WASH in Schools for Girls E-Course
Increasing national capacity to conduct research on menstrual hygiene management in schools
Acknowledgements

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For more information on the WinS4Girls E-Course and support in adapting it to your context, contact Bethany Caruso, bcaruso@emory.edu, or Murat Sahin, msaolin@unicef.org.

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All course materials, including module presentations, research tools and background documents, can be accessed online at [www.washinschoolsmapping.com](http://www.washinschoolsmapping.com).
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<td>ethical review board</td>
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<td>ERIC</td>
<td>Ethical Research Involving Children Project</td>
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<td>FGD</td>
<td>focus group discussion</td>
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<td>IDI</td>
<td>in-depth interview</td>
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<td>IRB</td>
<td>institutional review board</td>
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<td>JMP</td>
<td>Joint Monitoring Programme for Water Supply and Sanitation</td>
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<td>KII</td>
<td>key informant interview</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<td>MHM</td>
<td>menstrual hygiene management</td>
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<td>NGO</td>
<td>non-governmental organization</td>
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<td>SDGs</td>
<td>Sustainable Development Goals</td>
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<td>SEM</td>
<td>socio-ecological model</td>
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<td>Sanitation and Water for All Partnership</td>
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<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<td>WASH</td>
<td>water, sanitation and hygiene</td>
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<td>WASH in Schools</td>
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Foreword

Menstrual hygiene remains a taboo in many settings, with poor knowledge and misconceptions as great a challenge as access to adequate facilities at both home and in school. In recent years, a solid body of evidence has revealed the discriminatory nature of many school environments, with menstruating girls unable to adequately manage their monthly menses with safety, dignity and privacy. This, in turn, may have negative impacts on girls’ ability to succeed and thrive within the school environment.

In recognition of the positive impact on girls’ education, initiatives around the world are addressing adolescent girls’ menstrual hygiene management (MHM) needs in coordination with ongoing efforts to improve water, sanitation and hygiene (WASH) facilities and services in schools. By offering an alternative to the stigma and marginalization often associated with menstruation, integrating MHM into WASH in Schools (WinS) empowers all students, especially girls.

Since March 2014 the Canadian Government has been funding the project ‘WASH in Schools for Girls: Advocacy and Capacity Building for MHM through WASH in Schools Programmes’ (WinS4Girls Project). Phase I of the project involved the development and delivery of a web-based course to strengthen capacity of national research partners, WASH practitioners and policymakers to carry out rigorous research on MHM. In August 2015, 82 participants completed the WinS4Girls E-Course. With technical support from Emory University and UNICEF, national MHM working groups in 14 countries (Afghanistan, Bolivia, Burkina Faso, Eritrea, Ghana, India, Indonesia, Kyrgyzstan, Mongolia, Nepal, Niger, Nigeria, Pakistan and Zambia) are currently conducting MHM research in schools. The results will inform the development of interventions to improve MHM in schools.

This publication provides a summary of the course’s 12 modules. We encourage other organizations or universities to adapt the course to reach practitioners in the field, either face-to-face or through distance learning. All course materials, including module presentations, research tools and background documents, can be accessed online at www.washinschoolsmapping.com. Please contact us for more information on the course and for support in adapting it to your context. We look forward to working with you to ensure that schools are ready for girls.

Lizette Burgers
Senior Adviser
Head of Sanitation and Hygiene Team
UNICEF
Learning objectives

At the end of this module, participants should:

- Understand the course aims and how they relate to the WinS4Girls Project.
- Know what skills they will gain from active participation in the course.
- Recognize Emory University’s role in providing support during the course and throughout research activities.
- Appreciate expectations for participants and the requirements for receiving a course certificate.
- Understand the role and importance of research ethics.
- Know how to use Blackboard, an online learning system used for the course.

Outline

1. Course aims and how they relate to the WinS4Girls Project

The WinS4Girls E-Course was designed by the Center for Global Safe WASH at Emory University and UNICEF to help strengthen the capacity of WASH practitioners and policymakers to carry out rigorous research that investigates local MHM practices and challenges.

The course is part of ‘WASH in Schools for Girls: Advocacy and Capacity Building for MHM through WASH in Schools Programmes (WinS4Girls Project)’, which is being funded by the Canadian Government. The e-course contributes to the objectives of the broader project by:
• Exposing participants to the different MHM practices and challenges facing girls in schools around the world, drawing on current research and initiatives.
• Highlighting gender-sensitive approaches to research and programming, and discussing how these approaches can be applied to future work.
• Promoting shared learning and collaboration from various country-level stakeholders, including ministries of education. Each participating country will form its own working group to complete assignments collectively.
• Strengthening the capacity of participants to undertake research on MHM. Participants will also learn how to use research results to inform programmes, policy and advocacy.

2. What will participants gain from the course?
At the end of the course, participants should be able to:
• Identify current research and initiatives related to MHM in schools.
• Address gender in research and programming.
• Design and write a research protocol to explore MHM in the local context.
• Obtain ethical clearance for research.
• Describe the strengths and weaknesses of qualitative and quantitative methods used in MHM research.
• Adapt and use existing MHM research tools (and create new tools as needed) to meet research objectives.
• Create a work plan to carry out and track research activities.
• Train local research assistants to execute MHM research activities.
• Pilot and adapt tools as needed.
• Conduct research according to a research plan.
• Develop strategies for analysing data and carry out analyses accordingly.
• Write a final report summarizing findings and proposing next steps.
• Develop an advocacy strategy to promote awareness of MHM issues and improve MHM interventions within the local context.

3. Emory University’s role
Emory University instructors and teaching assistants will provide support to participants throughout the course. In addition to leading lectures and sharing resource materials, Emory instructors and teaching assistants will provide feedback on all group assignments. These assignments are designed to help guide research and feedback will be geared to improving research activities. Emory instructors will visit selected countries to provide hands-on support as needed.

4. Timeline
The course includes 12 modules that are designed to run concurrently with research activities. Assignments are designed to form the basis of the research plan and activities for each country working group.
Table 1: Module themes and assignments

<table>
<thead>
<tr>
<th>Module</th>
<th>Assignment</th>
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<tbody>
<tr>
<td>0: Introduction to the WinS4Girls E-Course</td>
<td>Research local review board protocols</td>
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<td>1: MHM and WASH in Schools</td>
<td>Conduct a desk review, Part 1</td>
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<td>2: Incorporating gender into MHM research and programming</td>
<td>Conduct a desk review, Part 2</td>
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<td>3: Research ethics</td>
<td>Brainstorm research ideas</td>
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<td>4: Planning research</td>
<td>Map stakeholders</td>
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<td>5: Qualitative and quantitative methods</td>
<td>Draft a research protocol</td>
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<td>6: Tools for MHM research, Part 1</td>
<td>Draft objectives for research tools</td>
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<tr>
<td>7: Tools for MHM research, Part 2</td>
<td>Draft objective-driven research tools (in-depth interviews and focus group discussions with girls)</td>
</tr>
<tr>
<td>8: Collecting, recording and managing data</td>
<td>Draft objective-driven research tools (key informant interviews with teachers)</td>
</tr>
<tr>
<td>9: Training a research team, and piloting and executing research</td>
<td>Revise previous assignments</td>
</tr>
<tr>
<td>10: Integrating research into practice</td>
<td>Revise previous assignments</td>
</tr>
<tr>
<td>11: Qualitative data analysis</td>
<td>Revise previous assignments</td>
</tr>
<tr>
<td>12: Advocacy</td>
<td>Finalize research protocol and tools</td>
</tr>
</tbody>
</table>

5. Course expectations and certificate requirements

Upon adequate completion of the course, participants will be given a certificate from Emory University and UNICEF. This certificate is an acknowledgement of successful completion of the course but does not correspond to credit towards a degree at Emory University. To receive the certificate, participants must:

- Attend or watch video recordings of all module sessions.
- Read key documents prior to each module session.
- Complete a quiz after each module.
- Post at least one comment or question on the discussion board for each module.
- Participate in course surveys to aid in the development and improvement of course content.
- Take the pre-course and post-course assessments.

If they are part of a national working group, participants will also be expected to contribute to group assignments throughout the duration of the course.

6. Role and importance of research ethics

In order to conduct research with human participants, researchers must receive permission from an institutional review board (IRB) or an ethical review board (ERB). These boards are
established within organizations to review the ethical acceptability of all research involving humans conducted within their jurisdiction and can approve, reject or propose modifications to any proposed or ongoing research. IRB/ERBs are especially vital for MHM research as they can result in better protection of the young girls and boys who participate in research activities. Every country has different rules and regulations regarding the permissions necessary to conduct research. IRBs/ERBs will often require a lay (non-scientific) summary of the research along with the full research protocol.

7. Introduction to Blackboard

In this module, we review Blackboard, an online learning system used by Emory and other universities, including how to sign-in to the Emory Blackboard site, navigate the site, take quizzes, submit assignments and participate in online discussions. The online learning system will be available throughout the course for announcements, module schedules, sharing of documents, and for posting and uploading assignments.

Discussion board activity

Please complete the following on Blackboard:

- Introduce yourself! Take a minute to share some information about yourself.
- Answer the following questions:
  - What expectations do you have for the course?
  - What expectations do you have for the Emory University instructors?

Assignments

1. Research the IRB/ERB requirements in your country. List the steps necessary to gain permission to carry out research with human participants. Make a plan around how and when your group will meet the requirements and post it on Blackboard.

2. ‘Getting to Know You’ survey. Prior to Module 1, each participant must take the short survey posted on Blackboard. This survey is designed to help course instructors learn basic information about each of the course participants, including their previous experience with research.

3. ‘MHM Baseline Test’. Each participant must also take the ‘MHM Baseline Test’ posted on Blackboard as soon as possible. This test will be administered at the start and end of the course so instructors can evaluate the information participants gain as a result of the course. The test is anonymous and will not be graded.
Module 1: MHM and WASH in Schools

Learning objectives
At the end of this module, participants should:

- Understand the concepts of puberty, adolescence and menstruation, and the World Health Organization’s (WHO) definition of health.
- Recognize typical WASH-related challenges that girls face in school, including in the countries represented in this course.
- Understand the methods and findings from the 2012 UNICEF-Emory MHM research in Bolivia, Philippines, Rwanda and Sierra Leone.
- Be able to identify the key components of adequate MHM in schools.
- Be familiar with the latest global initiatives related to MHM.
- Be able to conduct a desk review on MHM in the local context.

Module outline
1. Puberty, adolescence and menstruation
Puberty is a biological process that marks the transition from childhood to adulthood. Youth who are undergoing this transition are often referred to as adolescents (WHO defines adolescence as the period between 10 and 19 years of age (WHO, 2014)). While puberty can occur at different times depending on an adolescent’s nutritional intake and environment, the transition usually starts around 10 to 11 years of age for girls and 11 to 12 years of age for boys. While not all societies recognize this life stage, it is becoming more prominent within
various societies as children enter puberty earlier and take on adult roles later, leaving a gap where youth are no longer children but are not yet considered adults (Sawyer et al., 2012).

During puberty, girls and boys start to look more like adults. Girls will notice breast development, widening of hips, appearance of pubic and underarm hair, and they will have their first menstruation – known as menarche. Boys will begin to grow facial hair, pubic and underarm hair will appear, and they will have their first ejaculation – known as semenarche.

In addition to physical changes, adolescents also experience cognitive, social and emotional changes. Adolescents start to think more abstractly, develop morals, set goals and think about the meaning of life. These young girls and boys often feel awkward, worry about fitting in with their peers and whether the emotional and physiological changes they are experiencing are normal, distance themselves from their parents, experience mood swings, struggle with their sense of identity and have feelings of attraction (Sawyer et al., 2012).

In addition, adolescents often become vulnerable to various pressures and begin to engage in adult behaviours such as sexual activity and tobacco and alcohol use. In this context, adolescence is a crucial time for acquiring the necessary social skills and capabilities to become a successful adult and it is a pivotal period that can affect the future health of adolescents and even their future children’s health (Fatusi and Hindin, 2010).

Menstruation is a healthy and normal part of the reproductive process that begins when girls enter puberty. The menstrual cycle is a monthly process that prepares a woman’s body for pregnancy. The average length of the cycle is 28 days, but it can range from 20 to 35 days. During the cycle, an egg is released from the ovaries and attaches to the inside of the uterus. If the egg is not fertilized, the lining of the uterus sheds and exits the body through the vagina. This shedding of tissue and blood is known as menstruation or the menstrual period and usually lasts five days, but can be two to seven days (MayoClinic, 2013; NIH, 2014). Girls typically experience menarche, their first menstruation, between 12 and 16 years of age, but some girls may start menstruating earlier or later (Thomas et al., 2001). During the first year of menstruation it is common for girls to menstruate every few months (as opposed to a regular monthly period). Women and girls often experience menstrual cramps, known as dysmenorrhea, during their menstrual period. This cramping is a result of the uterus contracting to shed its inner lining of tissue. Other typical side effects of menstruation include lower back pain, bloating, sore breasts, headache, fatigue, mood changes and food cravings (NIH, 2014).

2. WHO’s definition of health

WHO’s definition of health has not changed since 1948: “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (WHO, 1946). While health is often simply considered to be the absence of disease and infirmity, the WHO definition, which includes mental and social aspects, recognizes that health is more complex.

3. Girls’ experiences of WASH and menstruation in school

The WHO definition of health is particularly useful when considering the scope of WASH-related issues that girls face at home and at school. With this definition in mind, it is evident that the challenges girls face are not just struggles or inconveniences but legitimate health concerns that require appropriate attention.
In this module, we explore some of the ways that poor WASH conditions worsen girls’ health and well-being in school and at home, focusing specifically on three points:

- Poor WASH conditions at home are a burden for girls because they are usually responsible for fetching water for the household, causing them to miss school if the source of water is distant. Girls are also usually obligated to participate in work that requires water, such as laundry, washing dishes, food preparation and childcare. These obligations are often mirrored in the school setting, where gender roles require girls to fetch water for the school or clean the school latrines.

- Poor WASH conditions at school are a challenge for girls because the lack of clean, private and sex-segregated latrines often prevents girls from using the bathroom while at school. Moreover, when schools lack appropriate latrines for female teachers, there are often fewer female teachers and thus fewer role models for girls. Lastly, the lack of water, soap and other sanitary facilities inhibits girls from taking care of their hygiene needs.

- The onset of menstruation complicates these challenges because many girls do not know what menstruation is or how to manage it. Girls often do not have the support or resources they need for proper MHM, causing them to improvise strategies for coping.

4. UNICEF-Emory MHM research in Bolivia, Philippines, Rwanda and Sierra Leone

In 2012, Emory’s Center for Global Safe WASH and UNICEF collaborated on research to document the challenges related to inadequate MHM in schools in four countries: Bolivia, Philippines, Rwanda and Sierra Leone (Caruso et al., 2013; Haver et al., 2013; Long et al., 2013). This research was the first multi-country study focusing on MHM and WASH. Field methods and tools to assess MHM challenges in the school setting were developed, tested and adapted to fit the local context. Guided by an ecological framework, research teams conducted a range of activities, including school facility surveys, focus group discussions (FGDs) with girls, boys, mothers, teachers and health workers, in-depth interviews (IDIs) with girls, and key informant interviews (KIIs) with school administrators, teachers, non-governmental organizations (NGOs) and government officials.

Findings revealed that girls associated a range of challenges with menstruation in school, including leaks and stains, menstrual pain, odour, teasing, shame, embarrassment and fear. The educational impacts mentioned by girls included absenteeism, reduced participation, missed class time, distraction and impaired concentration. Voiced health impacts included self-exclusion, weakness, dizziness, withholding urination and stress. Potential education risks included dropping out and missed educational opportunities. Potential health risks included anaemia, unplanned pregnancy and infection. While insufficient WASH facilities contributed to the challenges, they were exacerbated by lack of support, insufficient knowledge and information, and lack of materials for MHM.

5. Key components of adequate MHM in schools

A technical working group of the WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation agreed on the following definition for MHM:
Women and adolescent girls are using a clean menstrual management material to absorb or collect menstrual blood, that can be changed in privacy as often as necessary for the duration of a menstrual period, using soap and water for washing the body as required, and having access to safe and convenient facilities to dispose of used menstrual management materials. (JMP, 2012)

This definition focuses on four aspects of MHM interventions:

- ‘Hardware’, in the form of gender-specific, safe, clean and accessible sanitation facilities and water sources.
- ‘Software’, in the form of puberty and hygiene education and support systems.
- Operations and maintenance systems, to ensure that facilities are well kept.
- Continual availability of consumables, with particular attention on soap, water and culturally appropriate MHM materials.

6. Challenges from the countries involved in this e-course

During this module, we review qualitative research undertaken in each country participating in the course, revealing challenges that girls and women face related to WASH, menstruation and MHM.

7. Inclusion of MHM in the Sustainable Development Goals

While the international community increasingly recognizes WinS (including MHM), as vital to sustainable development, progress in the area remains largely unmonitored. There is a movement to create MHM indicators that can be monitored locally, nationally and internationally. Significantly, WASH- and MHM-related targets have been included in the Sustainable Development Goals (SDGs; see Table 2).

Table 2: MHM-related goals included in the Sustainable Development Goals

<table>
<thead>
<tr>
<th>Goal</th>
<th>Targets</th>
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<tbody>
<tr>
<td>Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.</td>
<td>Target 4.a: Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.</td>
</tr>
<tr>
<td>Goal 5: Achieve gender equality and empower all women and girls.</td>
<td>Target 5.6: Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences.</td>
</tr>
</tbody>
</table>
| Goal 6: Ensure availability and sustainable use of water and sanitation for all. | Target 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all.  
Target 6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations. |
Improved monitoring will help practitioners to tailor projects around what works, improve organizational accountability and identify gaps in programming and advocacy (JMP, 2012).

7. Conducting a desk review of MHM in the local context

Desk reviews are an important component of the research planning process, providing researchers with an opportunity to examine existing research within a country, assess gaps in current knowledge and examine the current environment for research and initiatives related to the subject. Researchers should review a range of documents including:

- General MHM literature (white and grey literature);
- Papers about the country’s culture and national context;
- Literature and reports from United Nations agencies, including but not limited to UNICEF, the United Nations Population Fund (UNFPA) and the United Nations Educational, Scientific and Cultural Organization (UNESCO);
- Ministry of education and health policies;
- Reports from partner organizations/NGOs; and
- Health- and science-related school curricula.

A thorough desk review also often involves informal interviews with key stakeholders.

Key readings


Supplemental readings


WaterAid, Menstrual Hygiene Matters. 2012.

Discussion board activity

Please answer the following questions on Blackboard:

• What questions do you have regarding menstruation, puberty, adolescence and MHM? Please post a question. We will review and address the most commonly asked questions in future sessions.

• What do you hope to learn through research in your country?

• Please tell us more about your country’s involvement in this project. What do you hope to learn? What do you hope to do with the research findings?

Assignments

1. Desk review. This will be an ongoing activity throughout the duration of the course. We expect that participants will slowly add to the desk review over several months and that it will be a ‘living document’. Adapt the desk review template available on Blackboard as needed. Input the articles and reports that have been assigned for the course and add at least five more articles/reports to the template with your working group. As the course progresses, each country team should have a minimum of 15 articles/reports. The desk review provides an opportunity for the country working group to pool resources. While not every member will read all of the literature (though the lead consultant/researcher should), sharing literature or contacts from different sectors will help ensure that the desk review is comprehensive.

2. Brainstorm research ideas. Arrange a time to brainstorm research ideas with your working group. Do not focus on limitations, but think big! You can (and will) narrow your focus later on. Please use these questions in your activity and include any others that you think are relevant:

• What will your research focus on?

• What questions do you hope to answer?

• Who can you speak to in order to learn more about your research focus?
Module inspired and informed by the following resources


Learning objectives
At the end of this module, participants should:

- Be familiar with key gender terms that relate to MHM.
- Appreciate the effects of gender roles and norms on the lives of girls and in relation to MHM.
- Understand the steps involved in integrating gender considerations into MHM research and programming.
- Be able to cite examples of good practices in gender-sensitive MHM programming and research.

Module outline
1. Gender terminology

Basic terms
- Gender refers to the economic, social, political and cultural attributes and opportunities associated with being male or female. Gender underlies assumptions regarding appropriate behaviour for boys and girls (and men and women).
- Sex refers to the biological and physiological characteristics that define men, women and intersex, including differences based on genitalia, chromosomes and hormones.
- Gender roles are behaviours deemed appropriate for women or girls and men or boys in a given culture. For example, in some cultures girls are expected to fetch water and
women are expected to raise the children. In many places, seeing a man with a child tied 
to his back would be a challenge to typical gender roles.

- **Gender norms** are the expectations around how women or girls and men or boys are supposed to behave, think and feel. For instance, men build toilets, while women use the toilets men provide. These are actions that people may expect, but they are not necessarily based on physical or mental capacity.

- **Gender discrimination** is the systematic, unfavourable treatment of individuals on the basis of their gender. For example, in isolated parts of Nepal the centuries-old tradition of *chaupadi* dictates that women and girls who observe the tradition are forbidden from entering their home when menstruating (sleeping instead inside a *chaupadi* shed).

**Terms related to gender, power and equality**

Gender is fundamentally about power relations, which are in turn related to ethnicity, class, race and age. Gender differences and relations influence people’s ability to make decisions about their bodies, relationships, resources, income, education, employment and mobility.

- **Gender-based opportunities** are gender relations that facilitate boys’ or girls’ access to opportunities or services.

- **Gender-based constraints** are gender relations that inhibit boys’ or girls’ access to opportunities or services. Research and programmes that focus on MHM have implications for changing power relations between boys and girls, women and men.

- **Gender equality** refers to the enjoyment of equal rights, opportunities and treatment by boys and girls (and men and women) of all ages in all spheres of life and work.

- **Gender equity** is the process of being fair to boys and girls (and men and women). It does not mean that boys and girls are treated the same. Instead, it recognizes the historical social disadvantages that women have faced and tries to correct these inequalities.

### 2. The effect of gender norms and roles on the lives of girls and MHM

Because they influence menstruation-related beliefs and practices, recognizing gender norms and roles in a given culture is imperative to MHM research and programming. Gender norms and roles can vary within and between countries, cultures and societies. In addition, gender is never separate from socio-economic class, race, ethnicity, age, language, disability, income or other diversities. Although some gender patterns may appear similar across contexts, it is critical to understand the specific relations across time, in different organizational contexts, and in different socio-cultural contexts. Once a young girl’s contextual background is understood, it is much easier to recognize the gender norms and roles placed upon her and how they affect menstruation-related beliefs and practices.

Men and boys often have to go against gender norms and roles in order to support adequate MHM for girls. While this can be a challenge, around the world there are an increasing number of male champions working as MHM advocates, hygiene promoters, and inventors and manufacturers of menstruation materials.
3. **Integrating gender into MHM research and programming**

Gender analysis is a tool that can be used by researchers and practitioners to understand how gender relations affect a development issue. Gender analysis seeks to answer two main questions:

- How will gender relations affect the achievement of sustainable results?
- How will proposed results affect the relative status of men and women?

Gender analyses often focus on four domains: i) practices; ii) roles; iii) participation/knowledge/beliefs; and iv) perceptions/access to assets/legal rights and status.

In addition to conducting a gender analysis, gender-sensitivity can be integrated into every part of the programming or research cycle. In the design stage, objectives and activities can be developed that address harmful gender norms, roles and practices. Practitioners can develop indicators to monitor and evaluate gender-specific outputs and outcomes. During the evaluation phase, the programme’s impact on gender norms and relations should be assessed.

4. **Examples of good practices in gender-sensitive MHM**

**Zambia – SPLASH (Schools Promoting Learning Achievement through Sanitation and Hygiene)**

- SPLASH included boys in the manufacturing of reusable menstrual pads and found that boys were the most enthusiastic makers of the pads. The boys were thrilled to be fully included and eager to show their sisters how to make pads.
India – Water for People

- Water for People involved girls as ‘child engineers’ in planning, designing and monitoring WinS infrastructure.

Multi-country – Grow and Know

- Grow and Know developed girls’ puberty books based on participatory research with girls in Tanzania and other countries. The books include context-specific information about puberty, menstrual onset and management, and girls’ menstrual stories. Puberty books for boys have also been developed, which contain guidance on boys’ body changes and healthy gender dynamics.

Key readings


Water and Sanitation Program. Gender Roles and Impact: Toolkit on hygiene, sanitation and water in schools.


Supplemental readings


Discussion board activity

Please answer the following questions on Blackboard:

- What are some examples of gender norms in your country or region?
- How do you plan to integrate gender into your MHM research or future programming?

Assignments

1. Mapping “Gender Allies”. With your working group, identify those individuals/organizations that could be considered “gender allies”, supporting your efforts to ensure gender is integrated into your research programme. These allies could provide technical or academic support or could have some unique insight or influence within the community. Identify at what time in the process you could consult or engage with each ally and what you would expect them to provide.
Learning objectives

At the end of this module, participants should:

- Understand the fundamental principles of research ethics and know how to apply them to develop research protocols, conduct research activities and review research carried out by others.

- Recognize the importance of privacy and confidentiality, and the reason and need for informed consent.

- Understand the role of institutional/ethical review bodies and how to identify and map stakeholders.

Module outline

1. Principles of research ethics

Respect for persons, beneficence and justice are the fundamental ethical principles of research involving human participants. These principles are universal and transcend geographic, cultural, economic, legal and political boundaries (Graham et al., 2013; Rivera and Borasky, 2009).

Respect for persons recognizes the right and capacity of all individuals to make their own choices and decisions. Respect for persons takes into account concepts of autonomy, self-determination, capacity to make decisions, dignity of people and the individual, and respect for community and local culture. In order to treat a child with respect, one must know:
• Who the child is;
• What cultural context they are living in; and
• How culture shapes their experiences, capabilities and perspectives.

The Ethical Research Involving Children (ERIC) project also stresses that respect involves understanding the subjective and relational experience of children within their families, communities and social structures (Graham et al., 2013).

Beneficence holds the researcher responsible for the participant’s physical, mental and social well-being (Rivera and Borasky, 2009). Non-maleficence – or “do no harm” – requires that researchers must avoid harm or injury that could come to children because of their involvement in research. The protection of the participant is the primary responsibility of the researcher; research that may place the participant in harm’s way should be reconsidered. The researcher must communicate to the participant and, where appropriate, to the community, the benefits that the research may or may not offer the child and community. If there are no benefits to the child or community, the researcher should also communicate what benefits may come from the research in general (Graham et al., 2013).

Justice obligates researchers and sponsors to distribute the risks and benefits in an equitable manner among potential participants and communities (Rivera and Borasky, 2009). With regard to recruitment, researchers must ensure that the decision of who to include and exclude from research is equitably made. Selection must be consistent with a research purpose and not with the intention to discriminate. Special protections should be afforded to vulnerable groups, including children (Graham et al., 2013; Rivera and Borasky, 2009). Justice also covers any kind of compensation that may be offered for involvement in research and how this will be equitably distributed. Finally, justice requires that researchers attend to the power differences inherent in child/adult relationships.

2. Privacy and confidentiality

Privacy and confidentiality are important issues that need to be taken into account when planning and conducting research. Researchers should make sure that activities are conducted in a private physical space. Most of the national working groups will conduct their research activities at schools. Thought should be given to which classrooms are appropriately isolated, which have curtains over windows to prevent curious students from looking in, and whether a sign should be placed on the door to prevent people from entering. It is also important that researchers clearly communicate the purpose of the research and the need to respect children’s privacy to appropriate stakeholders, such as the school principal. Data collected from participants (such as interview transcripts) must be de-identified to ensure that the specific participant cannot be identified. If children talk about locations, people in their lives or other factors that could be used to identify them, researchers must de-identify or change these factors in transcripts.

Photographs provide a powerful way to help tell stories, including about children. However, there can be risks. UNICEF suggests that photos should not display faces of children who may be vulnerable to exploitation, abuse, discrimination, violence or trauma if they are identified. Always ensure that children have given their consent/assent to having their pictures taken, and that they understand that their photos may be used in publications and other materials. Each working group should determine their policy around photos of children.
Finally, each working group should engage with representatives from a child protection organization to develop a child protection protocol for the research. The protocol should outline the steps that researchers must take if a child reveals that he or she is in potential danger or if someone they know is in danger.

3. Informed consent of participants

It is absolutely necessary to gain informed consent or informed assent from participants involved in MHM research. Informed consent is when an individual agrees to participate in research activities. In order for informed consent to be adequately and ethically met, that individual must have:

- Received and understood the necessary information about the research;
- Given explicit consent, either verbally or written;
- Arrived at their conclusion to participate in the study without coercion; and
- Understood that they can renegotiate the terms of their consent at any time (Graham et al., 2013; Rivera and Borasky, 2009).

There has been some debate as to whether children can truly give informed consent, because of the lack of understanding of the consequences of their actions. While children may be legally incapable of giving informed consent, they nevertheless may possess the ability to assent to, or dissent from, participation. If a child gives assent, there should be protections in place to ensure that there is consent from a parent. With older children, a written assent document may be beneficial, with the understanding that it does not replace parental consent (Graham et al., 2013).
An appropriate consent form offers comprehensive information to the potential participant, including:

- Research description.
- Risks and benefits to participating.
- Alternative measures to collecting data and reasons for engaging with participants.
- How participant confidentiality will be protected.
- Emphasis on voluntary participation and the participant’s ability to stop their participation at any time.
- Any compensation involved.
- Ownership and disposal of any materials produced in the research activities (i.e. drawings, stories, writings).
- Contact information if the participant has future questions or concerns (Graham et al., 2013; Rivera and Borasky, 2009).

If written consent is not possible, it is important to consider how to gain oral consent from parents, or how the research team will communicate the necessary pieces of information to ensure informed consent. In some contexts, a waiver for written consent in the case of illiteracy may be required.

4. Institutional/ethical review bodies and the identification of stakeholders

As discussed in Module 0, researchers must receive permission from an IRB/ERB before conducting research with human participants. In addition to the formal permission granted through the IRB/ERB, it is also essential to explore other levels of permission necessary in each country. National, district and local officials may need to review and approve the research plan. Researchers should consider which stakeholders should be engaged (government officials, community members, educators, academic institutions, NGOs, media, private sector actors, religious leaders, etc.) and what information should be shared with them.

Key readings

Supplemental readings


Discussion board activity
Please answer the following questions on Blackboard:

- How can you ensure the privacy and confidentiality of your participants?
- What factors could challenge participant privacy in your country?

Assignments

1. **Stakeholder mapping.** It is critical to identify potential partners and stakeholders for your research. For this assignment, complete the following with your working group:

   - Identify your allies/stakeholders. Your partners may be the other people in your working group, or their extended organizations. Consider additional potential partners/stakeholders as well, such as other organizations/ministries that are already working on issues related to WinS, education, health, gender, etc. Also consider people who may have a less direct association with WinS (such as the private sector).

   - Identify your allies/stakeholders’ stated or potential interest in WinS4Girls research and project implementation. Stakeholders’ interests may be clear and stated or you may need to identify how the research could help your potential stakeholders and allies. Would they be interested in the research results? Are they willing to provide time or information? Would the research directly impact them and in what way?

   - Identify each stakeholder’s participation/role in the research and project implementation. Identifying how stakeholders may benefit from the research findings/project implementation or how they might use the information gained from the research may help to build interest and investment in the project. Consider those parties already invested in the research (your working group), how they will contribute to the research and what they hope to learn/gain from this project.

Module inspired and informed by the following resources


Learning objectives

At the end of this module, participants should:

- Understand the steps necessary to develop a research plan.
- Be able to identify different purposive sampling strategies used in qualitative research.

Module outline

1. Developing a research plan: 11 key steps

A research plan is like a blueprint or map for research activities. Research plans are invaluable as they break down large complex studies into discrete, sequential steps. There are 11 key steps to developing a research plan, which can be organized into three main parts: preparation, key methods and application (Bernard, 2011; Crosby et al., 2011; Maxwell, 2005). Conceptually, the 11 steps take the shape of an hourglass, starting with a wide breadth, becoming more specific in the middle steps, and then widening again at the end.

1 Prior to developing a research plan, a literature review should be undertaken from multiple sources in order to inform what MHM research activities should take place (see Module 1).
11 Steps to Developing a Research Plan

<table>
<thead>
<tr>
<th>Part</th>
<th>Step</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation</td>
<td>1. Define problem statement</td>
</tr>
<tr>
<td></td>
<td>2. Define research objectives</td>
</tr>
<tr>
<td></td>
<td>3. Define research population and setting</td>
</tr>
<tr>
<td></td>
<td>4. Outline key research questions</td>
</tr>
<tr>
<td>Key methods</td>
<td>5. Identify appropriate methodologies</td>
</tr>
<tr>
<td></td>
<td>6. Determine sampling plan</td>
</tr>
<tr>
<td></td>
<td>7. Carry out data collection</td>
</tr>
<tr>
<td></td>
<td>8. Analyse data</td>
</tr>
<tr>
<td>Application</td>
<td>9. Consider implications of findings for local context</td>
</tr>
<tr>
<td></td>
<td>10. Consider broader implications</td>
</tr>
<tr>
<td></td>
<td>11. Disseminate findings (locally, nationally, globally)</td>
</tr>
</tbody>
</table>

**Preparation: Steps 1 to 4**

The first step in developing a research plan is to define the problem statement. A problem statement clearly and explicitly explains the issue to be addressed. For example, in the four-country study conducted by Emory and UNICEF, the problem statement for the research in Bolivia was:

There has been no research conducted to understand girls’ experiences of menstruation in the school setting in Bolivia. Without any understanding of girls’ experiences, it is impossible to know if girls face challenges when managing mensuration. If they do experience challenges, the lack of knowledge does not make it possible to advise on policy or programmes for girls related to menstruation. There is a need to understand girls’ experiences so that recommendations can be made if needed.

The second step is to define research objectives, which should directly address issues identified in the problem statement. The research objectives for the Bolivia country study were:

- To investigate and understand the scope of challenges faced by schoolgirls during menstruation – as well as the determinants of those challenges – in Bolivia.
- To inform a set of school-based recommendations that are specific to the needs of girls in the Tacopaya and Independencia regions of Cochabamba, Bolivia.

The third step is to specifically define the research population and setting. For the Bolivia country study, the primary population and setting were girls who had already experienced menstruation and lived in the Tacopaya and Independencia regions of Cochabamba, Bolivia.

The fourth and final step within the preparation component is to outline specific research questions, which should be related to the population and setting identified. The specific research questions for the Bolivia country study included:

- What menstruation-related challenges do primary schoolgirls in Tacopaya and Independencia face at school?
Why do primary schoolgirls in Tacopaya and Independencia face these challenges at school?

What can be done in Tacopaya and Independencia to ameliorate these challenges?

**Key methods: Steps 5 to 8**

The middle part of the hourglass approach to developing a research plan involves identifying the key methods to be used in the research activities. The fifth step is to identify appropriate methodologies to answer the research questions. It is important to note that methods can only be selected after the research questions are defined. As discussed further in Module 5, research methodologies can be either qualitative or quantitative in nature. Because qualitative methods allow for a more in-depth understanding of complex and sensitive issues, we expect that each working group will primarily use qualitative methods.

The UNICEF/Emory four-country study used the socio-ecological model (SEM) to inform the selection of methods (Sokols, 1992). The SEM framework recognizes that there are multiple levels of influence that may impact individual behaviours and experiences, including societal, environmental, interpersonal, personal and biological factors (see Figure 1). It is important to note that the primary factors influencing a behaviour, either positively or negatively, may be outside the responsibility of the individual (i.e. a factor that is not personal). In addition, the different levels of influence often interact. Changes at the societal level, for instance, may impact the individual level.

**Figure 1: The socio-ecological model (SEM)**

In Module 5 we will further discuss both qualitative and quantitative methods and how they can be applied to MHM research. In Modules 6 and 7 we will discuss the different methodological tools the four-country study used to carry out research, as well as some tools used by other MHM researchers.

The sixth step in developing a research plan is to determine the sampling plan, including the number of research activities that will be conducted and who will be a part of each activity. For instance, in the Bolivia study 65 activities were conducted with a total of 157 participants. The
research included 12 FGDs with girls, five FGDs with boys, four FGDs with mothers, two FGDs with teachers, 11 IDIs with girls, 17 KIIs with teachers, and four KIIs with health workers.

IRBs/ERBs require a range of specific information related to sampling plans, including the number of schools/communities to be visited, the number of research activities to be carried out, the total number of participants involved, and how and why the schools/communities/types of participants were selected.

When developing a sampling plan, it is important to first consider the ‘higher level’ and then work down. For example, the geographical regions where the research will be conducted should be defined first, after which the communities or schools can be identified. It is important to note that at least three units within each level are needed in order to make comparisons during data analysis. For instance, to compare schools from two or more regions, it is advised that data are collected from three or four similar schools in each region. Researchers should also consider the many factors that influence the number of regions, schools and individuals that will be involved, including time available to collect and analyse data, personnel available, access to communities/schools/individuals, saturation of data, research funding, etc. Above all else, remember that if you collect data, you are ethically obligated to analyse it thoroughly, so do not ‘oversample’.

As opposed to quantitative research, which typically uses random sampling methods, qualitative research generally uses purposive sampling, where researchers intentionally select participants based on pre-determined criteria. In MHM-related research, these criteria may include menstrual status, sex, school grade, age and whether or not a girl is currently attending school (i.e. in school vs. out of school). Table 3 describes five different purposive sampling strategies used in qualitative research.

**Table 3: Purposive sampling strategies**

<table>
<thead>
<tr>
<th>Type</th>
<th>Resulting cases</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical case sampling</td>
<td>Typical, normal or average cases</td>
<td>A typical girl from the general population of those that fit broad criteria.</td>
</tr>
<tr>
<td>Extreme or deviant cases</td>
<td>Unusual cases of interest</td>
<td>Girls at the top of the class/never absent vs. dropouts/chronically absent.</td>
</tr>
<tr>
<td>Criterion sampling</td>
<td>Cases that meet specific conditions</td>
<td>Girls who only use pads; got period very young/old; never got period, etc.</td>
</tr>
<tr>
<td>Snowball or chain sampling</td>
<td>Cases of interest identified based on information from other similar cases</td>
<td>Groups of girls that are hard to find, like girls who dropped out because of teasing. These girls may know others who did the same, helping find more cases.</td>
</tr>
<tr>
<td>Emergent sampling</td>
<td>Cases that meet specific conditions identified during fieldwork</td>
<td>While conducting activities, researchers may learn about an unexpected behaviour or practice and decide to seek more of those people.</td>
</tr>
</tbody>
</table>

Adapted from Guest et al. (2012) and Patton (2002).
The remaining steps in the research plan will be discussed in subsequent modules:

- Step 7: Collecting data (Modules 8 and 9)
- Step 8: Analysing data (Module 11)
- Step 9: Considering implications of findings for local context (Module 11)
- Step 10: Considering broader implications (Module 11)
- Step 11: Disseminating findings (Modules 10, 11 and 12)

**Key readings**


**Supplemental readings**

Discussion board activity

Please answer the following questions on Blackboard:

- What special considerations will you need to take into account when determining your sampling plan?
- What challenges might you encounter related to your ideal sampling plan?

Assignments

1. Research plan: Many IRBs/ERBs will require a research protocol or research plan. Within your working group, follow the guidelines provided by your local IRB/ERB to develop a research plan. At this time you may not have of all the necessary details with regard to your research population, setting, etc. Simply provide initial thoughts on these areas. At minimum, include the following sections:

   - Title page, including full title, investigators’ names, sponsors’ names if any, and date
   - Background
     - Literature review
     - Problem statement
     - Research objectives
     - Research questions
   - Sample
     - Population (age range, country, region)
     - Inclusion criteria
     - Exclusion criteria
   - Setting
     - Location of study

Module inspired and informed by the following resources


Learning objectives

At the end of this module, participants should:

• Understand key differences between qualitative and quantitative approaches for MHM research.

• Know when to use different qualitative methodologies, including in-depth interviews, focus group discussions and key informant interviews.

• Be familiar with the advantages and potential use of mixed methods research designs.

Module outline

1. Qualitative and quantitative methods

During this module, we discuss key differences between qualitative and quantitative research. The course focuses primarily on qualitative research, which is an approach to:

• Explore issues in detail from the perspective of the participant.

• Understand meanings and interpretations of behaviours, events and objects.

• Comprehend the significance of context, whether it be social, physical or structural (Hennink, Hutter, and Bailey, 2011).

This module stresses the iterative nature of qualitative research. What each country learns as it proceeds through data collection and analysis will inform the ongoing adaptation of tools and the research design.
The role of a qualitative research assistant
In quantitative data collection, enumerators are trained to ask questions verbatim in the order in which they are written on the survey. Qualitative data collection requires more training and a deeper understanding of the research questions. Qualitative researchers must be very well prepared as the order of questions or how they are asked and answered may change during the course of the conversation or interview. The training and previous experience of research assistants is crucial to collecting high-quality data (Hennink et al., 2011).

It is critical that research assistants also play a role in data analysis. Their insights and feedback following data collection should inform changes to help improve research tools and data collection.

2. Qualitative research approaches

In-depth interviews
IDIs are face-to-face interviews that involve open-ended questions, designed to lead to ‘natural’ responses. They are different from surveys, in which the possible responses are pre-determined. IDIs allow researchers to gain valuable information on personal perspectives, experiences, beliefs, feelings and stories, and are best used when the researcher seeks to understand personal experiences around a specific issue (including potentially sensitive topics) (Hennink et al., 2011). However, given the one-on-one format of IDIs, there is no possibility for interaction with other participants. Other limitations include the need for specific skills and training for interviewers and the need to transcribe interviews, which requires significant time and effort.

Interviewer conduct is essential to an IDI. An interviewer must be able to begin a session with ‘small talk’, then establish rapport with the interviewee. Listening, asking follow-up questions and probing for details allow the researcher to gain a rich understanding of the experiences and perspectives of the interviewee. Showing empathy and respect will motivate participants to tell their stories openly and honestly (Hennink et al., 2011; Rivera and Borasky, 2009).

Key informant interviews
A KII is an interview with select individuals to gather information about a group of people or issue beyond the individual. An ideal key informant knows the group, culture, structure or system researchers want to explore very well and is willing to share knowledge about it, functioning as a ‘cultural translator’ (Hennink et al., 2011). The interview may cover the informant’s own thoughts, experiences, ideas and opinions as well as the actions, norms and beliefs of others.

Focus group discussions
A FGD is an interactive conversation between six to eight people. The aim is to elicit a broad range of views in a way that allows for nuance and detail in the data gathered. FGDs are most useful for gaining a range of views, understanding norms or typical behaviours, understanding group processes, and when exploring new topics (Hennink, 2007; Hennink et al., 2011).

FGDs are beneficial because they can replicate social interactions and may be more comfortable and enjoyable for participants. However, it is important to acknowledge that researchers have less control over the environment and a comfortable space is necessary for the session. Similar to IDIs, skilled moderators are integral to an effective group discussion. Group dynamics may also pose a
challenge for FGDs. Hierarchies and social pressures may develop or exist, influencing answers and/or causing some participants to say little while others dominate the conversation. FGDs are also less confidential than one-on-one formats such as IDIs. Lastly, given the dependent nature of responses and the large volume of information gathered, analysis is usually complex (Hennink, 2007).

When planning a FGD, it is important to create a discussion guide, which is essentially a list of topics or questions that functions as a checklist or set of reminders for the moderator. Discussion guides are flexible and leave room for an evolving discussion while maintaining the research focus. It is imperative that only a few areas of interest are covered in a 60-90 minute discussion. Questions should be clear, short and easy to understand, open-ended, colloquial, one-dimensional, non-personal and few in number. The environment and composition of the group is important. It is best to have a small group of peers, with no more than eight participants. The room should be arranged so that participants can sit in a circular arrangement, thereby encouraging inclusiveness (Hennink, 2007; Hennink et al., 2011).

FGD moderators are not like interviewers. Their role should be minimal, simply probing for depth, nuance or detail, managing and encouraging participation, focusing discussion, seeking various perspectives in the group, pacing discussions, and opening or focusing topics (Hennink, 2007).

3. Mixed methods approaches

Mixed methods research uses both qualitative and quantitative data to answer research questions (Creswell and Clark, 2011). During the UNICEF/Emory four-country study, qualitative research activities included IDIs, FGDs and KII. Quantitative research was conducted at school grounds to determine the number of facilities, such as toilets and hand-washing stations. There are a number of approaches to mixed methods research, including:

- **Convergent parallel design:** Collecting both qualitative and quantitative data at the same time to answer research questions. This was the method used in the four-country study.
• **Explanatory sequential design**: Collecting quantitative data first and then designing a qualitative study to help explain results. This is especially useful when the researchers know what type of questions to ask because studies have been undertaken in the area or on the topic before.

• **Exploratory sequential design**: Collecting qualitative data first to explore a topic, then use findings to design a quantitative survey to test or generalize findings (Creswell and Clark, 2011).

**Key readings**


**Discussion board activity**

Please answer the following questions on Blackboard:

• When in the past have you used qualitative and/or quantitative research methods to inform or improve programming?

• How did you select your methods?
**Assignments**

1. **Objective-driven research tools.** A variety of qualitative research tools were discussed in Module 5, including FGDs, IDIs and KIIIs. Within your working group, determine which tools you will use in your research, by filling out the following table:

<table>
<thead>
<tr>
<th>Research objective</th>
<th>Method</th>
<th>Participants</th>
<th>Key Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand what changes girls experience as a result of menstruation</td>
<td>Focus group discussion</td>
<td>Primary- and secondary-aged schoolgirls who have begun menstruating</td>
<td>What has changed in your life since you began menstruating?</td>
</tr>
</tbody>
</table>


**Module inspired and informed by the following resources**


Learning objectives

At the end of this module, participants should:

• Be familiar with the range of methods available when conducting MHM research.
• Understand how method selection, participant identification and tool development is guided by research objectives.
• Know the difference between a tool and a method.
• Understand how to develop in-depth interviews and focus group discussions with girls.

Module outline

1. Methods for MHM research

The UNICEF/Emory four-country study utilized a range of qualitative methods, mixing and matching methods with different populations. For example, FGDs were conducted with boys, mothers, teachers and girls (including those both in and out of school). The study also involved IDIs with girls and KIIIs with teachers, health workers and officials. To document the condition of school WASH facilities, observational methods were also used.

2. Objective-driven tool development

To ensure that the desired data is collected, methods and their corresponding tools should always be developed based on research objectives. A helpful strategy is to first identify the research objective of interest and then to build the foundation of the tool using the following steps:
• Determine which qualitative method would best provide the information needed to meet the objective.
• Select which participants are most appropriate to provide the information needed to meet the objective.
• Identify specific areas of inquiry to explore as part of the objective.
• Develop key questions to help guide the creation of the tool (see Table 4.).

Table 4. Objective-driven tool development

<table>
<thead>
<tr>
<th>Research objective</th>
<th>Method</th>
<th>Participants</th>
<th>Areas of Inquiry</th>
<th>Key Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand what changes girls experience as a result of menstruation</td>
<td>Focus group discussion</td>
<td>Primary- and secondary-aged schoolgirls who have begun menstruating</td>
<td>Life changes and social norms; menstruation-related challenges</td>
<td>What has changed in your life since you began menstruating?</td>
</tr>
</tbody>
</table>

3. Methods, tools and data

A research method is an approach, technique or process such as a FGD, IDI or survey. A tool is the complete set of questions and activities that make up a method. Data consist of everything generated from the tool using the selected method. Data are found in many forms, including, among other things, audio recordings of FGDs or IDIs, transcripts from recordings, drawings from participatory activities, survey results and photos taken of facilities or scenarios. While the majority of data are generated from the methods selected, data can also be generated from other research-related activities, such as conversations with relevant stakeholders and debriefing meetings with the research team.

4. In-depth interviews and focus group discussions with girls

Probes and follow-ups

It is important to note that IDIs and FGDs and their corresponding tools are semi-structured. As such, research assistants should be comfortable using probes, a technique used to encourage participants to further expand on an answer (i.e. “Tell me more about X”). Follow-up questions should be used when a participant’s response needs to be clarified. If research assistants do not have extensive experience in qualitative research, transcripts from pilot tests should be reviewed to identify ‘lost’ opportunities, where probes or follow-up questions could have yielded important additional information.

In-depth interviews with girls

In the UNICEF/Emory four-country study, one or two IDIs were conducted with girls at each school. The interviews focused on girls’ knowledge of menstruation, personal experiences with menstruation, behaviours during menstruation and recommendations for improving the school environment with regard to MHM. IDIs were semi-structured and followed a classic ‘funnel structure’, in which initial questions were broad, and became more focused as the interview progressed (see Figure 2). The interview guide should include the opening, key and closing questions as well as transition questions or comments.
Focus group discussions with girls

While IDIs are used to address research objectives targeted at individual experiences, FGDs are used to assess social norms or typical experiences. In the four-country study, FGDs were performed at most schools where research activities were conducted, and included girls who had reached menarche. Tools were designed to elicit responses about a typical girl in case participants felt uncomfortable talking about their own experiences. Primary areas of inquiry included characteristics of current and ideal school facilities, life changes and social norms, menstruation-related experiences and challenges, and recommendations for improving girls’ experiences.

Similar to the IDIs, the FGDs followed the funnel structure, beginning with general questions intended to build rapport. Unlike IDIs, however, the FGDs utilized different participatory learning activities (PLAs), including:

- **Building the ideal latrine**: This drawing activity sought to understand what girls consider an ideal latrine or bathroom at school and how the ideal differs from existing sanitation facilities.
- **Before and now**: This drawing and writing activity aimed to understand the social norms, activities and expectations that change as a result of the onset of menstruation. Girls were asked to talk, write or draw about their lives before and after menarche.
- **Imagining the life of a girl**: This scenario discussion sought to understand what a ‘typical’ girl experiences while menstruating at school. A fictitious girl was introduced (e.g. Rosita in Bolivia) and was described experiencing various situations. Girls were asked to describe how Rosita would respond to the situations.
• **Tackling challenges like Rosita’s:** This discussion and listing activity aimed to understand the biggest challenges girls face at school during menstruation and how girls would like to see the challenges addressed. Girls either discussed solutions or listed recommendations.²

It is important to note that in the four-country study, certain contexts experienced more success with some of the tools than others.

5. **Other participatory learning activities**

*Research conducted in Tanzania by Marni Sommer, Columbia University*

- **Writing the story of first menstruation:** Girls wrote the story of their first menstruation, including how they felt, who they went to for help, and what they did to manage their menstruation.

- **Creating a puberty curriculum:** Girls worked together to identify puberty-related topics that they would like to see included in school curricula.

- **Anonymous questions:** Girls submitted anonymous questions about puberty and menstruation, allowing them to ask questions they may have been embarrassed to ask aloud. This activity highlighted gaps in girls’ knowledge and helped identify the knowledge that girls felt was important to include in a puberty book. Dr. Sommer’s research team answered these questions in follow-up sessions with the girls.

- **If I had a millions pounds/dollars/shekels:** Girls identified what they would improve about their school environment if they were given a million dollars (or other locally relevant currency). Girls wrote lists or drew pictures to identify the physical or structural changes they might make.

Research conducted in Tajikistan by Gloria Sclar, Emory University (for Save the Children)

- **Becoming an adult**: Participants were split into two groups and asked to write down either the physical or life changes that take place when a girl becomes an adult. The activity explored how students perceive the puberty process and identified gaps in knowledge.

Research conducted in Bolivia by Jeanne Long, Emory University/Save the Children (for UNICEF)

- **MHM game**: During the study in Bolivia, researchers found that girls were not comfortable talking about menstruation and did not want to participate in discussions. To create a more encouraging atmosphere, the research team turned their FGD guide into a game, engaging girls in a range of activities that elicited answers to various research questions.

Key readings


Discussion board activity

Please answer the following questions on Blackboard:

- Tell your fellow classmates about one of the methods you will use in your research.
- Why have you chosen this method and what areas of inquiry do you want your tool to address?
- What activities are you considering using?

Assignments

**1. Tools - Part 1.** In Module 6, we discussed how to conduct IDIs and FGDs with girls. You should consider using both of these tools in your research; your assignment is to create either one of these tools using your research objectives to guide tool development.

Revisit your objective-driven tools homework assignment from Module 5. Add a column to the table for primary areas of inquiry. Create either a FGD or an IDI for girls using the funnel structure discussed in the module. When creating questions, ensure you are asking open questions, (using ‘who’, ‘what’, ‘when’, ‘where’ and ‘why’), not closed questions (yes/no). For each question, create a set of probes.
<table>
<thead>
<tr>
<th>Research objective</th>
<th>Method</th>
<th>Participants</th>
<th>Areas of Inquiry</th>
<th>Key Questions</th>
<th>Probes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand what changes girls experience as a result of menstruation</td>
<td>Focus group discussion</td>
<td>Primary- and secondary-aged schoolgirls who have begun menstruating</td>
<td>Life changes and social norms; menstruation-related challenges</td>
<td>What has changed in your life since you began menstruating?</td>
<td>How have your relationships changed? How have your responsibilities changed?</td>
</tr>
</tbody>
</table>


### Module inspired and informed by the following resources


Learning objectives
At the end of this module, participants should:

- Be familiar with the concept of triangulation and its application to verify and explore a research theme from different perspectives.
- Understand how to develop key informant interviews with teachers and administrators, and focus group discussions with mothers, boys and fathers.
- Know how to conduct school facility observations.

Module outline
1. Triangulation
Triangulation is the use of a combination of different methods, theories, data and/or researchers in the study of one issue. The premise is that the research conclusion may be stronger if the same result arises from different methods (Creswell and Clark, 2011). Module 6 specifically discussed conducting IDIs and FGDs with girls. During this module, we discuss the importance of other perspectives and describes how to conduct KIIs with teachers and administrators, and FGDs with mothers, boys and fathers.

2. Key informant interviews with teachers and administrators
Key informants are typically ‘insiders’ who know something about a broader system, community or institution (Woodsong et al, 2005). To gather information on a school’s WASH facilities and the operation and maintenance of these facilities, KIIs should be conducted with
school administrators. These interviews usually involve a set of mostly closed questions (e.g. How many toilets/latrines are located within school grounds? Are the toilets/latrines gender segregated?). To explore teachers’ and administrators’ perspectives around menstruation-related issues, KIIs should be conducted using more open-ended questions. Ideally, the teacher interviewed should be one who teaches menstruation, reproductive health or science.

The UNICEF/Emory publication *WASH in Schools Empowers Girls Education: Tools for Assessing Menstrual Hygiene Management in Schools* provides the tool that was used to conduct KIIs with teachers and administrators during the four-country research. The tool can be adapted to other country contexts and research objectives. Examples of adaptations that were made to this tool when recently used in the Philippines by UNICEF include:

- The inclusion of questions on waste management systems.
- Further probes regarding whether boys also receive education about menstruation, reproductive health and puberty.
- Whether teachers knew if information that girls receive in school was different than other beliefs they might have.
- Probes around whether girls and boys were taught together when learning about puberty or sexual/reproductive health.
- Probes around the gender of the teacher who taught menstruation and/or puberty.
- Whether girls were expected to come to school when menstruating.
- Whether teachers were aware of teasing that girls experienced related to puberty or menstruation.
- Whether teachers were aware if girls missed schools during menstruation.

### 3. School facility observation

During the four-country study, researchers used school facility observation to observe and record information about WinS facilities. The primary areas of inquiry were related to water (source and access), sanitation (functionality, cleanliness and lighting in school toilets), waste disposal and hygiene. When conducting facility observation, it is important that the research assistant seeks assistance from a school administrator, teacher, janitor or facilities manager who can show the research assistant how the facilities function and demonstrate how to use anything unfamiliar.

School facility observation can help researchers triangulate results generated through qualitative methods such as FGDs and IDIs. The tool used in the four-country study, which is included in the publication *WASH in Schools Empowers Girls Education: Tools for Assessing Menstrual Hygiene Management in Schools*, should be adapted to the country context and research objectives. Some ideas for adaptation/clarification include:
• How hand-washing points are identified/defined.
• Whether toilet or facility doors are usually locked.
• Counting the number of gender-segregated toilets and toilets specifically designed for children with physical disabilities.
• Counting the number of toilet stalls with wastebaskets (including whether wastebaskets have lids) and the number of toilet stalls with locks on the inside.
• Including information on waste segregation systems.
• Including information about water accessibility for hand washing/toilets for all children.

4. **Focus group discussion with mothers**

The four-country research also involved FGDs with mothers to triangulate and expand on findings that emerged from discussions with girls. The primary objectives of the discussions were to understand mothers’ roles in communicating knowledge, information, attitudes and practices regarding menstruation to their daughters; to understand mothers’ perceptions of MHM-related challenges that girls face in schools; and to elicit recommendations for MHM programmes. The tool used should be adapted according to the country context and research objectives. Recent adaptations have included adding additional probes on:

- Management of menstruation, including care and disposal of different absorbent materials.
- How women’s routines changed during menstruation.
- How mothers communicate with their daughters about menstruation.

Additional topics that were introduced in the Philippines included:

- How mothers talked to their sons about menstruation and puberty.
- How boys’ lives and behaviours change during puberty.
- How mothers felt girls should learn about menstruation.
- How mothers felt their daughters might react to the challenges they experienced in schools.

5. **Focus group discussion with boys**

FGDs were also conducted with boys to further triangulate and expand on the data collected from girls’ IDIs and FGDs. While the discussions focused on similar themes, they offered a new perspective on girls’ experiences in schools and allowed researchers to assess whether boys have access to the same information as girls. The boys FGD tool begins with broad questions to build rapport between the boys and the interviewer. The tool then asks about menstruation-related health education, and knowledge boys have regarding menstruation. The next section asks questions about boys’ behaviour towards girls during menstruation, with the aim of understanding how boys understand their own behaviour. The final section focuses on how boys perceive girls’ experiences with menstruation.

6. **Additional tools**

Additional tools available include FGDs with fathers and teachers, and KII with health workers and NGO workers. Researchers should decide which tools are best for their research goals and modify the tools appropriately.
Key readings

Discussion board activity
Please answer the following questions on Blackboard:

- Of the different methods discussed during Module 7, which methods will you use and why?
- What objectives will you seek to answer more completely using triangulation?

Assignments

1. Tools – Part 2. Revisit your previous objective-driven tools homework assignment (from Module 6) and create/adapt a KII for teachers. You may adapt the existing KII (included in the UNICEF-Emory publication *WASH in Schools Empowers Girls Education: Tools for Assessing Menstrual Hygiene Management in Schools*), or create a different KII. Include closed, semi-open and open questions. When asking open questions, you can create a set of probes as appropriate.

<table>
<thead>
<tr>
<th>Research objective</th>
<th>Method</th>
<th>Participants</th>
<th>Areas of Inquiry</th>
<th>Key Questions</th>
<th>Probes</th>
</tr>
</thead>
<tbody>
<tr>
<td>To learn teachers’ perspectives of menstruation-related issues in the school setting</td>
<td>Key informant interview</td>
<td>Teachers</td>
<td>Curriculum and facilities</td>
<td>Do girls receive menstruation-related education at the school?</td>
<td>If yes, how is menstruation-related education taught at the school?</td>
</tr>
</tbody>
</table>

Module inspired and informed by the following resources
Learning objectives

At the end of this module, participants should:

- Understand the types of demographic information to collect from research participants.
- Be familiar with strategies for recording, transcribing and translating data.
- Recognize the importance of data management.

Module outline

1. Demographic information

Demographic surveys are a useful tool for gathering information about research participants. Each participant involved in an IDI, FGD or KII should fill out a demographic survey. It is important to adapt the list of key demographics to the participant type and to the research context and objectives. When administering surveys to girls involved in MHM research, the following information is usually collected: age, school grade, language spoken at home, age at first menstruation, number of siblings and number of sisters at home. In certain contexts it may be useful to collect information on religion and access to media/cell phones, the latter being used as an indicator for socio-economic status.

2. Recording, transcribing and translating data

Making audio recordings and taking written notes

Taking notes and making audio recordings of IDIs and FGDs are not mutually exclusive. Audio recording is considered the ‘gold standard’ because it allows researchers to capture what participants say verbatim. However, note taking can capture non-verbal parts of the interview.
or focus group, such as facial expressions and body language. Using both methods can help create a more complete record of the research activity.

When using audio recordings, researchers must ensure that recording is discussed as part of the consent process. Before starting the interview or discussion, researchers should be clear and direct about the intent to record, explain the need to record and discuss confidentiality. If a participant does not consent to being recorded, the researcher must decide to either change the participant or take written notes instead. Recording equipment should be placed in a central location to ensure all voices are clearly heard. If possible, two recorders should be used in case one malfunctions.

Taking written notes is more skill intensive than making an audio recording. The key objectives of note taking are to record the main issues raised, reconstruct the flow of the discussion and capture key quotes as precisely as possible. Note-takers must be objective in their documentation of the discussion, capturing all information, not just what they think is most interesting. Note-takers should also record body language, non-verbal signals, group interactions and interruptions. Note-takers must be properly trained; ideal note-takers are those who can write fast and listen to the discussion while writing. It is suggested that two note-takers are used for focus groups if no audio recording is being made.

Regardless of whether or not an audio recording is made, all written notes should be reviewed as soon as possible. Recall diminishes over time; reviewing the notes right away allows note-takers to add other important information that was not captured during the session.

**Transcription**

A transcript is a written record of an interview or discussion, usually created by typing up the audio recording of the session. The gold standard of transcription captures the discussion verbatim, including slang terms, incomplete sentences and grammatical errors. Transcripts should also record aspects of speech that convey contextual meaning such as laughter, pauses and sounds of affirmation. Additional information documented by the note-taker, such as body language and facial expressions, can also be incorporated into the transcript to create a complete record of the research activity.

Every transcript should include both a label and transcription key. The label should be written at the top of the transcript and contain a range of information, including the interview topic, identifier code, names of interviewer and note-taker, date, location and language.

---

**Example of a transcript label**

**Topic:** MHM in Schools

**Identifier code:** Girls_FGD_3 (Participant_Method_Schoolnumber)

**Interviewer:** Bethany Caruso

**Note-taker:** Anna Ellis

**Date conducted:** 5 March 2015

**Location:** School 3

**Language:** Spanish

**Number or participants:** 6

**Length of activity:** 96:35 (minutes: seconds)

**Additional related data:** Before/after activity sheet, photos of the activity sheet, ideal latrines

**Date transcription completed:** 8 March 2015

**Transcription completed by:** Anna Ellis

**Date transcription reviewed:** 9 March 2015

**Transcription reviewed by:** Bethany Caruso

**Date translation completed:** 12 March 2015

**Translation completed by:** Candace Girod

**Date translation reviewed by:** Anna Ellis
A transcription key should be created that shows how different non-verbal items are notated in the transcript. For instance, ellipses can represent short pauses, double parenthesis can be used to highlight transcriber’s comments, etc. Transcripts should include time stamps every three minutes to make it easy to reference the actual audio recording.

Transcription is a very time consuming process. A single IDI can take a full day to transcribe and a single FGD may take several days. Not only does transcription require someone to type up the audio recording, the transcript should also be ‘spot-checked’ to ensure its accuracy. In addition, transcripts must be de-identified, removing any identifying information (e.g. participant’s name, employer and place of residence). The purpose of de-identification is to ensure that no one outside the research team is able to identify the individual by reading the transcript.

It is recommended that transcription be completed during data collection as this allows the research team to take advantage of the iterative nature of qualitative research. Interviewers and facilitators can reflect on their work and make improvements; weak questions can be adjusted and new questions added, information can be clarified with participants, and the team can identify when they have enough information. Transcription after data collection does not allow for this iterative process.

**Translation**

Translation is necessary if the research team and/or stakeholders speak a different language than the research participants. If translation is required, it is important to hire someone on the research team who is fluent in the participants’ language. Translation should not be literal but rather focus on meaning. For vernacular or slang words that are difficult to translate, a corresponding ‘dictionary of terms’ should be created for reference. It is recommended that a complete transcript be created in the language of the interview, after which translation can be completed. While this type of ‘sequential translation’ is very time-consuming, it allows the research team to have two complete transcripts of the session.

**3. Data management**

When developing a research protocol, it is important to identify how documents and files (both digital files and hardcopies) will be safely stored and protected. One way to protect digital documents, such as transcript files, is to save them on an external hard drive and keep the hard drive in a locked filing cabinet. Demographic surveys, consent forms and other hardcopy documents should be kept in a locked filing cabinet. Demographic information should be entered into an electronic database as soon as possible. Digital files, like electronic audio recordings, should be destroyed once the data analysis is complete.

It is imperative that research teams maintain a data management file to track all
research documents. A data management file can be in the form of a spreadsheet and should include information similar to that of a transcription label, including interviewer name, participant IDs, method (FGD/IDI/KII), time started, time ended, transcriptionist, translator, etc. The data management file should also include the actual file name of digital documents so they can be easily found. Ensuring that these steps are followed should be an essential part of research assistant training.

**Key readings**


**Discussion board activity**

Please answer the following questions on Blackboard:

- What are the resources you possess to protect data?
- Is it possible to adhere to strict research protocols while in the field?

**Assignments**

1. **Data management file.** Using the data management file available on Blackboard as a template, create your own file that includes:

   - Name of data file (Method_participant#_School#)
   - Transcription information
   - Translation information (if applicable)
   - Additional information as necessary (refer to the extended template example on Blackboard)

**Module inspired and informed by the following resources**


Learning objectives

At the end of this module, participants should:

- Be able to design and facilitate a training programme for a research team.
- Understand how to successfully carry out school visits and pilot exercises.
- Recognize common research challenges and how to address them.

Module outline

1. Training a research team

Training a research team is a vital part of the research process and can impact the overall quality of results. The purpose of training is three-fold: to ensure all team members are equipped with the basic skills and knowledge needed to properly conduct research activities; to familiarize the team with the research tools being used; and to utilize team members’ expertise in adapting and translating the tools. If time allows, training may also include pilot exercises.

Building a team

When building a research team, important qualifications include experience with the subject matter, research experience, connections to the local context, proficiency in the local language and computer literacy. It is rare for one individual to meet all criteria; the research team as a whole should represent these knowledge and skill sets. Additional considerations include the sex and age of team members. For MHM research with schoolgirls, women are more appropriate and effective.
interviewers. The number of people needed to carry out the planned research activities should also be considered. The minimum activities recommended for WinS4Girls research include FGDs and IDIs with girls, KIIIs with teachers, and facility observations. In the UNICEF/Emory four-country study, research teams consisted of four to six members, with most, if not all, being women.

**Key topics for training**

Training should cover seven key topics, each of which correspond to a given module from this e-course. Consider using the slide decks and resources from this course for your own training activities.

**Table 5: Training a research team**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Corresponding e-course module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to MHM in Schools</td>
<td>1</td>
</tr>
<tr>
<td>Research ethics</td>
<td>3</td>
</tr>
<tr>
<td>Child protection (can be led by child protection team member)</td>
<td>3</td>
</tr>
<tr>
<td>Qualitative research</td>
<td>5</td>
</tr>
<tr>
<td>Tools for MHM research</td>
<td>6 and 7</td>
</tr>
<tr>
<td>Transcription and translation</td>
<td>8</td>
</tr>
<tr>
<td>Piloting data collection</td>
<td>9</td>
</tr>
</tbody>
</table>
2. Training schedule

A seven-day training programme is recommended, allowing enough time to cover key topics, thoroughly practice qualitative methods and review each research tool. During the training, members of the research team should practice different roles (e.g. FGD facilitator, IDI or KII interviewer, note-taker, observer, transcriber, translator, etc.). The team leader can then ascertain the strengths and weaknesses of each team member to determine their role during research activities.

Table 6 provides an outline of each training day. Further details and training materials are available at www.washinschoolsmapping.com.

Table 6: Suggested training schedule for research teams

<table>
<thead>
<tr>
<th>Day</th>
<th>Topic</th>
<th>Activities</th>
</tr>
</thead>
</table>
| 1   | • Introduction to MHM and WASH in Schools  
      • Introduction to MHM research  
      • Research ethics  
      • Research logistics | • Johari's Window: Team members explore their own perspectives and consider what topics girls or other participants may have difficulty speaking about. |
| 2   | • Introduction to qualitative research  
      • In-depth interviews | • Review in-depth interview tool.  
      • Open and closed questions: Participants practice different questioning strategies.  
      • Probing deeper: Participants practice probing and asking follow-up questions.  
      • Bad/good listening: Participants practice active listening skills. |
| 3   | • Working with adolescents and sensitive topics  
      • Focus group discussions | • Review focus group discussion tool.  
      • Mock focus group discussion: Participants practice facilitator and note-taker roles and how to manage challenges. |
| 4   | • School facility observation  
      • Key informant interviews | • Review key informant interview tool.  
      • Review school facility observation tool. |
| 5   | • Demographic surveys  
      • The permission process and use of recorders | • Participants conduct a ‘mock’ session of each tool, treating it like a real IDI/FGD/ KII by going through the consent process, demographic survey and recording. |
| 6   | • Transcription and translation | • Participants practice transcription and translation. |
| 7   | • Data management protocols  
      • School visit strategies | • Review of data management protocols.  
      • Plan school visit schedule |

Additional time may be required for training depending on the experience of the team members.
3. School visits
Research teams should prepare for at least two separate visits per school – a preliminary visit and a research visit.

**Preliminary visit**
The preliminary visit allows the team to introduce the research to school administrators and to prepare for the research visit. Team members should explain the research topic to the school principal and relevant teachers, gain permission for research activities, and discuss participant recruitment. In addition, team members should agree on a date for the research visit with school administrators. Consent forms should be left for distribution to parents. If possible, team members should also view the classroom that will be used for data collection to confirm its appropriateness with regard to privacy, size, etc.

A number of templates are available to help research teams prepare for the preliminary visit, including an information letter to schools, instructions for the head teacher, example instructions for participant selection and parental consent forms. The files are available online at www.washinschoolsmapping.com.

**Research visit**
Before team members re-visit schools to carry out research activities, a school visit checklist should be developed to ensure the team has the necessary materials and supplies (consent forms, school visit report templates, note-taking templates, recorders, etc.). The actual visit will probably take most of a day. A schedule should be set up that includes enough time for all planned activities.

The school visit report should be filled out immediately after the research visit. The report documents the date of the visit, school identification number, arrival and departure time, research team members involved and a detailed table of the activities conducted. The team should also debrief on their activities as soon as possible after the visit. The main purpose of the team debrief is to discuss both the themes that participants brought up during the research activities and what worked/did not work for each research tool. Data management protocols should be closely followed, organizing and securing notes, consent forms and collected data accordingly.

Templates for school research visits are available online at www.washinschoolsmapping.com, including a sample visit schedule, school visit report template, data management file template and consent/assent forms templates.

4. Piloting
Piloting is a crucial step prior to formal data collection and is an essential part of research team training. Piloting involves conducting a ‘test-run’ of research activities and tools so that they can be further adapted and improved. Piloting also enables the team leader to identify which member will function best in each position (facilitator, note-taker, etc.). Piloting should ideally take place in a school where team members will have the opportunity to test all research tools with a group of trial participants.

After piloting, two to five workdays should be set aside for an extensive team debrief. During the pilot debrief, the team should discuss each research activity (including the consent process,
logistics and tools), evaluate the performance of team members and review the data collected. Reviewing the data will be the most time-intensive part of the debrief because in order to assess data quality, the collected data should be transcribed and, if applicable, translated. Similar to team debriefs after school visits, the pilot debrief should address what worked, what did not work and what changes should be made.

5. Research challenges
During this module we briefly discuss potential challenges that may come up during data collection. Common challenges included shyness of research participants, time limitations, security concerns and illness.

Discussion board activity
Please answer the following questions on Blackboard:
- What research challenges are you experiencing?
- How could you better prepare your team for these challenges through training?

Assignments
1. Research plan, continued. During your Module 4 assignment, you developed the following aspects of your research plan:
   1. Background
   2. Sample
   3. Setting
For this assignment, please add the following items to your research plan:
   4. Recruitment of participants
   5. Team training
   6. Data management and monitoring
   7. Confidentiality
   8. Informed consent
   9. References

Module inspired and informed by the following resources


Learning objectives
At the end of this module, participants should:

- Understand the development and dissemination of the girls’ puberty book in Tanzania and the adaptation of the book to other country contexts.
- Recognize the importance of ensuring multiple stakeholder involvement throughout an intervention.

Module outline
1. Introduction
In this module, Dr. Marni Sommer, Associate Professor at Columbia University, discusses the process undertaken to create puberty books for girls in Tanzania. Country teams can use the guidance to create puberty books in their own countries.

2. History of the intervention
In 2006-2007, Dr. Sommer’s team conducted research on MHM in Tanzania. The aim was to explore the challenges menstruating schoolgirls were facing in rural and urban Tanzania and to compare the experiences of girls in and out of school.

The hypothesis prior to the research was that girls would have insufficient information on the changes happening in their bodies and how to manage menstruation in school. The ultimate goal was to develop a girls’ puberty book to help address this knowledge gap. The realization of this goal depended heavily on buy-in from a range stakeholders.
The research team approached girls’ education champions within the ministry of education and local universities, WASH and education teams at UNICEF, NGOs, donors, and other United Nations agencies to gather input and advice.

**Research methods and findings**

A number of research methods were used to inform the development of the puberty book, including:

- Observation of school water and sanitation facilities.
- Review of current curricula around menstruation in schools.
- IDIs with girls, parents and teachers.
- Participatory activities, including the collection of menstrual stories. For example, girls were asked to describe the first time they had their menstrual period, how they felt, who they told, how they managed, and what advice they have for younger girls.

Based on these activities, it was found that girls in Tanzania lack pragmatic guidance on menstruation, puberty and MHM. Important female family members who were at one time involved in discussing menstruation with girls, such as grandmothers and aunties, were often no longer around. Further compounding the problem, teachers, both male and female, were uncomfortable discussing menstruation with girls, and girls were too shy to ask. The research team concluded that the regular school syllabus was too crowded to add more material on puberty. An alternative solution was needed that would:

- Not be dependent on teachers taking on more work;
- Be culturally acceptable to parents, families, communities and the ministry of education; and
- Be meaningful for girls.

### 3. Developing the girls' puberty book

**Stakeholder engagement**

The research team conducted further discussions with key stakeholders, including counterparts at the Tanzanian Ministry of Education, other gender and education experts in the country, UNICEF, UNFPA, NGOs and donors. They also conferred with librarians and bookstore owners. Through this process, it was decided that a puberty book would be the best way forward.

A proposal submitted to the Nike Foundation was successful in securing funding for the book’s development, illustration, translation, printing (15,000 pilot copies) and evaluation.

**Content development**

The team used the data generated from the research (and draft puberty curriculum created by the ministry of education) to develop the book’s three main parts. The first provides girls with basic guidance on normal emotional and physical changes that take place during puberty, and on menstruation and its management. The second part includes five menstrual stories. The third part includes activities around puberty and MHM, such as keeping a menstrual calendar. Importantly the book is:

- Colourful, fun and exciting for girls to read.
• Culturally and socially acceptable for families and communities.
• Helpful for practicing English (each page contains both English and a Swahili translation).
• Written at a reading level appropriate for girls 10 to 14 years of age.

The research team shared the draft publication with key stakeholders for feedback.

**Identifying a publisher, translator and illustrator**

A number of potential publishers were considered, with one selected based on price, book quality, distribution and storage capacity, and understanding of the project’s vision.

Dr. Sommer found a translator by asking for recommendations from colleagues and interviewing candidates. It was important to find a person or team that had previously worked with girls. After the translators completed a draft, Dr. Sommer asked colleagues to review it and provide feedback. An illustrator in Tanzania was selected based on a review of previous work.

4. **Field-testing**

The publisher produced a mock book for field-testing. After obtaining clearance from the ministry of education, the research team then met with standard 5, 6, and 7 girls for three hours to review the book contents and illustrations. They also met with parents, teachers and key stakeholders, after which a number of changes were made to the translation and illustrations. Between August and September 2009, 16,000 copies of the book were distributed in Tanzania through various NGOs and were pre/post tested with primary and secondary schoolgirls. In 2010, the ministry of education approved the book, and UNICEF worked with four Tanzanian ministries to have the book incorporated into the new national WinS strategy. To date, over 470,000 copies have been distributed in the country. In addition, the book has been adapted to Cambodia, Ethiopia and Ghana, with over 720,000 books distributed across the countries.
5. Adapting the puberty book to other countries

When considering the possibility of adapting the puberty book for use in another country, it is important to consider the following:

- What is known about the onset of menses in various ethnic groups in the country?
- Are there any strong taboos around teaching girls about menstruation?
- Has the ministry of education developed any curricula to teach girls pragmatic information about MHM?

If there is significant interest in developing a book in your country, the WinS4Girls project team can assist you by providing much of the content and advising you as you adapt the model to your context.

Discussion board activity

Tell us what you think about the possibility of producing a girls’ puberty book for your country.

- What topics should you include in the book that are specific to your country?
- Do you perceive any challenges working with the local ministry of education to get this published and distributed?
- Do you foresee any challenges to creating this book? For example, will there be concern from teachers, parents or government?

Assignments

1. **Reviewing the puberty book.** Please download a PDF version of one of the four puberty books (www.growandknow.org/books.html) and take it home to share with female family members. Ask them to read the book and answer the following questions:
   - Did they like the book?
   - Did they enjoy the stories?
   - Would such a book be useful for girls in your country?

Next, please ask one or more female relatives who is 16 or older to write a short (one page) menstrual story that describes the first time they got their menstrual period. The following questions should be answered:

- How old were you?
- How did you feel?
- How did you manage?
- What is your advice for younger girls?

Module inspired and informed by the following resources


Grow and Know, Inc. www.growandknow.org/books.html
Learning objectives

At the end of this module, participants should:

- Understand the purpose of qualitative data and recognize that good analysis can only come from good data.
- Understand the key steps of the data analysis process.
- Be able to recognize/identify themes in research findings.
- Know how to compare findings across schools to draw conclusions.
- Recognize the amount of time needed for data analysis.

Module outline

1. Qualitative research

Qualitative research aims to shed insight on the human experience of a particular phenomenon. The WinS4Girls Project intends to explore girls’ experience of menstruation by collecting perspectives from a number of countries. The goal is to design studies that allow generalizations to be made across schools, regions and countries. The data analysis process allows researchers to make these generalizations. It is important to note that valid generalizations are only possible when starting with a good study design and high-quality data.

Study design

As girls’ experiences around MHM differ depending on context, it is critical that the study design allows for the in-depth investigation of context. Instead of studying a large number of geographic
regions, it is often better to thoroughly examine a few regions (studying at least three schools within each selected area). It is also important to remember the many factors that influence girls’ experiences of MHM at school (e.g. availability of private toilets/latrines, evidence-based MHM education, etc.). Focusing on a few (or even one) of these factors may provide the most useful results.

**Qualitative data**

As opposed to quantitative data (which focuses on numbers), qualitative data is largely made up of text. Text-based data can take many forms, including:

- Transcripts from recorded interviews or discussions;
- Notes from interviews, discussions or observations;
- Debrief memos or written notes taken after an activity; and
- Lists and stories generated by participants.

Qualitative data may also be visual, including photos of facilities and drawings made by participants.

2. Phases of qualitative data analysis

Qualitative data analysis is the process through which the data generated through research activities are used to draw conclusions. Data analysis should occur concurrently with data collection and includes three distinct phases: data reduction, data display and drawing conclusions (Miles and Huberman, 1994).

**Data reduction**

Data reduction refers to the process of selecting, focusing, simplifying, sorting and organizing data. The purpose is to organize the large quantity of text generated during data collection into common themes, reducing data into more manageable pieces. Data reduction occurs before research begins (e.g. deciding which research questions to focus on), during data collection (e.g. identifying themes, applying codes and writing memos) and after data collection (e.g. synthesizing and summarizing results).

**Data display**

Organizing data into visual displays can help to determine if there are certain patterns or trajectories in the data and can help present or share data with others. Forms of data display include pictures, matrices, graphs, charts, networks and lists. Some displays may become part of the final project report.

**Table 7: Data display example**

<table>
<thead>
<tr>
<th>Theme: Leaks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>School A: Participant 1</strong></td>
</tr>
<tr>
<td>Concerned about leaks; has no pads or cloth at school. There is a place to change, but she does not know where to get materials.</td>
</tr>
</tbody>
</table>
**Drawing conclusions**

Drawing conclusions involves noting patterns and themes across research activities, regions, schools and individuals, and relating them to research questions. Not everything will fit into similar patterns; it is important to note similarities and differences and to try to understand why these similarities and differences are occurring in the data.

**3. Key analysis activities to be completed during data collection**

**Post-data collection debriefings**

As an early part of data reduction, the research team should debrief at the end of each day of data collection. During the session, team members should discuss each activity and key learnings, including what worked and what did not work. In the beginning, teams should go through each tool and discuss each key section. This will provide the group with a sense of the tool, if data collectors are asking the questions correctly, and if they need to probe more. School activity sheets should be created, detailing the key aspects of each research activity conducted at the school.

**Activity memos**

Research assistants should write a brief review of each completed activity. All memos should be labelled with the school and community name/ID, the date, the activity type and number of participants, and the names of the research team members involved (see text box). Key points to include in the memo are: challenges, including the determinants and impact of those challenges; specific issues around WASH, knowledge, materials and support; recommendations; personal perceptions of how successful the activity was; and suggested changes or additions to the tool.

**School reports**

As part of the data reduction process, a report should be compiled for each school visited, including the post-data collection debriefing, activity memos and an overall synthesis of key ideas. School reports are a valuable reference to be used later in the research process.

**4. Analysing transcripts**

**In-transcript memos**

Once the transcript of an activity is available, it should be reviewed for completeness and accuracy by the research assistants involved in the activity. The researcher who led the activity or the lead researcher should then create in-transcript memos, adding notes to each transcript (see Figure 3). Memos should consider content and quality of data, include thoughts and potential connections, and detail the way people reacted to specific questions. Memos should not summarize the data, or what the participant said.
Overall activity transcript memo
Once in-transcript memos have been finalized, the lead researcher should create an overall activity transcript memo to summarize key issues. The researcher can also start compiling data in other forms, such as charts and lists.

Identifying themes
Common themes should then be identified and listed. These themes may already be clear from background literature and research questions or may arise during activities with participants. If identifying themes becomes a challenge, it may be helpful to ask a number of questions: what is happening?; who is it happening to?; how or why is it happening?; who is involved?

Creating codes
After identifying re-occurring themes, researchers should develop a ‘codebook’, listing and defining the identified themes. Codes to consider include determinants, challenges, voiced impacts, potential risks and recommendations. Across the four-country study, a common codebook was created with shared themes; however, some codes only related to certain countries or contexts. Researchers in Sierra Leone created a code for pregnancy as girls frequently mentioned pregnancy as a challenge associated with lack of knowledge related to menstruation. Codes were also created for specific places (e.g. home and school).

Applying codes
There are many ways to apply the chosen codes to qualitative data. One way is to highlight a section of text to which a particular code applies (see Figure 4, in which a portion of a transcript is coded for absorbent materials).
Another way is to use a different colour of text for each code. However, these methods can get complicated when trying to apply more than one code to a single section of text. One solution to this problem is to cut and paste sections of text into a spreadsheet with different sheets for each code (see Figure 5). This should be done for each activity in each school.
Comparing data from different sources within a school

Once coding is complete for each research activity within a school, triangulation should be used to combine what has been learned through different methods, data and researchers within the school. As schools are a cohesive unit, all activities undertaken in a school should be analysed together.

Comparing schools

Researchers can compare schools within a particular geographic area or that share another relevant characteristic (e.g. all primary schools or all secondary schools). Researchers may now have a sense about what a typical experience may be like for a girl in a certain school, district or region. Based on this information, it may be possible to draw a number of conclusions and/or generalizations.

Verification

Once conclusions or generalizations have been identified, the research team should return to the study locations to verify accuracy. This can be accomplished through a short FGD with key participants during which the research team reports on their conclusions. This provides an opportunity for participants to provide clarifications or corrections.

5. Time needed for data analysis

Qualitative data analysis is extremely time consuming. An interview will take an hour to collect, 6-8 hours to transcribe, and several hours to review, code and memo. An FGD will take at least two hours to collect, at least two days to transcribe, and several hours to review, code and memo. Data analysis for the MHM research conducted in Bolivia, Philippines and Rwanda, which involved 8-10 schools per country, took a few months of full time work for one person.
When planning research, it is important to consider how many schools will be visited, whether there is enough time scheduled for transcription and analysis, and whether there are enough people on the analysis team.

**Key readings**


**Discussion board activity**

Please answer the following questions on Blackboard:

- What are some preliminary codes or themes that you think you may use to answer your research questions?
- Will you conduct validation with participants? Why or why not?

**Module inspired and informed by the following resources**


Learning objectives
At the end of this module, participants should:

- Be able to define policy-focused advocacy.
- Recognize the basic steps needed to create an advocacy strategy and the role of evidence in that process.
- Understand and be able to apply tools for advocacy.

Module outline
1. Introduction
In this module, Elynn Walter, Sustainability Director at WASH Advocates, outlines the basic elements of advocacy. She also discusses steps for using country-specific research to advocate for improvements around MHM in schools. Country teams are encouraged to use the findings from their research to promote policy changes.

2. Defining advocacy
Advocacy is the process of strategically managing and sharing knowledge to change and/or influence policies and practices that affect people’s lives. Policy advocacy is the deliberate process of informing and influencing decision-makers in support of evidence-based policy change and policy implementation, including resource mobilization.

Global advocacy focuses on international efforts to raise awareness on an issue to influence global change through multiple actors. For example, the Sanitation and Water for All (SWA)
Partnership, which links governments, donors, civil society and multilateral organizations, aims to catalyse political leadership and action, increase the accountability of partners, and improve the use of resources to reach those without WASH services. The partnership also provides a mechanism to assess each country’s progress towards its WASH goals.

International days (such as World Water Day and World Toilet Day) provide opportunities for advocates to rally together and speak with one voice. Organizations can engage targeted political actors, stakeholders and allies by presenting important data in support of a cause.

The Sustainable Development Goals (SDGs) provide an important platform for advocacy. Moving forward, organizations should consider how work undertaken in new projects will contribute to the SDGs, a few of which are related to MHM.

Regional and national advocacy involves civil society networks, government-led efforts, and civil society and government partnerships. Country teams should tailor messages based on their audience. Specifically, teams should select data and evidence that are directly related to the goals and targets of the organizations with which they are working.

3. Approaches to advocacy: grassroots vs. grasstops

There are two main ways to approach advocacy – ‘grassroots’ advocacy and ‘grasstops’ advocacy. Grassroots advocacy involves raising awareness among the general public about a specific issue in order to influence public perception and policies. Grassroots advocacy aims to motivate people to take action. Grassroots initiatives include World Walks for Water and Sanitation as well as the Menstravaganza campaign. They are intended to engage people who may not have expertise on an issue, but have the potential to become an ally or supporter.

Grasstops advocacy can be defined as raising awareness among decision-makers and turning that awareness into action. Grasstops advocacy is usually individualized, targeted advocacy aimed at high-level individuals such as parliamentarians, governors and leaders of private sector companies. An example of grasstops advocacy is a meeting with government officials to discuss the importance of including menstrual hygiene in WinS policy.

The messages used for grassroots and grasstops advocacy are usually different. Grassroots messaging tends to be catchy and simple. It is important to include some sort of action with grassroots messaging. Grasstops messaging, on the other hand, is highly targeted. Country teams should do research to understand what evidence would be most compelling to an individual based on their broader political interests and goals. With this knowledge, messaging can be targeted and thus more effective.

Policy advocacy issues

A good issue for policy advocacy is:

- A current objective or natural fit within current work.
- Based in evidence.
- Readily improved with a policy change or implementation of an existing policy.
- Reasonably attainable in three to five years.
- Sufficiently specific and clear.

Source: Advocacy Impact for Health, PATH
4. The advocacy planning cycle
The advocacy planning cycle illustrates the essential steps for constructing and managing an advocacy strategy (see Figure 6). The order in which the steps are completed is somewhat flexible, except for monitoring and evaluation, which should be conducted at the end of the campaign to measure its impact. It is important to note that the role of the research team is most important during step one, when identifying the issue and reviewing data.

5. Evidence-based advocacy
There are two approaches to evidence-based advocacy. One approach is for teams to form a campaign strategy around a specific piece of evidence. The other is to gather evidence to support an already existing strategy. Knowing the problem that the advocacy campaign hopes to address may assist research teams to identify critical areas in which to gather evidence. However, when planning and conducting a study, it is important to remember that the data may not yield the desired evidence.

Discussion board activity
Please answer the following questions on Blackboard:

- What advocacy activities have you been involved in?
- Did you use evidence to create your key messages? If yes, provide an example of one of your key messages.

Module inspired and informed by the following resources

PATH, (2014). Stronger Health Advocates Greater Health Impacts: A workbook for policy advocacy strategy development, PATH.

Menstrual Hygiene Day Website, http://menstrualhygieneday.org/


WaterAid, Policy, practice and advocacy website www.wateraid.org/policy-practice-and-advocacy
The WinS4Girls E-Course was designed by the Center for Global Safe WASH at Emory University and UNICEF to help strengthen the capacity of WASH practitioners and policymakers to carry out rigorous research that investigates local menstrual hygiene management (MHM) practices and challenges in schools. The course can be adapted by universities or organizations to reach practitioners in the field, either face-to-face or through distance learning. All course materials, including module presentations, research tools and background documents, can be accessed online at www.washinschoolsmapping.com. By working together to improve MHM in schools, we can help ensure that girls are able to adequately manage their monthly menses with safety, privacy and dignity.

Funding for the WinS4Girls E-Course was provided by the Government of Canada.