INVESTIGATING OPPORTUNITIES TO IMPROVE GIRLS’ EDUCATIONAL EXPERIENCES THROUGH WASH IN SCHOOLS.

MHM RESEARCH FINDINGS IN KYRGYZSTAN
Acknowledgements

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Suggested Citation:

Acronyms

DHS – Demographic and Health Survey
FGD – Focus Group Discussion
GNI – Gross National Income
IDI – In-Depth Interview
ICFI – Inner City Fund International
KII – Key Informant Interview
MHM – Menstrual Hygiene Management
MoES – Ministry of Education and Science
MoH – Ministry of Health
NGO – Non-Governmental Organizations
SRR (SanPiN) – Sanitary Rules and Regulations
SCI – Save the Children International
UNICEF – United Nations Children’s Fund
WASH – Water, Sanitation and Hygiene
WinS4Girls – Water, Sanitation and Hygiene in Schools for Girls
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Background

Assessment background

Water, sanitation, and hygiene (WASH) have long been domains of interest for governments and nonprofit agencies seeking to improve health and reduce the spread of disease, particularly among children. In recent years, attention has increasingly turned to menstruation as a determinant of adolescent girls’ overall physical, mental, and emotional health, and there is growing recognition of the importance of accommodating girls’ menstrual hygiene needs as a facet of WASH programs.

In 2012, a round of research was conducted by UNICEF and the Emory University Center for Global Safe Water in four countries (Bolivia, the Philippines, Sierra Leone, and Rwanda), with the aim of “understand[ing] the range of challenges faced by schoolgirls during menstruation, as well as the determinants of those challenges, and [providing] recommendations for stakeholders” (Long et al. 2013). These studies found that girls faced a range of social, emotional, and practical challenges around menstruation, including stress, fear, and shame; leaks, stains and odor; pain; poor understanding of menstruation; and inability to effectively manage menses at school (Long et al. 2013; Haver et al. 2013; Caruso et al. 2013).

Building upon these findings, a second round of research was conducted in 10 countries across Asia, Africa, and Latin America. This report presents the findings of the assessment conducted in Kyrgyzstan, a collaborative effort led by Save the Children and supported by UNICEF, the Ministry of Education and Science, the Ministry of Health, and the Kyrgyz Russian Slavic University, and funded by the Canadian government. The primary aims of the assessment were:

1. to identify challenges and their determinants around menstrual hygiene management at schools;
2. to gain a comprehensive understanding of the menstruation and puberty knowledge, attitudes, and practices among girls, boys, parents, and teachers; and
3. to inform the development of a basic package of educational materials on menstruation and puberty for the use of girls and schools.

Country context

Topography and climate

Kyrgyzstan is a landlocked, mountainous country in Central Asia with a population of 5.4 million as of the 2009 census (National Statistical Committee of the Kyrgyz Republic 2009). The country is bordered by Kazakhstan, Uzbekistan, Tajikistan, and China. Like most of its neighbors, Kyrgyzstan was part of the Soviet Union for much of the twentieth century, from 1919 until 1991, when the country formally declared itself a sovereign republic.

Kyrgyzstan’s topography is defined by the Pamir and Tien Shan mountain ranges, which comprise two-thirds of the territory. Over 90% of the country is at least 1,000 meters above sea level. As a result, much of the land is more suitable to pasture than to conventional agriculture. The mountainous terrain also contributes to harsh, snowy winters.

Economy

After independence in 1992, the Kyrgyz Republic’s economy and public services were hit hard by the break-up of the Soviet economic zone and the end of subsidies from Moscow. Due to the adoption of market-based economic reforms in the 1990s, the economy has nearly recovered to its pre-independence level of output, but infrastructure and social services have suffered from low investment.

In 2013, the Kyrgyz Republic’s GNI per capita was estimated at US $1,200, increasing from US $1,040 in 2012. The global economic crisis, the political unrest of April and June 2010, and food price increases in 2011 and 2012 have reversed earlier gains in poverty reduction (World Bank Income Classification). The absolute poverty rate increased from 33.7% in 2010 to 36.8% in 2011 (World Bank Data Kyrgyz Republic).

A series of reform-oriented governments since the political crises of 2010 have sought to restore economic and social stability, and to address shortcomings in public governance and the investment climate. Thus, the Kyrgyz Republic has been re-classified from a low income country to a lower-middle income country, according to the 2014 Income Classifications released in July 2014 by the World Bank’s Office of Development Economics and Chief Economist.
Demographics

Kyrgyzstan is a multiethnic country with significant ethnic minority populations concentrated in various parts of the country. As of the 2009 census, approximately 71% of the population is ethnically Kyrgyz. Uzbeks make up the second largest ethnic group (14.3%), and primarily live in the south. The Russian population has decreased dramatically since Kyrgyzstan became independent, falling from 21.5% of the total population in 1989 to 7.8% in 2009 (National Statistical Committee of the Kyrgyz Republic 2009; National Statistical Committee of the Kyrgyz Republic 1989). However, Russian is still widely spoken, and Russians remain the country’s third-largest ethnic group, mainly concentrated in and around the northern capital city of Bishkek. Additionally, there are small pockets of ethnic minorities, including Dungan, Uyghur, and other Central Asian ethnicities including Tajik and Kazakh (National Statistical Committee of the Kyrgyz Republic 2009).

Figure 1. Ethnic groups as percentage of total population as of 2009 census (National Statistical Committee of the Kyrgyz Republic 2009).

Schools in Kyrgyzstan are distinguished by their language of instruction. Kyrgyz language schools make up the majority, though there are some Russian and Uzbek language schools. Kyrgyz-language schools make up 65% of schools and 49% of all students in Kyrgyzstan, while Russian schools account for 7% and 10%, respectively (Juraev 2005).

The primary religions observed in Kyrgyzstan are Islam (75%), Russian Orthodox Christianity (20%) and other (5%) (World Fact Book).
Infrastructure and WASH facilities

Infrastructure for water and indoor plumbing was prioritized during Soviet times, but many systems have since deteriorated, particularly in rural areas. The number of rural households using water piped into the dwelling fell by more than half between the 1997 and 2012 Demographic and Health Surveys, from 27.6% to 12.3% (National Statistical Committee of the Kyrgyz Republic, Ministry of Health of the Kyrgyz Republic, and ICF International 2013; Research Institute of Obstetrics and Pediatrics, Ministry of Health of the Kyrgyz Republic and Macro International Inc 1998). Pit latrines with slabs currently serve as the primary household sanitary facility for 89% of rural households, with ventilated improved pit latrines accounting for another 5.1%.

WASH infrastructure at schools has similarly deteriorated in recent years. Most schools in Kyrgyzstan have some sort of toilet facility, but a recent survey of schools in three northern provinces found that just 11.5% of rural schools had a functioning sewage system, while 28.8% had an existing system that was currently non-functional (Domashov et al. 2011; United Nations Children’s Fund 2013). Eighty-five percent of surveyed schools had pit latrines. Maintenance of the sanitation facilities is poor, and much of the existing infrastructure has fallen into disrepair. Latrines that were constructed during Soviet times generally provided were usually constructed without individual stalls, limited privacy for the user.

Many schools have limited or unreliable access to water. Twenty-nine percent of schools in the 2011 survey reported that they “never had water,” and another 23% reported having water only sometimes. Only 60% of rural schools have access to an improved water source. Accordingly, rural schools are more likely than urban schools to be accessing water from non-piped sources such as irrigation canals, rivers, or unprotected wells (Domashov et al. 2011; United Nations Children’s Fund 2013).

Lack of water presents challenges in sanitation, hand-washing, and the ability to maintain cleanliness of toilet facilities. Indeed, 62% of students described school toilets as “generally not clean” or “always dirty.” Poor sanitary conditions of school toilet facilities has been cited in Kyrgyzstan and elsewhere as a deterrent to use by both male and female students (Haver et al. 2013; United Nations Children’s Fund 2013; Domashov et al. 2011).

Research on Menstrual Hygiene Management in Kyrgyzstan has largely focused on infrastructure and WASH conditions; however, social and emotional factors may also affect girls’ experiences of menstruation at school. A qualitative study conducted with adolescent girls and boys in Tajikistan found that when a girl was unprepared for menstruation, she often left school rather than using the school latrines to clean up (Sclar 2015). Girls described behavior changes related to menstruation including withdrawing from classmates, not wanting to participate in social activities, and being quieter in class. They said that a menstruating girl may suffer teasing from classmates, especially boys, and she may want to hide her menstruation as much as possible. Repeatedly, close friends were identified as the primary source of support, rather than mothers or teachers.

Policies and regulation on WASH in Schools

Standards for sanitary and other WASH facilities in Kyrgyzstan schools are regulated by Sanitary Rules and Regulations (SanPiNs), which are considered guidance documents and therefore not legally binding (Vashneva et al. 2014; Vashneva et al. 2012). Regulations for sanitary facilities at schools have remained unchanged since Soviet times and still mandate indoor toilets and functioning sewerage systems. According to current regulations, pit latrines are allowed only in the case of schools with fewer than 50 students (Sanitary Rules and Regulations 2.4.002-03, n.d.). In all other cases, centralized or decentralized sewage systems are required, as well as indoor toilets with individual cabins.

Current legal requirements for school sanitary facilities (Sanitary Rules and Regulations 2.4.002-03, n.d.)

- Indoor toilets on each floor of the building
- Individual cabins with doors
- 1:20 toilet-to-student ratio for girls, 1:30 for boys (plus 1:60 for urinals)
- 1 wash basin for every 30 students
- Separate toilets for staff
- “Personal hygiene” rooms for girls at secondary schools (1 per 70 students)

However, over the past three decades, water systems and plumbing infrastructure have deteriorated and are now in a state of disrepair at schools across Kyrgyzstan. Schools that once had functioning indoor toilets reverted back to outdoor pit latrines due to failing plumbing and
maintenance. Some of these schools serve thousands of students, far exceeding the official allowed maximum of 50 pupils for a school to be allowed to have pit latrines (Vashneva et al. 2012).

Because existing regulations were designed to enforce indoor plumbing systems, there are no official regulations on the construction of outdoor pit latrines. Most outdoor latrines meet very few of the requirements for indoor toilets, with insufficient holes for the number of students, no individual cabins, and no hand-washing facilities inside or nearby (United Nations Children’s Fund 2013). Furthermore, while schools serving secondary students are officially required to provide “personal hygiene” rooms for girls, most schools do not have such rooms designated.
Methodology

Research Setting

The assessment was conducted from 11 July - 1 December 2015 at six schools, four in the northern province of Chuy and three in the southern province of Osh. These provinces were selected by Save the Children and UNICEF to provide a broad perspective on school WASH facilities and community beliefs. Due to their proximity to the capital of Bishkek, communities in Chuy province are generally considered more “Russified” and liberal, while communities in Osh tend to be more religious and traditional.

Schools in Kyrgyzstan are distinguished by language of instruction, including Kyrgyz, Russian, and Uzbek. In order to better understand the spectrum of experiences female students may face at different schools, the research included both Kyrgyz and Russian language schools. Two Russian and two Kyrgyz language schools in Chuy, and one Russian and two Kyrgyz schools in Osh were selected. Russian language schools are widely considered to be less conservative and more open to communicate about sensitive topics than Kyrgyz language schools, despite both types of school having predominantly Kyrgyz students. All schools selected were in predominantly Kyrgyz communities and attended by mostly Kyrgyz students.

School Selection

Schools were selected with the assistance of the Ministry of Education and Science. Schools were selected purposively, with an emphasis on rural schools with poor WASH infrastructure. All schools had outdoor pit latrines as the primary toilet facility for both students and staff.

Initially, the research team planned to include at least one Uzbek-language school in Osh. However, due to intimacy of the topic in general in the country and particularly in Uzbek communities regarding the distribution of reproductive health education materials, the research team and MoES decided to limit the assessment to Kyrgyz communities.
### Table 1. School characteristics.

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>SCHOOL</th>
<th>LANGUAGE OF INSTRUCTION</th>
<th>WATER ACCESS</th>
<th>WASH FACILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chuy District,</td>
<td>School 1</td>
<td>Kyrgyz</td>
<td>Irrigation canal</td>
<td>Outdoor pit latrines, non-functioning indoor toilets</td>
</tr>
<tr>
<td>Chuy Province</td>
<td>School 2</td>
<td>Russian</td>
<td>Yard tap</td>
<td>Outdoor pit latrines, non-functioning indoor toilets</td>
</tr>
<tr>
<td></td>
<td>School 6</td>
<td>Kyrgyz</td>
<td>Yard tap</td>
<td>Outdoor pit latrines, non-functioning indoor toilets</td>
</tr>
<tr>
<td>Alay District,</td>
<td>School 3</td>
<td>Kyrgyz</td>
<td>Yard tap</td>
<td>Outdoor pit latrines</td>
</tr>
<tr>
<td>Osh Province</td>
<td>School 4</td>
<td>Kyrgyz</td>
<td>Yard tap</td>
<td>Outdoor pit latrines</td>
</tr>
<tr>
<td></td>
<td>School 5</td>
<td>Russian</td>
<td>Yard tap</td>
<td>Outdoor pit latrines</td>
</tr>
</tbody>
</table>

### Data Collection

#### Activities

The activities conducted and the themes explored were guided by the theoretical socio-ecological framework of factors expected to influence menstrual hygiene management (see Figure 2). The tools used to conduct Key Informant Interviews (KIs), In-Depth Interviews (IDIs) with girls and Focus Group Discussions (FGDs) with mothers, girls, and boys were adapted from the UNICEF/Emory 2012 research (Haver et al. 2013; Long et al. 2013; Caruso et al. 2013). The tool for the FGD with fathers was adapted from the 2013 Save the Children Philippines MHM Situation Analysis.

#### Societal factors | Policy, tradition, cultural beliefs
- Desk review → School WASH policies; curriculum; government and NGO reports
- FGDs and IDIs with girls, boys, mothers and fathers → Norms and beliefs concerning sanitation, menstruation, puberty, and gender roles

#### Environmental factors | Water, sanitation and resource availability
- School observations → WASH facilities and conditions, availability of soap and toilet paper
- KIs with teachers → Hygiene in school curriculum; policies and practices for maintenance of WASH facilities
- FGDs with girls and boys → Perceptions of WASH facilities; use of facilities

#### Interpersonal factors | Relationships with family, teachers, peers
- FGDs with girls, boys, mothers, and fathers → Perceptions of changes in responsibilities, gender roles, and role in the family and community post-menarche; relationships with family, teachers, and peers; sources of information about menstruation and puberty
- KIs with teachers → Teachers’ role in providing information and support to girls

#### Personal factors | Knowledge, skill, beliefs
- FGDs and IDIs with girls → Biological knowledge of menstruation and puberty; menstruation hygiene management practices; behavioral restrictions; needs

#### Biological factors | Age, intensity of menstruation, cycle
- IDIs and FGDs with girls → Prevalence and severity of symptoms such as headaches, cramps, and weakness; impact of symptoms on school experience; prevalence and understanding of irregular menstruation; cycle tracking practices and ability to predict menstruation
Authorization to conduct activities in schools was obtained from the District Departments of Education of Chuy and Alay Districts in Chuy and Osh Provinces, respectively, as well as the directors of each participating school.

Research activities were conducted by multilingual Kyrgyz research assistants fluent in Kyrgyz, Russian, and English. Given that the vast majority of participants were Kyrgyz, it was decided to begin activities in the language of the school, while making it clear to participants that they were free to speak in whichever language they felt most comfortable. All FGDs with mothers and fathers were conducted primarily in Kyrgyz, as were most adolescent FGDs, though participants often included a number of Russian expressions (such as “месячные,” the Russian word for menses) which had no easy Kyrgyz equivalent.

Discussion guides were adapted to each participant type. Topics discussed included:

**Girls:** Understanding of menstruation, norms and practices around menstruation, sources of information, challenges for managing menstruation, and the typical girl’s experience of menarche and menstruation.

**Boys:** Understanding of menstruation and puberty (female and male), interaction with female classmates, girls’ behavior during menstruation, and how menstruation was perceived and reacted to among students.

**Mothers:** Understanding of menstruation, norms and practices around menstruation, perceptions of daughters’ challenges and needs, and communication with daughters on menstruation and puberty.

**Fathers:** Understanding of menstruation, perceptions of daughters’ challenges and needs, and communication with wives, daughters, and sons about menstruation and puberty.

**Focus group discussions (FGDs)** – In order to gain a comprehensive understanding of menstruation and puberty communication, perceptions of menstruation, and MHM challenges at school and at home, FGDs were conducted with girls, boys, mothers, and fathers. Each FGD aimed to include six participants with the goal of striking a balance between including a range of perspectives and giving each participant the opportunity to contribute.

**In-depth interviews (IDIs)** – One in-depth interview with a post-menarchal girl was conducted at each school. Interviews covered personal history of menarche and menstruation, understanding of menstruation, norms and practices around menstruation, sources of information about...
menstruation and puberty, and challenges for managing menstruation.

**Key informant interviews (KIs)** – At each school, one key informant interview was conducted with a teacher who was identified as being involved in menstruation and puberty communication with female students. Participants included biology teachers, the heads of Women’s Committees, and Social Pedagogues, a recently established position whose primary role is to provide social support and guidance to students and to engage them in extracurricular activities. Interviews assessed hygiene and sanitation policies and facilities, menstruation and puberty education, and teachers’ perceptions of challenges for menstrual hygiene management.

**School observations** – Structured observations of each school’s water, sanitation and hygiene facilities were conducted using an adapted version of UNICEF’s WASH in Schools Monitoring Package developed by Emory University.

**Validation activities** – After analysis, research staff returned to one school in Chuy and one in Osh to conduct validation discussions with each participant group. The main purpose of these discussions was to share and corroborate findings and preliminary conclusions, clarify questions that had arisen during analysis, and seek input for proposed recommendations.

While focus groups were limited to six participants, validation discussions were open to anyone who wanted to participate, and generally included a mix of former FGD participants and new participants. In order to streamline the process and encourage discussion on school versus family responsibilities, female teachers and mothers were combined into one discussion group, as were male teachers and fathers. Validation was not conducted with male teachers and fathers in Chuy due to recruitment challenges.

Details of the activities and participants are shown in Table 2.

### Table 2. Activities completed and participants included during MHM research, Chuy and Osh Provinces, Kyrgyzstan, 11 July – 1 December 2015.

<table>
<thead>
<tr>
<th>TOOL</th>
<th>POPULATION</th>
<th>NO. OF ACTIVITIES COMPLETED</th>
<th>NO. OF PARTICIPANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus group discussions</td>
<td>Girls</td>
<td>6</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Boys</td>
<td>4</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Mothers</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Fathers</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>In-depth interviews</td>
<td>Girls</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Key informant interviews</td>
<td>Teachers</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Observations</td>
<td>Schools</td>
<td>6</td>
<td>—</td>
</tr>
<tr>
<td>Validation discussions</td>
<td>Girls</td>
<td>2</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>Boys</td>
<td>2</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Mothers and female teachers</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Fathers and male teachers</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>39</td>
<td>200*</td>
</tr>
</tbody>
</table>

*Includes some overlap between initial data collection and validation activities.

### Training

Five research assistants, four female and one male, were recruited to conduct data collection. All research assistants were fluent in Russian, Kyrgyz, and English.

A five-day training workshop was held with the five research assistants, the project manager, the MHM research fellow, and two technical advisors from Save the Children US. Training included sessions on WASH in Schools, an overview of the 2012 Emory/UNICEF MHM research and findings, adolescence and puberty, menstruation and MHM, qualitative research methods, and research ethics. Three modules from the Emory-UNICEF WinS for Girls online course were presented or
adapted: “Menstrual Hygiene Management; Water, Sanitation, and Hygiene in Schools,” “Qualitative Research Approaches,” and “Recording, Managing and Collecting Data.” Additional information specific to Kyrgyzstan was also included.

During the training research assistants familiarized themselves with the data collection tools and consent/assent forms. The research team reviewed all tools and forms in English, adapted them for the Kyrgyzstan context, and translated them into Russian and Kyrgyz. The girls’ and mothers’ FGD guides, girls’ IDI guide, and KII guide were piloted at a Russian language school in Chuy and revised to improve comprehension and flow.

The first attempt at a boys’ FGD yielded very thin data, as the boys were highly reserved and difficult to engage in discussion. In an effort to encourage participation and improve data quality, the boys FGD guide was adapted to a board game with a variety of question types and activities, building on the model of a game designed for girls in Bolivia (Sahin et al. 2015). An additional boys’ activity was added into the schedule, and the game was piloted at School 2, where it resulted in a significant increase in participation and thicker data.

**Participant selection**

Data collection activities were conducted during the summer holiday. While the absence of students in school helped to ensure privacy for participants, it also posed a challenge for recruitment. Initially, parents were invited to the school a few days before data collection for a meeting at which the research team could explain the activities and collect parental consent forms. However, attendance at these meetings was very low. To address this challenge, teachers and research team members went door-to-door in each village to recruit participants and secure parental consent. This strategy proved successful, though turn-out for activities was still relatively low. Initially, the research team aimed to recruit a pool of 20 candidates for every FGD activity; however, on average, 10-12 adolescents came to the school on the day of the activity. Research staff conducted icebreaker activities and games with adolescents to relax the group, encourage a sense of group identity, and observe how the potential participants interacted with each other and the research team. The most active and interested candidates were then chosen to participate in the research activities, with six participants selected for each FGD and one for the IDI. For the IDI, research staff selected a girl who was responsive during the icebreaker activities, but seemed to interact less with the other girls.

Fathers presented the greatest recruitment challenge. Despite strong recruitment efforts by school teachers, most of the fathers invited declined to participate, citing either lack of time due to the harvest or discomfort with the topic. Only two men came to the first fathers’ FGD; however, both participants were highly active and the resulting...
discussion elicited rich and valuable data. All but one of our seven adult male participants were schoolteachers.

Inclusion criteria: Participants for the girls’ FGDs and IDIs were required to be female students who had begun menstruating. Boys were initially recruited from 8th to 11th grade; however, after an unproductive first boys’ FGD, the research team decided that it would be more effective to adjust the minimum grade level to 9th grade, when puberty and menstruation are supposed to be covered in biology class. Mothers and fathers were required to be parents of girls who had begun menstruating, though not necessarily girls participating in the research. Teachers were selected based on their involvement with menstruation and puberty education, and at various schools included biology teachers, social pedagogues, and heads of women’s committees.

All participants were informed of the objectives of the assessment and that their participation was voluntary. Boys and girls assented and adults consented to participate. Written parental consent was obtained from parents or guardians of all adolescent participants. Research protocols were approved by the Kyrgyzstan Ministry of Education and Science and the Kyrgyz Academy of Education prior to data collection. All participation in research activities was confidential, no names were shared and all data was de-identified.

Data processing and tool improvement
All interviews and discussions were digitally recorded. The research team processed data in three stages: verbatim transcription of recordings in the original Kyrgyz or Russian, translation of transcriptions into English, and review of translations against the recordings to confirm accuracy and completeness. The research assistants rotated their data processing responsibilities to reduce errors, with one person transcribing an activity’s recording, another translating, and a third reviewing. The research team processed all data school visit and the research fellow reviewed the processed data, and the research team made adjustments to the tool and techniques as necessary before going to the next school. This iterative data collection process allowed the research team to account for new topics that arose during data collection and to improve the richness and quality of data at later schools.

Analysis
Data was analyzed using MAX QDA software, following a codebook that was adapted from the UNICEF-Emory 2012 research study. Each transcript was analyzed using the following codes: first time, openness, life changes, knowledge/practice, male knowledge, restrictions, supplies, terms, tangible/informational support, emotional/appraisal support, teasing, context, catching cold, Local mentality, hardware and services, privacy, software, challenges, smell, leak/stain, consumables, home/school, recommendation.
Findings

Figure 3. Schematic of the research findings in Kyrgyzstan.

CONTEXTUAL FACTORS

1. Failing Soviet-era infrastructure and outdated WASH regulations
2. Winter and freezing conditions in latrines

DETERMINANTS

Insufficient knowledge and support
- Insufficient information provided before menarche
- Discomfort discussing menstruation and puberty due to “local mentality”
- Limited knowledge among mothers
- The Internet myth and diffusion of responsibility
- Misinformation about menstruation-related health concerns and behavioral restrictions

Inadequate school WASH facilities and software
- Poor water access
- Lack of privacy
- Limited options to dispose of menstrual supplies
- Uncomfortable facilities
- Insufficient time to use latrine

CHALLENGES

- Fear at menarche
- Reluctance to seek support
- Poor understanding of menstruation
- Irregular menstruation
- Pain and weakness
- Masking of health concerns
- Inability to change supplies or wash at school
- Leaks and stains
- Odor
- Teasing and embarrassment

IMPACTS

- Missed class time
- Withholding urination
- Stress
- Distraction
- Self-exclusion
- Reduced participation in physical activities

RISKS

- Anaemia
- Missed educational opportunities
- Infection

Contextual factors

Contextual factors shape the environment in which girls manage their menstruation and contribute to challenges. Schools, communities, and individuals have limited capacity to effect change on these factors (Haver et al. 2013; Long et al. 2013; Caruso et al. 2013).

Contextual factor 1: Soviet-era infrastructure and outdated WASH regulations. As discussed in the Background section, regulations and policies on WASH facilities at schools are outdated, having not been revised since the 1980s (United Nations Children’s Fund 2013). In the intervening decades, school water systems have deteriorated into varying states of disrepair, and schools have moved to the use of outdoor pit latrines, which are technically discouraged by current regulations. Because these policies were designed with the aim of eliminating pit latrines, there are no official standards for their construction or maintenance. All of the schools included in the present study failed to meet most or all of the key standards for indoor toilets, including standards for privacy, facilities-to-students ratios, and the presence of a separate “personal hygiene” room for female secondary students.
School wash facility observations

Observations of WASH facilities were conducted at each participating school. Facilities were assessed on the presence and condition of latrines, handwashing facilities, and water sources. Latrine assessment included observations on the functionality, cleanliness, and darkness of the facilities, as well as the presence of trash bins, toilet paper or other anal cleansing materials, pits or incinerators for burning used sanitary materials, and functional interior and exterior locks.

Table 3. Summary of WASH conditions in schools.

<table>
<thead>
<tr>
<th>Sanitation Observations</th>
<th>Chuy (N=3)</th>
<th>Osh (N=3)</th>
<th>Total (N=6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of schools with latrines</td>
<td>3 (100%)</td>
<td>3 (100%)</td>
<td>6 (100%)</td>
</tr>
<tr>
<td>No. of schools with at least some latrines specifically for use by girls only</td>
<td>3 (100%)</td>
<td>3 (100%)</td>
<td>6 (100%)</td>
</tr>
<tr>
<td>No. of schools with at least some partially functional latrines for girls</td>
<td>3 (100%)</td>
<td>3 (100%)</td>
<td>6 (100%)</td>
</tr>
<tr>
<td>No. of schools with at least some somewhat clean latrines for girls</td>
<td>2 (67%)</td>
<td>1 (33%)</td>
<td>3 (50%)</td>
</tr>
<tr>
<td>No. of schools with at least some light for girls</td>
<td>2 (67%)</td>
<td>3 (100%)</td>
<td>5 (83%)</td>
</tr>
<tr>
<td>No. of schools with at least some functional locks in latrines for girls</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>No. of schools with at least some functional locks outside girls' latrines</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>No. of schools with at least some trash bins</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>No. of schools with anal cleansing materials</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>No. of schools with space or pits used for burning used sanitary materials</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>No. of schools with incinerators for burning used sanitary materials</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>No. of schools with latrines that are: exclusively for girls, at least some partially functional and at least some somewhat clean</td>
<td>2 (67%)</td>
<td>1 (33%)</td>
<td>3 (50%)</td>
</tr>
<tr>
<td>No. of schools with latrines that are: exclusively for girls, at least some partially functional, at least some somewhat clean, and some functional locks inside latrine</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Observations</th>
<th>Chuy (N=3)</th>
<th>Osh (N=3)</th>
<th>Total (N=6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of schools with functional water source on school grounds at time of visit</td>
<td>3 (100%)</td>
<td>1 (33%)*</td>
<td>4 (67%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hygiene Observations</th>
<th>Chuy (N=3)</th>
<th>Osh (N=3)</th>
<th>Total (N=6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of schools with handwashing facilities available</td>
<td>3 (100%)</td>
<td>3 (100%)</td>
<td>6 (100%)</td>
</tr>
<tr>
<td>No. of schools with handwashing facilities with soap or ash available</td>
<td>1 (33%)</td>
<td>0 (0%)</td>
<td>1 (17%)</td>
</tr>
<tr>
<td>No. of schools with handwashing facilities with water available</td>
<td>3 (100%)</td>
<td>2 (67%)</td>
<td>5 (83%)</td>
</tr>
<tr>
<td>No. of schools with handwashing facilities with soap or ash AND water available</td>
<td>1 (33%)</td>
<td>0 (0%)</td>
<td>1 (17%)</td>
</tr>
</tbody>
</table>

* Two schools were subject to water rationing and scheduling. The main water sources at these schools (outdoor taps) were not functional at the time of visit, but would be functional for an hour in the morning or afternoon at a scheduled time each day.
Table 4. Mean pupil-to-latrine ratios.

<table>
<thead>
<tr>
<th></th>
<th>Chuy (N=3)</th>
<th>Osh (N=3)</th>
<th>Total (N=6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean pupil-to-latrine ratio in participating schools</td>
<td>47</td>
<td>73</td>
<td>60</td>
</tr>
<tr>
<td>Mean girl pupil-to-latrine ratio</td>
<td>45</td>
<td>72</td>
<td>59</td>
</tr>
<tr>
<td>Mean boy pupil-to-latrine ratio</td>
<td>48</td>
<td>73</td>
<td>60</td>
</tr>
<tr>
<td>Mean pupil-to-latrine ratio for latrines considered at least partially functional only</td>
<td>47</td>
<td>73</td>
<td>60</td>
</tr>
<tr>
<td>Mean girl pupil-to-latrine ratio</td>
<td>45</td>
<td>72</td>
<td>59</td>
</tr>
<tr>
<td>Mean boy pupil-to-latrine ratio</td>
<td>48</td>
<td>73</td>
<td>60</td>
</tr>
<tr>
<td>Mean pupil-to-latrine ratio for latrines considered at least somewhat clean only</td>
<td>168</td>
<td>492</td>
<td>330</td>
</tr>
<tr>
<td>Mean girl pupil-to-latrine ratio</td>
<td>163</td>
<td>497</td>
<td>330</td>
</tr>
<tr>
<td>Mean boy pupil-to-latrine ratio</td>
<td>174</td>
<td>486</td>
<td>330</td>
</tr>
<tr>
<td>Mean pupil-to-latrine ratio for latrines considered to have at least some light</td>
<td>168</td>
<td>73</td>
<td>120</td>
</tr>
<tr>
<td>Mean girl pupil-to-latrine ratio</td>
<td>163</td>
<td>72</td>
<td>118</td>
</tr>
<tr>
<td>Mean boy pupil-to-latrine ratio</td>
<td>174</td>
<td>73</td>
<td>123</td>
</tr>
<tr>
<td>Mean pupil-to-latrine ratio for latrines with functional locks</td>
<td>324</td>
<td>540</td>
<td>432</td>
</tr>
<tr>
<td>Mean girl pupil-to-latrine ratio</td>
<td>314</td>
<td>540</td>
<td>427</td>
</tr>
<tr>
<td>Mean boy pupil-to-latrine ratio</td>
<td>335</td>
<td>540</td>
<td>437</td>
</tr>
</tbody>
</table>

All schools had at least some partially functional latrines designated specifically for girls and for boys. None of the latrines observed had electric lighting, and most were classified as “somewhat dark” at the time of visit. None of the latrines were clean, and only half were somewhat clean. (Observations were conducted within the first few weeks of the academic year, so it may be expected that latrines would become dirtier still over the coming months if there was not a frequent cleaning schedule.) No schools had trash bins or toilet paper in any latrine.

Most latrines were completely open inside, with no individual stalls or dividing walls between holes, and none had a functioning exterior door with a lock. One school had a door that did not latch properly and had to be held closed by hand, and all others were designed without exterior doors, leaving those inside visible from outside through the open doorways.

All schools had handwashing facilities on the grounds, though most were located near the cafeteria or at an outdoor tap far from both the latrines and the school building. Only one school had soap at the handwashing facility. Most handwashing facilities had water available.

Latrines for girls had either three or four holes. On average, there was one at least partially functional hole for every 59 girls, approximately three times the ratio recommended by the SaNPIN. This ratio applied only if all holes were used simultaneously.

Two schools in Osh were subject to municipal water rationing as a consequence of local clean water scarcity and deteriorating water infrastructure. Water flowed from the schools tap(s) for one or two hours each day at a scheduled time, at which point it could be collected for storage or to fill the umuvalniki (hand-washing stations with reservoirs for storing water). Outside of these scheduled times, the taps were non-functional, and teachers and students had no other reliable water source.
Contextual factor 2: Winter and freezing conditions in latrines. Winters in Kyrgyzstan are snowy and very cold, particularly in mountainous regions like Alay District in Osh. Teachers and students in most schools reported that school buildings were very cold inside, despite having heating systems.

School latrines were located outside of the school and had no protection from cold climate elements. The design and location of school latrines meant that they were highly uncomfortable and inconvenient to use during the winter months. The open doorways and windows made it very cold and windy inside. Students had to travel an average of three to five minutes through the snow to get to the latrine; they tracked snow inside the latrine, which froze, making the floor slippery with ice and frozen urine splash back.

"It is slippery in the winter. It freezes very quickly. We are afraid to fall down." – Girl, Osh, School 5 (R)

"P3: We are falling on the slippery floor. P4: Snow gets inside your shoes and it’s freezing. P5: The way to the latrines is hard." – Boys, Osh, School 4 (K)

Because they had to travel outside between the school building and the latrine, students were also burdened with heavy outerwear, which made using the latrine difficult. Mothers complained that their small children sometimes urinated or defecated on themselves because they could not undo all their layers in time. Girls often took turns holding each other’s coats while the other girl used the latrine, though this made the experience even colder.

Darkness was also a concern. None of the latrines had electric lighting, and school observations in late summer and early autumn found that all latrines were either “dark” or “somewhat dark.” Shorter days in winter further reduced light. A few girls reported that visibility in the latrines was a problem during menstruation, as they couldn’t see whether they had gotten blood on their hands or clothes.

Challenges girls face

Challenges are concerns related to menstruation that negatively impact girls’ wellbeing or make their school experiences more difficult (Haver et al. 2013; Long et al. 2013; Caruso et al. 2013).

1. **Fear at menarche.** Many girls weren’t aware of menstruation before menarche. Uninformed girls were often shocked and brought to tears by the fear of not knowing what was happening to them. Many were afraid that they were injured, dying, or feared that they had been raped.

"I was really afraid. I did not know anything, nobody told me." – Girl, Osh, School 3 (K)

2. **Reluctance to seek support.** Many girls were afraid to go to their mothers for help at menarche, as they thought they would get in trouble. Even after coming to understand menstruation better, many girls quickly internalized the belief that menstruation was a “closed” topic and inappropriate to discuss with elders, making them too embarrassed to ask questions of their mothers and teachers. This encouraged a perception of menstruation as shameful and contributed to poor understanding of what menstruation was and how to use menstrual supplies, and may also pose a risk to girls’ health. Many girls reported irregular or very heavy menstruation, but failed to seek help, in part because they didn’t have a clear understanding of what constituted an abnormal menstrual cycle and in part because they were embarrassed to raise the topic with their mothers.

“Sometimes it [menses] stops. In winter, this happens. […] I did not have it for three months. I don’t know why. I kept track of it, I was waiting for it, but it did not come. My friend had the same. […] I did not tell anyone.” – Girl, Osh, School 4 (K)

“I was young. I did not understand it. I was menstruating and menstruating, and one day my mom noticed that I had been menstruating for a long time. She asked me how long I had been menstruating, I told her that I had been menstruating for many days already. We came to the hospital. When my menses stopped in the hospital, it had been coming for one month.” – Girl, Chuy, School 6 (K)

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Participants at Russian-language schools will be noted with “(R)”, while Kyrgyz-language school participants will be marked “(K)”. 

1
3. Poor understanding of menstruation. Nearly all participants held biologically inaccurate beliefs about menstruation: most participants reported that menstruation was “dirty blood” cleansing the body, and that bad cramps and irregular menstruation were the result of “catching cold.”

“The dirty blood leaves, goes out, they say.” – Girl, Osh, School 3 (K)

“They told us if you touch cold water often, you will have pain in the back, then they also said you have to wear warm clothes and rest. Even if you are not menstruating now, you have to keep yourself warm, otherwise you will have problems in the future. You will have your period for longer than 10 days, when it should normally come three or four days.” – Girl, Osh, School 4 (K)

4. Irregular menstruation. Irregular menstruation is normal for up to two years after menarche, after which cycles should have become regular (Loyola University Health System 2013). However, many girls reported experiencing irregular menstruation well beyond the first two years: bleeding for up to a month, or missing multiple months at a time. Menstruation was primarily associated with the ability to bear children. While healthy menses were a sign of fertility, irregular menstruation was correspondingly rumored to indicate infertility, which caused great concern among girls who experienced it, as well as their mothers.

“Some of my friends say that they do not have it [menstrual cycles] for months.” – Girl, Chuy, School 2 (R)

“My friends did not menstruate for three or four months.” – Girl, Osh, School 5 (R)

“A girl who will give birth, she has to experience it [menstruation] every month for sure. If it comes and suddenly stops, it is a sign of some illness.” – Mother, Osh, School 3 (K)

5. Pain and weakness. Girls suffered from debilitating headaches and menstrual cramps during menstruation, which distracted them from their lessons and rendered them unable to participate in physical education. They also experienced fatigue, dizziness, and weakness.

“She has severe pain during her period. Her face turns grey and she cannot do much work.” – Girl, Chuy, School 2 (R)

“When I had my period at school, I fell down, so I went home. I do not like when it is hot at school. My vision blurred and went black, and I fell down.” – Girl, Osh, School 3 (K)

6. Masking of health concerns. Irregular menstrual cycles, headaches and cramps, and difficulty getting pregnant were attributed to “catching cold,” and accordingly, the recommended methods of prevention and treatment focused
exclusively on avoiding cold. This masked
the possible true causes of these problems,
including anemia.

"P2: Most diseases start from catching cold. For
instance, infertility or back pain, kidney illness,
these start from the cold.
P1: Women who gave birth by caesarean section
or who have pain here [in the lower abdomen]
cought cold earlier."
– Male teachers, Osh, School 5 (R)

7. Inability to change supplies or wash at school.
Inadequate break time, insufficient number of
useable latrine holes, and the lack of privacy,
water, and bins for disposal of used menstrual
supplies in school WASH facilities made it
challenging for girls to change their menstrual
supplies while at school, and impossible to
wash themselves. As a result, girls reported that
they didn’t change their supplies as frequently
as they should.

"In our latrine, it is not possible to change pads,
because we have no water or toilet paper."
– Girl, Osh, School 4 (K)

8. Leaks and stains. Infrequent changing of
supplies contributed to frequent leaks and
stains of menstrual blood, especially when a
girl was using cloths. Girls commonly leaked
menstrual blood through their clothing to
the seats of their chairs, referred to by male
students as “drawing a rose” on the chair.

9. Odor. Girls, boys, and teachers reported
noticeable menstrual odor from girls. Infrequent
changing of supplies and inability to wash
sometimes contributed to a strong odor of
menstrual blood, especially when multiple girls
in a class were menstruating at the same time.

"I feel uncomfortable. Girls have a bad smell
when they have menses. I always think, do I
have this smell as well? I worry about this.” – Girl, Chuy, School 6 (K)

“Sometimes it happens that all the girls have
menstruation at the same time and it stinks
in the classroom. [...] The boys say, ‘Wash
yourselfs.’” – Girl, Osh, School 5 (R)

10. Teasing and embarrassment. Leaks, stains,
and odor could provoke intense teasing from
male classmates, and even from girls who
had not yet begun menstruating themselves.
Boys might also tease upon finding a pad in a
girl’s bag or among her belongings. At some
schools, these episodes were remembered
and gossiped about for months, shaming
girls in front of their peers and in some cases
negatively impacting their social standing.

"[Boys] say things like, 'Please buy pads for us,'
or, 'Did you stain the chair?' There are cases
when they tease in very rude ways, saying, 'You
smell.' Only troublemaker boys say things like
that.” – Girl, Chuy, School 6 (K)

“P3: One girl brought a pad and put it in the bag,
and one boy noticed this and took the pad from
her bag and started to show everyone. That girl
cried, and he was scolded by the teacher. After
that, we’re really afraid to bring such kind of
materials to our school, because they might tease
us. [...] If they noticed pads [...], they just take it
and show for everyone, announcing that this girl
has something in her bag.
P1: All boys are the same. If they saw something
in your bag, they will not leave it without showing
everyone.

[...]
P4: For example, if there is a girl in the class who
is very active, and she doesn’t notice that she has
dirty pants or that there is something on her chair,
but other people notice, of course she will lose her
authority.

M: What is 'authority'?
P2: It is respect.
P3: She might feel uncomfortable, shy, and
stressed.

[...]
P5: You cannot meet other people’s eyes.”
– Girls, Osh, School 3 (K)
“There are forty restrictions for girls”: Menarche as the bridge between childhood and young womanhood

The life of typical girls in Kyrgyzstan is divided into three stages: childhood, young womanhood, and adulthood. Menarche is considered the transition point between childhood and young womanhood, while marriage serves as the bridge to adulthood. While gender roles are not strict during childhood, at menarche girls become young women and assume gendered expectations and responsibilities.

Table 4: Stages of life for a girl in Kyrgyzstan.

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Childhood</th>
<th>Young womanhood</th>
<th>Adulthood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibilities</td>
<td>Few responsibilities at home. Freedom to play outside with other children.</td>
<td>Increased responsibilities at home. Must help mother and other post-menarche female family members with “indoor” chores.</td>
<td>Responsible for all “indoor” chores at home, including cooking, laundry, cleaning, and childcare. Delegates certain responsibilities to daughters.</td>
</tr>
<tr>
<td>Perceptions of sexuality</td>
<td>Non-sexual. Perceived as innocent.</td>
<td>Sexually vulnerable. Possesses “virginity” which must be protected in order to be given to future husband. Virginity may be lost (consensual sex) or taken (rape or bride-kidnapping).</td>
<td>Sexually secure. Expected to have a monogamous sexual relationship with husband. Considered safe from threat of bride-kidnapping and rape. Allowed to use tampons, having broken the hymen.</td>
</tr>
<tr>
<td>Role in family and community</td>
<td>Child. Expected to play, behave parents, and not cause trouble.</td>
<td>Potential wife and mother. Behavior is evaluated on the basis of whether a girl would make a good wife. Pillars of expected behavior: Preserve virginity act as a “good girls” to secure a husband</td>
<td>Wife and mother. These roles are considered paramount to the identity of women in Kyrgyzstan. Women who don’t meet one or both of these criteria are thought to have not fulfilled their purpose in life.</td>
</tr>
</tbody>
</table>

**Motherhood:** Menarche marks the transition from childhood to young womanhood. Menstruation is equated with the potential for motherhood. Girls are taught that menses is 1) a sign that the body is ready for pregnancy, 2) a symbol of fertility, and 3) required for future motherhood. In a sense, post-menarche girls are considered “pre-mothers,” since they now have the potential to bear children.

Girls consider their ability to bear children as critical to their future happiness. Accordingly, healthy menstruation is understood to be necessary for a happy life, as it is the primary indicator of fertility.

"P3: If [menses] doesn’t come, she won’t have children.
P4: We have to have children.
P1: We have to marry." – Girls, Osh, School 3 (K)
My mom tells me that if you do not menstruate, a woman cannot have children. No one will marry her if she does not mature. – Girl, Chuy, School 2 (R)

"M: If Aisha couldn’t have a baby, what would happen? What would her life be like?
P1: Her life would be bad, difficult, not having a family.
P6: People will gossip that she cannot have a child.
P4: That’s why you should care for yourself during menstruation." – Girls, Osh, School 4 (K)
Sexuality and virginity: Menarche is the foremost indicator of puberty and abruptly endows girls with a perceived sexuality that was absent from their identity as children. Menstruating girls are sexually vulnerable, possessing “virginity” which may be lost or taken from them, and which they must protect in order to secure a husband and fulfill their ultimate role as wives and mothers. Virginity is both technical (girl has not had sex) and biologically perceived (girl has an intact hymen). The loss of either of these, if revealed, will damage a girl’s reputation, reflect badly on her parents, and cause her to suffer in her marriage.

“M: If someone is raped, in your community, if someone loses her virginity, how do people perceive her?
P4: That girl’s life is ruined, of course. Nobody will marry her after that.
P2: They will marry, but as a second or third wife, or to someone who do not know.
P5: Afterward, they will treat her as a slave to her husband. They will mock you for your whole life.
P1: They may say, ‘You were not a virgin when I married to you, you were ‘that,’ this man took your virginity.’
P5: They would say that the family did not bring her up the right way, she spent too much time outside.
P4: They would say that her parents didn’t bring her up well.
P1: Girls who haven’t been raised well act like that.
P3: They say there are forty restrictions for a girl.2
P4: This is how our culture works.”
– Girls, Osh, School 3 (K)

“The hymen is a woman’s honor. We [mothers] bring her up from her childhood. We give her to her husband when she grows up, with a shining face. Then she should have children and a family. Her husband should not say bad things to her. [If she is not a virgin], her heart will be broken all her life. She will be ashamed. And when she gets married, he will be strict to her. Her husband’s family will treat her badly also. So it is needed to live like this [protecting girls’ virginity].”
– Mothers, Osh, School 3 (K)

Gendered responsibilities and expectations: Upon reaching menarche, girls are assigned gendered responsibilities at home, taking on household chores traditionally considered women’s work, including cooking, cleaning, and laundry. Their mothers and teachers urge them to behave as “good girls,” primarily through presenting a conservative appearance, limiting interactions with boys, demonstrating respect for their elders, and staying at home rather than going out to socialize or attend parties. A girl who exhibits these traits is considered a good candidate for marriage. The role of “good girl” and its associated behavioral expectations were emphasized more strongly at Kyrgyz-language schools than at their Russian-language counterparts.

“Before we could play freely, but now our parents order us to cook and clean the house, because they already consider us grown-up girls.” – Girl, Osh, School 4 (K)

“P1: Adults will gossip if they see you standing and talking with boys. They will say, ‘She is bad, she is always talking with boys.’
P4: Your parents will have a bad reputation, too. Your mama will ask you, ‘Why were you standing with him? Do not talk so much, you are an adult now.’ […]
P1: [The women’s committee] tells us, don’t wear short skirts, don’t use cosmetics, don’t go to parties, don’t go out at night, don’t dye your hair, don’t have bangs, keep your hair braided.” – Girls, Osh, School 4 (K)

“As teachers, we advise people which girl’s behavior is good. In this way we can advise who would be the best daughter-in-law. […] We tell girls not to talk so much, not to argue, to be polite, be nice, don’t get angry. […] We can see right away what kind of girl she is. We can look at her posture and how she does her hair.” – Head of women’s committee, Osh, School 3 (K)

Transition to adulthood: The average age at reported menarche is perceived to have decreased within the study sample, from mid- to late teens among previous generations (10th grade) to early teens in the current generation (as early as 5th grade); this is believed by participants to reflect a trend in the general population. However, the perception of menarche as the key transition point between childhood and young womanhood has not changed. As a result, girls are expected to assume the role of young women – with all the attendant responsibilities, restrictions, and perceptions of sexuality – at an increasingly young age. The average 16-year-old girl is at a significantly more advanced stage of physical, social, emotional, and mental maturity than her 12-year-old counterpart. Accordingly, expectations that may be considered reasonable for a girl nearing the end of her secondary education are likely to be less appropriate when applied to a girl so fresh out of childhood.

[^2]: Kyrgyz proverb
Determinants

Determinants are factors contributing to challenges which are more preventable than contextual factors. Determinants have greater room for positive change at a school, community, and individual level (Haver et al. 2013; Long et al. 2013; Caruso et al. 2013).

Determinant 1: Insufficient knowledge and support

Girls’ physical, mental, and emotional health around menstruation depends on the information and support they receive from others, especially adults. The barriers to adequate knowledge and support are discussed below.

Insufficient information provided before menarche

Most mothers and teachers believed that it was best to wait until after menarche to open communication about menstruation with girls. At school, the Anatomy/Human Biology lesson on reproduction was held in 8th or 9th grade, and the women’s committees and social pedagogues usually gathered girls for extracurricular meetings starting around 7th grade, by which time many girls had started menstruating already.

“We start in the 7th grade. Because if you tell them early, it would not be comprehensible. If they have it at that time, they will have the right approach. Then they will have questions.”
– Social pedagogue, Chuy, School 1 (K)

Similarly, the majority of mothers planned to tell their daughter about menstruation only after she had started menstruating, arguing that a girl didn’t need to know before it happened to her. However, this left many girls experiencing menarche without any understanding of what it was, leading to fear, distress, and an inability to care for themselves. There was a striking difference between the experiences of girls who had been told about menstruation before menarche and those who hadn’t. The former typically recognized what was happening to them and calmly informed their mothers or sisters, while the latter were frightened and often didn’t feel comfortable telling their mothers or asking for help.

Girls who were unaware of menstruation

“[I was] really afraid. I did not know anything, nobody told me.” – Girl, Osh, School 3 (K)

“I told my mom, but I hesitated – should I tell my mom, or if I tell her, will she scold me? But I decided to tell her even if she scolds. [...] I was afraid at first, should I tell her or not?” – Girl, Osh, School 3 (K)

“I cried when I had it the first time. I was afraid.” – Girl, Chuy, School 6 (K)

Girls who had been told about menstruation

“I knew what it was. Then I told my mom. […] I was surprised, then I was happy.” – Girl, Chuy, School 1 (K)

“I did not feel bad. I was prepared very well.” – Girl, Osh, School 3 (K)

“When I looked at my underwear, there was blood, then I remembered what my mom told me. I told my sister and she gave me pads.” – Girl, Osh, School 4 (K)

“I told my mom. I was not afraid of it, I knew about it before, and afterward my mom explained more as well.” – Girl, Osh, School 3 (K)

“Before [my first time], my mom taught me. I already knew what I should do. […] I was ready.” – Girl, Chuy, School 6 (K)

The best insights into girls’ menarche experiences came out of a scenario activity that discussed the story of Aisha, a young girl who experiences menstruation for the first time while at school. Most of the girls assumed that Aisha had not previously been told about menstruation, and they assigned to her feelings of shock and fear, as well as reluctance to seek support from an adult.
What would Aisha feel when her period comes for the first time?

“P4: She would be scared and cry.
P2: She would think of many different things at once.
P5: She would think, ‘What have I done?’”
– Girls, Chuy, School 2 (R)

“P4: She will think that she is sick.
P1: She will be shocked.
P6: She will be scared, thinking, ‘What happened to me?’”
– Girls, Osh, School 3 (K)

“She will feel scared inside. She feels scared of not knowing what happened, but she is scared to tell someone, and she does not know what to do. [...] I think she won’t tell anyone about it. She may think, ‘Maybe something happened to me, maybe I am sick.’” – Girl, Osh, School 3 (K)

“If it is her first time, she may have to use [her undershirt], because she may feel embarrassed to tell her mom.”
– Girl, Osh, School 4 (K)

“She feels uncomfortable and bad. She would be afraid to tell her mother about it.” – Girl, Chuy, School 6 (K)

“She does not understand what is happening since she does not have the necessary information. No one teaches her when and how it comes.” – Girl, Chuy, School 6 (K)

Contrary to their mothers’ and teachers’ opinions, most girls believed that it was necessary to learn about menstruation before menarche, regardless of whether the information came from mothers or teachers. They felt that girls ought to be informed in advance so that they could be prepared when the time came.

“What [menarche], parents and schools should prepare you. After, you should take care of it yourself.” – Girl, Chuy, School 2 (R)

“If her mother explained it to her before, she would not feel embarrassed, and if her mother did not explain, she would be afraid.” – Girl, Chuy, School 6 (K)
Curriculum and other resources

The current state curriculum includes a biology course called Anatomy or The Human Being, which includes a section on puberty and reproduction. Until the 2015-2016 academic year, this course was taught in 9th grade; however, it is now taught in 8th grade. The textbook for this class is the primary educational resource used in puberty and menstruation communication.

**Content:** The textbook used in Russian-language schools was written by Russian authors and published in Russia (Zuzmer and Petrishina 1990). It includes a chapter on “human procreation and growth,” which covers the following topics:

- Reproduction
  - Male and female reproductive systems
  - Fertilization
  - Fetal development
- Menstruation
  - The female reproductive system
- Basic information on menstruation and the menstrual cycle
  - Menses is described as lasting three to five days. The menstrual cycle may last between 20-30, with an average of 28 days.
- Puberty
  - Boys’ puberty (physical changes, ejaculation)
  - Girls’ puberty (physical changes, menstruation)
  - Brief discussion of emotional, social, and behavioral changes during puberty

Overall, the Kyrgyz version of this textbook is a fairly close translation of the Russian original. However, the above information on reproduction, menstruation, and puberty, which spans several pages in the Russian version, is condensed into the following single brief paragraph, leaving out the vast majority of details.

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*The Russian version of the Anatomy textbook contains basic information on menstruation, including this figure illustrating the menstrual cycle (Zuzmer and Petrishina 1990).*
“At the age of 11, children are called adolescents. As adolescents, they experience many changes in their bodies. Under the influence of sexual hormones, adolescents also start experiencing sexual development. At the age of 13-15, boys’ muscles start growing, they start gaining weight, the skin oil decreases, adolescent boys’ voices change, and the moustache and beard start growing. At 11-13, girls start experiencing muscle development, even distribution of skin oil, and the growth of breasts. At this age, with the development of their ovaries, girls also start menstruating for 3-5 days. Menstruation comes monthly.”

– Biology: Human Anatomy, Physiology, and Hygiene (Zakirov and Davletova 2012)

This abridged explanation presents a superficial description of puberty with minimal details, little nuance concerning individuals’ different experiences of puberty, and no explanation of the biological processes behind menstruation, puberty, or reproduction. There is also no discussion of the emotional, mental, social, or behavioral changes that accompany puberty and adolescence.

The discrepancies between the Russian and Kyrgyz textbooks are the most concrete example of the different “mentali- ties” attributed to Russian and Kyrgyz language schools. Russian schools are considered more “open” and expected to discuss sensitive topics such as reproduction and menstruation in greater detail, while Kyrgyz schools provide more limited information.

Scarcity of Kyrgyz-language materials: The two textbooks also illustrate a larger resource challenge for Kyrgyz-speaking adolescents and educators. Most educational resources on puberty or sexuality are in Russian, with incomplete or nonexistent Kyrgyz translations.

In one example, the social pedagogue at a Kyrgyz-language school described a video on reproduction that she had acquired from a social pedagogue at a different school. She showed the video separately to female and male students at her school; however, the video was in Russian, with no Kyrgyz translation or subtitles, and so students were unable to understand the content. The social pedagogue watched the video together with her female students and verbally translated it into Kyrgyz for them, but she was too embarrassed to watch with the male students, so the boys were left alone to watch the video without translation. Neither male nor female students were able to explain the video’s content in our focus group discussions.

Ease of comprehension: Both the Russian and Kyrgyz textbooks sometimes use technical language which may not be understood by students. The Russian version is easily comprehensible in some places (for example, the subsections on boys’ and girls’ sexual development), but in other parts includes technical biological terms presented without explanation. The Kyrgyz textbook uses similarly technical and scientific language, which teachers in our study complained that it was difficult for students to understand.

Biology textbooks at schools in Kyrgyzstan.
Photo credit: SCI Kyrgyzstan, 2015
Discomfort discussing menstruation and puberty due to local “mentality”

The majority of parents and teachers believed that menstruation and puberty were embarrassing to discuss with their children and students, and preferred to avoid those topics entirely. For example, biology teachers sometimes skimmed over the lesson on reproduction, citing their own embarrassment and students’ laughter.

“To be honest, it is uncomfortable for me to talk to them about it. [...] Sometimes we skip certain topics because the students are laughing.” – Biology teacher, Chuy, School 2 (R)

“P1: [The book] shows pictures. A female teacher does not explain properly, a male teacher will not tell a word at all.
P4: They won’t talk about it in front of boys.”
– Male teachers, Osh, School 5 (R)

“When the teacher feels shy, she tells us to read [the textbook] at home.” – Girl, Osh, School 3 (K)

“The teacher told us to read it by ourselves, but she did not explain.” – Girl, Osh, School 5 (R)

Parents also expressed discomfort with the idea of discussing these topics with their children. Fathers were especially reluctant, and felt that it was inappropriate for them to talk about puberty with either their daughters or their sons. Mothers were slightly more willing to engage their daughters, but often felt shy and embarrassed.

This conspicuous discomfort with the topic was then felt by adolescents, instilling them with a belief that menstruation and puberty were inappropriate to discuss with the adults in their lives. The resulting environment was one of mutual embarrassment, in which adults felt uncomfortable broaching the topic and adolescents assumed that they weren’t allowed to ask questions.

“P6: From an early age, we were raised to understand that [menstruation] is embarrassing.
P1: From my childhood, people were always telling me that it is embarrassing, therefore I feel shy until now.”
– Girls, Osh, School 3 (K)

When girls needed to ask their teachers for permission to leave class because of menstruation, either to change supplies or to go home because of bad pain, they usually made up a fake reason for why they needed to leave. Some girls were comfortable admitting the truth to female teachers, especially their homeroom teachers, but would make up an excuse with male teachers. This was especially common when asking permission to sit out during physical education class, which was usually taught by a man. Female and some male teachers often recognized that the girl’s excuse was fabricated, but allowed the pretense in order to avoid embarrassment on both sides.

“I say, ‘Go home and drink hot tea and lie in bed.’ It means, ‘Change your pads, clean yourself. We do not say directly, ‘You are menstruating, go home.’ A girl would not say this openly and neither would we. She would say that she has stomach pain.” – Teacher, Osh, School 3 (K)

“We can ask permission from female teachers, but we should lie to male teachers.”
– Girl, Osh, School 5 (R)

“P4: Sometimes when you have menstruation, you cannot ask [the teacher], so you just leave the class.
P3: But if you can ask the teacher, they understand.
P1: if there is a male teacher, you just sit in order not to be embarrassed.”
– Girls, Osh, School 3 (K)

3 Participants regularly cited their community’s “mentality” when discussing attitudes toward puberty and menstruation. This “mentality” may be understood as local norms and perceptions that are adopted by the community at large and considered to be traditional. Key components included strict gender roles, a conservative approach to sexuality, and an emphasis on family hierarchy leading to a communication barrier between parents and children on topics considered sensitive.
Boys’ knowledge of menstruation and puberty

While girls received insufficient and delayed communication on menstruation and puberty, their male classmates often received none at all, from either parents or teachers. This lack of engagement contributed to a stigma around menstruation among boys, as well as ignorance and a strong sense of shame about their own puberty.

**Menstruation:** Most adults and many adolescents believed it was highly inappropriate for boys to learn about menstruation. Discussing menstruation with boys was considered to go against the local mentality.

> “How could I tell [my sons about menstruation]? We do not have such a thing. If they were girls, I would tell them. With sons, we have distance on this issue.”
> – Female teacher, Osh, School 3 (K)

> “[Menstruation] is a closed topic. […] I cannot speak to the city, but among Kyrgyz people, we don’t speak like this. We don’t speak at all.”
> – Father, Chuy, School 2 (R)

Most adults, male and female, refused to talk to boys about menstruation on the grounds that they didn’t need to know about it, since it was a “woman’s issue” and didn’t affect them. Many boys agreed with this sentiment, but some argued that they would need to know about menstruation as adults in order to be good husbands to their wives.

> “It is better for us in the future if we know about menstruation, because when we are husbands, if we don’t know about it, it will be a big shame for us.” – Boy, Chuy, School 2 (R)

> “If you do not start learning [about menstruation] from this age, who will teach you when you are grown up?” – Boy, Osh, School 4 (K)

Some schools had a more open environment regarding the discussion of topics like menstruation and puberty, both among students and in teachers’ communication with students on these topics. These schools were perceived by many adolescent and adult participants as having a more “Russified” perspective, as opposed to the traditional local mentality. Girls at these schools were generally more open about menstruation with their male classmates and teachers.

> “I ask students why they missed class, they tell me openly, ‘We have women’s problem,’ so I understand, agree. […] They tell me openly, as we are a Russian school.”
> – Male teacher, Osh, School 5 (R)

Boys with greater knowledge of menstruation expressed more sympathy toward their female classmates, and were considered by girls to “understand.” Understanding was defined by knowledge of what menstruation was, an appreciation for the challenges girls faced during menstruation, and the recognition that menstruation was a biological process affecting all women. Boys who didn’t understand were likely to tease girls about smells, stains, or pads, while boys who did understand treated them normally and didn’t make a fuss over accidents or pads. Many girls and boys considered this understanding to be a sign of maturity in boys.

> “If some girl is menstruating, boys who understand will treat her normally, and boys who do not understand will tease her.”
> – Girl, Chuy, School 6 (K)

> “If a 7th grade girl will tell a 7th grade boy about her problem, he will not understand, as he has no understanding of this issue [menstruation]. But in 10th-11th grade, boys understand it. […] Now boys can understand. After 9th grade [when the Anatomy/Human Being class is taught] they know.” – Male teacher, Osh, School 5 (R)

**Puberty:** In addition to being excluded from conversations about menstruation, most boys received no education on their own puberty process and the changes they were experiencing. Male puberty was widely believed to be more sexual than female puberty, and most adults accordingly considered the topic embarrassing and inappropriate to discuss under the local mentality.

> “P1: There should be a hierarchy or distance between father and son. You cannot talk with the father about [puberty]. The schools should talk about it, or at iman’s class.

P2: Kyrgyz mentality is like this.

P1: Then there would be no border between father and son. They are not friends, that is not okay.”
– Fathers, Chuy, School 2 (R)
Family hierarchy and the local “mentality” required what fathers and boys both described as a “distance” between father and son, resulting in a communication barrier on sensitive topics. Due to this perceived necessary distance, fathers rarely talked to their sons about puberty, and sons believed it would be unacceptable to open that conversation with their fathers. Some boys said that their fathers would get angry with them if they did try to ask them questions. A minority of boys said that they wished their fathers would teach them about puberty, while most felt that it would be strange and uncomfortable for both sides.

Boys generally did not receive gender-specific puberty education in school. Most people felt strongly that women should teach girls about puberty, and men should teach boys. However, while girls might learn about puberty from female teachers, women’s committees, and their mothers, there were few men who were available and willing to teach boys. Men’s committees were far rarer than women’s committees, and where active, they focused exclusively on behavioural issues such as gambling and fighting and did not cover any topics on puberty. The vast majority of school staff responsible for puberty communication were female, including social pedagogues and biology teachers, and these women were uncomfortable with the idea of discussing puberty with boys. The few that did attempt to engage boys did so in an indirect manner which did not allow the boys to ask questions or discuss the topic openly.

Considering how reluctant adults were to broach the subject of puberty with boys, it is unsurprising that there was a lack of identified responsibility for boys’ education on this topic. Parents and teachers assumed that boys were learning what they needed to know somewhere, and often assigned primary responsibility to each other.

*How can I teach [boys]? It is better to have a man. How can women teach them?*
– Head of women’s committee, Osh, School 3 (K)

*I think it is better for male teachers to teach boys. [...] We have a Kyrgyz language teacher, but I do not know whether he would agree or not. [...] Of course a male teacher will feel embarrassed. It is really difficult.*
– Social pedagogue, Chuy, School 6 (K)

*I leave the classroom when I start playing the video [on reproduction] for the boys. When I show the video for the girls, I sit together with them and explain.*
– Social pedagogue, Chuy, School 1 (K)
Limited knowledge among mothers

The vast majority of participants agreed that mothers had a critical role to play in helping girls through menarche and the puberty transition. However, in addition to their embarrassment with the topic, most mothers had minimal biologically accurate knowledge about menstruation or the female reproductive system. Many mothers believed that their daughters knew more than they did about puberty and menstruation.

“P1: Our girls are smart now. […] We used to fear a lot of things. If they said a woman could get pregnant if she used the latrine after a man used it, we wouldn’t go. (laughing))

P3: People were simple in those times. […]
P7: Girls would not believe that now.
P8: Nowadays girls know everything.”
– Mothers, Osh, School 3 (K)

The Internet myth and diffusion of responsibility

Mothers and teachers both believed the other held primary responsibility for educating girls about menstruation. Mothers felt that teachers knew more, and teachers felt that it was an uncomfortable and sensitive conversation most appropriate for the family.

I talk with my daughter about this, but I cannot teach well. I feel embarrassed sometimes. It would be good if there were a lesson about menses. My kids understand lessons well in the classroom.
– Mother, Chuy, School 6 (K)

Kids treat us [teachers] like their grandparents. It is not good because parents should explain the fundamentals.
– Social pedagogue, Chuy, School 1 (K)

Mothers should also talk with their daughters about menstruation at home.
– Teacher, Osh, School 5 (R)

At school, the responsibility for menstruation communication may be shared between the biology teacher and the social pedagogue or women’s committee. The official biology lesson did not cover menstruation or puberty specifically so much as reproduction, and social pagedagoues and especially women’s committees typically focused on basic management and hygiene advice such as how to use and change supplies, the importance of washing the genitals with warm water, and restrictions on behavior. Even if all three of these types of educators were active with a school’s female student body, there was no coverage of puberty as a process, mental and emotional development, or discussion of menstruation beyond very basic processes and hygiene.

In general, teachers and parents assumed that adolescents were learning what they needed to know from their peers and from media: television, radio, and the internet. Parents and teachers expressed great faith in the informative power of the Internet. They assumed both that the information was available and that adolescents were accessing it. This belief allowed them to remove themselves from the uncomfortable process of educating adolescents.

P1: They learn everything from the internet. […] They learn about everything.
P3: They get from their mobile phones.
P7: Even if we don’t tell them, they find themselves from the Internet.
P8: Nowadays girls know everything.”
– Mothers, Osh, School 3 (K)

P2: They get information [about puberty] from the Internet.
P1: They have the Internet.
P2: From the Internet. Nowadays you can learn everything on your telephone.
P1: Without our help. (laughing))
P2: Yes, without our help. They don’t need us for such kind of topics.”
– Fathers FGD, Chuy, School 2 (R)

Many young people did have some access to the Internet, most commonly on their mobile phones. However, of all female and male students included in data collection and validation, no student reported having used the internet to find information about puberty or menstruation. Often, it had not occurred to them to look for answers to their questions online.

While many adolescents agreed that the Internet could be a good resource to find puberty and menstruation information, they identified several obstacles to doing so. First, they were unsure where to seek this information, and aware that some websites provided inaccurate information. Second, there were limited websites in Kyrgyz language, and none that they were aware of which contained information about puberty and menstruation. Finally, boys were highly resistant to seeking puberty information online, as male puberty was so strongly associated with sexuality that boys at three separate schools immediately equated “puberty information on the internet” with pornography.

On the Internet there could be fake information. […] On the internet there are so many fake things. There is not much truth. The fake things are increasing. – Boy, Osh, School 4 (K)
Misinformation about menstruation-related health concerns and behavioral restrictions

There were many traditional beliefs and practices around menstruation that had been passed on from previous generations. These beliefs tended to be widespread and equally prevalent in both regions and at both Kyrgyz and Russian language schools. Beliefs were taught and reinforced by teachers, mothers, sisters, friends, and even doctors. Many beliefs were taught as fact by biology teachers, women’s committees, and gynecologists, despite a lack of biomedical evidence.

In Kyrgyz communities, menstruation is closely associated with childbearing ability and potential motherhood, two matters of great importance for a Kyrgyz woman. Many beliefs and practices around menstruation are linked with the fear of infertility.

Catching cold – The most universal belief was that of “catching cold.” This belief was accepted by teachers, gynecologists, and other highly educated women and men, as well as by every girl and woman in our study (and many males). Catching cold was believed to occur when the female reproductive organs became cold. This could happen through direct exposure (for example, through sitting on a cold surface or not properly clothing the lower abdomen) or indirect exposure (for example, having cold feet or placing hands into cold water).

Consequences of catching cold were said to include:

a. Painful or heavy menstruation
b. Irregular menstruation
c. Infertility
d. “Female diseases” such as infections or cancer in the uterus, bladder, or kidneys

It was commonly believed that “female diseases” and infertility were more common than previously because girls and women were no longer spending hours crouched before a fire every day, as they now have modern conveniences such as electric stoves. This change was believed to increase susceptibility to catching cold.

Restrictions – Girls were advised to restrain their behaviour in a number of ways to avoid problems with menstruation or their reproductive systems. In addition to the aforementioned restriction on touching cold water, girls were instructed to abide by the following restrictions:

One of the most popular restrictions to avoid catching cold was the prohibition on touching cold water during menstruation, which typically meant not engaging in usual chores of washing clothes or dishes. This restriction was widely agreed with, but not always practiced. If there were multiple girls in a home, they might help each other by taking turns doing the menstruating girl’s water-based chores. Occasionally girls also helped their female classmates who were “on duty” for cleaning the school, which required washing with cold water. However, these options were not always possible, and so many girls and women admitted to doing water-based chores during menstruation despite believing they shouldn’t.

Dirty blood – Menses was nearly universally believed to be “dirty blood” leaving the body. The expulsion of dirty blood and toxins was thought to have a cleansing effect, so menstruation was therefore considered to be a healthy process. The concept of “cleansing” was believed to account for why girls and women felt better after their menses ended (for example, having more energy or fewer pimples); why irregular periods indicated poor health and possible infertility; and why menopausal women had worse health than younger, menstruating women.

“Human blood becomes dirty so it should be cleaned. Dirty blood comes out and I think this is good.” – Girl, Osh, School 5 (R)

“[During menstruation] our blood circulates and turns to clean blood. Then we will give birth and become mothers, our children will be healthy, so it is good if it comes.” – Girl, Chuy, School 6 (K)

Several practices were widely recommended in order to avoid catching cold. Girls were instructed to dress warmly, being particularly careful to keep the lower abdomen warm. Teachers warned against low-rise jeans and advised girls to wear warm woolen tights instead. Girls were also told to wash “underneath” with warm water exclusively, which was impossible at school due to limited water access.

“Underneath” is a widely-used colloquialism referring to the female genitals.
Table 5. Menstruation-related behavioural restrictions and associated consequences.

<table>
<thead>
<tr>
<th>RESTRICTION</th>
<th>CONSEQUENCES OF NOT FOLLOWING RESTRICTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t drink much liquid during menstruation.</td>
<td>Menstruation will come more heavily.</td>
</tr>
<tr>
<td>Don’t lift heavy things or engage in difficult physical work during menstruation.</td>
<td>Menstruation will come more heavily.</td>
</tr>
<tr>
<td></td>
<td>You will have bad cramps.</td>
</tr>
<tr>
<td>Don’t go to the sauna during menstruation.</td>
<td>The female organs are open during menstruation, and germs will enter and cause infection.</td>
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<tr>
<td></td>
<td>The intense heat will make menses come more heavily.</td>
</tr>
<tr>
<td>Don’t use pads.</td>
<td>Chemicals in the pads (in some cases, American or Chinese pads) will make you infertile or give you cancer.</td>
</tr>
<tr>
<td>Don’t step over “big gaps” at any time.</td>
<td>You will rupture the “tube” of your reproductive system and become infertile.</td>
</tr>
</tbody>
</table>

Religious restrictions – Girls were instructed not to conduct sacred acts including praying, fasting, or touching holy books such as the Quran during menstruation. According to widely-accepted interpretations of hadith and other scholarly writings in Islam, menstruating girls and women are “ritually impure” due to the presence of blood. Girls may resume sacred acts after menstruation ends, following a ritual full-body cleansing (ghusl).

Many girls appreciated the break from fasting and praying while they were weak and uncomfortable during their menstruation. However, girls sometimes felt embarrassed when their fathers asked them why they weren’t praying or fasting, as they did not feel comfortable admitting that they were menstruating.

* “Big gaps” were spots such as irrigation canals, where crossing would require an unusually large step and possibly a small jump.
Aisha’s Story

This story is a compilation of real stories told by girls, mothers, and teachers in focus group discussions and interviews.

I was 12 years old when I had my first menses. I woke up in the morning and found that there was blood in my underwear. I was confused and afraid. I had no idea what it was. I thought I had hurt myself, so I tried to wash the blood away, but it kept coming. Then I thought maybe I was sick. I was afraid to tell my mom, because I thought she might scold me. The blood kept coming, so I took an old cleaning cloth and put that in my underwear to catch it so I could go to school.

At school, I felt very bad and anxious about what was happening to me. I told my best friend Altynai, because I knew she wouldn’t tell anyone. She told me that I wasn’t sick – I was having my menses. She said it happened to every girl. I asked her if she had this menses, and she said she didn’t, but she had learned about it from her sister. I asked her what menses was, and she said it was dirty blood, and it was important for this blood to leave the body so that you can be clean. She said I should ask my mom for help.

When we stood up to go outside for break, Altynai told me that I had a stain on my skirt where the blood came through. The chair was dirty, too. I had some wet wipes in my bag, so we stayed behind and cleaned the chair after everyone went out. Then Altynai went to ask our teacher if I could be excused, because I had a “feminine problem.” That teacher is a young woman, so she understood right away and said I could go home and change after I finished cleaning the chair. Altynai gave me her jacket to tie around my waist so I could hide the stain, and I quickly walked home.

I was still nervous about talking to my mom, but I really needed help, so when I got home, I told her what had happened. She was really surprised. She said her menses didn’t come until she was in 10th grade, so mine was very early. She told me that menses was a good thing, that it meant I could be a mother someday. She gave me some clean, soft cloths to use and taught me how to wash them. She said I had to throw away the washing water in an out-of-the-way place and hang the cloths to dry under another piece of clothing, because it would be shameful for my father or brothers to see them. She told me I must wash myself with warm water only, and that I should dress warmly with thick tights and keep my abdomen wrapped so that I don’t catch cold. She told me it was forbidden to pray or fast while I had my menses, even during Ramadan. She said that I was a grown-up girl now, and I must start behaving like an adult and not a child.

The next year, in eighth grade, the women’s committee gathered all of us girls and had a meeting to talk about menstruation. They told us the same things my mom told me: that menstruation was dirty blood cleansing the body, that a woman needed to have menses in order to have a baby, that we must wash ourselves regularly with warm water and keep ourselves clean so that we don’t stain our chairs or smell bad. We can’t wash ourselves at school, though, because there is no water near the latrine. There’s no door, either, and in winter the wind comes in and it’s very cold. I’m always afraid I will catch cold. I don’t want to tell my mom, though, because I know she’ll be upset. She is always telling me how important it is to be a good wife and mother, and if I can’t have children, nobody will marry me.

I am sixteen now, so I have been having my menses for four years. I am used to it now, but it is still difficult. I don’t know when it will come. I try to keep track so I can be prepared, but it does not come on a regular schedule. Sometimes it comes very heavily for two weeks, and then not again for two or three months. The women’s committee told us that if our menses is very irregular, we should tell our moms and go see a doctor, because there could be something wrong, and we might have trouble getting pregnant later. I don’t want to tell my mom, though, because I know she’ll be upset. She is always telling me how important it is to be a good wife and mother, and if I can’t have children, nobody will marry me.

I still use cloth at home, but now I use Always when I go out. My mom wants me to use cloth all the time, but I don’t like to use them at school. I think Always are better. They stick to your underwear, so you don’t have to worry about them moving around like cloths do, and they don’t leak. They aren’t so big, either, so you can’t see them through your pants. With cloths, you are always worried about whether someone can see them, whether it will move when you walk, whether the blood will come very heavily and leak through. You can’t change cloth in the school latrine, either. You have to wash them and hang them in some hidden place to dry, but at school there’s no water in the latrine and nowhere to hang. With pads, you can just
throw the dirty one down the hole. Anyway, all the other girls wear pads, and if they see in the latrine that you are using cloth, they might gossip about you. It is really embarrassing to have to change in front of other girls. To be honest, most of the time I don’t use the latrine at school when I’m menstruating. I just hold it and change when I go home.

The women’s committee told us that pads are bad for your health, because the chemicals in them can give you a disease in your female parts and you won’t be able to have a baby. I’ve heard that it’s only the Chinese pads that have those chemicals, so I use the pads from Russia.

I try to keep a pad in my school bag, since I don’t know when my menses will come, but I am always worried that some boy will look through my bag and find it. One time another girl’s bag fell over and a pad came out, and the boys were waving it around and laughing. The girl was really upset, almost crying, and kept trying to say that it wasn’t hers. The teacher told the boys to stop making fun, but they still tease that girl sometimes. I think they will tease her for the rest of the year, maybe even longer.

My little sister is 12 and has not had her menses yet. She knows about it, though, because when she was younger I used to send her to the shop to buy pads for me. She wanted to know what they were – she thought maybe they were something to eat! I was embarrassed by her questions, but I told her that they were for menstruation, and that she would need them too when she was older. I explained that she would have blood come out “underneath,” and that she shouldn’t be afraid, because it is healthy and necessary for a girl to become a woman and a mother. I think it is better that she knows about menstruation before it comes to her. She is prepared now, and she will not be scared like I was.

Sometimes I am a little jealous of my sister, because she is still a child. She can play in the road with her friends. She can wear what she wants and go wherever she wants without worrying about menses. She is free. Once she becomes a grown-up girl like me, she will have to stay at home to help with chores and to protect herself from boys.
Determinant 2: Inadequate school WASH facilities and software

Clean, comfortable, and accessible WASH facilities are needed in order for girls to wash themselves, change and dispose of their menstrual waste. Girls were lectured by teachers and mothers on the importance of maintaining personal hygiene while menstruating, but the poor conditions of school latrines rendered female students unable to follow these instructions and care for themselves appropriately. Students, teachers, and parents commonly described the school latrines as having “no conditions” – in other words, lacking nearly every amenity required for girls to maintain hygiene during and even outside of menstruation.

All six schools had pit latrines: a brick or cement building built over a single pit, divided by an interior wall into two sections, one for boys and one for girls. Typically, these buildings were bare-bones structures consisting of nothing more than walls, a roof, and a cement floor with two to four squat holes on each side.

Exterior and interior views of typical pit latrines school latrines in Chuy. As seen here, characteristics of this style of latrine include no exterior door, multiple squat holes not separated by partitions or individual cabins, and an interior dividing wall to separate boys and girls. Photo credit: SCI Kyrgyzstan, 2015.

When asked to compare their ideal latrines against the existing facilities, girls laughed and insisted that there were no similarities at all.

How does your current school latrine compare to the ideal one you’ve described?

<table>
<thead>
<tr>
<th>“There is a big difference, like the difference between the sky and the earth.”</th>
<th>“Only the location of the holes is the same.”</th>
<th>“There are no similarities, only that this one is a toilet and the other is also a toilet.”</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Girl, Osh, School 3 (K)</td>
<td>– Girl, Osh, School 4 (K)</td>
<td>– Girl, Osh, School 5 (R)</td>
</tr>
</tbody>
</table>

Exterior and interior views of typical pit latrines school latrines in Chuy. As seen here, characteristics of this style of latrine include no exterior door, multiple squat holes not separated by partitions or individual cabins, and an interior dividing wall to separate boys and girls. Photo credit: SCI Kyrgyzstan, 2015.
Poor water access

There was no water accessible inside the latrines of any school included in our study. As a result, girls had no water with which to wash themselves “underneath,” as they were regularly reminded to do by mothers and teachers. In addition, due to a fear of “catching cold,” girls were strongly advised to use only warm water to wash themselves during menstruation. However, at most schools, warm water was not accessible anywhere on the school grounds.

“P4: We probably will not wash ourselves.  
M: Do girls ever wash themselves at school?  
All: No, no.  
P6: It is uncomfortable for them, they don’t want to.” – Girls, Osh, School 5 (R)

“The most important thing [during menstruation] is the water issue.”  
– Girl, Osh, School 3 (K)

“The latrine is not convenient during menstruation. It would be better if there were warm water there.”  
– Girl, Chuy, School 2 (R)

“The coldest winter is coming. The pipes and the water are outside. It would be very good if we had water inside the school. [Girls] cannot wash themselves ‘underneath.’”  
– Teacher, Chuy, School 6 (K)

Very few girls brought water with them to the latrine. Most said that to do so would be too difficult and would let others know that they were menstruating, and the water would be cold in any case. Some girls made do with wet wipes, usually scented, while others didn’t wash or change their supplies throughout the day.

“P1: We feel really embarrassed to bring water in front of the boys playing.  
P4: Nobody in our school brings water. I have not seen anybody bring water [to the latrine].  
P5: Me neither.  
P6: This doesn’t happen here.”  
– Girls, Osh, School 3 (K)

“M: Do girls wash themselves at school?  
All: No.  
M: Do girls ever bring bottles of water from home?  
P2: No, the water can become cold. If they bring just a bottle of water, boys can tease them.”  
– Mothers, Chuy, School 6 (K)

“Even if you bring water, it is uncomfortable there because other kids may come in.”  
– Girl, Osh, School 5 (R)

In the majority of research activities, and at every validation discussion, girls, mothers, teachers, and even fathers identified that the inability to access warm water inside the latrine was one of the primary obstacles to menstrual hygiene.

Water was generally accessed at an outdoor tap, though one school lacked even that. This tap was usually located neither near the latrine nor between the latrine and the school building, requiring students to add an additional leg to their already long journey to the latrine.

At two schools in Osh, water was supplied to the taps on a schedule: for example, running continuously for two hours in the morning and then turning off for the rest of the day. This scheduling was determined by the municipality and was a result of community-wide water rationing due to limited clean water supply and deteriorating water systems.

The outdoor taps provided only cold water, which was very uncomfortable in the winter. Sometimes the pipes froze in cold weather, eliminating a school’s only source of water.

“We would like to have a sink to wash hands. Sometimes it is difficult to wash hands during wintertime when the stand-pipe does not have water.”  
– Girl, Chuy, School 2 (R)
Lack of privacy

**Exterior privacy:** Most school latrines lacked functioning exterior doors, either because the latrines were constructed without them or because the doors were in a state of disrepair and didn’t close properly. In both cases, girls were afraid of boys being able to look in and see them. Many girls took turns holding the door closed or standing in the open doorway to ward off curious boys.

“[Boys] might tease girls and look inside, so therefore we go with friends so that someone is waiting outside while the other girl is in the latrine.” – Girl, Osh, School 3 (K)

“There is a door, but sometimes it can come open, so only two people can use the latrine and the third person has to keep the door closed.” – Girl, Osh, School 4 (K)

“P1: It is uneasy to go there when the boys are there. P2: We get scared that the boys will look. P3: We feel embarrassed. P6: We take a friend, so that she can watch that nobody is coming.” – Girls, Chuy, School 2 (R)

Boys also took advantage of the latrines’ open doorways and windows to throw stones into the girls’ side, and to throw snowballs in winter. Girls cited this as a major annoyance and a deterrent to them using the school latrines, especially during winter and especially without having a friend along to ward off the boys.

**Interior privacy:** In addition to lacking exterior doors, most latrines also had no partitions inside, meaning that girls were in full view of each other if they used the latrine at the same time. Girls reported that they were very uncomfortable with this, and many expressed a strong desire for separated stalls or short walls between holes to give them a measure of privacy. Girls’ latrines had between two and four holes available, but girls often used the latrine one by one in order to have privacy. While many girls took turns standing guard to deter boys, some were equally concerned about keeping out other girls.

“P6: Sometimes you feel embarrassed if someone else is inside the latrine, so you wait until she leaves and then go in. If she does not know about menstruation, she can leave the latrine and tell others about it. P2: She would say, ‘This girl has her menses.’ M: Would somebody tease her? All: Yes. P1: So if you wait until the latrine is empty, you can be late for class.” – Girls, Osh, School 4 (K)

“When you go to the toilet with girls, it is better to use pads, not cloth. [...] I feel ashamed to change cloth in front of girls, so I always have pads with me at school.” – Girl, Osh, School 3 (K)

“It is better if they are separate. For example, if I am menstruating and there is someone who sits nearby me. I feel uncomfortable when someone comes and sits nearby.” – Girl, Chuy, School 6 (K)

“P: We have one latrine for girls. There are three holes in the latrine, and when there are three people using it, everyone can see each other. I: So that is why you change at home? P: Yes, we usually change at home.” – Girl, Osh, School 4 (K)

Girls were especially uncomfortable using the latrine in front of other girls while menstruating. They felt embarrassed to change their menstrual materials or have others see their supplies, and sometimes worried that other girls would gossip about them if they saw that they were menstruating. As a result, girls commonly adjusted their latrine use during menstruation, either by not using the latrine at all or by waiting until the latrine was empty, which could make them late for class. Some girls also used pads at school because they felt it was embarrassing to be seen using cloths.

The one-by-one latrine use effectively reduce the holes-per-student ratio at schools. While a school may have three or four latrine holes allocated for girls, if girls insist on using the latrine one at a time, there is functionally only one hole available for girls. For example, School 5 had one latrine hole for every 23 female students, close to the ratio recommended by the SaNPIN. However, girls reported frequently using the latrine one at a time, meaning that there was just one latrine available for all 92 female students.

“If you are in your own home, you may use the latrine freely. But here, when someone else comes, you feel uncomfortable.” – Girl, Osh, School 3 (K)

“It is just one room with four holes. We go one by one. It is not right to go inside all together.” – Girl, Chuy, School 1 (K)
Limited options to dispose of menstrual supplies

None of the school latrines contained a wastebasket or other container to dispose of used toilet paper or menstrual supplies. For lack of options, girls threw their used pads directly into the latrine hole, where they could be seen by others, including boys, who joked about how many pads were visible in the shared latrine pit. This made some girls uncomfortable. Nearly all girls described their ideal latrines as containing wastebaskets.

“I really hesitate to leave used pads in the latrine. […] It is not a proper toilet for us since we became adults, because somebody might see our pads.”  
– Girl, Chuy, School 1 (K)

In addition to girls’ discomfort, the addition of large quantities of synthetic material into the pit is likely to interfere with the organic decomposition process and any emptying processes a school might attempt and lead to latrines becoming unusable faster than they otherwise would.

In the absence of water, girls were unable to wash cloths at school. This deterred most girls from using or changing them at school. The few who did use cloths admitted that if necessary, they threw them into the latrine pit like a pad rather than taking the dirty cloth home to wash and reuse.

Uncomfortable facilities

Many latrines had poor sanitary conditions and were described by students as smelly and dirty, with urine and feces on the floor or the walls. At the time of our facility observations, less than two weeks after the start of the school year, most of the school latrines had a very strong smell, and many were visibly dirty, with puddles of urine and crumpled toilet tissue and notebook paper on the floor. Girls worried about dirtying their clothes and shoes, or absorbing the smell in their clothes or hair. Many students blamed elementary school students for the mess, saying that they did not yet know how to use the latrine properly and had bad aim.

Access to Material Support

Access to materials was not voiced as a major concern of girls for managing menstruation. Girls in the research study had access to either cloths or commercially-produced sanitary pads. The exception was at menarche, when a girl might be too afraid to discuss menstruation with her mother and therefore lack immediate access to material support. In this situation, a girl may take a pad or cloth from her mother without asking, or she may improvise with toilet paper, an old item of clothing, or a cloth she finds around the house.

Cloths were generally recommended by adults because of affordability and because they were perceived as the healthier option. Mothers advised their daughters to use cloths instead of sanitary pads. Girls reported that the women’s committees at their schools counselled them against using sanitary pads because of a belief that using sanitary pads could cause cancer or infertility.

Girls voiced a preference for sanitary pads, especially when not at home, because they felt more confident with the protection from leaks provided by sanitary pads over that provided by cloth. They reported that sanitary pads were better because they stuck to underwear and had an added protective layer of plastic, both of which were believed to reduce the risk of leaks. Pads were also described by girls as being more discreet than cloths, as cloths were bulkier and might be noticed through clothing.

“In a pad is made particularly for this [menstruation].
P4: It has lots of glue.
P5: It does not leak.”  
- Girls, Osh, School 5 (R)

In addition to discretion and a higher level of protection against leaks, girls reported preferring pads at school because they felt embarrassed to be seen by other girls in the latrine using cloths instead of pads.

A few mothers agreed with their daughters’ belief that commercially produced sanitary pads were preferable to cloths:

“I want to thank the person who invented the pad. They wear trousers and [the pad] is not noticeable. […] There was not even a pin to fasten the cloth when we used them. [The blood] does not go through now. Thank you to the smart person who invented this.”  
– Mother, Osh, School 3 (K)

However, many mothers still preferred for their daughters to use cloths. Despite this preference, girls still had access and were able to use pads.

Neither cloths nor pads were accessible at school except through friends. Many girls stated that if they began menstruating unexpectedly while at school and had no materials with them, they would ask a trusted friend for a pad. Otherwise, girls would have to return home to get a pad or cloth.

While access to materials was not discussed as a challenge by the participants of this study, this issue may merit further investigation, as the sample was limited and the participants’ experiences cannot be assumed to be representative of all girls in Kyrgyzstan. In addition, despite menstrual materials being available to girls, girls still reported challenges with managing menstruation related to schools’ WASH facilities and informational support.
Students were allowed to use the latrine during class breaks of five or ten minutes. The latrines were located far from the school, requiring at least a minute or two to reach for teenage students, and longer still for small children. Elementary school students frequently ran to the latrine in order to make it in time. An additional trip to wash their hands at the tap took even more time, so many students either rinsed their hands in a nearby creek or irrigation canal or skipped hand-washing. Girls’ desire to use the latrine privately added an additional challenge, as they had to wait their turn while other girls entered the latrine one by one. Considering the limited time of each break, part of which was taken up in walking to and from the latrine, it would be impossible for more than a few girls to use the latrine one at a time during any given break. As a result, it was often not possible for every girl to use the latrine in this manner within the allotted break time.

Impacts and risks

Impacts are actual consequences of challenges which negatively impact girls’ wellbeing and/or education. Impacts are explicitly named and discussed by girls, mothers, teachers, boys, and fathers (Haver et al. 2013; Long et al. 2013; Caruso et al. 2013).

Risks are potential consequences of challenges which may negatively impact girls’ wellbeing and/or education. Risks were not explicitly discussed by participants, but have been identified in analysis as probable consequences resulting from the named challenges (Haver et al. 2013; Long et al. 2013; Caruso et al. 2013).

Impact 1: Missed class time. Whether using the latrine one at a time or waiting for their male classmates to leave, girls’ efforts to ensure privacy in the latrine led them to be late returning to class. The additional waiting time, together with short break times and long distances, meant that many girls were regularly late to class.

“If you wait until the latrine is empty, you can be late for class.” – Girl, Osh, School 4 (K)

“If the boys are there, we wait. That’s why we are late for classes.” – Girl, Chuy, School 2 (R)

Girls estimated that the average girl missed approximately 30 minutes of class every week as a result of waiting for the latrine. They stated that they were more likely to miss class during menstruation due to an increased desire for privacy during that time.

Impact 2: Withholding urination. Girls often avoided using the school latrines by “holding it” until they could return home after several hours of lessons. They were especially likely to do this in winter, when the cold and snow made a trip out to the latrine particularly unappealing, and during menstruation, when many girls were embarrassed to be seen with dirty pads or cloths by other girls.

“P2: I don’t use [the school latrine] at all. Only if it is urgent. For example, I went there three times last school year. I hold it until I go home.

P5: If you hold it for two or three days, you get used to it.” – Girls, Osh, School 5 (R)

Impact 3: Stress. Girls worried a great deal about leaks, stains, and odor during menstruation. They
repeatedly checked their backsides and their chairs to look for stains, and they worried that they had a smell noticeable to others, especially boys. Mothers laughed that their daughters “paid more attention to their backsides than to their faces.” (Mother, Chuy, School 6 (K))

“When your period comes, you keep worrying if it is smelling or noticeable. You keep looking behind yourself.” – Girl, Chuy, School 2 (R)

“During the lesson, it could be a problem for her, as she might have nothing with her. How will I ask permission from the teacher? What will I do if the chair is stained with blood? How will I stand up? If everybody is in the classroom, how will I stand up?” – Girl, Chuy, School 1 (K)

Impact 4: Distraction. Girls reported being preoccupied with the thought of leaks and stains, and reported paying little attention in class. They were reluctant to go to the board for fear of revealing a stain to their classmates, and were sometimes so distracted that they could not pay attention to the lesson.

“She pays no attention to lessons. She is different. She thinks about other things in class. We think about leaking, stains, when we sit in a chair, as we sit for one hour until the lesson is over. Hoping that the teacher will not ask me to stand up. […] We sit without understanding and if a teacher tells us to stand up and repeat what’s she just explained, we do not know what to answer.”
– Girl, Osh, School 4 (K)

“P4: She wants to sleep [in class]. She always thinks about going home.
P3: She always thinks about washing herself.”
– Girls, Chuy, School 6 (K)

Impact 5: Self-exclusion. Girls’ distraction and fear of leaks led them to withdraw from their classmates. They stayed inside during breaks, not wanting to stand or move around too much.

“You don’t mix with other pupils and laugh, socialize. […] If you come and sit next to her wanting to talk, she will not talk, as she is more worried about stains.” – Girl, Osh, School 4 (K)

“She would not talk to [anyone]. Her thoughts would be about totally different things.” – Girl, Osh, School 5 (R)

Impact 6: Reduced participation in physical activities. Most girls tried not to participate in physical education class or other strenuous activities during menstruation. They felt weak and in pain, and they feared that excessive movement would lead to leaking, especially if they use cloths. Girls regularly asked permission to sit out of physical education class while menstruating.

“You cannot take part actively anywhere. For example, if you are at school and want to play, you cannot play. You cannot go to physical education, you want to sit during the classes.” – Girl, Osh, School 4 (K)

Potential risk 1: Anemia. Many participants noted that girls were very pale around menstruation, with white or gray faces, and even blue lips. They were also described as feeling weak and dizzy. In addition, as discussed above, many girls reported irregular menstruation well beyond the first year after menarche. While these symptoms were usually attributed to “catching cold,” they may in fact be indicative of anemia.

Despite relatively high intake of meat, girls in Kyrgyzstan are at increased risk of iron deficiency and iron-deficiency anemia due to high consumption of green and black tea, including during mealtimes. The inhibitory effect of tea on iron absorption has been well-established, and
is especially strong when tea is consumed with meals (Disler et al. 1975; Zijp, Korver, and Tijburg 2000). Research in Asia has shown an association between high tea consumption and anemia in women of reproductive age (Baig-Ansari et al. 2008; Dangour, Hill, and Ismail 2001).

Anemia is an acknowledged problem in Kyrgyzstan. The 2012 Demographic and Health Survey for Kyrgyzstan found high prevalence of anemia among women and children under 5, as detailed in Table 6.

Table 6. Prevalence (%) of anemia among women and children in Kyrgyzstan, DHS 2012 (National Statistical Committee of the Kyrgyz Republic, Ministry of Health of the Kyrgyz Republic, and ICF International 2013).

<table>
<thead>
<tr>
<th></th>
<th>Chuy District</th>
<th>Osh District</th>
<th>Nationwide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>39.2</td>
<td>33.3</td>
<td>35.2</td>
</tr>
<tr>
<td>Children</td>
<td>58.5</td>
<td>34.9</td>
<td>42.6</td>
</tr>
</tbody>
</table>

In rare cases, girls were clinically diagnosed with anemia after exhibiting symptoms such as irregular menstruation.

“My sister said that she had it [menses] once every two months. She visited the doctor, and he told that she had anemia, that’s why there was no blood.” – Girl, Chuy, School 2 (R)

Anemia may contribute to many of the common health problems affecting menstruating girls and women, including severe headaches and menstrual cramps, irregular menstruation, weakness and fatigue during menstruation, and difficulty becoming pregnant. However, until these symptoms are recognized as the result of anemia and not catching cold, girls are unlikely to receive appropriate treatment to resolve their anemia.

Potential risk 2: Missed educational opportunities. Girls reported regularly missing class while waiting to use the latrine, an estimated two hours per every month. Less frequently, girls left school because of bad menstrual cramps or because they had stained their clothes. In these cases, girls usually did not return until the next day and might miss nearly a whole day of lessons. It is difficult to measure the scale of this absenteeism because girls frequently sought permission to leave with fabricated excuses, but it is clear that girls missed class somewhat regularly due to menstruation.

Potential risk 3: Infection. Uncomfortable latrines and poor WASH infrastructure prevented girls from changing their menstrual supplies as often as they should and from washing themselves while at school. In addition, girls were often advised not to bathe during menstruation. Both of these factors negatively impacted a girl’s hygiene and might increase her risk of developing bacterial infections or urinary tract infections.

Many mothers advised their daughters to hide their cloths under another item of clothing to dry, which could encourage the growth of bacteria and mold, as the cloths would stay damp longer before drying. Girls who dry their cloths in this manner may be at risk of developing infections.

“It is really shameful to see hanging cloth for girls. They should be hidden under her other clothes.” – Mother, Chuy, School 6 (K)

“P6: We hang [the cloths] with the other laundry, but we cover them with something. P4: We hide them and hang them that way.”
– Girls, Osh, School 4 (K)
Recommendations

The recommendations are based on the Kyrgyzstan context, taking into consideration the policy environment, environment, global guidelines and voiced recommendations of participants.

Key recommendation 1

*Improve menstruation and puberty communication at schools*

**National:**

- The government should mandate the inclusion of menstruation and puberty topics in school curriculum, and develop clear standards for the material that must be taught, including:
  - Topics to be included
  - How often material should be taught
  - Girls and boys should receive this information no later than 5th grade
  - Appropriate teachers or staff members to lead teaching
  - Engaging both female and male students

- Oversight measures should be developed to ensure that schools are conducting menstruation and puberty teaching at required intervals, with attention paid to ensuring that teachers cover the material in person and in detail, and that students are given the opportunity to ask questions.

- A standardized set of educational resources on puberty should be developed for teachers and students.
  - Materials should be in the appropriate language for each school (Kyrgyz, Russian, or Uzbek) and written in clear, non-technical language.
  - The government should develop a simple website to provide accurate, culturally appropriate information about puberty.
    - A government-created site would give the MoES and MoH control over the information provided to young people.
    - Once created, a website would be significantly less expensive to disseminate among students than hard copies of materials, and therefore has the potential to significantly increase program coverage.
    - A website requires less personal instruction from teachers or parents. This may appeal to many young people, especially boys, most of whom would prefer resources from which they can learn independently.
    - UNICEF is currently working with Facebook on the internet.org project, which aims to provide free internet access to some websites. A basic informational webpage could be made accessible to a high number of adolescents throughout the country through this channel.
  - Regardless of the medium, materials should cover the following topics:
    - For all students
      - The physical, mental, emotional, and social changes that puberty brings
      - The age range of puberty; that it’s normal for different individuals to start puberty at different times and experience the stages differently
      - Emphasis that puberty is a transitional stage, and that physical signs of puberty do not mean that a girl or boy is ready for sexual activity, nor that they should be considered an adult
      - A comprehensible biological explanation of menstruation
      - Answers to common questions about puberty and menstruation
      - Clarification of common misconceptions
    - For girls
      - How to use menstrual supplies and maintain hygiene during menstruation
      - Instructions for tracking the menstrual cycle
      - Anemia, its symptoms, and ways to prevent or treat it
    - For boys
      - Sexuality is only one component of puberty, which includes mental, emotional, and social changes for boys as well as girls.
      - Physical and hormonal changes do not equate to sexual readiness for either boys or girls.

- The government should develop and conduct trainings for school staff in the use of puberty resources.
  - Require at least one male and one female teacher from each school to receive this training, in order to engage both male and female students.
  - Main targets of this training should include biology teachers, social pedagogues, and teachers involved with the women’s and men’s committees.
  - In the absence of male staff to teach boys, alternatives should be considered with the school, such as bringing in local doctors or nurses.
School:

- School leadership should enable and encourage staff to openly discuss menstruation and puberty with students.
  - Identify staff members to spearhead puberty communication with girls and with boys, and clearly define the scope of what that communication should include.

- In order to reach the majority of girls before menarche, girls should be included in menstruation communication starting in 5th grade.

- Steps should be taken to ensure that boys are included in puberty education.
  - Schools should consider reinstating men’s committees in order to provide a platform for discussion of puberty with male students.
  - In the absence of male teachers willing to teach boys, an alternative figure such as a local doctor should be designated in that role.

- School directors should be responsible for verifying that puberty and menstruation education is taking place at appropriate intervals, which all age-appropriate students are being engaged, and that material is being covered in sufficient detail.

- Schools should share information about how to access support and/or information at the school level, including: where and who to access pain killers or sanitary materials in case of an emergency.

- Teachers responsible for menstruation education should consider making efforts to engage mothers of female students in order to include them in menstruation education, improve their own understanding of menstruation, and dispel myths around menstruation and related practices.
  - Where possible, schools should encourage active parental participation in parent-teacher associations.
  - Communication with mothers should emphasize the following points:
    - Mothers should raise the topic of menstruation with their daughters before menarche in order to open lines of communication and reduce fear at menarche.
    - Girls may begin menstruation as early as 5th grade.
    - Mothers are encouraged to review their children’s educational materials on puberty and menstruation.
    - Puberty is a transitional stage. Physical signs of puberty do not equate to adulthood, and the onset of menstruation does not necessarily mean that a girl is mentally or emotionally ready to be assigned the role and responsibilities of a woman.
Key recommendation 2

*Improve WASH facilities at schools*

**National:**

- Sanitation policies should be revised to reflect the current reality of infrastructure at schools. Current policies are designed to regulate systems with functioning plumbing, which many schools now lack. The absence of defined policies concerning the construction and maintenance of outdoor pit latrines promotes an environment of unclear standards, discourages schools from prioritizing maintenance of their latrines, and inhibits agencies and state bodies from enforcing hygiene and sanitation norms.

- Sanitary regulations should be expanded to include standards for construction and maintenance of pit latrines at schools. These latrines should be held to similar standards as those for indoor toilets, including implementing privacy measures and meeting an acceptable students-per-hole ratio.
  - All latrines should be required to have a functioning exterior door and interior partitions to provide a measure of privacy, which would render the practice of door guarding unnecessary and reduce missed class time.

- Appropriate agencies or departments should be identified and assigned oversight responsibilities for construction and maintenance of latrines, as well as other WASH facilities such as hand-washing stations and personal hygiene rooms.
  - Currently, many schools are hindered from meeting the proposed standards by lack of funds and failing water systems, over which they have limited control. Regulatory attention should be given not only to enforcing policies at schools, but to empowering schools to meet standards by adjusting budgets, assisting school leadership in setting priorities, and working together to pursue possible school-specific avenues for improvement – for example, the construction of a small closed water system drawing from a local water source, or seeking assistance from local government.

**School:**

- Schools should work with the Department of Sanitary and Epidemiological Surveillance and local governments to develop an operations and maintenance plan and budget for improving facility conditions.

- Schools should work with regulating agencies to improve conditions of sanitary facilities in order to meet standards for hygiene and privacy. Sanitary facilities should be gender segregated and equipped with basic necessary amenities for female and male students, including:
  - Handwashing stations
  - Soap
  - Toilet paper
  - Wastebasket
  - Mirror

- Water for hand-washing should be made available inside or near latrines. If the hand-washing facility is outdoors, there should be a means to access warm water during winter months.

- Schools should dedicate gender segregated personal hygiene rooms. These rooms should protect the user from winter elements, provide privacy to the user with a locking door, water access for personal washing and handwashing, and include a covered waste basket and mirror. These rooms should be planned and designed in consultation with girls and boys, and take into consideration school access to water.

**Family:**

- Parents should support their children’s schools in their efforts to improve sanitary and other WASH facilities. Support may include:
  - Contributing money, materials or labor toward construction or maintenance projects
  - Petitioning local government or other agencies for assistance
  - Designing and participating in a rotating schedule to provide necessary consumable products such as soap and toilet paper
Voiced recommendations

The recommendations above were informed by participants’ ideas, analysis of common themes in the data, and knowledge of context and the policy environment. The following recommendations were all voiced directly by research participants, and have been summarized and organized in the following tables to show which groups of participants suggested them.

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Girls</th>
<th>Boys</th>
<th>Women</th>
<th>Men</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information and support</strong></td>
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<tr>
<td>Educational materials on puberty and menstruation should be developed and provided for educators and students. Teachers should be taught how to deliver lessons based on these materials, and they should be given time in the day to do so.</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Materials should have clear explanations of biological processes for puberty and menstruation, answers to common questions, and pictures or diagrams to help explain the text.</td>
<td>• Students and teachers described the Biology textbook (the current primary resource) as unclear and not providing enough substantive information on menstruation and puberty.</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Materials should be available in the language of instruction.</td>
<td>• Most menstruation and puberty resources currently available are in Russian, which is not understood by most students and many teachers in Kyrgyz language schools.</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Materials should be written in simple, everyday language.</td>
<td>• Teachers and students reported that the language level used in the Biology textbook and other educational materials was very technical and difficult to understand.</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>Teachers should be provided with greater support in teaching students about menstruation and puberty.</td>
<td>• Teachers and students both expressed the necessity for clear materials that students could reference outside of classroom instruction</td>
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<tr>
<td>Teachers should be provided with greater support in teaching students about menstruation and puberty.</td>
<td>• Teachers perceive menstruation and puberty education as “sensitive” topics and expressed that they are uncomfortable teaching them. As a result, many teachers avoid those topics and sometimes skip or skim over them when they arise in the curriculum. For example, some Biology teachers tell students to read certain sections of the textbook at home rather than reviewing it in class and answering students’ questions.</td>
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<tr>
<td>Teachers should be provided with greater support in teaching students about menstruation and puberty.</td>
<td>• Teachers feel that they do not have a comprehensive understanding of puberty or menstruation themselves, and that they would benefit from training that addressed both content and teaching methods.</td>
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</tr>
</tbody>
</table>
Male teachers should be designated to teach boys and trained to engage them.

- Students, teachers, and parents agree that it is most appropriate for girls and boys to learn about puberty separately, with female staff teaching girls and male staff teaching boys.
- The majority of school staff involved in puberty communication are women.
- Many schools have a women’s committee, which sometimes takes on the role of speaking with female students about menstruation. At most schools there is no equivalent to the women’s committee for boys, as the men’s committee is either inactive or does not discuss puberty or sexuality.

| Mothers and daughters should communicate more openly about menstruation. | X | X | X | X |
| Mothers should explain menstruation to their daughters before menarche. | X | X | X |

- Girls who don’t know anything about menstruation at menarche report crying, feeling afraid, not understanding what was happening to them, and being afraid to seek support from an adult.
- Mothers report that their daughters did not tell them that they had started menstruation.
- Girls who already know about menstruation are much less likely to experience fear and distress at menarche, and are more likely to inform their mothers or another female family member.


