls, should have access to suitable materials for the absorption and disposal of menstrual blood. Women and girls should be consulted on what is culturally appropriate. Latrines should include provision for appropriate disposal of menstrual material or private washing facilities.

There are no major differences between editions. However the latest version has added more information in appropriateness of the material provided and provision of discreet laundry in the hygiene and non-food items sections. It appears that the Sphere project covers all the aspects on MHM in emergencies, provision, consultation, infrastructure and final disposal of menstrual hygiene material; but apparently there is no information on how to implement the recommendations; there is no specification in terms of quality for sanitary material colour, type of cloths and how absorbent the cloths/pads provided should be.

Apart from the Sphere project, most NGOs have their own protocols and guidelines for WASH with some recommendations in MHM during humanitarian responses and here are some examples of what those guidelines have considered in this situation.

The second edition of MSF WASH guidelines, which is the handbook "Public Health Engineering in Precaution Situation" (MSF, 2010), is the first MSF WASH document to refer to MHM; it suggests some questions for data collection during the planning stage of an intervention; questions like what goods women normally use during menstruation, the supplies available and if there are special facilities foreseen where the fabric used as sanitary towel can be collected/washed (MSF, 2010) are part of the assessment form. Furthermore, In 2013 MSF-OCA published the report "Addressing water and sanitation needs of displaced women in

emergencies" (de Lange, 2013) The aim of this research was to develop a strategy to meet the needs of women in emergency situation such as refugee camps or displaced person camps.

Action Contre la Faim (ACF), in English Action Against Hunger, and its technical guidelines for WASH intervention, the handbook "Water, Sanitation and Hygiene for Population at Risk" briefly mentioned menstruation as something to be considered for excreta disposal; the two questions are, how women manage issues related to menstruation and if there are appropriate material or facilities available for this (ACF, 2005)

The International Committee of the Red Cross (ICRC) and its guidelines for "Water, Sanitation, Hygiene and Habitat in Prison" consider that women should be provided with suitable sanitary products to deal with their menstruation (including the disposal of materials) with dignity and privacy and that detained women should be provided with sufficient supply of such to meet individual needs (ICRC, 2012).

The "Emergency field handbook" from UNICEF has sets of assessment tools for different areas; the one for WASH enquires the population about the availability of hygienic items such soap and sanitary protection. Also, as a standard indicator the latrines should allow the disposal of women's sanitary protection and the provision of necessary privacy for women to wash and dry sanitary protection cloths (UNICEF, 2005). However, there is no guidance for provision. Perhaps the sanitary material is part of a hygiene kit for adults; this information is not specified.

UNHCR "handbook for emergency" in its checklist for non-food items proposed that women and girls have sanitary materials for menstruation (UNHCR, 2007) but also, when planning age and gender sensitive distribution, there are some questions to be answered; what hygiene products (including sanitary materials) women need or what products are the most appropriate (UNHCR, 2007) Beside that, what sanitary materials women and girls use and how this material can be best provided. One of the UNHCR objectives is to meet gender roles and cultural differences by distributing appropriate sanitary supplies for women and girls, based on their preferences, estimating that 25% of the total population during an emergency response are girls and women in reproductive age.

Oxfam, an NGO with a big WASH component, also published a guidance handbook called "Development and Relief, Public Health and Personal Hygiene" and from the gender point of view, Oxfam considers that needs for men and women are distinct and it is essential to consult both sexes about what is needed, and what is acceptable to them (Eade and Williams, 1995). These guidelines suggest that some arrangements need to be done to ensure that enough water is available for women to be able to wash themselves adequately and in private.

Likewise, women may also need protected washing areas where they can wash rags or other material used during menstruation without fear of being observed or ostracized. At the same time, Oxfam also recommend adequate provision of latrines for the disposal of rags or towels used during menstruation and in case rags or other material are blocking the latrines, the provision of bags or other containers should be appropriate inside female latrines.

Generally speaking all the guidelines consider a variety of measures to ensure dignity and privacy for women and girls to manage their menstruation. However, there are no clear procedures on how to implement recommendations given on MHM in terms of infrastructure or procedures on how to adapt existing latrines to meet women's demands.

2.8.2 Women participation

The core humanitarian standards (Sphere Project, 2011) states that during humanitarian response all women and girls of menstruating age are provided with appropriate materials for menstrual hygiene following consultation with the affected population. Women are the ones to propose or to decide what they need based on what they use or what they are familiar with. Nevertheless, in the author's recent experience in Nepal, consultation with women did not take place and women received the available material coming in hygiene kits designed outside of Nepal.

2.8.3 Practice

Sommer (2012) raised the situation in emergency responses where some NGOs provide cloths because of its acceptability; however, soap, water and proper places to dry the cloths are not considered. At the same time, Nawaz et al.(2010) recommend the provision of dark coloured cloths, never white; this is somehow contradicted based on the fact that most commercial sanitary materials are white; perhaps because of the association with cleanness. More than the colour, The University of Oxford (2013) remarks that any cloths designed for MHM should use fabric that is absorbent, releases soil and stains quickly even by hand washing and can dry quickly even in the absence of sunlight.

The Oxfam programme in Pakistan trialled the use of special menstruation units in addition to bathing units. The women's initial preferences were for menstruation units to be included within the existing screened bathing blocks; so, that when they were entering, no one would know their purpose. The hygiene units were included and women were able to wash and dry their menstrual cloths in some of the women's toilets and bathing units (Nawaz et al., 2010).

2.9 WASH, Gender (MHM) and Health Facilities

Sanitation facilities in public places, such Health Facilities, should suit the needs of all users. The demands of women, men and children are equally important. E.g. men's physical and

social needs have to be considered when designing urinals and women's physical and social needs have to be considered when deciding how to dispose of sanitary towels waste (Reed et al., 2007).

A recent report, "the status of WASH in health care facilities in Low and Middle income countries" published by the WHO (2015) aims to improve the water and sanitation situation in Health Facilities worldwide. Data from 54 countries, representing 66,101 facilities show that:

- 38% of health care facilities do not have an improved water source.
- 19% do not have improved sanitation.
- 35% do not have water and soap for hand washing.

Therefore, WHO has proposed a target and an indicator of universal access to basic WASH services in health care facilities to be achieved by 2030, in which, all health care facilities provide all users with menstrual hygiene facilities for women and girls.
The indicator proposed is 'percentage of health care facilities with a private place for washing hand, private parts and cloths, drying reusable materials; and safe disposal of used menstrual material' (WHO, 2015pp15). The WHO will develop strategies for the implementation and monitoring for the countries to adopt this approach. The establishment and enforcement of national standards for WASH in health care facilities is a measure to increase access and improve services (WHO, 2015).

Furthermore, MSF (2010) states that 'correct sanitation facilities are extremely important for female teenagers and adults, certainly during their period. It might therefore be important to integrate washing basins and drying lines within female sanitary blocks, for the ladies to be able to wash their reusable sanitary towels. A waste bin in the neighbourhood of the sanitary facilities is essential for disposal of (single use) sanitary towels'.

Nevertheless, the WHO initiative and MSF guidelines do not provide specific procedures of how to implement a MHM program in health centres.

2.10 WASH, Gender (MHM), Health Facilities and Emergency

The literature review did not provide any guideline or recommendation from WHO, MSF or any other WASH actor specifically for Gender (MHM) in health facilities during emergency situations.

This study aims to fill part of this gap by combining recommendations given by different NGO guidelines, MSF guidelines and the WHO proposed indicator to develop indicators, essential requirements and tools to assess, design and monitor a MHM program for MSF-OCA health

facilities during acute, chronic and stabilized emergency situations (out-patients, in-patients departments and outreach).

2.11 Sanitary material

There are different options for sanitary materials available in the market, disposable and reusable, whether to choose one or another depends on culture, preferences, conveniences and affordability (House et al., 2012).

Regardless of the specific material used by women during menstruation, whether cloths, disposable pads, tampons or any other, this must be safe and comfortable; it must not cause infections and it must be suitable for the purpose of absorbing or collecting menstrual blood avoiding leaking and staining (Winkler and Roaf, 2014).
Because the sanitary option materials are many, this literature review grouped them into two categories, disposable and reusable considering the ones most likely to be used by women in low and middle-income countries.

2.11.1 Reusable sanitary material

Re-usable sanitary material has been one of the common coping strategies used by women in low and middle-income countries.
Rags or cloths: According to Fisher (2006; UNICEF Bangladesh, 2008; Ahmed and Yesmin, 2008) rags are the most common material used to absorb blood among women in Bangladesh. Rags are easily available; they are made from old cloths and do not involve any cost. In Niger and Burkina Faso cloths are the most common sanitary material among school girls (UNICEF West and Central Africa Regional Office, 2013).

Reusable pads: Reusable sanitary pads can be made at home, by community groups but also by companies like Afripad and Markapad in Uganda(Crofts, 2014). Reusable pads are cost-effective compared to disposable pads and they can be more environmentally friendly (House et al., 2012).
WashPlus, for example, has a program in west Uganda to teach women how to make their own reusable pads called RUMP (WASHplus, 2014).

The main problem with the reusable materials can be the lack of clean water and soap to wash them properly and the difficulty to dry the material in the sun. Moreover, in some countries women have to find hidden places to dry their material because menstrual cloths should not bee seen by others. Ahmed and Yesmin (2008) reported a campaign carried out by WaterAid in Bangladesh to raise awareness to overcome those problems by providing access to water and soap while encouraging women to dry rags under the sun as a kind of disinfection. Unicef Bangladesh reported a similar program (UNICEF Bangladesh, 2008) Nevertheless, women face difficulties during the rainy season; one coping strategy described

by Unicef Bangladesh is the use of Kacha (cane basket) placed upside down over a cooling fire to dry the rags.

2.11.2 Disposable sanitary material

The global market offers many options of disposable sanitary materials like pads and tampons but also some women use toilet paper and cotton wool. There are also some locally and homemade disposable pads. House et al. (2012) present different options in the report "Menstrual Hygiene matters".

Some developing countries are also producing their own sanitary pads, The University of Oxford (2013) found more than 34 brands of disposable sanitary pads in Uganda, most of them made in the country, there are also cases in India (House et al., 2012).

The main problem with the use of disposable material is the cost and the final disposal. In Low income settings, most of the time women cannot afford to pay for disposable material every month; apart from that, there are no solid waste management systems in place (House et al., 2012) .

2.12 Waste management of sanitary material

An average woman throws away 125 to 150kg of tampons, pads and applicators in her lifetime (Bharadwaj and Patkar, 2004) Attention must be paid to ensure the disposal of sanitary napkins and other protective materials is done hygienically and ecologically. The production of menstrual protection alternatives, which will not have negative environmental effects or be a hazard to the environment, must be encouraged (Tjon A Ten, 2007).

In several developing countries, various ecological sanitation systems (composting and burning) are used to manage waste material for menstrual hygiene. These "best practices" may serve as a model. A sample of that can be seen in India (Tjon A Ten 2007)

If disposable sanitary pads are to be provided, then facilities for an effective collection and disposal are essential. Where waste-disposal is not effective, there will always be the risk that used sanitary pads will end up on piles of refuse thrown into the road or public areas (Nawaz et al., 2010).

Sommer et al. (2013) state that in low-income areas there were found to be a range of options used for disposing of menstrual materials in the home, these included burning, burying, throwing in the waste bin, pit latrine or flushing.

In some places sanitary material cannot be buried while in others places it cannot be burnt, knowledge of cultural beliefs may influence the types of acceptable menstrual waste disposal (Somme et al., 2013).

2.13 WASH and MHM tools

Assessment tools, follow up tools, final project evaluation tools are all useful and very common in the WASH sector. The author assessed a series of tools but this literature review displays the four following tools considered as very relevant to the purpose of this study.

2.13.1 MSF sanitary surveillance for Health Facilities

This tool is used in MSF-OCA to monitor the situation in Water and sanitation in health centres (MSF-OCA, 2010); the aim is to see to what extent the previously mentioned WASH essential requirements for health centres are implemented. The form is very short, only two pages, but includes all the aspects mentioned in the WASH essential requirements starting from the staff involved in the activities to the most technical aspects such water supply, excreta disposal, wastewater disposal and so on. This form is completed every four months and the results are shared with the MSF-OCA coordination team in each country and MSF-OCA WASH unit in Amsterdam.

2.13.2 Gender and Sanitation Tool (G&ST)

The Gender & Sanitation Tool is focused on the needs of women during emergency situation. The tool is a step–by-step guide on how to collect data required to define and design parameters for sanitation facilities, based on ad hoc consultations with women who will be their users (de Lange et al., 2014). The tool was tested in a refugee camp in South Sudan in 2012 giving positive results.

This tool is longer than the sanitary surveillance for health centres; the eight pages are divided into four sections.

- Before anything else.
- Initial choices.
- First phase.
- Second phase.

2.13.3 Toolkit five. Menstrual hygiene matters

The toolkit five “working with schools on MHM” (House et al., 2012) contains a checklist for supporting schools with MHM, as well as, technical design specifications for waste collection, latrines, bathing units/changing rooms and case studies giving examples of training and raising awareness on MHM. This tool provides the following general design elements to consider for latrines, showers and changing facilities.

- Segregated by gender.
- Accessible to disabled women and girls.
- Different facilities for students and teachers.
- Private and safe for women and girls, preferable with a screen or wall in front.

- Lock on the inside of the door.
- Water available inside the latrine cubicles and shower unit.
- Facilities incorporated within each unit for the discrete disposal of sanitary material.
- Easy to keep clean and hygienic all the time.
- Shower units have good drainage where the wastewater does not flow into the open.

2.13.4 Splash MHM tool for schools

The Splash MHM toolkit (SPLASH, 2015) is divided into two sections. The first section provides general information on menstruation; what is menstruation, why MHM is important in schools, what are the challenges and what are the actions. The second section displays a MHM checklist for schools with a list of the elements that should to be considered for a good MHM program. The checklist combined software and hardware elements but basically most of the ones already presented for the previous tool, toolkit five, plus elements of training and awareness for teachers, students and community's members. This tool combines elements of education, WASH and health.

2.14 Other important aspects for Gender and MHM

MHM also has also implications in other areas that need to be considered before implementing any MHM programs. Some of those aspects are related to health, social norms, culture, religion and beliefs.

2.14.1 MHM and Health

Regular menstruation is a sign of health and fertility (Winkler and Roaf 2014) but at the same time, girls and women may be more at risk of infection during menstruation if menstruation is not well managed. In rural Bangladesh, for example, urinary and vaginal infections are common among women who use 'nekra' (rags) instead of sanitary towels, these are torn from old saris and most of the time are often washed in unclean water before being dried somewhere hidden and often damp and unsanitary (Fisher, 2006; Ahmed and Yesmin, 2008; Nahar and Ahmed, 2006).

The systematic literature review done by Sumpter and Torondel (2013) reports that there is an initial indication that MHM may be associated with an increased risk of Reproductive Tract Infection (RTI) but the strength and route of infection is not known; mainly the use of less hygienic absorbent materials, that is re-using cloths that have not been adequately cleaned and dried and not being able to wash regularly, was related.

MHM has been considered extremely important in the HIV context, as menstrual blood can actually carry a higher viral load than plasma blood; so it does present a risk of HIV

transmission while the blood is fresh (WASHplus 2014). Table 2.6 shows some potential health risks during menstruation.

Table 2.6 Potential health risk during menstruation associated to hygiene and sanitation

Practice	Health risk
Use unclean sanitary material	Bacteria may cause local infections or travel up the vagina and enter the uterine cavity
Changing pads infrequently	Can cause skin irritation
Insertion of unclean material into the vagina	Bacteria potentially have easier access to the cervix and the uterus
Unsafe disposal of used sanitary material or blood	Risk of infecting other specially with hepatitis B
Lack of hand-washing after changing sanitary pads	Can spread infections as hepatitis B and infection in the vagina, urethra of the mouth of susceptible person such a baby

Adapted from Menstrual Hygiene Matters (House et al., 2012)

2.14.2 MHM Socially

In Low and middle-income countries women's social life can get affected by menstruation because of taboos, beliefs and religious issues linked to it along with the lack of sanitation facilities and adequate material to use.

It is necessary for both men and women to have a greater awareness of menstrual hygiene, men and boys can support women and girls to manage menstruation effectively across different social domains; household, community, school, health facilities and work (Mahon et al., 2015). The strategies implemented in schools have demonstrated the importance of engaging boys and teachers on MHM programs (Mahon et al., 2015) the same principle can be applied to health facilities.

2.14.3 MHM Culture, religion and beliefs

Currently, cultural practices and taboos around menstruation impact negatively on the lives of women and girls, and reinforce gender inequities and exclusion (House et al., 2012).

It is necessary to consider menstruation as what it is – a fact of life– and integrating this view at all levels will contribute to enable women and girls to manage their menstruation adequately, without shame and embarrassment and with dignity (Winkler and Roaf, 2014)

In many cultures, menstruating women and girls are seen variously as 'smelly', 'dirty', 'shameful', 'impure' or even 'contaminated'. Women are not allowed to cook, to touch others, to sleep inside the house, to use the latrines or to fetch water; as a result, women get less access to sanitation at the moment they need the most (House et al., 2012).

From ancient times women have been marginalized and excluded while menstruating. Table 2.7 shows some of the taboos associated to religions.

Table 2.7 Examples of religious beliefs about menstruation

Religion	Practice	
Buddhism	Menstruation is a natural bodily process, not restriction.	(House et al., 2012)
Christianity	"When a woman has her regular flow of blood, the impurity of her monthly period will last seven days, and anyone who touches her will be unclean till evening. Anything she lies on during her period will be unclean, and anything she sits on will be unclean"	Bible Leviticus 15, verse 19-20
Jewish	Women are ritually impure during menstruation and anyone or anything the touch becomes impure as well There are restrictions on women and men passing objects between each other and sharing a bed or the same plate.	(Bharadwaj and Patkar, 2004) (House et al., 2012)
Islam	Under Islamic law, a menstruating woman is not allowed to pray, fast or have sex. She is not allowed to touch the Koran unless it is a translation According to the Koran (verse 2:222) menstruation is a harmful something, therefore, stay away from the women during the menstruation and do not enter to them, until she is pure.	(Ahmed and Yesmin, 2008)
Hindu	A Hindu woman abstains from worship and cooking and stays away from her family as her touch is considered impure during this period	(Bharadwaj and Patkar, 2004)

Apart from religion, cultural beliefs, myths and traditions also affect women negatively during menstruation. Table 2.8 shows some examples that must be considered before implementing a MHM program because they have a close relation with the facilities and final disposal of sanitary material.

Table 2.8 Cultural belief related to menstruation

Country	Beliefs	
Bangladesh	Old menstrual cloths are buried in the ground for fear that evil spirits will be attracted to the blood. Many Bangladeshis believe that if a man walks past menstrual rags or sees menstrual blood, misfortune will befall him.	(UNICEF Bangladesh, 2008)
Nepal	Menstruating women should be away from flowing water	(Mahon and Fernandes, 2010)
Sierra Leone	It is believed that used sanitary napkins can be used to make someone sterile.	(Tjon A Ten 2007)
Afghanistan	Improper disposal of used sanitary pads can make women to menstruate continuously for life. Burning or burying used pad material lead to infertility.	(House et al., 2012)

Religious and cultural beliefs around menstruation are important facts to be considered by practitioners before implementing programs to support women on MHM. Interventions should be culturally appropriate and accepted by the population. Women in Sierra Leone might be afraid to dispose of their used sanitary material in a waste container because they would be afraid that someone can use them for other purposes.

Raising awareness might help to overcome cultural and religious perceptions about menstruation. Campaigns like "28th May Menstrual Hygiene day" (Menstrual Hygiene Day org, 2015) and WaterAid campaign "if men had periods" (WaterAid, 2015) are good initiatives to break taboos around menstruation. The video, "if men had a period - manpons" (WaterAid, 2015)it was published on May 25/15 and has already reached more than 1,200,000 views on Youtube in less than a month.

2.15 Conclusion

The interest in Gender and MHM is growing and many actors within the WASH sector are talking more and more about MHM but still there is no clear guidance on how to implement a MHM program in an acute or chronic emergency setting.

First of all, The Sphere projects along with agencies and NGO guidelines do not provide relevant information on MHM; each guideline has less than a paragraph with a brief recommendation on MHM usually under the excreta disposal section. MHM is still one of the elements to consider for latrine design and construction. But, MHM is not just linked to latrines, MHM is linked to all the elements in WASH; water, hygiene promotion, solid waste management, wastewater disposal, showers facilities, washing area and drying area.

Secondly, the studies in MHM have been focussed on finding out the challenges faced by women, the beliefs regarding menstruation, the taboos, the material women use during menstruation, the access or not to sanitation facilities and menstrual hygiene material. However, there is little information about MHM programs with clear guidance procedures, designs and tools to use to implement a comprehensive MHM program in emergency settings, schools or health centres.

Furthermore, all the guidelines give recommendations about women's participation but again; there is no information on how to address this topic with women; what has to be done initially and how the programs can expand; maybe women do not want a man to talk to them about menstruation in the first stage of a MHM program but it can change over time.

Finally, the most important driver for a MHM program is to prevent women for health risk associated to MHM for the use of unclean sanitary material, change pads infrequently, insertion of unclean material into the vagina, unsafe disposal of used sanitary material or blood and the lack of hand washing after changing sanitary pads. Moreover, MHM is part of the right to water, sanitation, dignity and privacy.

3 Methodology

This chapter presents the justification of the methodology approach used to complete the study and the different methods used to collect the data to achieve the set objectives and answer the research questions.

3.1 Principal research question

How can sanitation facilities in MSF-OCA Health Facilities meet the needs of women (focusing on MHM)?

3.2 Research objectives

Objective 1: To gain an overview of the current and best practices in gender and WASH, including assessment tools, with focus on Health Facilities.

Objective 2: To develop a tool to assess the Gender and Menstrual Hygiene needs in MSF-OCA Health Facilities and to pilot it for further improvements.

Objective 3: To produce a list of essential requirements and indicators for gender and MHM including promotion, provision and management of specific hardware/consumables.

Objective 4: To provide recommendations in terms of infrastructure to improve the sanitation facilities to meet the needs women within MSF-OCA Health Facilities.

3.3 Specific research questions

To achieve the objectives and answer the principal question it is necessary to answer some specific questions linked to each objective.

Question 1: What are the best practices in gender and MHM used in the WASH sector?

Question 2: What kind of tool is appropriate to assess and monitor the needs on MHM in MSF-OCA health facilities?

Question 3: What is essential for women to manage their menstruation when they are in MSF-OCA health facilities?

Question 4: Are there operational problems in term of infrastructure that prevent women from managing their menstruation within the health centre?

3.4 Source of data

The best sources of data to answer the specific questions to be able to achieve the objectives and answer the principal research questions are shown in table 3.1.

3.4.1 Informants

Two principal sets of informants were identified to obtain part of the data for this research. The first ones are the patients and carers, as they are the main focus of this research. Patients and carers are the regular users of sanitation facilities in MSF-OCA health facilities; therefore, they provided relevant information to answer questions three and four. The study targeted adult women of reproductive age, inpatients, carers or outpatients in MSF-OCA health clinics. Apart from that, the study also targeted adult men inpatients, carers or outpatient.

The second sets of informants were the MSF-OCA staff members working in the health facility. Usually, the staff members have been working in the facility for some time so they know more or less the population and the culture. In addition to that, the staff members also use the sanitation facilities within the health structures, as they stay there on a daily basis, day and night. Perhaps, the staff members are also affected by the fact that sanitation facilities do not meet the users demands. The staff members provided relevant information to answer questions two, three and four.

Table 3.1 Identification of data sources

	Objectives	**Sources of information**			
		Published literature	MSF internal documents	Patients and carers	MSF-OCA staff
1	To gain an overview of the current and best practices in gender and WASH, including assessment tools, with focus on Health Facilities	✓			
2	To develop a tool to assess the Gender and Menstrual Hygiene needs in MSF-OCA Health Facilities and to pilot it for further improvements	✓	✓		
3	To produce a list of essential requirements and indicators for gender and MHM including promotion, provision and management of specific hardware/consumables	✓	✓	✓	✓
4	To provide recommendations in terms of infrastructure to improve the sanitation facilities to meet the needs of men and women within MSF-OCA Health Facilities	✓	✓	✓	✓

3.5 Methodological approach

There are two philosophical traditions to carry out researches, one tradition underpins a quantitative approach and the other tradition underpins a qualitative approach.

Quantitative research is commonly associated with the deductive reasoning approach going from Theory – Hypothesis - Investigation - Conclusion. This kind of research tends to use numbers, it can therefore give precise and accurate results, it is useful when a firm answer is required and when trying to get information across to a wide range of the population, large number of people.

Qualitative research is commonly associated with the inductive reasoning approach going from Investigation – Patterns – Hypothesis - Theory. It uses mainly words and is mostly used for social research. Qualitative research "seeks to understand the world through interacting with it, tends to collect the data in natural settings and tends to generate theory from observation (Scheyvens and Storey, 2003). Qualitative research is appropriate for a small community or a group of people.

Based on the above information on methodological approaches, qualitative research was selected as most appropriate for understanding the situation and the experiences women face when using MSF-OCA sanitation facilities. Therefore, the research methodology focused on qualitative methods for data collection.

3.6 Research methodology

Developing programs to meet the needs of the population cannot be achieved by applying standard technical solutions; projects work better with the participation of the people involved; talking to this people ensure that straightforward data is obtained.

According to Denscombe (2007) there are four main methods that social research can use; questionnaires, observation and interviews (including focus groups) are used to collect primary source data. Documents, on the other hand, are used to collect secondary source data. These tools help the researcher to get a clear picture of what he or she is studying, and to acquire accurate measurements and factual evidence about the subject matter.

3.6.1 Questionnaires

A questionnaire is a written list of questions to be answered by the respondent. This method requires the respondents to read the questions, understand them and write the answer; for that reason, the questions should be clear, easy to read and easy to understand (Kumar, 1999).

According to Denscombe (2007) the data collected by questionnaires can be categorised as facts and opinions.

When is it appropriate to use questionnaires? (Denscombe, 2007)

- When the study involves large numbers of respondents in many locations.
- When there is a need to standardize the data.
- When respondents are able to read and write.
- When what is required is mostly straightforward information.

Questionnaires are not a good data collection tool for the purpose of this study. First of all, to understand the problems women face when using sanitation facilities at MSF health facilities, it is essential to talk to them, whereas questionnaires are impersonal. Secondly; the fieldwork took place in one MSF-OCA health facility without involving a large number of respondents. Apart from that, there was the probability that not all participants knew how to read and write.

3.6.2 Interviews

The interview is a common method for collecting information from people. Denscombe (2007) states that when the researcher needs to gain insight into people's opinions, feelings, emotions and experiences, the interview is the most suitable method to use. This method is also good when the researcher covers issues that are considered to be sensitive.

The interviews can be structured or unstructured; focus groups are classified as group interviews.

Structured interview

The structured interview is like a questionnaire done face-to-face; in this case the researcher has a set of pre-determined questions to ask; therefore, there is a tight control over the format to use, the questions and answers.

The main advantage of this method is that it provides uniform information that helps to compare the data, making the data analysis relatively easy. (Denscombe, 2007; Kumar, 1999).

Semi-structured interview

With semi-structured interviews, the researcher uses a set of questions to be answered. However, the interviewer is prepared to be flexible; the researcher does not need to stick to the order of the questions, giving the respondent the possibility of developing ideas and speaking widely on the issue raised by the researcher (Denscombe, 2007).

Unstructured interview

According to Kumar (1999) the unstructured interview is where either in-depth information is needed or when there is little known about the area. In this kind of interview the researcher

formulates questions spontaneously but it is also useful to have a framework to guide the interview.

Focus group discussion (FGD)

The focus group is a discussion between a small group of people, Nichols (2000) recommends between six to ten member of the community of interest. During FGD participants are asked to share their opinions, perception, attitudes and ideas about a certain topic. The process of sharing and comparing is especially useful for hearing and understanding a range of responses on a research topic (Denscombe, 2007).

The composition of a group is something important to consider; as the interaction between participants is a key feature of the focus groups (Bloor et al., 2001) the researcher has to encourage a wide discussion and learn about the concerns and opinions of participants (Nichols, 2000).

Advantages of interviews (Kumar, 1999)

- More appropriate for complex situation areas and sensitive topics.
- Good method to produce data based on informants.
- High respondent rate.
- Flexible.

The interviews are a good data collection method to be used for the purpose of this research because MHM is a sensitive topic. Interviews allowed the researcher to get in contact with participants face to face, to interact with them and get their impression about the subject of the study.

3.6.3 Observation

Observation is a source to collect primary data; it is based on the premise that for certain purposes it is better to know what is actually happening (Denscombe, 2007). This can be done by watching and listening, interacting or standing back from the phenomenon when it takes place (Kumar, 1999). Examples of that might be type of latrines, technical features of latrines or the way the latrines are used.

There are two types of observation, participant observation and non-participant observation. Participant observation is recommended for in-depth study in small communities; usually the researcher stays in the community for weeks or months and keeps detailed notes of what she/he hears, sees and feels about the subject under study (Nichols, 2000). Participant observation has three categories described by Denscombe (2007):

- Total participation: where the researcher's role is kept secret.
- Participation in the normal setting: where the researcher's role is known by some people only Participation as observer: where the researcher's identity is openly recognized.

The purpose of this research involves facts of infrastructure and the researcher needs to observe the sanitation facilities at health facilities, the washing area, and the waste disposal area, how patients and carers use the facilities and the problems they face. That is the reason the participant observation method was used in this study. The researcher stayed at the health facility on a daily basis and experiences what patients and carers experience when using sanitation facilities at MSF-OCA clinic.

3.6.4 Documents

Documents are a secondary source of data being collected by someone else based on people specific purposes. They can be from newspapers, websites, government publications, earlier research and publications. Kumar (1999) identifies four problems when using data from a secondary source: validity and reliability, personal bias, availability of data and format; while Platt (1981) and Scott (1990), as quoted by Denscombe (2007, p.232) argue that documents need to be evaluated based on four criteria; authenticity, credibility, representativeness and meaning.

There are sources of information that are essential to fulfil this study: Data from MSF reports, as well as, previous MHM projects. Which is why documents have been selected as a good method to use for the purpose of this research.

In summary the methods used for data collection were focus group discussion, interviews, participant observation as observer and documents; all of them allowed the researcher to obtain a better understanding of the situation looking at the issue from different perspectives to ensure a reasonable level of accuracy of the data collected. The idea was to minimise bias by using different methods.

3.6.5 Triangulation

Triangulation is the art of crosschecking and testing results by comparing data on a single issue. One form of triangulation is within the method, using different sources of information. The idea is to validate and confirm the data. This study used, different informants and different data collection methods to reduce bias obtaining the most accurate information.

3.7 MHM toolkit

One of the main objectives of this study was to develop a toolkit to enable the assessment and monitoring of gender needs, focussing on MHM, in MSF-OCA health facilities.
The first step was to define basic standards for MHM based on MSF-guidelines and policies.

Proposed standard for MHM in MSF-OCA Health Structures

All Health Structures supported by MSF-OCA should provide patients, carers and staff with proper sanitation facilities and means for MHM

There should be private places, in all Health structures supported by MSF-OCA, for women to change sanitary materials, to wash their hand, wash themselves, washing and drying reusable sanitary materials and safe disposal of disposable sanitary materials.

The second step was to define a set of essential requirements for MHM in health structures; the set of criteria were developed based on literature using recommendations given in different guidelines and designs used in schools described by some researchers cited in the literature review. The requirements were listed in a form to be used as a monitoring tool for MHM in MSF-OCA health structures. The draft of this tool is put forward in this chapter, 3.11 “monitoring tool in MHM”. The initial draft tool was piloted during the fieldwork so that, a final version could be presented in the recommendation chapter.

The third step was to develop a draft MHM design & planning tool. This tool is to be used to assess the situation on MHM in health centres, based on the information provided by the users; the aim is to design a comprehensive and clear action plan to help to implement all the requirements described in the monitoring MHM tool and to meet the proposed standards on Gender and MHM for health centres. This step took place after the fieldwork because currently there is no literature or previous experiences in MHM for health centres. Therefore, it was necessary to talk to patients, carers and MSF-OCA staff members to understand all the aspects to be considered for a MHM program considering training, infrastructures, material and final disposal. MHM programs are more than sanitary pads.

Returning to the literature review, it was observed that assessment and monitoring tools should be short and easy to follow. An example of those is the toolkit five suggested by House et al. (2012) in the handbook “Menstrual hygiene matters” and the MHM school checklist used by SPLASH (SPLASH, 2015). These tools are similar to the MSF-OCA sanitary surveillance for health facilities that has been in use for five years; which is short, simple, straightforward, easy to use, and easy to follow. Thus, people are familiar with the procedures and accustomed to them.

The proposed monitoring form for MHM in health structures intends to follow the above criteria. That is why; the initial draft was fixed at one page to complement the existing sanitary surveillance tool for health facilities, a tool that is familiar to MSF-OCA staff, so that the process can be made as simple as possible. The MHM design & planning tool is a big longer because it is to be used at the very beginning to assess the situation and to plan the corrective measures similarly to the Gender and Sanitation Tool mentioned in the literature review.

3.8 Ethical consideration

Ethical clearance was obtained from Loughborough University, Ethics Approval (Human Participants) Sub-Committee, on June 21st 2015. The completed ethics approval can be seen in appendix 15.

The MSF-OCA mission in Bangladesh was briefed on the objectives and purpose of the study and the link this research had with the MSF-OCA strategic plan 2015-2019.

Participants were informed about the following points.

- The purpose, details and benefits of this study; that this study was designed to further scientific knowledge and that all procedures were approved by Loughborough University.
- Participants were able to ask questions about their participation in the research.
- Participants were not under any obligation to take part in this study.
- Participants were free to withdraw at any stage of the study without giving reason or explanation.
- All the information provided by the participants was treated in strict confidence and will be kept anonymous and confidential to the researcher unless (under the statutory obligations of MSF-OCA), it is judged that confidentiality will have to be breached for the safety of the participant or others.
- The research did not refer to participants' name at any moment.

Finally, written consent was obtained from participants taking part in the interviews (structured and unstructured) and verbal consent was read to participants taking part in focus groups discussions. The inform consent form can be seen in appendix two.

3.9 Fieldwork location

MSF- OCA works in more than 20 countries worldwide; therefore, it was not easy for the WASH unit in Amsterdam to decide where to carry out the fieldwork. The author defined a set of criteria for a project to be considered for the study.

- Health structure with in-patient department, meaning that people stay in the health facility and use the sanitation facilities on a daily basis.

- The type of MSF intervention, maternity/paediatric being the most relevant because of the high number of women affected.

Initially four countries were proposed as possible options: South Sudan, Ethiopia, India and Bangladesh. South Sudan was rejected because of instability in terms of security; Ethiopia was not possible because the MSF-OCA coordination team in the country were busy with other activities and could not to take part of the study; India was never explored; Finally, MSF-OCA mission in Bangladesh was glad to take part in the research. So, the fieldwork took place in Kutupalong project in Bangladesh. Figure 3.1 shows the location of Bangladesh.

Figure 3.1 Bangladesh location
Source: mapsofworld.com

3.9.1 Project background information

Name of the project: Kutupalong Basic Health Clinic.
Location: Kutupalong, see location in figure 3.2.

Medical intervention: Out-Patient Department (OPD), In-Patient Department (IPD), Ante Natal Care (ANC), Post Natal Care (PNC), Family Planning, Mental Health, Maternity/ Birth Unit and Diarrhoea Treatment Centre (DTC). Additionally, there is: a laboratory, a pharmacy, a sterilization room, a hygiene and WatSan department, an outreach room and an emergency/ dressing department.

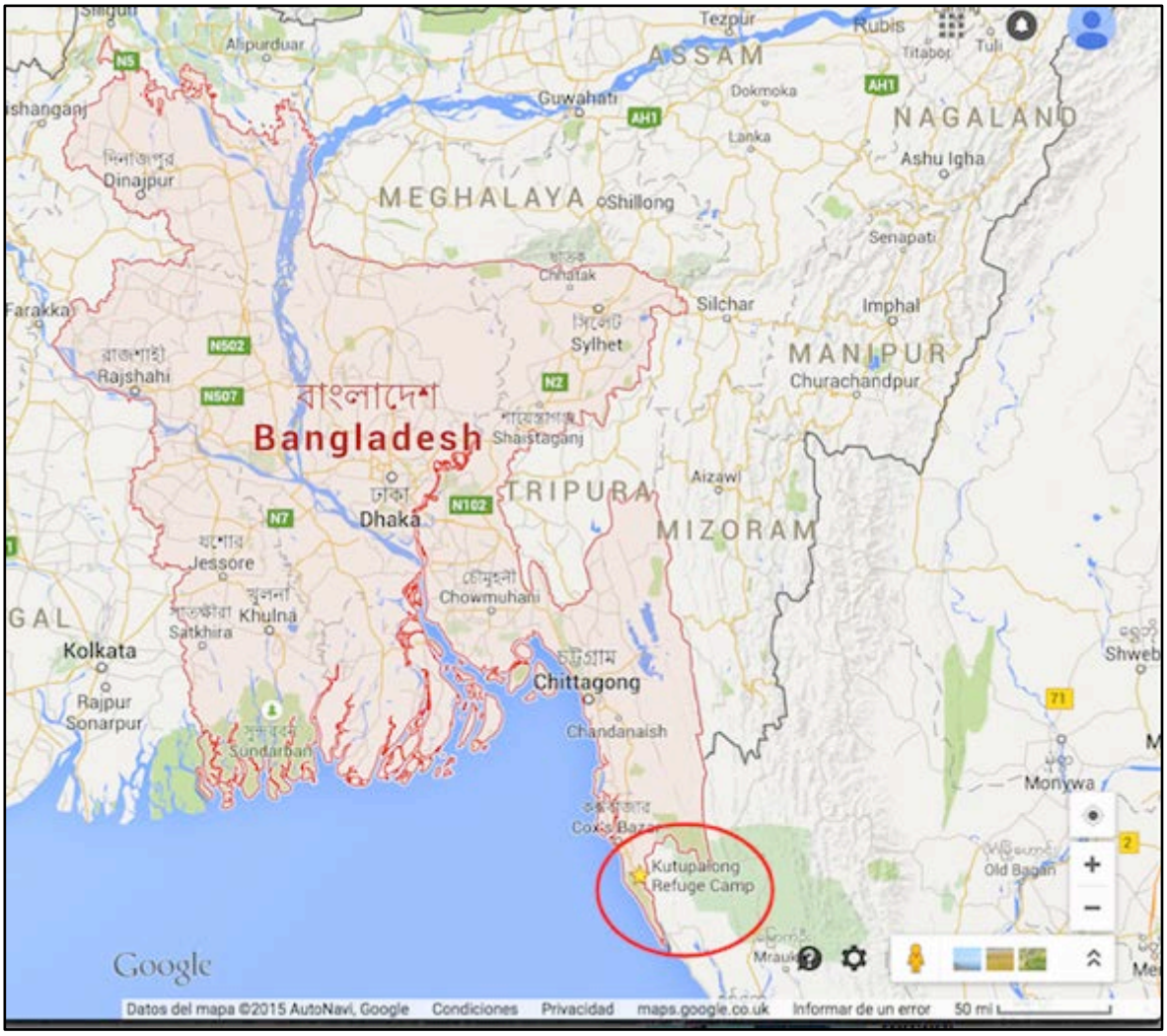

Figure 3.2 Bangladesh map, Kutupalong camp location
Source: Googlemap

Bed capacity: 57 beds in total; nine in IPD neonate, 11 in IPD paediatric, 12 in IPD adult, 10 in DTC, two in Isolation room and 13 in the birth unit department.

Staff: 148 national staff and five international staff.
During the month of May, Kutupalong health clinic received 7,455 consultations in outpatient department and 221 admissions in the in-patients department. (MSF-OCA, 2015b).

Target population: The project targets the Rohingya refugees going from Myanmar into Bangladesh. The Rohingya are an ethnic Muslim minority in the majority Buddhist Myanmar, they flee Myanmar because they face violence and lack of basic rights such as access to health care, education and employment (Tennery, 2015). The MSF-OCA clinic provides the refugees and the host community with basic health care throughout Kutupalog clinic located next to Kutupalong refugee camps (UNHCR registered camp and unregistered camp).

MSF Kutupalong clinic

Figure 3.3 MSF-OCA clinic location in relation to the refugee camp
Source: MSF-OCA Kutupalong project.

3.9.2 Length of the fieldwork

The MSF mission in Bangladesh granted 10 days to carry out the data collection in Kutupalong Health Clinic; the available date went from July 7nd to July 18th 2015. Table 3.2 shows the initial timetable for the fieldwork.

Table 3.2 Initial data collection timetable

	Morning	Afternoon
Day 1	Briefing with MSF staff, visit Kutupalong clinic and get familiar with the environment.	Observation of latrines and shower facilities, location and accessibility. Take pictures of sanitation facilities. Visit the market for available sanitary material and get sample of them
Day 2	Organise the first FGD	FGD with women Interview two patients/carers Interview two staffs
Day 3	Organise the second FGD	FGD with men Interview two patients/carers
Day 4	Narrative observation of the infrastructures	Interview two patients/carers Interview two staffs
Day 5	Organise the third FGD	FGD with women Interview two patients/carers Interview two staffs
Day 6	Organise the fourth FGD	FGD with men Interview two staffs
Day 7	Pilot assessment tool by the researcher	Interview two patients/carers Interview two staffs
Day 8	Organise the fifth FGD	FGD with women and men together
Day 9	Pilot assessment tool by the logistician Process data at the end of the day	Interview five staff
Day 10	Review the data	

3.10 Data collection methods used

The data collection methods used were structured interviews, semi-structured interviews, FGD, participant observation and documents.

3.10.1 Structured interviews

The structured interviews were held with the MSF staff, national and international.

The staff interviews involved female and males from different backgrounds, logistician, WatSan, midwifes, doctors, hygiene coordinator, MTL (Medical Team Leader) and cleaners. The idea was to get information from different points of views. However, the key informants for this study were the WatSan, cleaners, hygiene, MTL and logistician as they are the one involve with WASH in MSF-OCA health facilities; also, they will be the ones involve in the implementation of any recommendation given by the end of this study.

The purpose of these interviews was to obtain information about the knowledge and awareness MSF-OCA staff members have on gender and MHM related to WASH.

The total number of MSF-OCA staff in the Kutupalong project was around 150 people; ten of them were interviewed. The interview form is presented in appendix four.

3.10.2 Semi-structured interview

The interview for the patients and carers was designed to get in-depth information about women's personal experiences managing their menstruation on their daily life and when they were in Kutupalong Clinic; for this reason, only women who had experienced menstruation at the health facility were interviewed. The objectives was to interview 10 women and find out information about; what women used as sanitary material, how often they changed their material, where they cleaned or disposed these materials and what were the main difficulties they faced when they managed their menstruation at the health facility. The interview form can be seen in appendix seven.

3.10.3 Focus group discussion (FGD)

The plan was to carry out five focus groups, due to the short time available for the fieldwork, namely 10 days. Two FGDs were organized for women, two FGDs for men and one for women and men combined. The total participants for each discussion were restricted to eight due to the sensitivity of the topic.

The objective was to gather information about users opinions of MSF sanitation facilities and to give the opportunity to people to express their ideas of what needs to be done to improve those facilities to meet the needs of women.

Women FGD (two in total)

Number of participants: Maximum eight women. The first step was to set a time and invite participants to take part in the activity and explain the purpose of the activity and to let them know about their consent to take part or not of the study (see the structure of the focus group activity in box 3.1 below). The complete form used for the FGD can be seen in appendix nine.

Box 3.1 Women FGD structure

Verbal consent: Read the inform consent to all participants

1. Explain the purpose of the exercise; the topic to be discussed.
2. Open the discussion by talking about latrines in the health centre. Then, show participants different options of sanitary material and pictures of the latrine in the health centre
3. Discuss together
   - How do they managed their period when at the health centre?
   - What sanitary materials do the used; from where do they get them? Who supplies them?
   - What difficulties do they face managing menstruation at the health centre, privacy, security, light at night, distance to the building?
   - Access to water and soap to wash their sanitary material at the health centre, space to get them dry. Or how do they dispose of the sanitary material.
   - The changes they would make in the latrines to overcome those difficulties.

Men FGD (two in total)

Number of participants: Maximum eight men.

Invitation: Set a time and invited participants to take part in the activity; explained to the participants the purpose of the activity; let them know about their consent to take part of the study (see the structure of the focus group activity in box 3.2 below). The complete form used for the FGD can be seen in Appendix 11.

Box 3.2 Men FGD structure

Participants consent: Read the inform consent to all participants

1. Explain the purpose of the exercise; the topic to be discussed.
2. Open the discussion by talking about the latrines in the health facility. Then, what the participants think about them; if sanitation facilities are appropriate for men and women; what do women use the latrines for and what men use the latrines for, if there are differences.
3. Discussion together:
    - Do you have any idea how women in your family handle their menstruation?; what they use?; if they get any supply and from where.
    - Make men to discuss why MSF bring that topic to the health centre.
    - What difficulties they think women faced managing their menstruation within the health facility; privacy, security, light at night, distance to the building and so on
    - If they know what women need; the access to water and soap to wash their sanitary material, space to get them dry. Or to dispose sanitary material.
    - The changes they would make in the latrines to overcome those difficulties.
    - If they would like to be consulted and involved to design the sanitation facilities.

Women and men FGD (only one)

This focus group combined the questions from the women's focus group and the men's focus group to see women and men interaction when addressing this topic together.

3.10.4 Participant observation

This method was conducted using an assessment form designed for this study (structured observation), which includes a description of WASH requirements for latrines considering MHM needs. The objective was to identify possible improvements in terms of privacy, water accessibility, soap distribution, washing facilities, waste disposal and other concerns reached from the users during the FGDs.

Furthermore, the objectives were to observe how people use the sanitation facilities on a daily basis and to discover whether there were problems of waste disposal, privacy, or distance, problems that perhaps were not mention during the focus groups because of shame or fear. The complete form used for structured observation can be seen in appendix three.

3.10.5 Documents

Some documents were assessed before the fieldwork departure to get information about the project. MSF-OCA provided a situation report to inform the author of the most recent activities carried out in Kutupalong project. Also, the author read previous researches on MHM identified in the literature review in Bangladesh. Furthermore, the author assessed other key documents on hygiene and MHM during the fieldwork.

3.11 MHM monitoring tool

The MHM monitoring tool was to be piloted twice; the first one by the author and the second one by the watsan officer responsible of WASH activities in the health centre. Based on the results, the author looked for adjustments and improvements. See the monitoring tool draft template in in table 3.3

Table 3.3 Draft MHM monitoring tool

Area	Aspects	In place =1	No in place =0
Staff	Staff has been trained in MHM and are able to talk to women about it		
Women participation	Women are consulted about the type of sanitary material they use and facilities arrangements to manage their menstruation		
Water	Water is available inside the latrine or nearby (max 5m walking distance), and at the washing area		
Infrastructure	Female latrines are separated from the male latrines. Preferably the block should have a screen		
	Female latrines are safely located to avoid risk of sexual violence		
	Each latrine has an internal lock system, which is fully functioning.		
	All latrines have a roof and the walls are high enough to avoid others to peek out from outside.		
	There is a light system to allow women to use the latrine at night		
Hygiene	Hygiene is promoted among women to safely manage their menstruation		
	Hand washing facilities and soap are available at female latrines		
	Soap is provided for women to wash sanitary material		
	If necessary, and after consultation with women, sanitary material is provided.		
Wastewater	Discreet washing facilities with drying lines are in place for women to wash reusable sanitary material		
	Drainage is covered to avoid others to see the content of the wastewater. This is connected to a grease trap and soak-away pit		
Waste disposal	There is a system for safe collection, transport and final disposal of disposable sanitary material		

3.12 Logistic preparation before departure

The first step, before anything else, was to complete the university ethic risk assessment to be able to get the approval from the university to travel to the field.
Secondly, to get in contact with the MSF-OCA office in Amsterdam and Bangladesh to obtain information on:

Travel arrangements Loughborough - Dhaka – Loughborough: One question that came out from MSF-OCA was whether the researcher was able to pay for her international flight London to Bangladesh; the answer from the researcher was no and after some discussions, the MSF-OCA Watsan Unit in Amsterdam HQ covered the cost of the ticket. Nevertheless, there was another discussion about travel insurance, after negotiation between the researcher and MSF-OCA, the author got the travel insurance seven hours before leaving the UK for Bangladesh.

Travel arrangement Dhaka – Kutupalong project – Dhaka: The agreement between MSF-OCA HQ in Amsterdam and Bangladesh coordination mission was for the mission to pay the researcher's domestic flights and all the expenses needed during her field visit.

Visa: The author checked on the Internet that, as a Colombian, it was possible to get the Bangladeshi visa on arrival, for that reason she did not apply for any visa before departure.

Data collection tools: The tools for data collection: FGDs, interviews, MHM monitoring tool and observation form, were all printed at Loughborough University before departure.

Terms of references: This was a short document sent to the field to explain the purpose of the visit, the activities to be carried out, the timetable and the material and resources the researcher required during the field visit.

Translator: The author requested a female local translator or a female national staff member to help during the patients' and carers' interviews. The project had two translators, one female and one male. The female translator was assigned to work with the researcher for the length of her visit.

Dress code for MSF female staff: Bangladesh is an Islamic country. Therefore, MSF female staff have a dress code to follow. They are advised to wear the traditional clothes use for women in the country, Shalwar kameez. The shalwar is a baggy trouser and the kameez is a long shirt or tunic.

3.13 Limitations and constraints during field work

The fieldwork took place close to end of Ramadan when the Muslin community celebrate the festival of Eid. Therefore, the number of working days was reduced from ten to six; the 9th, 11th, 12th, 13th and 14th of July were national holidays. The timetable was then adjusted to fit all the activities into the available time; the translator was called to work during some of these national holidays to be able to complete the work. Table 3.4 shows the final timetable followed to collect the data.

Table 3.4 Data collection timetable adjusted in the field

	July	Morning	Afternoon
1	7 Tues		**Arrival in Dhaka**
2	8 Wed	**Dhaka. Briefing in capital**	
3	9 Thurs	**Trip from Dhaka to Kutupalong**	Briefing with MSF- OCA staff
4	10 Fri	▪ Briefing with MSF- OCA staff. ▪ Visit Kutupalong clinic, and get familiar with the environment	▪ Observation of latrines and shower facilities, location and accessibility. ▪ Take pictures of sanitation facilities. ▪ Visit the market for available sanitary material and get sample of them
5	11 Sat	▪ Adjust data collection timetable	
6	12 Sun	▪ Meeting with translator and explain the study ▪ Organise women FGD ▪ Have FGD with women.	▪ Interview one patient /carers ▪ Interview watsan officer ▪ Pilot assessment tool by watsan officer.
7	13 Mon	▪ Organise men FGD ▪ Have FGD with men ▪ Interview with staff (female translator) ▪ Narrative observation of infrastructure problems of the latrines, waste disposal and washing facilities	▪ Interview two patient/caretaker. ▪ Interview two staffs (expat doctor and national staff doctor)
8	14 Tues	▪ Pilot MHM monitoring tool by the researcher. ▪ Interview two patient / carers	▪ Interview two staffs (midwives)
9	15 Wed	▪ Interview two patient/ carers	
10	16 Thu	▪ Interview two patient/ carers ▪ Interview with staff (cleaner and Hygiene supervisor)	▪ Interview two staffs (MTL and log) ▪ Pilot assessment tool by the MTL
11	17 Fri	▪ Observation	▪ Review the data
12	18 Sat	**Trip from Kutupalong to Dhaka**	
13	19 Sun		
14	20 Mon	**Trip from Dhaka to London**	

FGD constrains: The participants were quite shy, it was not easy to encourage them to debate about the topic.

The quantity of FGD was reduced from five to two because of the Eid celebration. Apart from that, it was not easy to gather men for the FGD because there are not many men in the in-patient department. Men come to the clinic mainly for daily consultations; the participants of the FGD were willing to take part in the discussion while they were waiting for medical consultation.

Finally, the FGD planned for men and women together was cancelled after discussion with local staff who believed, it was not appropriate for women and men to talk about sanitation and menstruation together due to religious and cultural traditions.

Interview constraints: The target was to interview ten women; however, it was not easy to find women with previous experience managing their menstruation in the health centre and willing to share that experience; only seven women were interviewed. The MSF-OCA staff were not clearly informed about the purpose of the study; it was necessary to explain again and again because some staff members thought the author was there to evaluate their work rather than to conduct a survey.

Personal limitations: The author faced two personal challenges; the first one was the dress code; loose dresses, long-sleeved tops and trouser should not be worn according to culture and MSF-OCA rules. Fortunately the MSF-OCA international staff lent the author some traditional outfits to be used during the visit. The second challenge arose from the author's ethnicity; the data collection tools required constant contact with the informants and Bangladeshi people and Rohingya people are not use to seeing black people. The way to cope with the situation was to spend the entire days in the clinic, going around, talking mainly to national staff, from cleaners to doctors; in that way the patients and carers were able to see the author as part of the staff, not as an outsider.

Getting a visa was another issue; MSF-OCA did not provide any documents to prove the purpose of the visit, based on the fact that Colombians are able to get a Bangladeshi visa on arrival. Then, on the day of the trip, the author contacted with the MSF-OCA office in Dhaka to get an invitation letter and hotel booking to prove to the immigration officers at Dhaka airport the purpose of her visit. The author arrived in Dhaka with the soft copy of those documents and after one hour's negotiation with the immigration officers; she managed to get into the country.

Translation: Collecting data with a translator was a challenge. There were some opportunistic talks done with the national staff because it was possible to speak English to them, but this did not happen in the same way with patients and carers because of the language barrier.

3.14 Conclusion

The data collection tools were appropriate for the informants, the context and the study. It was possible to overcome all the difficulties and carry out the fieldwork successfully. The next chapter presents all the findings.

4 Result of Fieldwork

This chapter presents the findings from the focus groups, interviews, participant observation and documents by grouping relevant information in answer to the research questions. The information is presented as provided by the staff, patients and carers, as well as, describing the technical aspects observed in the sanitation facilities at MSF-OCA clinic.

4.1 Observations

The first activity done, as part of the observation, was a health walk with the doctor around the health centre; the objective was to get familiar with the different departments described in the project background information explained in the methodology. Then, a second walk was conducted together with the WatSan officer to observe the water and sanitation systems in the health centre along with the medical departments; The researcher observed the water system, latrine design and quantity, shower design and quantity, wastewater system (grease traps, soak away, septic tanks), washing area, laundry area, waste disposal system (segregation, collection, transport and final disposal in the waste management area) and the morgue. The observation was conducted using a structured form designed for this study. The form can be seen in appendix three.

4.1.1 Staff

The MSF-OCA clinic has a total of 13 staff dedicated to issues related to sanitation facilities: a WatSan officer, a hygiene supervisor, two health promoters and nine cleaners.

4.1.2 Water

The clinic has its own water supply system, a borehole connected to an elevated tank, which distributes the water to the entire facility including all the medical departments mentioned in the project background in methodology chapter. In addition to that, there is a series of treated drinking water points along the corridors and pipe connections into the latrines and showers. Patients and carers do not need to carry water around the clinic; water is available at each point of use.

4.1.3 Excreta disposal

Quantity: There are a total of 12 latrines, three for the staff, one in the birth unit, two in DTC (Diarrhoea Treatment Centre), four in IPD (In Patient Department) and two in OPD (Out Patients Department)

Current situation: The latrines were renovated in May 2015 after recommendations given by the reproductive health advisor after her field support visit. The former latrine block is shown in figure 4.1 and the current one in figure 4.2

Figure 4.1 Former latrines

Figure 4.2 Current latrines

Infrastructure: The system in place has a pour flush pan connected to a septic tank and soak away. Each latrine has a roof, high walls, a small window with iron bars and a proper door with a system to be locked from inside. The size of the latrine inside is 1.50m X 1.60m (2.4m^2).

Water accessibility: Each latrine has running water inside for hygiene purposes and anal cleansing.

Location: The latrines are close to the buildings and each one has a light inside. Also there is a light system along the corridors to allow people to use the facilities during the night.

The clinic uses the city's power supply but there is a generator in case of power cuts.

Safety and privacy: The facilities provide privacy and are easy to access. Nevertheless, none of the latrines has access for disabled people.

Hygiene: The latrines are cleaned at least twice a day; one of the main tasks of the cleaners is to keep the latrines cleaned all the time.

Waste disposal: There is a waste bin in each latrine for waste collection and a poster with images to show the type of waste to be disposed of in it.

Segregation: Latrines are not segregated between men and women.

Facilities by departments

IPD: The IPD (In Patients Department) latrines are separated into two blocks; the superstructure is made out of corrugated iron for walls and roof and tile on the floor. Women prefer to use the second block but there is no segregation between female and male. Figure 4.3 shows the latrine/shower block and figure 4.4 shows the IPD latrines inside.

Figure 4.3 IPD latrines and showers block

Figure 4.4 IPD latrine

OPD Latrines: The OPD (Out Patients Department) latrines were not renovated; the superstructure is made out of woven bamboo with a corrugated iron roof. These latrines are outside the clinic, next to the IPD entrance and far from the out patients department; therefore, OPD patients use the IPD latrines. Figure 4.5 shows the OPD latrine.

DTC latrines: The DTC (Diarrhoea Treatment Centre) latrines have concrete walls and roof. They are just for this department because patients with diarrhoea can be very contagious for other in- patients. There is a hand-washing point outside. Figure 4.6 shows the DTC latrine.

Figure 4.5 OPD latrine

Figure 4.6 DTC latrine

Birth unit latrines: It is located inside the building and it is the only one with a toilet bowl based on a medical recommendation that it is not good for pregnant women to squat because it compresses the foetus. There is a sign on the door to show women how to sit on the bowl but this is not followed; so, they try to squat on the bowl or urinate on the floor. Figure 4.7 shows the birth unit latrine.

Staff latrines: They are separated from the patient and carer's latrines. The superstructure is made out of concrete, corrugated iron roof, and concrete slab with tile on the floor and 30cm above. There is toilet paper, soap and a hand-washing point outside. Figure 4.8 shows the staff latrine.

Figure 4.7 Birth unit latrine

Figure 4.8 Staff latrine

4.1.4 Bathing facilities

The superstructure of the showers is built similarly to that of the latrines.

Quantity: There is one shower in the birth unit, two showers in IPD and two showers in DTC. There is no shower for staff and out patients.

Infrastructure: The size inside is 1.90m X 1.80m (342m^2).

Water accessibility: There is running water inside with a head shower and a second tap 40cm above the floor.

Location: Showers are very close to the building and next to the latrines.

Privacy: Each shower has a door and lock to close it from the inside; there is a light inside and along the corridor in case patients or carers need to use the facilities during the night. The walls, window and roof provide enough privacy for the users. It is not easy for other users to

get into the superstructure when someone is inside. Figures 4.9 and 4.10 show the shower facilities.

Figure 4.9 IPD shower

Figure 4.10 Woman washing inside the shower

Waste disposal: Each shower is provided with a waste container inside and a poster with images to show the type of waste to be disposed of in it.

Segregation: Showers are not segregated between men and women.

Hygiene: Bathing soap is provided by MSF-OCA on daily basis. The facilities are cleaned at least twice a day, similarly to latrines.

4.1.5 Washing area and laundry area

There is an open washing area, with concrete slab and a tap with running water, for patients and carers in front of OPD. The drying lines, with no shelter, are located next to it. The area looks clean and patients and carers use it; MSF-OCA provides laundry soap. Figure 4.11 shows the washing area and drying lines and figure 4.12 the washing area.

The clinic has a laundry area for linen (bed sheets, mosquito nets and delivery material); this one has a washing machine and drying lines with a shelter to protect the washing from the rain.

Figure 4.11 Washing area and drying lines

Figure 4.12 Washing area

4.1.6 Wastewater disposal

The washing area, laundry area and showers are connected into a grease trap and soak away. The latrines are connected to septic tanks and soak away. The septic tanks are desludged periodically. All the drainage distribution uses pipes and covered concrete distribution boxes.

4.1.7 Health Care Waste Management (HCWM)

The clinic has its own system for managing the medical waste. This includes segregation, transport and final disposal (treatment).

Segregation: The waste is segregated into five categories using a colour code and special containers.

Organic, human fluids and soft are collected in blue, green and red buckets respectively.

Sharp and vials are collected in sharp containers and vial containers.

Transportation to the waste area: The cleaners are in charge to transport the waste into the waste management area where the buckets are emptied, cleaned and disinfected.

Final disposal: The soft waste, included used pads, is treated in the incinerator and the ashes are disposed into an ash pit; the organic waste and human fluids are disposed of in an organic pit; the sharps are disposed of in the sharp pit and the vials are sent to Dhaka for final disposal.

Waste management area: The waste area is separated from the medical premise; it has a fence, a roof and a dedicated trained waste manager. See figure 4.13. Latrines and showers have a red waste bin inside with a sign explaining how to dispose of sanitary material figure 4.14 shows the containers and figure 4.15 shows where women put the sanitary material.

Figure 4.13 Waste Management Area

Figure 4.14 Waste container for sanitary pads

Figure 4.15 Used sanitary pad hidden in a cavity wall

4.1.8 Hygiene

It was observed that patients and carers wash their hands after they use the latrines. In general patients, carers and staff use the facilities; washing area, showers and latrines. The clinic has two male hygiene promoters doing health education in OPD and IPD; they do not go into the birth unit because men are not allowed to go inside. There is a series of hand washing points along the corridors, outside staff latrines and DTC latrines; each point has a piece of soap wrapped in a piece of mosquito net to prevent people for taking them home.

4.1.9 Sanitary material commonly use

Cloths or rags were observed to be the most common material used by women during menstruation. The second option was a reusable sanitary pad made in the registered camp with the support of UNHCR. The pad is shown in figure 4.10. The third option was the disposable pad shown in figure 4.17. The brand is called “senora” and it can be found in most local shops; the packet contains ten units and costs 90 BDT (1.15USD), the equivalent of buying 4.5kg of low cost rice. The packet comes with a kind of elastic string to hold the pad; so, it can be used without underwear. The pads distributed by MSF-OCA in the birth unit need the use of underwear but that is not provided. Women said they do not use underwear on a daily basis, just during menstruation.

Figure 4.16 Reusable pad made in the camp

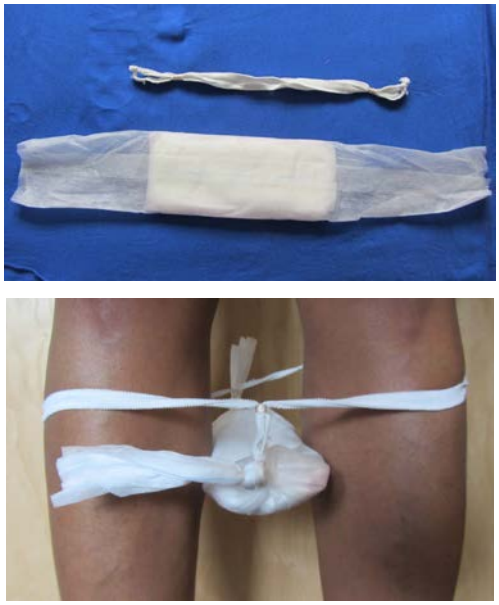

Figure 4.17 Cheapest disposable pad

4.2 Structured interviews

A total of 10 MSF-OCA staff members were interviewed. The respondents had different opinions in relation to the sanitation facilities in Kutupalong clinic as well as different amount of knowledge and attitudes in relation to MHM. See the composition on the respondents in

appendix six. The findings have been clustered using some of the SHTEFIE criteria: Socio/cultural, Health/hygiene, Technical, Economic, Financial, Institutional and Environmental; some aspects are not tackled because they were not part of the project scope.

Technical/Facilities: Most staff members think that sanitation facilities are appropriate for the users, as they have improved considerably, providing more privacy and comfort to users. Respondents are aware of the fact that latrines are not segregated between men and women but only four out of 10 mentioned that facilities should be segregated.

Socio/cultural: Half of the respondents identified menstruation as one special need for woman in term of sanitation. At the same time, all the staff members believe that women have to be the ones to talk to women about menstruation.

Material: All the staff recognize a sanitary pad but there are different ideas of the type of sanitary material they believe patients and carers use. The staff members know that MSF-OCA provides sanitary pads in the birth unit but most of them do not know how patients and carers get access to pads outside the birth unit.

Institutional: Most staff members believe it is good to include MHM in MSF-OCA medical settings along with hygiene promotion and provision of sanitary material. Only one staff member has come across information on MHM in MSF-OCA, the gender and sanitary tool for emergencies described in the literature review. Half of the staff members believe there is a need of a MHM policy before a program is implemented.

Appendix five present a table with all the information provided by the staff during the 10 structured interviews.

4.3 Semi-structured interviews

A total of seven women were interviewed face to face for around 30 minutes each. The Findings have been clustered using the same criteria used for the structured interviews.

Technical/ Facilities: Patients and carers think latrines are comfortable, private, safe and clean. However, most women prefer to change their sanitary material in the showers because they provide the same comfort as the latrines and it is easy for them to wash themselves and their used material.

Socio/cultural: Women were asked about the process they follow when they change their sanitary material and all of them said they wash themselves before putting on a new sanitary material. Most respondents said it is possible to use the latrines during the night as the clinic

has lights everywhere. On the question whether women were able to wash their sanitary material in front of other women three respondents said it was fine while two said they need privacy for that. The main challenge identified by women when managing their menstruation at the clinic was the lack of sanitary material.

Material: Cloths and rags were found to be the most common sanitary material being used. Women identified cloths (sanitary material), underwear and soap as the essential items they need to manage their menstruation in the clinic.

Institutional: The seven respondents agree that the support they might need from MSF-OCA is the provision of sanitary material.

Figure 4.18 shows one of the interviews. Appendix eight presents a table with all the information provided by patients and carers during the semi-structured interviews.

Figure 4.18 Interview with Rohingya woman

4.4 FGDs

The findings from the FGDs with women and men are clustered using some of aspects of the SHTEFIE: Socio/cultural, Health/hygiene, Technical, Economic, Financial, Institutional and Environmental.

4.4.1 Women FGD

The FGD took place on July 12th and lasted for 40 minutes. The participants were eight adults women aged between 19 and 45. Women believe showers and latrines in the clinic are safe, private and comfortable because the facilities are near to the buildings, they have doors and the water is inside. The main challenge women face managing their menstruation in the clinic is the lack of sanitary material and the absence of a private place to dry their reusable material. All the information provided by women during this FGD is presented in appendix 10.

4.4.2 Men FGD

The FGD took place on July 13th and lasted for 40 minutes. Six adults men aged between 40 and 50 participated in the activity. Men believe sanitation facilities should not be shared with women; they also think that women need more seclusion for sanitation; men had little knowledge about menstruation. Appendix 12 presents all the information provided by participants during FGD. Figure 4.19 shows the FGD at the end with only four participants.

Figure 4.19 Men FGD

4.5 Documents

In June 2014, the Bangladesh government published the national hygiene baseline survey, document that was assessed during the fieldwork.

According to this survey from households, around one‑tenth (rural: 10%, urban: 21%) of adolescents and one‑tenth of adult women (rural: 10%, urban: 33%) used a disposable pad during menstruation. Reusable cloth is more the norm.

Among students a small proportion (10%) used a disposable pad. This was more common among urban students (rural: 9%, urban: 21%).

Most women used old cloth (86%); some do not use soap or an improved water source for washing and rinsing and many dry the cloth in hiding (WaterAid - PSU and icddrb, 2014).

This report is consistent with the study findings; five out of seven women in the Kutupalong clinic have said they used cloth as sanitary material during menstruation.

4.6 MHM monitoring tool

The MHM monitoring tool is a list of essential requirements to have in place to meet the proposed standards in MHM for health centres. This tool was piloted three times during the fieldwork. The watsan officer did the first trial; the author did the second and the MTL (Medical

Team Leader) did the third one; MTLs are responsible for completing the MSF-OCA WASH standard form “sanitary surveillance for health structures” described in the literature; Therefore, to complete this proposed tool would be her/his responsibility.

The MHM monitoring draft tool had 15 essential requirements necessary to have in place to meet the needs of women in MHM within the MSF-OCA health centres. Table 4.1 presents the different results according to the each evaluator; the aspects highlighted are the discrepancies between evaluators.

A= Author **W**= Watsan officer **M**= MTL.

Table 4.1 Results after piloting the MHM monitoring tool

Area	Aspects	In place =1			No in place =0		
		A	**W**	**M**	**A**	**W**	**M**
Staff	Staff has been trained in MHM and are able to talk to women about it				0	0	0
Women participation	Women are consulted about the type of sanitary material they use and facilities arrangements to manage their menstruation				0	0	0
Water	Water is available inside the latrine or nearby (max 5m walking distance), and at the washing area	1	1	1			
Infrastructure	Female latrines are separated from the male latrines. Preferably the block should have a screen		1		0		0
	Female latrines are safely located to avoid risk of sexual violence	1	1	1			
	Each latrine has an internal lock system, which is fully functioning.	1	1	1			
	All latrines have a roof and the walls are high enough to avoid others to peek out from outside.	1	1	1			
	There is a light system to allow women to use the latrine at night	1	1	1			
Hygiene	Hygiene is promoted among women to safely manage their menstruation				0	0	0
	Hand washing facilities and soap are available at female latrines			1	0	0	
	Soap is provided for women to wash sanitary material	1		1		0	
	If necessary, and after consultation with women, sanitary material is provided*.		1		0		0
Wastewater	Discreet washing facilities with drying lines are in place for women to wash reusable sanitary material				0	0	0
	Drainage is covered to avoid others to see the content of the wastewater. This is connected to a grease trap and soak-away	1	1	1			
Waste disposal	There is a system for safe collection, transport and final disposal of disposable sanitary material		1		0		0
Total score		**7**	**9**	**8**			

* Sanitary pads are provided in the birth unit for women after delivery

There were five discrepancies between evaluators after the tool was piloted separately. The trial done by the author was the one with the lowest score (7/17) following by the one done by the MTL (8/15); the WatSan officer trail got the highest score (9/15)

- **Latrine separation**: The WatSan officer thinks latrines are segregated because it appears to be a kind of social agreement that men and women use different facilities but there is not sign or label in any latrine identifying it as a female or male latrine.
- **Hand washing facilities**: The MTL thought hand washing and soap were available at all latrines; however, there is no hand washing point outside the in-patients' latrines.
- **Soap distribution**: MSF- OCA provides laundry soap for in-patients; it is not specific for MHM but it can be used for that purpose.
- **Consultation with women about sanitary material provided:** Women receive sanitary pads as part of the post-natal care program (birth unit) but MSF-OCA did not consult with them about the type of material to be provided.
- **Safe collection of sanitary material**: There is a waste container inside showers and latrines but women do not use it because they feel embarrassed to put used pads inside because other users can see them.

4.7 Summary

- Women change their sanitary material in the shower.
- Users believe that the hygiene and sanitation facilities are appropriate.
- Latrines and showers are not segregated.
- Men recognise women have a greater concern for privacy in terms of sanitation.
- Cloths/rags were the most common material being used by women during menstruation.
- Women identified the lack of sanitary material as the main challenge they face when they manage their menstruation at the clinic.
- Women wash their sanitary material in the shower and dry them underneath other clothes because there not designated places.
- The staff members do not have much knowledge on MHM; however, they believe the clinic needs a female hygiene promoter
- Collection of used sanitary pads is a problem (women do use waste bins); final disposal is not a problem because the clinic has a waste management area.
- The MHM monitoring tool was piloted; the initial trial exposed some lack of clarity and different understanding between evaluators but also it evidenced that some aspects were omitted. The final version with the adjustments is presented in the recommendation chapter.

4.8 Conclusion

Using different methods for data collection was useful because when the same information is collected from different sources, the author is able to obtain more accurate data, thus minimising the bias.

The information provided by the informants was consistent with what it was observed.

5 Discussion

This chapter presents opinions, previous experiences and expectations in relation to the findings obtained during the fieldwork. The information is presented following the same structure, SHTEFIE, used to introduce the results from FGDs and interviews in the previous chapter: technical/facilities, socio/cultural, hygiene and institutional. Moreover, in this chapter the author returns to some of the aspects observed in the clinic during the data collection.

5.1 Technical/Facilities

The literature in water and sanitation has identified the latrines as the places for women to manage their menstruation. Reason why; different NGOs, UN agencies, Sphere guidelines and books on WASH, provide recommendations on menstruation under the excreta disposal section in emergency situation and schools settings.

The situation in health centres is quite different from schools, refugee camps and IDP camps; Health centres should always provide bathing facilities as well as latrines as part of WHO WASH (WHO, 2008) guidelines and MSF essential requirements (MSF, 2004). Therefore, women have the option to decide which facility is most suitable for them to manage their menstruation. It was unexpected to find out that women in Kutupalog clinic change their sanitary material in the showers rather than in the latrines. This situation may be found in other countries as long as the culture suggests that women take a bath or shower during menstruation.

Furthermore, the showers and latrines in Kutupalong clinic were built at very high MSF-OCA quality standards. At first glance the author believed that the fieldwork location was not appropriate for the study because of the high standard of sanitation facilities. Then, at second glance it was realised that having good sanitation facilities in place allowed the researcher to focus on what is required for MHM, without getting distracted looking at technical aspects that are more relevant when planning the strategy for excreta disposal and bathing facilities. Despite this, it was possible to find features linked to MHM that needed to be improved, aspects like accessibility, appropriateness and hygiene, because the facilities did not have access for disabled people; there was no segregation and no hand washing point for IPD latrines. Actually, it was not possible to establish the reason why the facilities where not segregated.

The coping mechanism used by women in the health centre, drying their sanitary material underneath other clothes, is considered unhygienic. If sunlight is used, it can kill pathogens in the cloths and women do not expose themselves to some medical risk. The drying lines for MHM should allow sanitary material to be dried under direct sunlight.

5.2 Socio/ cultural

"Women need more seclusion" It was not expected to hear this statement from the men, in fact it was mentioned at least three times during the FGDs. This statement can be considered as something positive because men understand the greater concern of privacy needed for women in terms of sanitation.

On the other hand, it was surprising to see how men associated menstruation with morality and decency, they talked about 'good character woman' and 'bad character woman' to define and make a difference between a woman who manages her menstruation in secrecy without being noticed and woman who manages her menstruation without secrecy so that others can find out that she is menstruating. A good character woman is shy, hides her sanitary material, dries them out of the sight and maybe buries them after many usages while a bad character woman is not shy, does not hide her sanitary material and dries and disposes her material in the open. So, based on that opinion, the mode a woman manages her menstruation tells the society whether she has good or bad character.

The collection of used sanitary material has been a challenge in the health centre; women do not use the waste containers placed in showers and latrines to dispose of the used sanitary material because other users can see the used pads and that is embarrassing and not acceptable. Perhaps, this is linked to 'good and bad character woman' issues mentioned before. Nonetheless, around five used disposable sanitary pads were found hidden in gaps on the wall of one of the showers; when that happened, the cleaners had to get them out to be transported to the waste area. Also, there was evidence of sanitary pads being flushed into the pans because plastic parts of pads were found in the septic tanks when they were desludged. This situation might be found on other MSF-OCA health centres because the common waste containers used in the projects are usually purchased locally and have wide lids.

The final disposal of used material is a current challenge in Kutupalong clinic but it can be met; some women's opinion was that sanitary pads could not be burnt. Patients and carers know that most of the medical waste produced in the clinic is transported to the waste management area and most of the soft waste (dressing, bandage, packets and sanitary pads) are burnt in the incinerator; maybe this issue is linked to the disposal of pads in the flush pan because women do not want their blood to be burnt. This is an aspect to be considered for the MHM design & implementation tool.

5.3 Material

This study has mentioned that MHM is not yet part of the WASH program in MSF-OCA and menstruation is seldom mentioned in MSF WASH policy, technical guidelines or essential requirements for health centres. For this reason, it was no expected to find that MSF-OCA is

currently providing sanitary pads in the birth unit as part of the Post Natal Care program without having any policy or guideline linked to WASH. That could be the reason that the cleaners, the hygiene promoters and the WatSan officer face challenges in terms of disposal because no one thought about the implications of this activity; there was no a plan for discreet collection of used pads, and no consultation with the women about the type of sanitary material they use; maybe women prefer to use the locally available pads with the string and no underwear but that was not considered.

The use of underwear was not tackled in any of the data collection tools. Nevertheless, some women mentioned it during the interviews and in fact the use of underwear is an important part of a MHM program; it can determine the type of sanitary material to be provided. An example of that is the disposable sanitary pad given to women in the birth unit; this pad needs to be stuck to the underwear but the underwear is not provided. When talking to women in Kutupalong clinic it was noticed that they do not use underwear on a daily basis; so, how are they supposed to hold the sanitary pad without underwear? Maybe that is why the most common disposable sanitary pad in the market does not need the use of underwear; it comes with a string to hold the pad. This pad can be seen in chapter four, figure 4.17.

One specific question that was asked of the women was what they needed to manage their menstruation at Kutupalong clinic. This exercise was quite interesting because women have a clear idea of what they need; they listed everything that is required to manage their menstruation when using cloths as sanitary material.
The first item was cloths to use inside underwear; then, the following items were underwear and soap. The next in the list were water, places to change and places to wash and dry but those were not mentioned by most of the women because they already have access to some of these facilities at the clinic and they can find some coping strategies to deal with the lack of designated places to wash and dry their material. Women's main challenge is the lack of sanitary pads. If a woman starts menstruating unexpectedly, if will be difficult for her to have access to cloths, rags or commercial pads while she is in the health centre.

When women start menstruating at the clinic, they have to go back home to get some cloths or rags to use; sometimes, they have to leave their relatives, usually children under five, unattended for the period they need to go and come back. There have been some embarrassing situations where carers have only the clothes they wear and these get stained. Sometimes, women have asked a cleaner or midwife for help to give them at least one disposable pad from the post-natal care program till they get their own material from home.

5.4 Economic

The minimum wage in Bangladesh is 1,500 BDT per month (19.2USD) (WageIndicator Foundation, 2015) and the cost of the cheapest pack with ten pads is 90 BDT (1.15USD). This is very high taking into account that the cost is the equivalent of almost two working days but also equivalent to the cost of 4.5kg of poor quality rice. Therefore, it is expected to that women in Kutupalong area cannot afford to buy disposable pads, if they do not have access to cloths or rags, when they start menstruating at the clinic. More than 80% of the target population of Kutupalong clinic, patients and carers, are refugees with very little source of income; perhaps, they earn even less that the official minimum wages established by the Bangladeshi government because Rohingya refugees are stateless.

This situation is not isolated to this clinic; similar situation might be found in other contexts as the populations assisted by MSF-OCA worldwide are under emergency or post emergency situations. That is the reason MSF-OCA health centres should provide facilities and also sanitary material for patients and carers to manage their menstruation hygienically when they are within the medical facilities.

5.5 Financial

The MSF interventions are financed 100% by MSF; meaning that MSF pays staff salary, medical and logistic supply as well as all the infrastructures required to provide health care. All the MSF programs provide the affected population with free health care. Therefore, the recommendations provided by this study would be implemented by MSF-OCA and it would be MSF-OCA to cover all the costs.

5.6 Institutional

MHM goes beyond the provision of sanitary pads; Kutupalong clinic can be considered as a pioneer in MHM because it is providing sanitary pads based on a need identified by the staff; but the lack of requirements and tools on MHM is a challenge for staff because they cannot monitor and follow up what is happening with the sanitary pads, how they are being disposed of and if women really use them. There are no hygiene promotion activities to talk to women about hygiene related to menstruation.

The proposed monitoring tool, piloted during fieldwork, was very useful as identifying everything that needs to be in place to implement proper MHM. The initial tool considered 15 requirements but after the trial, two more aspects were added based on the findings from FGDs, Observations and Interviews. The final list of requirements is put forward in the recommendation chapter.

It was not surprising to discover that the staff members do not have much knowledge of MHM. However, it was not expected to find that 7/10 respondents believed MHM is under the

medical department and only the three international staff interviewed said MHM was part of WASH because the design and implementation is basically done by the WatSan staff.

The staff members were asked if they ever came across to any information on menstruation in MSF guidelines; only 1/10 respondent knew the gender and sanitation tool for emergencies mentioned in chapter 2, 2.13.2. It was presumed that at least the WatSan officer and hygiene supervisor had come across the tools or the brief recommendations on menstruation given in the MSF public health handbook. This was a bit disappointing because these two people are key for the implementation of any recommendation given by this study.
Both, the hygiene supervisor and the WatSan officer have some years of MSF experience and the public health handbook is part of the guidelines they follow to do their job effectively.

Generally speaking, it was very positive to see the motivation of the staff for this topic; all the respondents believe this is something important and relevant for the MSF-OCA interventions in health centres. On the one hand, the staff members think women have to be the ones to talk to women about MHM but on the other hand, female and male staff are willing to talk to women about MHM as far as they feel comfortable; the staff do not want to impose views on patients and carers.

5.7 Conclusion

Integrating MHM into the WASH program involves more than sanitary material and toilet facilities, as was seen from the findings and the discussion. The socio/cultural aspects play an important role; they determine the type of sanitation facilities women might use, latrines or shower, sanitary material they might use and the type of collection and final disposal.

It is recognised that women do not only face challenges during menstruation at the health structures; perhaps most of the women interviewed have better access to sanitation facilities at MSF-OCA health structures than they do in their houses, but the study has boundaries. Nevertheless, having a MHM program in the health structure can sensitize women to good MHM practices to use at home.

6 Conclusions and recommendations

This chapter returns to the research question and objectives to analyse to what extent they were achieved. Also it presents a reflection in relation to the methodology used for the study to see whether it was appropriate or no. Finally, there are some suggestions for further research that might be relevant for the completion of this study, along with a final conclusion.

6.1 Recommendations for the MHM intervention

The recommendations include the use of the MHM program in health centres, as part of the watsan essential requirements, along with recommendations in terms of consumable material (sanitary material), hygiene promotion, waste disposal and infrastructure. The aim is to answer the principal and specific research questions and achieve the four objectives set for this study.

Objectives 2

6.1.1 Recommendations about MHM as part of WASH

Standards in MHM for health structures

All Health Structures supported by MSF-OCA should provide patients, carers and staff with proper sanitation facilities and sanitary material for safe MHM

There should be private facilities (latrine/showers), in all Health Structures supported by MSF-OCA, for women to change sanitary materials, to wash their hands, wash themselves, wash and dry reusable sanitary materials. There should also be a system in place for proper collection and safe disposal of used sanitary materials.

Indicators in MHM for health centres

- All female patients, carers and staff have access to sanitation facilities that ensure to safe menstruation management, including privacy.
- All female patients, carers and staff have access to sanitary materials within the health facility if necessary.
- MSF-OCA carries out hygiene promotion activities on MHM in all its Health centres
- All the sanitation facilities, sanitary material and collection of used sanitary material are culturally appropriate.

MHM essential requirements

18 aspects were identified as essential for women to manage their menstruation in a health facility; three requirements were added after the fieldwork, (numbers two, ten and fourteen). The words highlighted in bold represent the adjustment being made after the fieldwork.

Table 6.1 Final version of proposed MHM essential requirements

Area		Requirement
Staff	1	MSF staff have been trained in MHM and are able to talk to women about it
	2	**Preferably, a female member of staff is responsible for MHM hygiene promotion**
Women participation	3	Women are consulted about the type of sanitary material they use and facilities arrangements to manage their menstruation **within the health centre.**
Water	4	Water is available inside the latrine/shower or nearby (max 5m walking distance), and at the MHM washing area.
Infrastructure	5	Female latrines are separated from the male latrines. Preferably the block should have a screen
	6	Female latrines are easily accessible and safely located
	7	Each latrine has a well fitting door and an internal lock system, which is fully functioning.
	8	All latrines have a door and roof and the walls are high enough **to ensure privacy from other users**.
	9	There is a **pathway and** light system to allow women to use the latrine **and showers** at night
	10	**At least one latrine provides wheelchair access, for women with special needs, to manage their menstruation**
Hygiene	11	Hygiene is promoted among women to **enable them to** safely manage their menstruation
	12	Hand washing facilities and soap are available at female latrines **and showers**
	13	Soap is provided for women to wash sanitary material
	14	**Facilities are easy to keep clean and hygienic all the time**
	15	If necessary, and after consultation with women, sanitary material **and underwear** is provided.
Wastewater disposal	16	Discreet washing facilities with drying lines are in place for women to wash reusable sanitary material
	17	Drainage is covered to **prevent others from seeing** the content of the wastewater. This is connected to a grease trap and soak-away
Solid waste disposal	18	There is a system in use for safe **and discreet** collection, transport and final disposal **of used** sanitary material

MHM monitoring tool (essential requirements)

This tool has been designed to complement the WASH sanitary surveillance form to enable the integration of MHM into the WatSan program. The monitoring tool can be seen in appendix 13; the form contains the 18 essential requirements for MHM. This one was piloted during the fieldwork; therefore, it has been adjusted afterward based on the results obtained. The updates are highlighted in bold.

Design & implementation tool for MHM in MSF Health Facilities.

A design & implementation tool was developed based on information consolidated from the literature review and the findings from the fieldwork. This tool is to be used at the initial stage to assess the situation regarding MHM in health facilities to help WatSan officers, medics and logisticians to design an action plan to implement the proposed standards and essential requirements on MHM for health centres. The draft template is presented in appendix 14.

Objectives 3

6.1.2 Recommendations about consumable material

There is not a best or worst sanitary material; the most appropriate material to be provided will be determined by the context. There should be a stock of locally available disposable and reusable material (cloths or sanitary pad) and before it is given to a woman, she should be asked which one she prefers. The sanitary material should not be provided as individual item; it is better to prepare a MHM kit according to findings from the MHM design and implementation tool.

Two optional kits are recommended

MHM kit disposable pads: This can be composed of sanitary pads, paper bag for disposal, bathing soap and underwear if necessary

MHM reusable material: This can be composed of reusable pad or cloths, washing soap, bathing soap and underwear if necessary.

The kits can be adjusted according to the context; the underwear is optional; it will depend whether or not women use it on a daily basis and whether or not the sanitary material requires the use of underwear.

The kits must be distributed by the hygiene promoters along with information on how to use the pads, how and where to dispose of them or where to wash and dry the reusable material in the health centre. It is very important to ensure women dispose of single use pads and wash reusable pads with clean water and soap and dry them in the sun.

6.1.3 Recommendations on Hygiene promotion

Organize hygiene promotion sessions on MHM to sensitize and teach women about menstruation, reason women menstruate and how to manage menstruation safely. Important points are:

- Menstruation is a natural human process.
- Wash sanitary material with clean water and soap and drying them under direct sunlight.
- The use of clean sanitary material.
- Personal hygiene during menstruation (hand washing, bath)
- Safe collection and disposal of used sanitary material.

6.1.4 Recommendations on infrastructures

Shower and latrines

The bathing facilities and latrines must be built taking into account recommendations about privacy, safety and location given in the MSF public health handbook. Showers and latrines

must complete the requirements in terms of privacy, accessibility, safety and access to water described in the proposed MHM essential requirements and MSF WASH essential requirements. It is preferable that the female latrines and showers have a screen.

Washing facilities for MHM

The idea is to provide private facilities for women to wash their sanitary material; there are two options that can be used.

Option one: To construct a MHM washing area with individual washing points as part of the female latrine or shower block; this area can be located on one side of the latrines or shower block as is shown in figure 6.1.

Option two: To have some washbasins in the female showers or latrines that women can use to wash their sanitary materials inside the shower, in that these are less busy compare to latrines.

Drying facilities for MHM

The drying line for sanitary material must be discreet, only women should have access to it.

Two options are recommended.

Option one: To set a MHM drying area behind the shower or latrine blocks. This area should have a fence, have some lines for drying and a side pathway; figure 6.1 shows a sketch of it. This system would work better if the latrine or shower block has a screen. The advantage of this system it is very discreet; women can get into the facility without giving evidence of menstruation to other users. The disadvantage is that it needs the available space behind, in front and by one side of the block; so, it can be difficult to implement in the existing facilities. There is no roof at the back because the idea is to dry the material under the sun.

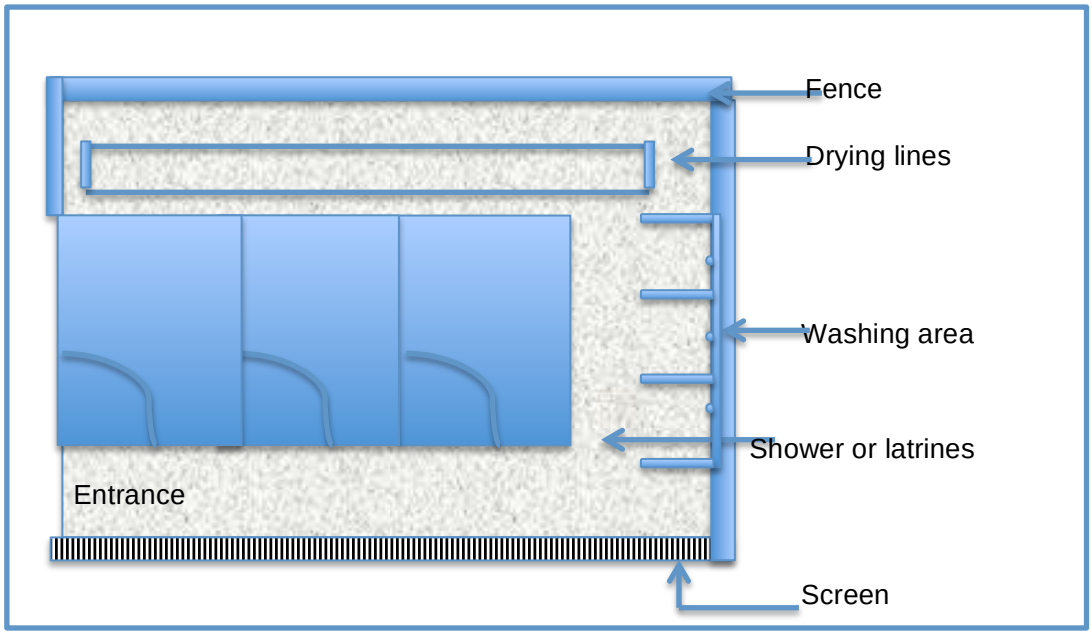

Figure 6.1 Sketch of drying line behind female showers or latrines
Designed by Rubis Mena

Option two: The second option is to have a separated fence drying area with direct access from the female latrines or shower block.

6.1.5 Recommendations on waste disposal

The collection of used pads must be discreet otherwise it can be embarrassing for women to dispose of a used pad in a waste container knowing that the next user can see the used pad but also it can be unpleasant for the cleaner to transport and empty the container for final disposal. All the waste bins should have lids.

Here are some recommendations to prevent people from seeing the content of the waste container.

Option one: Provide the sanitary material in a kit including a dark paper bag for disposal; it has to be linked to a hygiene promotion program to explain to women how to wrap the used pad in the paper bag and where to dispose of it. This option is good for women and cleaner; sample of a paper bag is shown in figure 6.2.

Option two: The waste bins should always have lids. However, the lids of most of the local containers are as wide as the containers themselves and any time the lid is removed the users can see what is inside. Those containers can be modified to have a kind of lateral push door lid as shown in figure 6.3.

Option three: The waste container with push door lid or swing lid as shown in figure 6.4 and 6.5 can be a good solution to prevent the users to see the content of the container.

The final disposal can be done in the waste management area; the options are incineration and burial. In the situation where people do not agree with incineration, a MHM pit must be added to the waste management area.

Figure 6.2 Sample of disposable sanitary bag

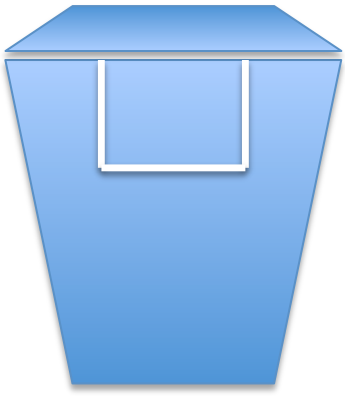

Figure 6.3 Model of modified container
Designed by Rubis Mena

Figure 6.4 Push lid container

Figure 6.5 Swing lid container

6.1.6 Recommendation about staff training

The MSF-OCA staff members need to get some understanding of MHM to enable them to talk to patients and carers about the topic. Also they need to be trained on how to use the tools recommended by this study.

MSF-OCA should include a MHM module as part of all water and sanitations trainings the organization carries out with watsan officers and logisticians.

6.2 Recommendations on future researches

This study has focussed on gender, MHM and WASH for MSF-OCA health structures in chronic and establish emergency situations but MHM has also health implications, some of which were mentioned in chapter 2, 2.14.3. That is the reason the author believes the following areas of research can help to complement this study.

Trial the MHM program in MSF-OCA to make further adjustments.

Research into the following three recommended areas can help to strengthen how to manage the MHM under certain medical situations, which have not been addressed in this study.

- MHM under medical emergency (cholera and Homographic fever outbreaks)
- MHM for disabled women.
- MHM for women with fistula problems and women with perimenopause.

6.3 Reflection on the methodology

The methodology used for this study proved to be appropriate; the use of different methods contributed to the success of the study. The literature review provided in depth information on MHM and also guided the researcher to select the methods to use for data collection. Then, the FGDs, structured and semi-structured interviews along with the observation and MHM monitoring tool made the researcher aware of issues that were not found on the literature.

Finally, the combination of literature and fieldwork allowed the researcher to answer the research question and achieve the set objectives.

6.4 Limitations of the study

The study aimed to provide recommendations and tools for better sanitation facilities considering gender and MHM needs in MSF-OCA health structures worldwide. However, the fieldwork was carried out in only one Health Centre with very good quality latrines and showers. It would have been much better to collect data from at least two different health facilities, Kutupalong in South Asia and another one in Sub-Saharan Africa to be able to compare and consider all the possible socio/cultural variables. Unfortunately, that was not possible because of time and cost; MSF-OCA would not have covered the cost of travelling and the study would have needed more than four months.

6.5 Conclusion

The principal research question of this study was: *How can sanitation facilities in MSF-OCA Health Facilities meet the needs of women (focussing on MHM)?*

To provide sanitation facilities, which can meet the needs of women with a particular focus on MHM, requires the integration of MHM into the existing MSF-OCA WASH essential requirements for Health Structures. This study has developed a MHM intervention including: standards, indicators, essential requirements and tools to be used to design, implement and monitor the MHM needs in MSF-OCA health centres worldwide.

The standards, tools and recommendations provided have been developed based on the best practices described in different water and sanitation guidelines and on MHM interventions in schools and emergency settings; all of them assessed in the literature review. Moreover, the list of requirements has been used as a monitoring tool to identify criteria to be considered from a technical, socio/cultural, environmental, consumable and institutional perspective because MHM goes beyond the provision of sanitary pads.

The integration cannot be done without training the national and international staff and a strong MHM policy supported by the MSF-OCA principal office in Amsterdam. Currently, women face challenges managing their menstruation in MSF-OCA health facilities because there are no designated facilities for this. MHM is essential for patients, carers and staff.

If MSF-OCA implemented the proposed MHM standards, indicators and essential requirements in all its health facilities, the sanitation facilities would meet the gender and MHM needs in MSF-OCA Health Structures.

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Appendices

Appendix 1: **Literature review search strategy**

Word used to search for literature in Sanitation, gender, MHM and Health centres

Sanitation in health facilities	**Sanitation in Humanitarian sector**	**Sanitation and Gender**
Sanitation AND care facilities, Environmental standards AND health facility, WASH AND health facility, WASH AND health care facility, Standard AND WASH AND health care facility, Standard WASH AND care facility, Standard AND hygiene AND care facility, Toilets AND health care, Toilets AND care facilities, Latrines AND health facilities, Latrines AND hospital, Toilet AND hospital, Standard AND WASH AND hospital, Standards AND sanitation AND hospital, Sanitation AND hospital, Environmental sanitation AND hospital, MHM AND care facilities.	Sanitation AND emergency, Latrine AND emergency, Toilet AND emergency, WASH and Emergency, WASH AND humanitarian, Latrine AND humanitarian, Sanitation AND humanitarian, Watsan AND humanitarian, Watsan AND emergency, Hygiene AND emergency, Excreta AND emergency, Emergency AND toilet, Engineering AND emergency.	Gender AND sanitation, Women AND sanitation, Girls AND sanitation, Menstruation AND Sanitation, Latrine AND girls, Latrines AND women, Latrine AND menstruation, Latrine AND gender, Toilet AND girls, Toilet AND gender, Toilet AND women, Toilet AND menstruation, Wash AND gender, Watsan AND gender, WASH AND women, Watsan AND women, WASH AND girls, Sanitary pad AND sanitation, Watsan AND girls.
Sanitation, health facilities and humanitarian sector	**Sanitation, and gender (MHM) in the humanitarian sector**	**Sanitation, gender (MHM) in health facilities**
Sanitation AND health facility AND emergency, Sanitation AND health centre AND emergency, Hospital AND emergency AND sanitation, WASH AND emergency AND sanitation, Latrine AND health facility AND emergency, Toilet AND health facility AND emergency, Latrine AND health centre AND emergency, Toilet AND health centre AND emergency, Watsan AND emergency AND hospital, Watsan AND emergency AND health post, WASH AND emergency AND health facility, Watsan AND emergency AND health centre, WASH AND emergency AND health centre.	Menstruation AND emergency AND women, MHM AND emergencies, Girls AND emergency AND menstrual hygiene management, Menstrual management AND emergency AND women, Menstrual hygiene AND humanitarian response, Menstrual hygiene management AND humanitarian emergencies, Menstrual hygiene AND emergency AND women, Menstrual hygiene management AND emergency response, sanitary material AND emergency, sanitary pad AND emergency.	Menstruation AND health facilities, Menstruation AND hospital, Menstruation AND health post, Menstruation AND health centre, Menstrual hygiene AND health facility, Menstrual hygiene AND hospital, Menstrual hygiene AND health centre Menstrual hygiene AND health post, MHM and Hospital, MHM AND health facility, MHM AND Health centre, MHM AND Health post, sanitary pad AND health facility.
MHM in Health facilities in humanitarian response		
Menstruation AND hospital AND emergency, MHM AND health facilities AND humanitarian response, Menstrual hygiene AND health care facilities AND emergency, Sanitary pad AND hospital AND emergency, Gender AND emergency AND health care facilities, Menstrual women AND health centre AND humanitarian response		

Appendix 2: **Informed consent form**

Loughborough University

Meeting gender and Menstrual Hygiene Needs in MSF Health Structures

The purpose and details of this study have been explained to me. I understand that this study is designed to further scientific knowledge and that all procedures have been approved by the Loughborough University Ethics Approvals (Human Participants) Sub-Committee.	Yes ☐	No ☐
I have read and understood the information sheet and this consent form.	Yes ☐	No ☐
I have had an opportunity to ask questions about my participation.	Yes ☐	No ☐
I understand that I am under no obligation to take part in the study.	Yes ☐	No ☐
I understand that I have the right to withdraw from this study at any stage for any reason, and that I will not be required to explain my reasons for withdrawing.	Yes ☐	No ☐
I understand that all the information I provide will be treated in strict confidence and will be kept anonymous and confidential to the researchers unless (under the statutory obligations of the agencies which the researchers are working with), it is judged that confidentiality will have to be breached for the safety of the participant or others.	Yes ☐	No ☐
I agree to participate in this study.	Yes ☐	No ☐

Your name _____

Your signature _____

Signature of investigator _____

Date _____

Appendix 3: **Observation form template**

Person responsible of the study: Rubis Mena

Date	DD/MM/YYYY

Staff	**Yes**	**No**
Is there a watsan officer assigned to the clinic?		
Is there a person responsible for hygiene in the clinic		
Are there cleaners responsible for maintaining the latrines?		

Water	**Yes**	**No**
Water points fully working		
Availability for staff and visitors		
Storage		
Water point near to latrines, showers and washing areas		
Type of water source:		

Excreta disposal	**Yes**	**No**
Separate latrine for women and men?		
Anal cleansing material		
Hand-washing point with soap		
Each latrine has a door and working lockable inside system?		
Light to use at night?		
The latrine is used at night		
Window and roof provide privacy		
Is it easy for men to get into female latrines		
Is there a screen in front of the women's latrine block?		
Type of latrine		
Number of latrines, enough? How many in use?		
Size of the latrine		
Type of slab		
Floor		
Condition and use of the latrines		

Location of latrines (meters from the buildings)
Comments

Wastewater management	**Yes**	**No**
Separate shower for men and women		
Soap available		
Each shower has a door with working lockable inside system?		
Light to use at night if necessary		
Is it possible to use the showers during the night?		
Window and roof provide privacy		
Is it easy for men to get into women's showers		
Type of showers?		
Number of showers, enough? How many in use?		
Size of the showers		
Floor		
Condition and use of the showers		
Location		
Stagnant water		
Grease trap and soak-away		
Comments		

Washing area	**Yes**	**No**
Washing area available with water point		
Soap available		
Drying line available and shelter from rain		
Private washing area available for MHM?		
Type of laundry area?		

Condition and use of the laundry area
Location
Stagnant water
Grease trap and soak-away
Comments

Waste disposal	**Yes**	**No**
Waste area fenced		
Incinerator fully working		
Organic pit fully working		
System in place for glass disposal and needles disposal		
Waste manager trained		
Segregation system in place with colour code		
Collection done on a daily basis		
Final disposal done on a daily basis		
General condition of clinic in terms of waste		
Comments		

Hygiene	**Yes**	**No**
People wash hands after using the latrines		
People use the laundry and showers		
Hygiene promotion activities in place		
Hygiene committee in the health facility		
Comments		

Appendix 4: **Structured interview template**

Person responsible for the study: Rubis Mena

Interview information

Date	DD/MM/YYYY
Start time	
Finish time	

I**ntroduction**

My name is Rubis Mena, I have worked for MSF for more than 5 years. I am now studying in the UK and I am doing a piece of research with MSF as part of my university studies

Purpose of this interview

- To understand your involvement in meeting the gender and MHM needs in MSF interventions.
- To identify the knowledge you have about MHM and its link with WASH in MSF health facilities.

Participant information

Name	
Position in MSF	
Years of experience in MSF	

Informed consent

The participant has signed the consent form staying that she/he agrees to take part of this study.

Questions

1. **What do you think about the latrines here in Kutupalong?**
   Do you think they are appropriate for men and women?

   Yes_____ No_____

   Reason for answer

2. **Can you tell me what are the differences between female and male latrines here in Kutupalong?**
   What are the differences?

3. **What are the needs for women and men in term of sanitation?**
   Show participants disposable sanitary pads, reusable sanitary pads, tampon, rags and cloth

4. **Do you know what is this for?**
   Yes_____

   No_____ Comments

5. **Do you have any information about which of these is used by women in Kutupalong clinic?**
   Disposable sanitary pads_____

   Reusable sanitary pads_____

Rags_____

Cloths_____

Other_____

6. **From where do they obtain those sanitary materials? Who provides the items?**

7. **Where do women go to get changed when they have their menstruation here at the health facility?**

8. **How do women dispose of or wash their sanitary material? Is there a place available for that?**

9. **MSF is considering including MHM as part of MSF programs in health facilities worldwide? What do you think about this idea?**

10. **In which component of MSF does MHM fit?**
    Medical (Reproductive health)____

    Logistic_____

    Watsan_____

    Reason

11. **Is there any information on MHM in the MSF technical guidelines?**

12. **What do you think MSF should do to meet women's needs in term of MHM within health facilities?**
    Possible answers: Provide sanitary material, women participation, consult women and include MHM in MSF training, develop a guideline.

13. **What do you think is necessary in term of infrastructure?**
    Possible answer: Improve latrines infrastructure for better privacy, access to water near or inside the latrines, provide discreet washing area with drying line, set up a system for proper sanitary waste disposal.

14. **Who should talk to women about MHM in the health facility?**
    Anyone_____

    Just women_____

15. **What would happen if tomorrow you were asked to talk to patients and caretakers about MHM? Would you feel confident talking to women about MHM?**

Thanks you very much for taking time to be part of this study. I vey much appreciate your participation.

Appendix 5: **Summary of structure interviews responses**

Summary of data provided by MSF-OCA staff (n = 10)

Aspects	Thoughts	Nº of answer
Technical / Facilities	There is no segregation of latrine (men/woman)	10
	Latrines are appropriate for users	7
	Latrines provide privacy	6
	Sanitation has improved in the clinic with the renovation of latrines	6
	Latrines need to be segregated male and female	4
	Latrines are not appropriate for users	3
	Latrines are far for some in-patients	2
	Latrines are near for users	2
	The best latrines compared to other places	1
Place for women get change	Latrine	5
	Latrine and shower	3
	Shower	2
Infrastructures needs to manage menstruation	Toilets with running water	6
	Facilities for pad disposal	6
	Private separate toilets for female	5
	Do not know	1
	To have MHM centre for education	1
Socio/cultural Sanitation need for men and women	Women menstruate	5
	There are no special needs for one or the other	3
	Men can shower outside	1
	Men stand to pee, they can use urinals	1
Who should talk to women about MHM	Just women	10
	Any one	0
Material Sanitary material it is believed to be used by women	Staff recognize sanitary pads	10
	Disposable pad and cloth	2
	Disposable pad	2
	Reusable pads	2
	Reusable pad, disposable pad and cloth	1
	Reusable pad and cloth	1
	Cloth	1
	Do not know	1
Provision of sanitary material	MSF-OCA provides for birth unit	10
	Do not know	7
	From UNHCR in the refugee camp	3
Institutional Opinion about inclusion of MHM in MSF-OCA	Will be good	8
	Good initiative	1
	Will be helpful for women	1
Staff have come across to information on MHM in MSF	No	9
	Yes	1
MHM in MSF- OCA	Medical	7
	Watsan	3
	Logistic	0
What MSF- OCA should do for MHM	Hygiene promotion in MHM	8
	Provide pads for patients and cares	7
	Make a plan for MHM in health centres	1
Do the staff feel comfortable and prepared to talk about MHM?	Need policy on MHM first	5
	Feel confident	3
	Do no know	2

Appendix 6: **Composition of Staff members interviewed**

	Position		**Gender**	**MSF Experience**
1	Watsan officer	National	Male	15 years
2	Translator	National	Female	4 years
3	Doctor	International	Male	2 months
4	Doctor	National	Female	6 months
5	Hygiene supervisor	National	Male	3.5 years
6	Medical Team Leader	International	Female	4 years
7	Logistician	International	Female	15 years
8	Cleaner	National	Female	2 years
9	Head midwife	National	Female	5.6 years
10	Midwife	National	Female	4 years

Appendix 7: **Semi-structured interview template**

Person responsible for the study: Rubis Mena

Interview information

Date	DD/MM/YYYY
Start time	
Finish time	

Introduction

My name is Rubis Mena, I have worked for MSF for more than 5 years. I am now studying in the UK and I am doing a piece of research with MSF as part of my university studies

Purpose of this interview

- To understand women's experiences managing their menstruation at Kutupalong clinic.
- To identify difficulties women face when they manage their menstruation at Kutupalong Clinic.

Participant information

Name	
Age	
Patients/caretaker	

Informed consent

- The participant has consented that she/he agrees to take part of this study.
- Participant has ben informed that the interview is going to be recorded to be able to capture everything she/he said.

Questions

1. **Tell me, how are the latrines here at Kutupalog Clinic?**

2. **Privacy and accessibility? Is it easy for you to get to the latrine? and how comfortable did you feel using the latrines?**

3. **If you have had your menstruation at the clinic, what did you do to change your sanitary material? Where did you go?**

   Latrine____

   Shower_____

   Never change_____ why?

   There is not place to get changed_____

   Other place _____

   Why? _____

4. **What material do you use to absorb blood during your menstruation?**
   Rag_____
   Cloths_____
   Disposable pad_____
   Reusable pad_____
   Other_____

5. **Why do you use that material and not something else?**
   It does not cost me anything (rags, old cloth)_____
   I always use this_____
   I don't know any other sanitary material_____
   I get them free_____ by whom? _____
   Those are the cheapest ones_____
   Other reason_____

6. **How do you get access to your sanitary material when you are at the clinic?**

7. **How many times a day do you change your sanitary material?**
   Once_____
   Twice_____
   Three_____
   More_____

8. **Can you describe for me the process when you change your sanitary material?**

9. **Do you change your pad during the night?**
   Yes_____
   No_____
   Reason for not to change

10. **Can you change your pad at night here at the health centre?**
    Yes_____
    No_____

    Why not_____
    Yes, where_____

11. **Can you wash your hand after you change your sanitary material?**
    Yes_____
    No_____ Why not?
    Always_____

Sometimes_____

12. **In some countries women do not shower during menstruation, do women shower during menstruation here in Kutupalong?**
    Yes_____

    No_____

    Why not_____

13. **Can you have a shower here at the health clinic during your menstruation?**
    Yes_____

    No_____

    If yes, where_____ is there water and soap_____

    Why not? _____

If reusable sanitary pad is used

14. **Tell me; is it possible to wash your sanitary material here at the clinic?**
    Yes_____

    No_____

    Distance to get the water_____

    Why there is not access_____

15. **Where can you clean/wash your pad here in the clinic?**
    I cannot wash my pad here _____why not?

    Bucket_____

    Washing area_____

    Other_____

16. **From where do you get the soap to wash your pad here at the clinic?**
    Bring from home_____

    MSF provides it_____

    Other_____

17. **Is there a place where you can dry your pad/rag/cloth here at the clinic?**
    Yes_____ where_____

    No_____

18. **Can other women see you washing and drying your sanitary material?**
    Yes_____

    No_____

    Why not._____

    And Men?

    Yes_____

    No_____

Reason

If disposable sanitary pad is used

19. **Is there a place where you dispose of your used pad?**
    Waste bin_____

    Inside the latrine_____

    Bury it_____

    Other_____

20. **In some countries, it is not possible to bury or to burn sanitary material (soaked with blood. Can you tell me what is the cultural belief in relation to that here in Kutupalong?**

21. **What are the main difficulties you face when you handle your menstruation at the health centre?**

Thanks for your participation.

Appendix 8: **Summary of semi-structured interviews responses**

Summary of data provided by female users (n=7)

Questions	Thoughts	Nº of answers
Technical / Facilities	Water is available inside	4
	Comfortable	3
	Latrines are cleaned	2
	Now is possible to have shower	2
	Before latrines were not that comfortable	2
	Possible to wash hand.	1
	Possible to lock the door	1
	Women can use the facilities with their kids	1
Privacy and accessibility	Latrines provides privacy	4
	Sanitation facilities are safe	3
	Possible to lock door inside	2
	Comfortable	1
	Easy to use	1
Place women get changed	Shower	5
	Latrine	2
Place to wash sanitary material	Shower	4
	There is not place in the clinic	3
Place to dry sanitary material	There is not place in the clinic	4
	Sanitary material is dried underneath other cloth	2
Socio/cultural Process follow when changing sanitary material	Wash themselves before changing the sanitary material	7
	Wash their sanitary material right after it is changed	1
Possibility to use the latrines during the night	Yes	5
	No	2
	Why no	
	Need of company	1
	Belief evil spirits are in dirty places like toilets	1
Washing area for MHM	It is ok to wash sanitary material in front other women	3
	It is not ok to wash sanitary material with other women	2
Main challenges on MHM faced by women in the clinic	Lack of sanitary material	7
Sanitary material disposal	Waste bin	4
	Underneath other waste	4
To bury used sanitary material	Yes	7
	No	0
To burn used sanitary material	Yes	4
	No	3
Material Sanitary material being used	Rag/cloth	4
	Reusable pad and cloth	1
	Disposable pad	1
	Kind of small skirt underneath the cloth	1
Reason to use the sanitary material	Always use	3
	Lack of money to buy sanitary material	3
	Do not know other sanitary material	1
Soap	MSF-OCA provides soap in the clinic	4
What women need to manage their	Cloth to wear inside or sanitary pad	4
	Underwear	3

menstruation?	Soap	2
	Place to change	1
	Water	1
	Place to wash	1
	Place to dry	1
Institutional What should MSF-OCA do for MHM	Provide sanitary material at the health centre	7

Appendix 9: **Women FGD template**

Person responsible of the study: Rubis Mena

Identification

Health facility	

Interview information

Date	DD/MM/YYYY
Start time	
Finish time	

Introduction

My names is Rubis Mena, I have worked for MSF for more than 5 years. I am now studying in the UK and I am doing a piece of research with MSF as part of my university studies

Purpose of the study

I am doing this study to find out about the approach to gender issues in sanitation facilities in MSF health Structures. MSF and I would like to understand how we can improve the latrines in MSF health facilities to be more appropriate for the needs of women; we do not really know if the latrines are good for the patients and caretakers, so the best way to find out this information is by talking to you.

That is the reason I have invited all of you to take part in this conversation that will last for about 30-40 minutes, I would like to hear your opinion as users. This can be a sensitive topic but I want you to feel free to talk, everything you say here is confidential, everyone's opinion is more than welcome; do not feel shy to say what you think, this information will be used just for me to write my report.

I also want to let you know that I will record this conversation, because as I mentioned before, I have to write a report and it will be difficult for me to follow what you say and takes notes of everything. The audio recording will help me to remember what you have said. Only I will be able to listen to the recording and read my notes. When I write my report, I will not use your name.

Informed consent

- You can ask me questions about your participation here.
- You are not obliged to take part in this conversation
- I you feel uncomfortable; you are free to leave anytime you want without giving me any explanation.
- Everything you say here is confidential to this study.

Does everybody agree to participate?

Objectives

- To get people's opinion about the sanitation facilities at the health centre.
- To understand women's experience of using sanitation facilities in MSF health facilities.
- To listen to ideas of what needs to be done to improve the sanitation facilities to meet women needs within the health facility

Participant background information

Verbal presentation without recording

Observation of participant's background (age, women with children, teenager, etc)

Discussion topics

1. Do you use the latrines here in Kutupalog clinic? How do you find them? Are they ok? Lead participants to introduce the MHM topic themselves.

2. Do you think men and women use the latrine in the same way and for the same reason?

3. Is there something that only women use latrines for?

   Show participants disposable sanitary pads, reusable sanitary pads, tampon, rags and cloth.

4. Do you recognize this material? What is this for?

   First the researcher shared her personal experience managing her menstruation to the participants, what she uses and how often she gets changed.

I would like to know….

5. How do you manage your menstruation when at the health centre?

6. Which difficulties you face with your menstruation in term of privacy, during the night, distance from the building. (Latrine's door, walls, lock, roof…)

7. Do you have access to water and soap to wash your sanitary material at the health centre, where do you dry the cloths or rags? Or how do you dispose of the sanitary material? Where do you dispose of the sanitary material? Is it possible to burn or to bury rags or cloth soaked with blood?

8. Do you know what men think about menstruation? Your husband, father, bothers?

9. Which changes should be made in the latrines to overcome the difficulties you mentioned before?

10. Would you like to be consulted and involved in the design of the latrines? How?

Thanks you very much for taking time to be part of this study. I greatly appreciate your participation.

Appendix 10: **Summary of women FGD responses**

Information provided by women during FGD

Aspects	▪ Thoughts from women
Technical /Facilities Opinion about facilities	▪ The latrines are clean enough. Women use the latrines. ▪ Latrines are comfortable, near to the buildings and water point is near. ▪ It is possible to take a shower in the clinic. ▪ Women use the showers during menstruation because they can wash their "things" in there. ▪ There is soap and water in showers and latrines. ▪ All over the clinic is very good. ▪ The latrines are different for men and women, latrines are separated
Socio/cultural Knowledge and attitudes	▪ Women go more to the latrine compared to men. ▪ Women take kids to the latrines. ▪ Most of the time, women are the ones to take sick members of the family to the latrine. ▪ Men go to the latrines basically to pass urine. ▪ During menstruation women use the latrines more.
Socio/cultural Challenges women face managing menstruation at health centre	▪ Women have to go home to get some cloths to use. ▪ It is possible to get changed in the clinic because there are private places, "we can wash ourselves in the showers". ▪ There is a separate string (the one for hospital linen), it is not that open and it is possible to dry sanitary material in there. ▪ The other option is to hide the cloth underneath other cloth.
Material What is used during menstruation	▪ Most women use folded cloths in a little shape inside underwear. ▪ There is special cloth (reusable sanitary pad) made in the registered camp, sometimes women from the not registered camp buy that pad but "we cannot buy it all the time, most time we use old cloth". Also, women in the registered camp receive soap or Dettol and sometimes they sell it, women from the not registered camp can buy it.
Institutional /policy	▪ It would be better if the cloths that are provided in the registered camp (hand made reusable pad) were available at the clinic along with underwear.

Appendix 11: **MEN FGD template**

Person responsible of the study: Rubis Mena

Identification

Health facility	

Interview information

Date	DD/MM/YYYY
Start time	
Finish time	

Introduction

My name is Rubis Mena, I have worked for MSF for more than 5 years. I am now studying in the UK and I am doing a piece of research with MSF as part of my university studies

Purpose of the study

I am doing this study to find out about the approach to gender issues in sanitation facilities in MSF health Structures. MSF and I would like to understand how we can improve latrines in MSF health facilities to be more appropriate for the needs of women; we do not really know if the latrines are good for the patients and carers, so the best way to find out this information is by talking to you.

That is the reason I have invited all of you to take part in this conversation that will last for about 30-40 minutes, I would like to hear your opinion as users. This can be a sensitive topic but I want you to feel free to talk, everything you say here is confidential, everyone's opinion is more than welcome; do not feel shy to say what you think, this information will be used just for me to write my report.

I also want to let you know that I will record this conversation, because as I mentioned before, I have to write a report and it will be difficult for me to follow what you say and takes notes of everything. The recording audio will help me to remember what you have said. Only I will be able to listen to the recording and read my notes. When I write my report, I will not use your name.

Informed consent

- You can ask me questions about your participation here.
- You are not obliged to take part in this conversation
- I you feel uncomfortable; you are free to leave anytime you want without giving me any explanation.
- Everything you say here is confidential to this study.

Does everybody agree to participate?

Objectives

- To get the people's opinion about the sanitation facilities at the health centre.
- To understand men's perception of MHM

Participant background information

Verbal presentation without recording

Observation background participants (age, men with children, etc.)

Discussion topics

1. Do you use the latrines here in Kutupalog clinic? How do you find them? Are they ok?

2. Do you think men and women use the latrine in the same way and for the same reasons? Is there something that only women use latrines for?

Lead participants till they introduce the topic of MHM.

Show participants disposable sanitary pads, reusable sanitary pads, tampon, rags and cloth.

3. Do you recognize this? Do you know what this is used for?

4. Do you have any idea how women in your family handle their menstruation, what they use, if they get any supply, from where?

5. Do you think this is something important for women and they might need your support? Think about your daughter, mother, wives, sisters.

6. Which difficulties you think women face with their menstruation in term of privacy, during the night, distance from the building here in the clinic. (Latrine door, walls, lock, roof…)

7. Do you know if women have access to water and soap to wash their sanitary material here in the clinic? Where do they dry the cloths or rags? Or how they dispose the sanitary material?

8. Do you think that this is something that men are not supposed to know?

9. Do you think something must be done? What do you propose to do to help women to overcome those difficulties?

10. Would you like to be consulted and involved in designing the sanitation facilities

Thanks you very much for taking time to be part of this study. I really appreciate your participation.

Appendix 12: **Summary of men FGD responses**

Information provided by men during FGD

Aspects	▪ Thoughts from men
Technical/ Facilities Opinion about facilities	▪ Latrines are better since they were renovated. ▪ All latrines should be cleaned. It is important to have separate latrines for men and women. ▪ Women need more seclusion to have a bath compare to men. Women are supposed to bath inside the bathrooms. Men can feel free to bath anywhere.
Socio/cultural Knowledge/ attitudes	▪ Menstruation is a sensitive topic because of religion. ▪ Men do not use showers in the clinic because it is not good for men and women to share the same facilities. ▪ Women need support during menstruation but it should come from other women in the family, not from men. ▪ Menstruation is something men are not supposed to know about . ▪ If men see a dirty sanitary pad it means something that was planned will go wrong, if that occurs before travelling it means the journey is not going to be successful. ▪ Women should throw their sanitary material in a safe place. There are women who are very careful because they do not want that to be seen. There is not much space in the camp, which is a problem.
Socio/cultural Challenges men believe women face during menstruation	▪ Women face problems in the camp when they go to the latrines. ▪ There are security problems in the camp. ▪ Good character women are shy, so they bath and struggle hard. ▪ Bad character women feel free, they feel comfortable, and they are not shy. ▪ The latrines in the camp are far from home, sometimes women are bleeding and they cannot hide. ▪ Women do not have much trouble; they use extra cloth to control the flow.
Institutional / policy	▪ It would be better for the users to be involved before construction of sanitary facilities ▪ Female latrines should be separated from men latrines. ▪ Men do not need much seclusion; showers for men can be in the open, just a shelter without walls.

Appendix 13: **Gender & MHM monitoring tool for Health Structures**

"Gender and MHM as part of Water and Sanitation Essential requirements for Health Centres"

Project name	
Name of the health facility	
Type of facility: Hospital/PHC/PHU/	
Evaluator	
Date	

MSF-OCA Standard in MHM in Health Structures

All Health Structures supported by MSF-OCA provide patients, carers and staff with proper sanitation facilities and means for safe Menstrual Hygiene Management

There should be private facilities (latrine/showers), in all Health Structures supported by MSF-OCA, for women to change sanitary material, to wash their hands, wash themselves, wash and dry reusable sanitary material and systems in place for proper collection and safe disposal of used sanitary material

This tool is part of the Sanitary Surveillance Form for Health Structures; therefore, it has to be completed every four months. It will help watsan officers, medics and logisticians to obtain information and implement correct measures to meet the needs of women in relation to MHM in MSF-OCA Health Structures.

Area		Requirements	In place =1	No in place =0
Staff	1	MSF staff have been trained in MHM and are able to talk to women about it.		
	2	**Preferably, a female member of staff is responsible for MHM hygiene promotion.**		
Women participation	3	Women are consulted about the type of sanitary material they use and facilities arrangements to manage their menstruation **within the health centre.**		
Water	4	Water is available inside the latrine/shower or nearby (max 5m walking distance), and at the MHM washing area.		
Infrastructure	5	Female latrines are separated from the male latrines. Preferably the block should have a screen		
	6	Female latrines are easily accessible and safely located		
	7	Each latrine has a well fitting door and an internal lock system, which is fully functioning.		
	8	All latrines have a roof and the walls are high enough **to ensure privacy from other users**.		
	9	There is a **pathway and** light system to allow women to use the latrine **and showers** at night		

	10	**At least one latrine provides wheelchair access, for women with special needs, to manage their menstruation**		
Hygiene	11	Hygiene is promoted among women **to enable them to** safely manage their menstruation		
	12	Hand washing facilities and soap are available at female latrines **and showers**		
	13	Soap is provided for women to wash sanitary material		
	14	**Facilities are easy to keep clean and hygienic all the time**		
	15	If necessary, and after consultation with women, sanitary material **and underwear** is provided.		
Wastewater disposal	16	Discreet washing facilities with drying lines are in place for women to wash reusable sanitary material		
	17	Drainage is covered to **prevent others from seeing** the content of the wastewater. This is connected to a grease trap and soak-away		
Solid waste disposal	18	There is a system in use for safe **and discreet** collection, transport and final disposal **of used** sanitary material		
Total score				

All facilities must be culturally and socially appropriate for the users and maintained at least once a day following the infection control procedures for sanitation facilities described in MSF guidelines.

Appendix 14: **MHM Design and implementation tool for Health Structures (Draft)**

"Gender and MHM as part of Water and Sanitation Essential requirements for Health Centres"

Project name	
Name of the health facility	
Type of facility: Hospital/PHC/PHU/	
Evaluator	
Date	

MSF-OCA Standard in MHM in Health Structures

All Health Structures supported by MSF-OCA provide patients, carers and staff with proper sanitation facilities and means for safe Menstrual Hygiene Management

There should be private facilities (latrines or showers), in all Health Structures supported by MSF-OCA, for women to change sanitary material, to wash their hands, wash themselves, wash and dry reusable sanitary material and systems in place for proper collection and safe disposal of used sanitary material

This tool is part of the watsan essential requirements. It will help watsan officers, medics and logisticians to obtain information and implement correct measures to meet the needs of women in relation to MHM in MSF-OCA Health Structures.

MHM indicators

- All female patients, carers and staff have access to sanitation facilities that ensure to safe menstruation management, including privacy.
- All female patients, carers and staff have access to sanitary material within the health facility if necessary.
- MSF-OCA carries out hygiene promotion activities in MHM in all its Health centres
- All the facilities, sanitary material and collection of used sanitary material are culturally appropriate.

Planning the MHM program

The MHM program is to be planned between medics and watsan officers or field logisticians. The plan is divided into four sections. The first two are part of the design and the second two are part of the implementation.

1. Working with the staff on MHM
2. Data to be collected from female patients and carers
3. Data evaluation
4. Implementation

1. Working with the staff on MHM

1.1 General staff training

The first action will be a series of MHM workshops for watsan officers, medics and logistic staff. This workshop must introduce the MHM topic to the all the staff members in the health facility.

Objective:

- To introduce the MHM concept and the different aspects involved
- To get a common understanding of MHM programs within MSF-OCA health centres

Training content

The training is divided into five sections

Section one: Breaking the silence

- What is the basic difference between the female and male body?
- What is the basic difference between men and women in terms of sanitation?
- Have you seen women in the community or in your family excluded from some activities?
- What is the reason for this exclusion?

Section two: Biology of menstruation

- What is menstruation?
- Why do women menstruate?
- At which age do women begin menstruation?
- What is essential for women to safely and hygienically manage their menstruation?
- What do women use to absorb blood during menstruation?

Section three: Sanitary material

- What are the difference options available in the market for women to manage menstruation?
- What is the common material used in the project context?

Section four: MHM and health

- Why is MHM important?
- How can poor menstrual hygiene management be minimised?
- Why is it important to safely manage menstruation?

Section five: Infrastructure for safe MHM

- What aspects of the latrine or shower superstructures are essential for women to safely manage their menstruation?

- Apart from the latrines and shower, can you think of other essential facilities for women to manage their menstruation?
- Are the actual latrines or showers suitable for women to manage their menstruation?

1.2 Staff responsible for MHM

Usually, the MSF health centres have a hygiene promotion team; the female members of this team should be the ones to talk to female patients and carers about MHM. In case there is not a female hygiene promoter, it is recommended to hire one before the staff training takes place. The hygiene promoters should work in conjunction with the Medical Team Leader and the watsan officer or logistician.

2. Data to be collected

2.1 **From female patients and carers**

The female hygiene promoter organizes FGDs with small groups of women in the health facility to get the following data.

	Questions	Objective
1	Are the latrines or showers at the clinic appropriate for you to manage your menstruation? Are they segregated?	To identify potential improvements in terms of accessibility, privacy and safety
2	What material do you use to absorb blood during menstruation? Does the material require the use of underwear? How do you clean or dispose of the material?	To identify the most common material used by women in the project area and the type of material to be provided
3	How do you get access to this material?	To know whether there is a need to supply the sanitary material
4	Which facility do you use when you want to change your sanitary material, shower or latrines? Why?	To decide the location of the new extra sanitation facilities for MHM (washing area, drying area and waste disposal?
5	Can you describe to me the process you follow when changing your sanitary material?	To know the hygiene procedures followed by women to be able to plan the hygiene promotion activities on MHM
6	Do you feel comfortable about disposing of your used material in an open waste container where others can see?	To decide the type of collection system to set in place
7	Can you wash your sanitary material together with other women?	To get information to design the type of washing area for MHM
8	Where do you dry your sanitary material? Can other women or men see your sanitary material when it is drying?	To get information to design the type of drying area for MHM
9	Which of the following systems is more acceptable for final disposal of sanitary material? a. Incineration b. Deep burial	To decide whether to incinerate the used pads or to add an extra pit in the waste management area.
10	What is the main challenge you face when you have to manage your menstruation at the clinic?	To get an understanding of the MHM situation in the health centre

2.2 From cleaners and waste managers

It is important to involve cleaners and waste managers in the MHM program; they are in charge of cleaning the showers and latrines, and transporting and disposing of the waste in the waste management area.

	Questions	Objective
1	Do women use the waste container to dispose of used sanitary material?	To decide the type of collection system to put in place
2	Do you feel comfortable about emptying waste containers with visible used sanitary material?	To decide the type of collection system to put in place
3	Have you ever found used sanitary material outside the waste container? Hidden on the wall/ in the flush pan/ pit latrine/ in the septic tank?	To decide the collection system and the hygiene promotion activities on MHM
4	Do you have any suggestion of a system to collect used sanitary material?	To decide the type of collection system to put in place
5	Which system is more acceptable for final disposal, burning or deep burial?	To identify the most appropriate system for waste disposal

3. Data evaluation

Based on the data collected from women patients and carers and cleaners and waste managers it is possible to determine the following aspects.

3.1 Sanitary material to be provided

The material to be provided will be the one women identified as the most common; this can be disposable or reusable. It will also help to decide whether to provide underwear or not.

3.2 Sanitation facilities

The results of the consultation with women will determine which sanitation facilities women prefer to use to change their sanitary material. It can be the showers or the latrines facilities. The chosen facility must provide privacy, accessibility, water access and a hand washing point. Moreover, there must be a discreet MHM washing area and discreet drying lines with direct access from the facility. MHM washing area and drying lines are not required if all the women use disposable material.

3.3 MHM hygiene promotion activities.

The hygiene promotion team should plan their MHM activities focusing on the weak points identified during the FGDs. Some examples can be:

- The importance of washing hands after changing the sanitary material.
- The importance of drying sanitary material in the sun
- The importance of using clean sanitary material

3.4 Waste disposal

The type of waste containers to be placed inside sanitation facilities can be with a normal lid, push lid or swing lid. The results will help to decide whether or not to provide paper bags for wrapping used material; this will make the job of cleaners and waste managers less unpleasant.

4. Implementation

The implementation is divided into software and hardware.

4.1 Software

The software will be the hygiene promotion team's responsibility. They must make the order for the sanitary material to be provided and make the MHM kits based on the results from the FGDs with women. Furthermore, the hygiene promoter will organise activities to promote safe and hygienic menstrual hygiene management among women.

4.2 Hardware

The hardware will be the responsibility of watsan officer or logistician. They must make sure the improvements for MHM in latrines or showers are in place. Moreover, they are responsible for the systems for collection and final disposal of used material and/or for washing and drying sanitary material.

All facilities should be culturally appropriate for women.

Appendix 15: **Ethics approvals**

Completed ethical approval checklist

Ethics Approvals (Human Participants) Sub-Committee

WEDC

Ethical Clearance Checklist

Project Details

1. Project Title: Meeting Gender and Menstual Hygiene needs in MSF Health Structure

Applicant(s) Details

2. Name of Student: Rubis Mena	6. Name of Supervisor: Hazel Jones
3. Programme: MSc Water and Environmental Mangement	
4. Email address: r.m.mena-moreno-14@students.lboro.ac.uk rubismena@yahoo.es	7. Email address: h.e.jones2@lboro.ac.uk
5a. Contact address: E24 Kingfisher hall, Kingfsher way LE11 3FA	8a. Contact address: WEDC, John Pickford building
5b. Telephone number: +44 (0) 7967 164572	8b. Telephone number: + 44 (0) 1509 228 303

Participants

9a. Does the research involve human participants?	Yes
If you have selected No to this question you do not need to complete the rest of the form. Please sign it on page 6 and submit to your supervisor.	

9b. Has the Investigator read the 'WEDC Guidance for completion of Ethical Clearance Checklist' before starting this form?	Yes

Positions of Authority

9c. Are researchers in a position of direct authority with regard to participants (e.g. academic staff using student participants, line manager using junior staff, donor using staff of a recipient organisation)?	No

Vulnerable groups

10. Will participants be knowingly recruited from one or more of the following vulnerable groups?

1

WEDC Ethical Checklist_v4(locked).docx

Children under 18 years of age	No
Persons incapable of making an informed decision for themselves	No
Pregnant women	No
Prisoners/Detained persons	No
Other vulnerable group Please specify: Click here to enter text	No

11. Will participants from vulnerable groups be chaperoned by more than one investigator at all times?	N/A - replied no to question 10
12. Will at least one investigator of the same sex as the participant(s) from vulnerable groups be present throughout the investigation?	N/A - replied no to question 10
13. Will participants from vulnerable groups be visited at home?	N/A - replied no to question 10

Researcher Safety

14. Will the researcher be alone with participants at any time?	No
14a. Will the researcher inform anyone else of when they will be alone with participants?	N/A - replied no to question 14
14b. Has the researcher read the guidance document 'Conducting Interviews Off-Campus and Working Alone', and will the researcher abide by the recommendations within?	N/A - replied no to question 14

Methodology and Procedures

15. Please indicate whether the proposed study:

Involves taking bodily samples (please refer to published guidelines)	No
Involves using samples previously collected with consent for further research	No
Involves procedures which are likely to cause physical, psychological, social or emotional distress to participants	No
Is designed to be challenging physically or psychologically in any way (includes any study involving physical exercise)	No
Exposes participants to risks or distress greater than those encountered in their normal lifestyle	No
Involves collection of body secretions by invasive methods	No
Prescribes intake of compounds additional to daily diet or other dietary manipulation/supplementation	No
Involves pharmaceutical drugs	No
Involves use of radiation	No
Involves use of hazardous materials	No

Assists/alters the process of conception in any way	No
Involves methods of contraception	No
Involves genetic engineering	No

Involves testing new equipment with human participants	No

Observation/Recording

16a. Does the study involve observation and/or recording of participants?	Yes
16b. Will those being observed and/or video/audio recorded be informed that the observation and/or recording will take place?	Yes

Consent and Deception

17. Will participants give informed consent freely?	Yes

Informed consent

18. Will participants be fully informed of the objectives of the study and all details disclosed (preferably at the start of the study but, where this would interfere with the study, at the end)?	Yes
19. Will participants be fully informed of the use of the data collected (including, where applicable, any intellectual property arising from the research)?	Yes

20. For children under the age of 18 or participants who are incapable of making an informed decision for themselves:	
a. Will consent be obtained (either in writing or by some other means)?	N/A
b. Will consent be obtained from parents or other suitable person?	N/A
c. Will they be informed that they have the right to withdraw regardless of parental/guardian consent?	N/A
d. For studies conducted in schools, will approval be gained in advance from the Head-teacher and/or the Director of Education of the appropriate Local Education Authority?	N/A
e. For detained persons, members of the armed forces, employees, students and other persons judged to be under duress, will care be taken over gaining freely informed consent?	N/A

Deception

21. Does the study involve deception of participants (i.e.	

withholding of information or the misleading of participants) which could potentially harm or exploit participants?	No
22. Is deception an unavoidable part of the study?	N/A
23. Will participants be de-briefed and the true object of the research revealed at the earliest stage upon completion of the study?	N/A
24. Has consideration been given on the way that participants will react to the withholding of information or deliberate deception?	N/A

Withdrawal

25. Will participants be informed of their right to withdraw from the investigation at any time and to require their own data to be destroyed?	Yes

Storage of Data and Confidentiality

26. Will all information on participants be treated as confidential and not identifiable unless agreed otherwise in advance, and subject to the requirements of law?	Yes
27. Will storage of data comply with the UK Data Protection Act 1998?	Yes
28. Will any video/audio recording of participants be kept in a secure place and not released for any use by third parties?	N/A
29. Will video/audio recordings be destroyed within ten years of the completion of the investigation?	N/A
30. Will full details regarcing the storage and disposal of any human tissue samples be communicated to the participants?	N/A
31. Will research involve the sharing of data or confidential information beyond the initial consent given?	No
32. Will the research invclve administrative or secure data that requires permission from the appropriate authorities before use?	No

Incentives

33. Will incentives be offered to the researcher as an inducement to conduct the study?	No
34. Will incentives by offered to potential participants as an inducement to participate in the study?	No

Work Outside of the United Kingdom

35a. Is your research being conducted outside of the UK?	Yes

35b. Is your research being conducted in a country different to where you currently live and study/work?	Yes
36. Has a risk assessment been carried out to ensure the safety of the researcher whilst working outside of the UK and in a country other than their own?	Yes
37. Have you considered the appropriateness of your research in the country to which you are travelling?	Yes
38. Does carrying out your research in another country increase the risk to yourself or the participants in your research?	No
39. Have you obtained any necessary ethical permission needed in the country to which you are travelling?	Yes

Information and Declarations

Checklist Application Only:
If you have completed the checklist to the best of your knowledge, and not selected any answers marked with an *, # or †, your investigation is deemed to conform with the ethical checkpoints. Please sign the declaration and send it to your supervisor, who will lodge the completed checklist with your Head of School or his/her nominee.

Checklist with Additional Information to the Secretary of the Ethics approvals HPSC:
If you have completed the checklist and have only selected answers which require additional information to be submitted with the checklist (indicated by a †), please ensure that all the information is provided in detail below and send this signed checklist to your supervisor who will forward it to the Secretary of the Ethics Approvals HPSC.

Full Application needed:
If on completion of the checklist you have selected one or more answers which require the submission of a full proposal (indicated by a # or *), please download the relevant form from the Ethics Approvals HPSC's web page. **A signed copy of this Checklist should accompany the full submission to the HPSC.**

Space for Additional Information as requested:

Click here to enter text.

For completion by Supervisor

Please tick the appropriate boxes. The study should not begin until all boxes are ticked.

☒ The student has read the University's Code of Practice on investigations involving human participants

☒ The topic merits further research

☒ The student has the skills to carry out the research or is being trained in the required skills by the Supervisor

☒ The procedures for recruitment and obtaining informed consent are appropriate

Comments from supervisor:

Click here to enter text.

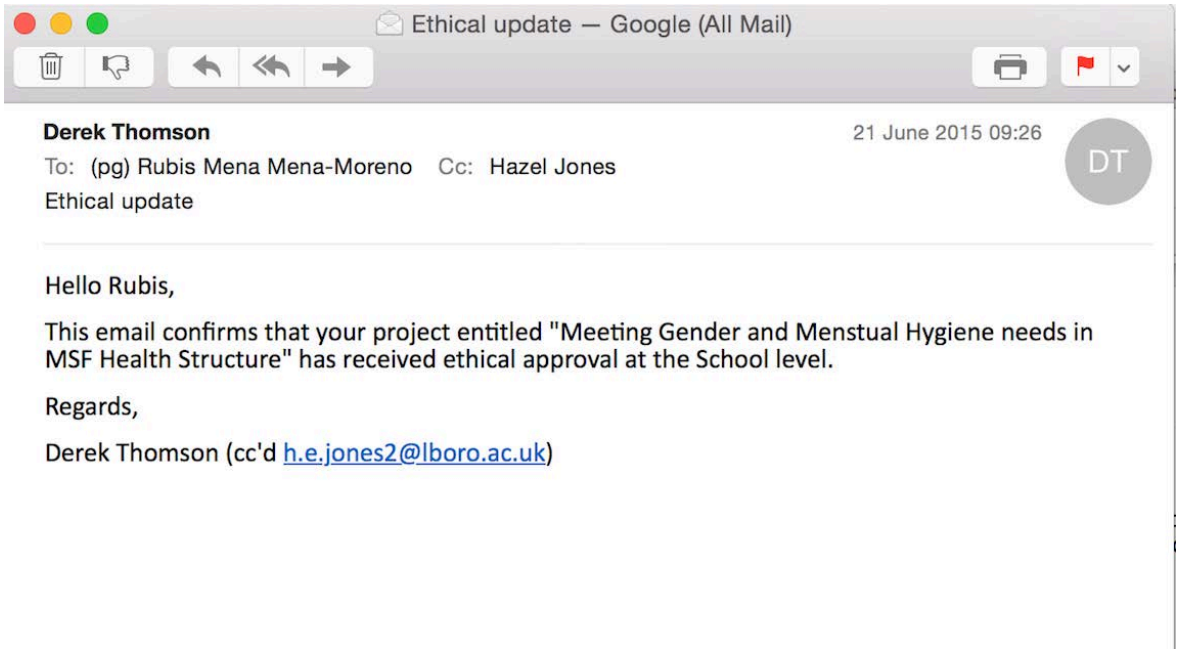
Signature of Applicant: Click here to enter text. Rubi Meno

Signature of Supervisor (if applicable): Click here to enter text.

Signature of Head of School or his/her nominee: Click here to enter text.

Date: 9/05/2015.

Email ethical approval



Ethical update — Google (All Mail)

Derek Thomson 21 June 2015 09:26

To: (pg) Rubis Mena Mena-Moreno Cc: Hazel Jones

Ethical update

DT

Hello Rubis,

This email confirms that your project entitled "Meeting Gender and Menstual Hygiene needs in MSF Health Structure" has received ethical approval at the School level.

Regards,

Derek Thomson (cc'd h.e.jones2@lboro.ac.uk)