



Menstrual hygiene management in Udaypur and Sindhuli districts of Nepal

Research report



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About this report

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Acronyms

FGD	Focus group discussion.
GI	Group interview.
NEWAH	Nepal Water for Health.
SSI	Semi-structured interview.
WASH	Water, sanitation and hygiene.

Cover image: Taken by Sushma as part of a participatory photography project involving girls from the schools we are working with on this project. "This is the girl's toilet of our school. We are in urgent need of an MHM friendly toilet. The one we use doesn't lock properly. If someone is inside, another person has to wait outside pushing the door for her. Because of lack of latrines in our school, we have to wait in a long line. This is very problematic for us and we are need of more girls' friendly latrines." Sirthauli, Sindhuli, Nepal, April 2016. Credit: WaterAid/ Sushma.

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Contents

Tables	4
Executive summary	5
Conclusions and recommendations	5
Introduction	6
Methods	7
Results	11
Socio-demographic and socioeconomic characteristics of girls and boys	11
Menarche – practices, knowledge and information	11
Everyday practices and restrictions	13
Vulnerability	14
Girls’ current knowledge and information	15
Boys’ current knowledge and information	16
Materials for managing menstruation	17
Health and hygiene	19
Disposal of menstrual materials	20
Menstrual management during the school day	21
Absence from school	23
Leakage and teasing	23
Participation in school during menstruation	24
MHM coping strategies during the school day	25
Discussion and recommendations	26
Summary of study findings	26
Annexes	31
References	26

Tables

Table 1 List of schools	1
Table 2 Characteristics of participants in the qualitative study.....	2
Table 3 Data collected	3
Table 4 Socio-demographic characteristics of girls.....	3
Table 5 Socio-demographic characteristics of boys.....	4
Table 6 Knowledge of menstruation before and after menarche	5
Table 7 Support during menstruation.....	6
Table 8 Restrictions and reasons Udaypur girls	7
Table 9 Restrictions and reasons Sindhuli girls	8
Table 10 Restrictions and reasons in Sindhuli and Udaypur girls	8
Table 11 Restrictions by district and ethnicity (qualitative data).....	9
Table 12 Boys' knowledge of menstruation	12
Table 13 Boys' beliefs about menstruating girls.....	12
Table 14 Restrictions and reasons Udaypur boys	14
Table 15 Restrictions and reasons Sindhuli boys	15
Table 16 Restrictions and reasons Sindhuli and Udaypur boys.....	15
Table 17 Menstrual management	17
Table 18 Personal hygiene and rest when menstruating	18
Table 19 Washing and drying cloths	19
Table 20 Observation of toilet facilities	19
Table 21 Access to toilets	20
Table 22 Managing menstruation at school	20
Table 23 Leakage and washing menstrual cloths in school	21
Table 24 Absence due to menstruation	21
Table 25 Comfort at school.....	22
Table 26 Ability to participate in class and school.....	23
Table 27 Boys perceptions of menstruating girls	24

Executive summary

Adolescent girls face significant challenges to managing their menstruation hygienically, with comfort and confidence, especially in low-income countries. Cultural constraints, lack of access to accurate and pragmatic information, and inadequate water, sanitation and hygiene (WASH) facilities in homes and in schools can restrict girls' ability to participate fully in society.

WaterAid is working with the Government of Nepal to strengthen WASH facilities in schools of Udaypur and Sindhuli Districts, and to help equip them to facilitate confident menstrual hygiene management (MHM). This study sought to inform the development of these interventions through mixed-methods research with girls, boys, teachers and mothers.

We found that although some girls and families were challenging restrictions, the perceptions of menstruation as a dirty, polluting process with the potential to harm girls, their families and others, as well as crops, and livestock still prevailed in the study districts. Menstruation was perceived as a time of vulnerability, when women and girls should rest, be around their home, and take care of their body. In addition, fear of suffering ill health, heavy bleeding or infertility if others see their menstrual blood is a constant source of concern for women and girls. The lack of appropriate, comfortable and affordable materials for MHM, of adequate waste disposal, and of adequate toilet facilities at school made leakage and others seeing their menstrual blood a source of stress for girls. Girls avoided changing their sanitary materials at school because toilet facilities were dirty and lacked privacy. Girls preferred to suffer the discomfort of using thick cloth, restricting their movement, and using friends' toilets rather than use the school toilet.

Conclusions and recommendations

We detail seven areas of focus for interventions in this report. We conclude that interventions should focus on cultural concepts of pollution and vulnerability **and** practical, sustainable strategies to improve waste management, maintain clean and child-friendly toilets, and increase access to comfortable, secure menstrual materials to enable more confident MHM.

Introduction

Menstrual hygiene management (MHM) challenges faced by girls in low-income countries are receiving increasing attention as a public health issue.¹ It is difficult for girls to hygienically and confidently take care of themselves during menstruation when they have poor access to adequate WASH facilities, or they cannot access appropriate sanitary materials because of financial or supply issues in rural areas.² Cultural taboos and restrictions also affect girls' abilities to equally and fully participate in family and community life, and many girls do not have access to accurate and pragmatic information about MHM. The school environment provides an excellent intervention site to enable adolescent boys and girls to negotiate the physical and psychosocial changes of puberty. However, girls might find it more difficult to attend and participate in school when they are menstruating, especially if the school does not meet their WASH needs.^{3,4}

In Nepal, cultural interpretations of menstruation as a polluting process mean that many women and girls face significant challenges during menstruation.^{5,6,7} In addition, confident MHM is made difficult by inadequate WASH and waste disposal facilities, especially in rural areas. For example, 38.2% of households in Nepal do not have a toilet.⁸ The Government of Nepal is taking steps to improve access to clean water supplies in communities and schools as part of the broader 'Child Friendly Schools Initiative'.⁹ This initiative outlines nine aspects of quality education, which include child-gender-disabled-friendly water and sanitation facilities.

WaterAid, through its project 'Ensuring girls' rights through school and community-based WASH and improved menstrual hygiene management in Nepal and Pakistan', is contributing to the Government of Nepal's targets for Child Friendly Schools and water and sanitation, and thereby aims to contribute towards gender equality in schools. In Nepal the project is being implemented in partnership with Nepal Water for Health (NEWAH). WaterAid and NEWAH are applying a comprehensive approach to inclusive WASH by improving facilities, awareness, sanitary material supply chains, and institutional accountability. This approach is framed around achieving children's rights to WASH, improving school environments, and accelerating regional progress towards a greater understanding of MHM awareness and practices.

This mixed-methods research sought to a) investigate and understand the scope of challenges faced by girls during menstruation (mainly at school but also in the community or household); and b) understand the determinants of those challenges, and identify potential solutions and recommendations. This research will inform strengthening of WaterAid's intervention design and the development of monitoring tools to track progress against project outcomes.

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Methods

Setting

We collected data in Sindhuli and Udaypur districts, where WaterAid has partnered with NEWAH to improve water and sanitation facilities and provide menstrual hygiene support programmes in government schools. Udaypur is in Eastern Nepal, is 2,063 km² and has a population of about 317,600.⁸ 61.9% of women in Udaypur are literate compared with 78.1% of men. The district has a Human Development Index (HDI) of 0.475, placing it 37th out of 75 in Nepal.¹⁰

Sindhuli is in Central Nepal and is 2491 km², with a population of about 296,192.⁸ 52.6% of women are literate compared with 70.9% of men. It has an HDI of 0.440, placing the district 52nd out of 75 in Nepal.¹⁰

Sampling and data collection

We used a mixed-methods approach in this study. We purposively sampled 12 schools in rural areas, two schools in urban areas, and two schools in peri-urban areas from Sindhuli and Udaypur where NEWAH was going to conduct interventions, because we believed that availability of products and cultural practices might be affected by the setting (**Table 1**). Large schools where NEWAH had not fully started their activities were purposively sampled so we could meet sample size requirements and the study could serve as a baseline for some indicators.

Quantitative methods and sampling

Structured interviews with girls

Our quantitative sample size was based on a WaterAid estimation that 0.28% of girls had 'a good understanding of menstrual hygiene management',¹¹ and WaterAid hope that the intervention will increase this understanding by 0.12% (to 0.4%). A sample of 130 girls per district was therefore required to investigate these differences. In all the sampled schools we conducted 16 structured interviews with randomly sampled menstruating girls in classes nine and ten whose parents consented for participation. We used the lottery method during sampling – all the girls who had parental consent who were interested to participate in the study wrote their names on a piece of paper, and the papers were mixed up and drawn at random by researchers. When there were not enough students, we also sampled menstruating girls from classes seven and eight. We collected data on Samsung tablets using Open Data Kit software.

Structured interviews with boys

We also collected data from boys, because WaterAid seeks to promote supportive behaviour and increased awareness among all students. In the four schools where we collected both qualitative and quantitative data, we randomly sampled ten boys from class nine whose parents had consented, using the lottery method, and invited them to participate in the study. They sat in the same classroom at separate desks, a researcher read each question and they self-completed a paper questionnaire. The questionnaire collected data about their knowledge and attitudes to menstruation, and we felt it would be easier for them to answer comfortably using this method.

Qualitative methods and sampling

Of the 12 schools sampled, two schools (one urban, one rural) in each district were identified by NEWAH as having the greatest number of students in classes nine and ten, from where we could collect both qualitative and quantitative data.

Group interviews with girls

We asked four menstruating girls per school who had not participated in semi-structured interviews to participate in a group interview with a close friend. We hoped that using this method would help them feel more at ease and enable us to explore their personal experiences of MHM. Where a shop was nearby we asked one pair of girls per school to buy sanitary materials and tell us on their return how they felt about buying pads.

Focus group discussions with girls

In addition, in the same four schools we conducted one focus group discussion with six to eight menstruating girls to discuss school and community issues in MHM. Where possible we sampled girls from the same class because they were likely to feel more at ease with one another. We used a game, storytelling, and body mapping in focus group discussions to enhance communication and participation. We also passed around sanitary pads and cloth used in menstruation to stimulate and focus the discussion. Researchers also observed the toilets that were used by girls to assess to what extent they were 'child friendly'. A description of girls participating in the qualitative study is detailed in Table 2.

Interviews with teachers and mothers

We sought to triangulate information from girls, and collect data on school and community barriers to confident menstrual management. We therefore conducted semi-structured interviews with four mothers of participants from the two mixed methods schools, and two teachers who taught the 'Environment, Health and

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Population' subject in each district. An overview of data collection is given in Table 3.

Data collection

Data were collected by two teams of four female researchers with minimum of a graduate-level academic qualification in social sciences or public health, with prior experience of collecting qualitative and quantitative data in rural areas. They received five days' training on research methods and tools, and were observed during a one-day pilot of tools in a secondary school two hours' drive from Kathmandu, in Kavre District.

Topic guides and questionnaires were developed in English, translated into Nepali, and back-translated into English to check the quality of translation. Tools were piloted and adapted. The senior research team observed data collection in each district and gave feedback to researchers. A desk-monitoring unit at the implementing organisation (HERD) maintained regular contact with researchers throughout data collection.

Ethical concerns

Students and their parents, teachers and mothers gave informed written consent to participate in the study. The study received ethical approval from the Nepal Health Research Council (NHRC). Data were collected in private, and anonymised for analysis. Data were stored on password-protected computers and only the research team had access to the data.

Data management and analysis

Quantitative data collected on tablets were uploaded to a central server in Kathmandu throughout data collection, and the boys' paper questionnaire data were entered in CSPro v6.0. Observation checklists were short and therefore data were entered in Excel. Data were cleaned, manually checked, and coded. Consistency and range checks were performed before exporting to SPSS (Statistical Package for the Social Sciences) v20 for descriptive analysis. Descriptive tables were produced of the quantitative data and these were compared to qualitative findings. We generated a wealth index using household assets, roof and house construction materials, type of toilet and main source of water. For each household characteristic in Figure 1, participants were scored one, and these scores were summed. If a household scored four or lower they were categorised as having low socioeconomic status; if they scored from five to seven they were of medium socioeconomic status; and scores of eight and above were classified as having high socioeconomic status.¹²

Figure 1: Variables used in the wealth index calculation

Household assets	Roof construction	House construction	Toilet facility	Water supply
Electricity	Calamine/cement fibre	Brick and cement	Flush to septic tank	Piped water in compound
Solar	Cement dhalan	Stone and cement	Flush to somewhere else	
Radio		Cement block	Pit latrine with slab	
Television				
Mobile phone				
Computer				
Livestock				
Bank account				

Qualitative data were collected and transcribed in Nepali by researchers while they were in Udaypur and Sindhuli districts. Researchers also added observation notes to the transcripts. Data were translated from Nepali to English by a team of six translators in Kathmandu, who had prior experience of qualitative data translation. Supervisors compared 30% of translations with the original Nepali transcripts and provided feedback to ensure quality, accuracy and consistency. JM, MB and AB conducted descriptive content analysis using Nvivo v10. We read the data, making memos, and made an initial coding structure based on themes emerging from the data.

We used a process of comparison between and within transcripts to classify the natural structures that occur in the data. These ‘themes’ recur or are common in the dataset. Emergent themes were those that helped researchers make sense of the data, those that help elicit broader meaning to the phenomena of menstruation for girls and other respondents. This was applied to a sample of data from each respondent type. We also discussed a conceptual model of the data and patterns emerging.

We used techniques such as looking for ‘deviant’ cases, and separate coding of the same transcripts by different researchers, with discussion thereafter to test our assumptions and presuppositions. We revised the coding structure, and coded the data in separate databases which were merged after all the coding was completed. The main themes used to code the data were: restrictions and pollution (menarche and day-to-day); shame and embarrassment (leakage and teasing); sources of information (menarche and day to day); vulnerability (rest and care, physical difficulties); practicalities of MHM (disposal, affordability, comfort, availability, safety and time); coping strategies (school and home). We then discussed triangulation in the data between respondents, and between qualitative and quantitative findings. We compared data within and between districts, from urban and rural schools, and data from the school that had received some intervention from NEWAH as compared with non-intervention

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schools. When comparing differences in community restrictions and practices, we tabulated data from each transcript according to ethnicity, setting and district.

Results

Socio-demographic and socioeconomic characteristics of girls and boys

In Udaypur, our population was more ethnically mixed than in Sindhuli where more than 50% of the population were of Hill Janajati (disadvantaged) ethnicity. Accordingly there was a larger proportion of Buddhists (31%) who spoke Tamang as a first language (28.5%) in Sindhuli.

A small proportion of our population self-defined as having a disability (8.5% in Udaypur, and 6.9% in Sindhuli). The mean age of girls was 15 years old in both Udaypur and Sindhuli, and most of their mothers had had no education. Their fathers were slightly better educated, but most had not reached class ten. Girls' families in Sindhuli were poorer than those in Udaypur, with 25.4% being in the poorest wealth quintile, compared with only 10.8% in Udaypur. Most girls had a tube well or a bore hole as their main source of water. 94.2% in Udaypur and 86.2% in Sindhuli had a toilet that flushed to a septic tank. Only seven girls in Sindhuli reported not having any kind of toilet in their home. As expected, more homes were earthquake-affected in Sindhuli, but only a small number of girls had been displaced (Table 4).

The socio-demographic and socio-economic characteristics of boys were similar to those of the girls (Table 5).

Menarche – practices, knowledge and information

Many girls reported feeling scared and upset when they started menstruating: “I was panicked and I felt strange. I thought I might die because of the heavy flow of blood. I felt that there might not have enough blood in my body,” (Sindhuli, FGD 402, U 10). Some girls were also angry and annoyed at the restrictions placed on them when they started menstruating and they were aware that their life was changing, not necessarily for the better: Interviewer: “Why did you feel bad?” “We cannot live like we did before,” (Sindhuli, FGD 402, U 10). “It felt like we are not allowed to do anything now...everything will be stopped and we will not be allowed to work openly. When we did not have our menstruation we were allowed to go anywhere but now they say that we must not go anywhere. We must not roam around certain or unknown places now,” (Sindhuli, GI 404, U 10).

In qualitative group interviews Hindu girls described their seclusion the first time they menstruated. They were sent to a neighbour's house or made to stay inside their house, being restricted from seeing the sun for up to seven days. “I was not allowed to go outside so I was annoyed. When I asked my friend to come to my

place, I was not allowed to talk to my friend either. My family said that boys should not hear my voice,” (Sindhuli, FGD 402, U 10).

During menarche, Hindu girls should not see or look at male family members, nor the roof of the house, and male family members should not hear their voice. Researchers did not explore the reasons for this with girls, but we discussed that looking at the roof of the house and looking at male family members is indicative of looking at your family home while you are polluted, and therefore you might curse or bring bad luck to your home. In Nepali Hindu culture, curses can be given by looking at the object of the curse (evil eye).¹³ While being secluded, girls reported being bored, lonely and depressed: “I was bored sitting there alone. I felt like no one loved me...I felt like crying...” (Sindhuli, FGD 402, U 10). Not all families followed these restrictions to the same extent. Some girls and families had rebelled against custom by coming outside after fewer days of seclusion, or had practiced the seclusion in their own homes (as opposed to a neighbours’ home).

Some girls received gifts after their seclusion period, but this was not reported by girls. A mother told us, “When we went to receive her on the 7th day of her menstruation we had to buy new underwear, new clothes, new hair rubber and we had to give her a set of cloth like in marriage,” (Sindhuli, SSI Mother, 413 R 9).

26.9% of girls in Udaypur, and 36.9% girls in Sindhuli were aware of menstruation before menarche. Girls were usually aware because of elder female family members following restrictions, or them having pain or discomfort during menstruation. But most were unaware of the cause of menstruation, particularly in Udaypur where 74.6% reported not knowing the cause, compared with 54.6% not knowing in Sindhuli (Table 6).

Girls’ mothers or elder sisters usually helped them at menarche (Table 7). Elder sisters often gave practical advice, whereas mothers gave more information about maintaining restrictions, hiding menstruation, and generally telling girls not to worry. Girls also reported being told by mothers and sisters that menstruation was positive because without it they would not be able to have a baby. This generally made girls feel a bit better.

Some girls reported being given information about how to fold menstrual cloths, not to use cloths for a long time, and to use clean cloths. Girls were given less information about the importance of using dry cloths. A few girls had received quite a lot of information from family members before they began menstruating, and they felt very confident in seeking help and managing menarche: “Both of my sisters had menstruation before than me that is why it was not difficult,” (Sindhuli, FGD 402, U 10). Girls were not given clear information about how to dispose of cloths (beyond not letting anyone else see the cloths when disposing of them).

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Everyday practices and restrictions

In our questionnaire we asked girls, boys, teachers and mothers about a sample of community restrictions, and the reason for these (Tables 8, 9, 10, 14, 15, and 16). These restrictions were based on the literature and also from a brainstorm with researchers. The strict menstrual seclusion (*Chhaupadi*) often reported in the far west of Nepal was not practised in our study districts. We found that most girls were unable to visit (go inside) the temple, do household puja (worship), or attend a religious function while menstruating. This was usually because ‘my parents do not allow me’ or girls ‘fear divine retribution’. We explored the reasons for restrictions in qualitative data collection and participants usually told us that they were from ‘ancient times’ so they should be followed. If restrictions were not followed this could anger ancestors, be harmful for the family and be committing a sin.

Girls told us that menstrual restrictions varied by ethnicity, with Hindu ethnic groups (such as Brahmin/Chettri) having more restrictions than Buddhist ethnic groups (Janajati), although restrictions on being able to worship (perform puja) and enter a temple or touch a temple were common across ethnic groups. Restrictions on looking at the roof of your home were also followed after menarche, and more girls in Udaypur than Sindhuli were restricted from touching male family members, cooking food or entering the kitchen, and eating any food or drink that they wanted: “We are not allowed to touch our brothers because they might get stained. Menstruating women are called untouchable,” (Udaypur, SSI Mother 311, R 1). Although quantitative data showed that restrictions on girls going outside were not very common, in qualitative data girls reported being told by their family not to roam around and “go here and there”. A mother told us it was difficult to move around freely during menstruation: “Everyone gets afraid of touching things and people, getting scolded,” (Sindhuli, SSI Mother 413, R 9).

In addition to questionnaire data, we collated other restrictions from qualitative data (Table 11). Girls and mothers mentioned not touching water, the worshipping room, priests or people who are fasting, male family members wearing sacred threads, and touching the same utensils that others also use. Other common restrictions were related to touching plants, vegetables growing in the kitchen garden, or livestock. If a menstruating girl touched these, they might become diseased or die. Some girls reported testing these restrictions to see what would happen: “I watched whether the plants in the garden got rotten or not (after I touched them), but nothing happened,” (Sindhuli, FGD 402, U 10). Although many girls reported pushing the boundaries of restrictions, they still were fearful that something might happen to them or their family, and then they would be blamed.

Table 11 also shows that some (but not all) participants from Buddhist and Hindu ethnic groups in both Sindhuli and Udaypur follow the same restrictions.

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Enforcement of restrictions depends on households. Female-only households, and nuclear households were more relaxed about restrictions, whereas extended families were more strict, indicating a generational change: “There is an old mother and father at home, we need to satisfy them because we should move according to the tradition of our society where we live. We should not do the things that cannot be done, which is impossible,” (Sindhuli, SSI Mother 412, U 10). Both men and women played a role in deciding the extent to which restrictions are followed. There was community pressure to maintain restrictions: “You have to follow (restrictions), otherwise people here will say ‘sir ate the food cooked by his wife, or eats the food cooked by other women having menstruation’,” (Udaypur, SSI Teacher 316, U 2.) But we also found some data suggesting that if a family is better off they were more able to be flexible about restrictions: “Nobody says anything. Now my husband is an employee. He works. There are not any sorts of restrictions,” (Udaypur, SSI Mother 312, U 2).

Vulnerability

Menstruation was perceived by most girls, mothers and teachers in both Sindhuli and Udaypur to be a time like pregnancy and delivery, when girls need to take extra care of themselves and not carry heavy loads as this may cause heavy bleeding: “My mother used to tell me that during menstruation we should not carry heavy things as it is like having a mini delivery,” (Udaypur, GI 305, R 1). “Mothers should encourage their daughters to maintain sanitation and not let them do heavy work,” (Udaypur, SSI Teacher 315, R 1). Girls, mothers and teachers feared ‘heavy bleeding’ and it was important to avoid carrying heavy loads, get sufficient rest and eat nutritious food while menstruating: “We should not carry heavy loads. If we carry heavy things then there will be heavy blood flow, and we should eat nutritious food,” (Udaypur, GI 308, U 2). “When blood goes through our vagina then our body will be weak so we must eat more fruits,” (Udaypur, GI 309, U 2). 38.5% of girls reported resting more than usual while menstruating in Udaypur, and 23.8% in Sindhuli (Table 19). Although families recommended restricting heavy work to prevent heavy bleeding, not all families could do this in practice, particularly in Sindhuli: “In the neighbourhood most girls do these heavy work, as there are not many members in their family, but in my house we are many and handle things slowly together. So during menstruation I do not work. But in the village they work both the time during their menstruation and when they are not menstruating,” (Sindhuli, GI 407, U 10).

The cultural links between menstruation and vulnerability might reinforce other restrictions, curtail movement, and make it difficult to encourage girls to be active while menstruating: “It is said that more blood goes while we are menstruating if we jump or walk. That is why we must stay safe,” (Udaypur, GI 309, U 2). “I play sports but I cannot jump much....I do not feel like jumping because there will be heavy bleeding,” (Sindhuli, GI 404, U 10). Teachers and mothers also reported counselling girls to take extra care of themselves during menstruation: “During menstruation we must maintain good hygiene and eat nutritious food since we

discharge blood and other things from inside our body, so it must be made strong again. I have discussed about that with (my daughter),” (Udaypur, SSI Mother, 311 R 1).

Girls’ current knowledge and information

We asked girls if they knew about the cause of menstruation now, and 40.8% in Udaypur and 16.9% in Sindhuli reported not knowing (Table 6). In Udaypur, only 36.9% of girls reported receiving more information about menstruation after menarche, compared with 84.6% in Sindhuli, which may explain the low levels of knowledge in Udaypur. This additional information tended to be from friends, books, their mother, or an elder sister. Girls said they felt most comfortable talking to their mother, friends, or older sister about their menstruation; almost none felt comfortable talking to men or teachers. In qualitative data we found that girls had a vague idea about the cause of menstruation, but only a few were able to be specific. Girls, mothers, and teachers commonly told us that menstruation was the body disposing of bad blood: “The blood that comes out from the 28th day to the 7th day or until the 10th day is called impure blood,” (Udaypur, SSI Teacher 316, U 2).

Although mothers were the main source of information for menstruating girls, we found that they were uninformed and unprepared to talk to their daughters about the causes of menstruation. They were usually embarrassed trying to explain to researchers about the cause of menstruation, and none had spoken to their male children about menstruation at all: “What can be discussed with sons? I have not even talked about it with my daughter, how can I talk with my son?”(Udaypur, SSI Mother 313, R 1).

Questionnaire data show that girls did not seek information from teachers about their menstruation, and qualitative data showed that girls usually only interacted with the teacher to ask for sanitary pads or leave from school. Some teachers also reported not having been asked about menstruation by students. In Sindhuli, girls talked about a radio show they had heard, a programme that they had received in the child club and through non-governmental organisations such as PLAN Nepal and NEWAH. They could remember some information quite specifically – the need to keep clean, and dry cloths in the sunshine - whereas other information was less well remembered.

Overall mothers, teachers, and girls thought it appropriate and useful that non-governmental organisations or community-based organisations would teach subjects relating to reproductive and menstrual health. Girls reported finding it easier to interact with individuals that they didn’t encounter every day, and teachers also found it easier. One teacher reported feeling uncomfortable talking to students about reproductive health because he had known the girls and their families since they were young: “When I was new to this profession I did not

recognise any students so it felt easy to teach about those matters. But slowly as we build up a relation with students and their guardians so it is difficult to teach them about those matters,” (Udaypur, SSI Teacher 316, U 2).

Teachers reported a lack of training and teaching materials to teach reproductive health and a few teachers explained menstruation in a very scientific way, perhaps to hide their discomfort or avoid answering at all: “If they try to get beyond a theoretical explanation I suggest them to get married and you will get all the information,” (Sindhuli, SSI Teacher 415, R 9). There is also some evidence that teachers reinforced cultural interpretations of menstruation. For example in a group interview we were told: “When we reached class nine we knew that... impure blood comes out. During menstruation proper care should be taken, when the blood comes out through our vagina then our body will be weak so we must eat more fruits,” (Udaypur, GI 309, U 2).

Girls who had received classes about reproductive health and/or menstruation from teachers complained that the boys asked too many questions and tried to embarrass them and the teacher. The boys laughed a lot, and couldn't take the class seriously. A few girls reported being told by the teacher to read the book themselves and then ask if they had any questions. A teacher reported that there needs to be adequate numbers of classrooms and teachers to teach these classes disaggregated by gender, as this would be easier for teachers and students: “If a class is divided into two, we need an extra teacher which would create a problem. That is the reason why we have to educate (boys and girls) together,” (Sindhuli, SSI Teacher 415, R 9). Generally girls felt more comfortable receiving classes and support from a female teacher, and they felt embarrassed with male teachers. They felt that female teachers were more empathetic. Most students had not reached that part of the curriculum yet, and those that had received a class did not appear to have accurate knowledge: “Sir told us that women should not walk around alone during menstruation and should not live with anyone. If anything happens then it causes HIV,” (Sindhuli, FGD 401, R 9).

Boys' current knowledge and information

Most boys thought that menstruation was a normal physiological process, and in Sindhuli 35% (n=7) thought that menstruation was bad blood being taken out of the body (Tables 12, 13, 14, 15, and 16). Boys were aware that girls could be in pain or feel dizzy during their menstruation. More boys reported teachers as their main source of information than other sources (75% in both districts). This is surprising given that a relatively low proportion of boys (20%) reported receiving a class on sexual and reproductive health in Sindhuli. Those who had taken the class reported finding it useful and 64% in Udaypur would have preferred the class to be disaggregated by gender, compared to in Sindhuli where only one boy reported this preference (25%). Boys also reported receiving information from female family members (Udaypur 35%, Sindhuli 65%), male family

members and other sources. Their understanding of restrictions was more varied than was girls', particularly in that they didn't report parental control as being the reason to follow restrictions. More boys than girls found information about menstruation on the internet.

Materials for managing menstruation

Girls usually started and continued to manage their menstruation with old, clean, dry, soft cotton cloths, torn up saris or bed sheets. They used these materials because they were readily available and were better at absorbing blood than is slippery cloth. Most mothers also used cloth, and reported feeling uncomfortable using disposable sanitary pads. A few mothers reported introducing their daughters to disposable pads, thinking that it would be difficult for them to manage cloth. 63.1% of girls in Udaypur and 76.9% girls in Sindhuli had used disposable sanitary pads at least once and 32% of girls in Sindhuli said that they usually used sanitary pads, compared with only 18.3% in Udaypur (Table 17). The use of disposable sanitary pads did not differ between girls sampled from rural and urban areas.

Reusable sanitary pads

Most girls, teachers and students were unaware of reusable sanitary pads, and did not use them. In Sindhuli in two group interviews some girls reported having made reusable sanitary pads. They were time consuming to make, and girls experienced leakage while using them, so they preferred not to use them: "There are not that many benefits to reusable sanitary pads, unlike disposable pads. While using (reusable sanitary pads), there will also be leakage. So, I did not find it any better (than cloths)," (Sindhuli, GI 405, R 9). A mother who had received training on making reusable pads felt that they may cause genital irritation: "I feel that those cotton cloths will tear and is also too thick to use. After using and washing, it [reusable pad] does not dry fast and if stains remain then problems like itching, rashes in vagina may occur," (Udaypur, SSI Mother 311, R 1).

Disposable pads and cloth

Around 64% of girls in both districts expressed a preference for using disposable sanitary pads if given the choice. We explored this in qualitative data, and most girls felt that it was easier to move around while using sanitary pads. They were more comfortable and girls were less worried about them being displaced or falling out which would cause leakage of blood onto their clothes: "While using pads there is no tension (stress). There is total freedom. All the blood is absorbed there. Cloth moves, and you feel tense about whether your clothes get stained or not, but with the use of pads there is no tension," (Udaypur, GI 309, U 2). Only a few girls felt 'safer' with a thick wad of cloth. Girls told us that it was difficult to jump and move around while wearing cloths: "It feels difficult to walk

while wearing menstrual cloth," (Sindhuli, FGD 402, U 10). Some girls also told us they were self-conscious about a large wad of cloth being visible: "Pads are comfortable to walk in and will not look 'big' from the outside...you don't get a puffy backside," (Sindhuli, FGD 402, U 10). Many girls reported using both pads and cloths, preferring to use pads when they moved outside their home, and cloth for around the home "We want to use pads when we have to travel, otherwise we want to use cloths when we stay at home," (Sindhuli, GI 405, R 9).

Girls complained about the time it took to wash the cloths, whereas disposable pads did not require much time and effort: "If pad is used then it saves time whereas if cloth is used then time isn't saved," (Udaypur, GI 307, R 1). Girls preferred to wash their cloths immediately, for fear of others seeing the blood, and also to keep the cloth from staining badly. During the winter girls were disinclined to wash their cloths in cold water. If girls were travelling somewhere the difficulty of managing the washing and drying of cloths, combined with having more trust in pads not to leak, meant that they preferred to use disposable pads. A few mothers reported usually staying at home during menstruation, which made it easier for them to manage washing and drying cloths.

Despite the preference for pads, the expense of buying them was prohibitive for many girls to use pads all the time. They often relied on older sisters or mothers to buy pads for them, (particularly in Udaypur) which made their supply unreliable, whereas cloths were always easily available. In Sindhuli 70% of girls who had used a sanitary pad had bought it themselves, usually from a larger bazaar area more than 20 minutes' walk from their home. Only 36% of girls in both districts had bought pads from a local shop. A few girls had been told by their mother that they shouldn't get used to disposable pads, as this would be unsustainable because they are not always available. Although there was little difference between urban and rural schools in terms of the material that girls use, the qualitative data shows that availability of disposable pads, and knowledge about disposable pads affects use: "This is not a city area. Only people from city areas use pads," (Udaypur, SSI Mother 313, R 1).

Most girls felt uncomfortable buying disposable sanitary pads from male shopkeepers, and bought them in a shop where they knew the owner, and the shopkeeper was female: "If the shopkeeper is female, because she has experienced it herself, she will understand our situation. But if it is the male shopkeeper in the shop then I feel embarrassed to buy a pad from him. I think they might tease me," (Udaypur, GI 305, R 1). Girls kept the pads hidden at home among their clothes. Some girls felt so uncomfortable and scared that someone would talk badly about them, or make fun of them, that they would not buy disposable sanitary pads. Embarrassment in buying pads was more of a concern to girls in Sindhuli than Udaypur, where 18.4% of girls said this was the main reason that they did not use sanitary pads (Table 17).

Health and hygiene

There was a general perception of menstruation being related to disease, illness, bacteria, decay, and dirt. One mother told us: “I feel like menstruation is the starting point of disease for every woman. Various deadly diseases are all caused because of menstruation,” (Udaypur, SSI Mother 311, R 1). There were different ideas of when it was important to bathe, according to traditions and seasons (with women bathing less in the cold months). We tried to capture this in our questionnaire. 13.8% of girls bathe every day in Udaypur, and only 2.3% in Sindhuli. More girls bathe on the first and third days of menstruation. Girls usually used soap, and washed their genitals (Table 18).

Of the girls who used cloths to manage their menstruation, almost all used clean, dry, used cloth (Table 19). Most girls did not have somewhere private to wash their menstrual cloths, and equal numbers of girls dried their cloths in a sunny place where clothes were normally dried (41.9% in Udaypur and 44.5% in Sindhuli), as dried them in a hidden way (either underneath other clothes or in a place away from view) (Table 19). Cloths were hidden from view because of worries about others casting an ‘evil eye’ on the menstruating woman, or the cloth causing pollution of the things around it: “If blood-stained cloths fall on cow dung it will cause disease so my family do not let us dry cloths in a place where there is cow dung,” (Udaypur, FGD 301, R 1). Many felt that it was embarrassing and shameful if others saw menstrual cloths: “(I dry) that cloth by covering up, hiding it. People will say different things...I am afraid what society will say,” (Sindhuli, SSI Mother 412, U 10).

There were conflicting opinions on whether pads or cloths were better for health. Girls talked about disposable pads or cloth in terms of the extent to which they could give them ‘rashes’ and ‘itching’, which was bad for their health. A rash could occur from having to walk a long way, causing chaffing with cloth, or having to pull off a cloth that had stuck to the vagina and pubic hair. Also some felt that you could get ill because a cloth had not been cleaned properly (i.e. it was still stained). One girl worried about the cloth decaying and then pieces of cloth entering the vagina, causing ill health.

Discussions revealed that girls, mothers, and some teachers had some confusion about the connection between maintaining menstrual hygiene and the health consequences. One girl stated “We learned things like if those used cloths are not washed and if we don’t take a shower then it will affect our health. Therefore we used to bath once a day and wipe ourselves clean with a towel. After washing cloths we would dry them in the sunlight. Because we do this we get less stomach ache,” (Sindhuli, GI 405, R 9). Menstruation was also blamed for causing uterine cancer, and it was thought this could be avoided by keeping clean: “We teach our students that they should keep themselves clean during the menstruation, only then can you remain healthy... if not you might face several

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health problems in the near future such as uterine problems, and cancer,” (Sindhuli, Teacher SSI R, 9). Some stated that there were bacteria in menstrual blood, and for this reason it was important not to use others’ cloth, or better to use disposable sanitary pads: “We have to make cloth out of old and dirty saris so disease may be transmitted from it. But pads are clean and there is also some kind of medicine applied inside it or something...it is safe to use pad for our body and health but cloth is bad for us,” (Udaypur, SSI Mother 313, R 1). It was thought that a dirty cloth could cause excessive bleeding. But others felt that cloth could effectively absorb menstrual bacteria “and save us from diseases,” (Udaypur, GI 305, R 1). Others felt that disposable pads would give them diseases and their family advised them against using pads: “My mother told me not to use other materials. She said that other materials cause diseases, and only cotton cloth should be used. Pads should only be used while going somewhere,” (Udaypur, GI 307, R 1).

Participants also spoke about the dangers of catching illness from the bacteria in menstrual blood while they were washing their cloths: “When washing the cloth the bacteria may get transferred to our hands, and it is also disgusting to wash the cloths. While pads do not need to be washed we can throw them away after using them so there is less chance of getting our hands infected. Later on we have used the same hands to eat and do many other things (Udaypur, FGD302, U 2). Others stated the importance of not hanging their washed cloth on a metal wire: “The cloths trap the rust from the iron wire and when we use it the rust enters our body and causes infections,” (Udaypur, GI 305, R 1). Concepts of menstrual blood and materials as carrying disease were linked to restrictions: “At home (girls) are not allowed to touch some things. In the context of health, they are not allowed to touch some things because of the belief that viruses will transfer,” (Sindhuli, SSI Teacher 416, U 10).

Disposal of menstrual materials

Disposing of pads or cloths was stressful for most participants because it was important that others did not see them. If others saw cloths or pads, many believed that they could curse the menstruating woman or girl, through ‘evil eye’, and as a result, the woman would have heavy bleeding, pain or become infertile. This was an important reason for women and girls to wash cloths before they disposed of them, but this was not possible with pads, making this a big disadvantage to using pads. “When they are used once, pads should be thrown away, but where should we throw them? If anyone sees that blood then maybe my body will become weak,” (Udaypur, GI 309, U 2). Girls disposed of materials by burning, burying, or throwing in a community rubbish dump, although some reported: “The soil will be polluted when menstrual cloths are buried,” (Udaypur, GI 309, U 2). Some girls reported difficulties with burying pads as dogs may discover them, flies gather around the waste pit, and the disposed menstrual cloths make a ‘foul smell’ when buried or burnt. Those who had regular rubbish

collection by the local authorities reported feeling relaxed about disposal: “Rubbish is not seen here and there. We do not know where the rubbish is thrown. After throwing in the (rubbish collection) vehicle, those pads are not at home, and I feel relaxed. There is no need to dig a pit, bury or set fire to it...there will not be any infection...” (Sindhuli, SSI Mother 412, U 10).

Menstrual management during the school day

Researchers observed the toilets and handwashing facilities in all 16 schools. The schools where we collected qualitative data were relatively large (39–168 students in class nine and ten in Udaypur and 39–112 students in class nine and ten in Sindhuli), and tended to score worse than other schools (Table 20). It is encouraging that almost all schools had girls-only toilets without derogatory graffiti, and just over half were inward-facing and on the compound of the school. Qualitative and quantitative data suggest that access to the toilet was not perceived to be problematic and 75% of girls in Udaypur and 88% in Sindhuli reported being always allowed to use the toilet during class, and almost all could use it during breaks (Table 21). But no toilet was defined as disabled-friendly, and girls generally avoided going to the toilet to change their sanitary materials.

In interviews and focus groups, girls unanimously described toilets as smelly, dirty places where they didn’t feel confident or comfortable to manage their menstruation: “It is difficult to change in the toilet. Although there are many toilets they are all dirty,” (Sindhuli, GI 407, U 10). The lack of consistent water supply and soap were of particular concern, and regular use of the toilets (including those specifically for girls) by younger children, college students and other male community members meant that they didn’t feel safe and they were unable to maintain the cleanliness of the toilets themselves. Girls in focus groups described a strategy for cleaning menstrual blood from the toilet pan: “if there is blood in the toilet pan when we urinate we ask one of our friends to urinate on that exact area so that the blood gets flushed,” (Udaypur, FGD 302, U 2).

In a few schools, students were responsible for cleaning the toilet themselves, and others had irregular cleaning staff, which girls were not satisfied with. “There is one auntie (cleaning staff). She only comes sometimes and most of the time she does not come because she is feeling sick or has no time, so the toilets remain dirty,” (Sindhuli, GI 404, U 10). The irregularity or absence of water supply and the irregularity of younger students flushing the toilets meant that they often got so dirty that cleaning was ineffectual. Girls complained that the toilets got blocked with leaves, stones and twigs which students used instead of water. They also noted that because the toilet was so dirty it was somewhere where they felt they could catch a disease. Given the cultural perceptions of menstruation as a time of vulnerability, girls told us that this was another reason to avoid using the toilet while menstruating.

In contrast, the staff toilets were clean and usually had water. Girls tried to use the teacher toilets when possible: “If I need the toilet really badly then I go to teacher’s toilet as there will be water,” (Sindhuli, FGD 402, U 10). Mothers who had been to meetings in the school had not observed the toilets which their daughters had to use, and only used the teacher toilets. Teachers were aware of the dirty toilets, but felt it was not their personal responsibility to ensure their cleanliness: “The office assistant does not clean the toilets well and regularly, but at the time we conduct programmes we hire some other people to clean it...our school has not put much effort into this...it is not as clean as it should be. The school should focus more on hygiene,” (Sindhuli, SSI Teacher 415, R 9). In some schools girls complained about the toilets to the teachers, and only a few reported that they were cleaned after the complaints. Teachers responded to complaints by saying that students themselves were to blame, or they found it difficult to hire and supervise a cleaning person.

Our quantitative data show that around a third of girls change their sanitary materials during the school day (32.3% in Udaypur, and 42% in Sindhuli), but during qualitative data collection only one girl in a group interview in Udaypur admitted to changing her sanitary materials at school, in the toilet. Other girls would either go to their own house (if nearby), a friend’s house, or a tea shop (canteen) just outside the school gate to change their sanitary materials if absolutely necessary: “When my friends menstruate I take them to my house,” (Sindhuli, GI 404, U 10). Most girls avoided changing their materials at all during the school day, wearing thick cloth and/or restricting their movement when they were bleeding heavily: “It is more difficult to use thick cloths. We do not go anywhere that much on a heavy day. We stay home. It is difficult to walk around. We only go to the toilet,” (Sindhuli, GI 405, R 9). Girls found it difficult to carry sanitary materials in case it was discovered and became a source of teasing: “Guys in our class take our bag and check it, they ask for extra pen or copy to borrow, so there is the possibility that they see it. It would be a very embarrassing situation for me so I wear a thick cloth from home,” (Sindhuli, GI 407, U 10).

Girls reported that they would prefer a private place or toilet cubicle to change their sanitary materials, but only if this was ‘child friendly’. At a school where we collected qualitative data, girls reported urinating and changing pads in the bushes instead of in the toilets. This might have also been because they could dispose of their cloth or pads there also. Girls’ reluctance to change sanitary materials in school might partly be attributed to girls’ inability to wash or dispose of their used materials at school. Only one girl in each district reported ever having washed her sanitary cloth in school. Quantitative data show the main reason for not washing cloth was because there was no ‘proper place to wash’ (Table 23). Qualitative data also emphasise the importance of private, clean facilities with water and soap for washing cloths: “We do not wash them inside the toilet because sometimes there is no water and it is crowded. There are also

young kids who make the toilet dirty,” (Sindhuli, GI 405, R 9). On the rare occasion that girls did change their materials in school, they usually brought their used materials home for disposal or washing. Only one school we visited had a dustbin in the toilet, and it was not emptied regularly. This was the school where NEWAH had begun working. Girls’ fear of being cursed if someone saw their menstrual blood – leading to heavy periods, increased menstrual cramps, or even infertility – made disposal and changing in school a stressful experience that they avoided.

Absence from school

Absence attributed to menstruation is difficult to capture. We asked girls to recall from the past three months how many whole days they were absent from school because of their menstruation, and for how many days they were absent for part of the day because of their menstruation (Table 24). Girls who had missed a whole day of school (12.3% in Udaypur and 21.5% in Sindhuli), attributed this to pain, and some were afraid of leakage (18.8% in Udaypur and 17.9% in Sindhuli). Almost 40% of girls in Sindhuli reported missing part of the school day due to their menstruation in the past three months compared with only 20% of girls in Udaypur. In both districts the main reasons were pain and fear of leakage, and in Sindhuli girls also reported being absent to go and get sanitary materials. Although we tried to understand the reason for absence, there may be some problems with the categories in our questionnaire not being mutually exclusive. For example girls who fear leakage may also need to go and get sanitary materials, and also may have menstruated suddenly in school. In our qualitative data several reasons were reported. Girls felt unwell, and they were scared about having leakage: “I do not feel anything at other times but during school when there is heavy discharge of blood, pads will get wet. That is why I go home because I am scared I will stain the bench,” (Sindhuli, GI 403, R 9). A few girls reported having heavy bleeding that caused them to miss school because they felt unwell, and fragile. Girls reported being allowed to leave school easily if they reported stomach cramps or began menstruating suddenly. No schools had a specific place for girls to rest, and they sometimes rested in another classroom or the staff room. Girls did not report receiving pain medication or other kinds of pain relief. A few girls reported that taking pain medication may cause heavy bleeding or infertility, but this was not discussed widely.

Leakage and teasing

In both districts, nearly 40% of girls said they sometimes or always had leakage (Table 23), and almost all the qualitative data showed that leakage was a big worry for girls while attending school or moving around generally. We examined leakage by type of sanitary material, and found that even girls who usually used pads experienced leakage sometimes. 5% of girls in Sindhuli said they always had leakage. We asked girls what they would do if they had leakage, and 61% in Udaypur and 75% in Sindhuli reported they would go home and stay at home. In

qualitative data girls confirmed that they would go home and stay at home, especially if they lived far from the school. The embarrassment they felt in having leakage would also prevent them from returning on the same day.

Girls were more worried about being teased in Sindhuli than in Udaypur, perhaps because they had more leakage. Girls were mainly fearful of being teased by boys, but over 45% of girls in both districts were also fearful of being teased by girls. Girls who had not started menstruating were usually the perpetrators: “Sometimes they say I shouldn’t touch them because they might also have their menstruation, (Sindhuli, GI 404, U 10). “If I say I am going through *mens*, then friends who sit next to me say that I am foul-smelling (laughing),” (Sindhuli, GI 406, U 10). Fear of leakage and subsequent teasing was the most significant source of stress for girls in school. Every girl in the school where NEWAH had begun working remembered a story given by NEWAH staff about a girl who was teased and then committed suicide. Girls found this shocking and it appeared to overshadow the other information that they had learned.

Participation in school during menstruation

Boys and girls usually sit separately in the classroom from a young age, with girls on one side and boys on the other side. Despite the fact that they sit separately, over 90% of girls reported feeling uncomfortable sitting in classroom with boys while they were menstruating. Many girls told us they were advised by their family not to interact with boys after they began menstruating, and some girls were restricted from touching or looking at male family members in their home during menarche and/or every menstrual period. Therefore it is unsurprising that they felt uncomfortable around boys while menstruating (Table 25).

Girls were generally less confident in Sindhuli than in Udaypur, particularly in class participation where they could be the centre of attention (Table 26). In Sindhuli, when menstruating, over 50% of girls felt that they could never write on the board in front of the class, 36% could never stand up to answer a question, 31% could never sit at the front of the classroom and 24% could never put up their hand to answer a question: “I don’t raise my hand. If I am asked to stand up there is heavy bleeding so I keep silent. If the teachers insist that I stand up and answer I say what I know and keep quiet. As a punishment a female teacher makes us stand for an entire period. I asked her to beat me instead but they stick to their decision. I can’t even speak the truth as there are boys in the class so I stay silent.” (Sindhuli, GI 407, U 10). Teachers appeared unsympathetic but noticed that: “when (girls) have their menstruation they become weak, they do not participate in activities and sit passively.” (Sindhuli, SSI Teacher 416, U 10).

When we asked girls how they felt being asked to write on the board many were uncomfortable. A girl told us: “it causes fear and makes our body tight (tense).” (Udaypur, GI 305, R 1). Some girls in both districts were worried that standing up

would cause a sudden flow of blood and increase the chance of leakage and others seeing this. In both districts, while girls were menstruating they felt girls were more able to concentrate on what teacher was telling them, do their work, and answer when called upon than other forms of participation. Most girls felt that they could go to school, and could stay in class and in school for the whole day when they were menstruating. Both mothers and girls in Sindhuli and Udaypur felt it was important not to miss school, and this was avoided if at all possible. Girls did not feel comfortable playing sports when they were menstruating, particularly in Sindhuli where 81.5% reported not feeling comfortable. It is possible that the numbers of girls feeling uncomfortable playing sports were higher in Sindhuli because 38.5% of girls in Udaypur reported not usually playing any sports. It could also be related to the fact that more girls report wearing cloth and report leakage in Sindhuli.

Boys noticed this lack of participation in sports particularly in Sindhuli. 80% of boys in Sindhuli believed that girls could not do sports when they were menstruating. In comparison with Udaypur, generally the boys in Sindhuli felt that girls were less capable of participating in school during their menstruation (Table 27).

MHM coping strategies during the school day

A few schools had begun discussions about how to provide better support to menstruating girls. Meetings with parents had been conducted to seek their support for menstrual hygiene strategies, and one school had taken steps towards improving infrastructure. One strategy was to have pads available for girls who started menstruating in school. In one school, girls had to pay for these pads, but in others they were given free of cost. This made resupply problematic. In schools without the facility of pads, girls stated that this would help them to stay in school instead of having to go home or to a friends' house to get materials. The pads were either kept at the child club, or with a female member of staff. Most girls felt too uncomfortable to ask for pads themselves, and asked friends to ask for them. We found that many students were fearful of interacting with the teacher, and it was challenging for them to talk about menstrual management with teachers unless they were friendly. At one school, the reaction of the teacher was rude: "I approached the teacher for one of my friends and they told me that there was no pads and told my friend to go home. And they also said that they do not touch menstruating girls, they do not have pads, and they complained that we do not ever pay for them." (Udaypur, FGD 302, U 2).

Discussion and recommendations

Our research sought to a) investigate and understand the scope of challenges faced by girls during menstruation at school and in the community; and b) understand the determinants of those challenges and identify potential solutions and recommendations. We discuss the study limitations, summarise study findings, and offer suggestions for how the findings could be used to inform the development of interventions. We present suggestions of how tools could be improved for future use in Appendix 1.

Limitations

We sought to focus on older adolescent girls because we thought they would be more comfortable and therefore more open with us, but because the School Leaving Certificate examinations were happening when we went to collect data, we had to interview girls from classes seven to ten. However, we found that girls from lower grades were also willing to talk to us about their menstruation, and they could easily recall experience of menarche, sources of information, and coping strategies. We therefore feel this did not affect our findings.

We were only able to invite the participation of students attending school when we gave the consent forms. This approach meant that we excluded children who are out of school or vulnerable to drop-out. This is an omission that may affect our interpretations of how menstruation affects absence from school.

Our method of data collection with boys did not succeed in allowing boys to respond anonymously, and therefore more openly. A researcher had to check up on most of the data because boys found it difficult to fill in the questionnaire. In future studies we recommend doing one-to-one interviews, even with female researchers.

Our quantitative tools were limited by the fact that we could not do qualitative research before designing them. Some options were therefore missing and some questions were less relevant than they could have been.

Summary of study findings

Although some girls and families were challenging restrictions, the perceptions of menstruation as a dirty, polluting process with the potential to cause harm to girls, families, individuals, crops, and livestock still prevailed in the study districts. Menstruation was perceived as a time of vulnerability, when women and girls should rest, be around their home, and take care of their body. In addition, fear of suffering ill health, heavy bleeding or infertility if others see menstrual blood is a constant source of concern for women and girls. The lack of appropriate, comfortable and affordable materials for MHM, the lack of adequate waste

disposal, and the lack of adequate toilet facilities at school made leakage and others seeing their menstrual blood a constant concern for girls. Girls avoided changing their sanitary materials at school because toilets facilities were dirty, and they lacked privacy. Girls preferred to have some discomfort through using thick cloth, restricting their movement and using friends' toilets as opposed to using the school toilet. Interventions should focus on cultural concepts of pollution and vulnerability **and** practical, sustainable strategies to improve waste management and maintain clean, child-friendly toilets to enable more confident MHM.

Recommendations

- **Informing and educating people who are existing sources of information and support**

Girls received information about menstruation from mothers, friends, and sisters. Some had also received information from non-governmental organisations and media. This information was not always useful or true. Interventions should focus on educating mothers and sisters to equip them with the skills and information to handle conversations about menstruation that go beyond the 'it's a normal healthy process' approach. Girls, boys, teachers, and mothers would benefit from receiving information about what happens to the body during menstruation. Explanation about the causes of pain, the reasons for heavy bleeding and differences in flow would be particularly useful in dispelling myths and giving girls more confidence to move around freely.

Our study found that girls did not receive information from teachers about menstruation, and teachers felt awkward teaching reproductive health classes. Both girls and teachers suggested that these classes could be more appropriately taught by non-governmental organisations, or local health institutions. Many girls and boys in our study had not yet received classes about reproductive health and menstruation, which suggests that this subject was either avoided or introduced too late in the curriculum.

We recommend that girls and boys receive information at an age-appropriate time, rather than only in a particular grade, especially in rural areas where it is more common that students enrol late or repeat years of schooling. Head teachers and school management committees could examine their student population to decide the appropriate grade at which students should receive education about MHM from a non-governmental organisation or health institution. This session could then be reinforced by text book and teacher education as part of the regular curriculum taught in class nine. Teachers required support to teach reproductive health and MHM classes, such as training and materials, extra teachers, and adequate classrooms to teach some topics to boys and girls separately, enabling a safe environment in which to ask and answer questions.

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- **Changing community norms**

Participants' impressions of menstruation as dirty, disgusting, and the vehicle for bacteria and illness might help to promote ideas of good hygiene during menstruation, but might also be harmful because they reinforce concepts that girls are vulnerable during menstruation and can bring bad luck and ill health on themselves or their family. This should be challenged with more information and better understanding of the concept of menstrual hygiene. It might be useful to refrain from discussing 'menstruation' with the word 'hygiene', to avoid reinforcing negative social norms.

Engagement with fathers, grandmothers and grandfathers, as well as other family members, is appropriate in this context because they are important stakeholders in household decisions about whether to follow restrictions or not.

- **Improving toilet facilities, water supply and waste disposal**

Girls were managing their menstruation and going to school, but it would be so much easier for them if toilets were child friendly, and they had a clean, private, secure space with water, soap, and waste disposal facilities to manage their menstruation. Interventions should focus on supporting schools to find a sustainable and effective way to maintain cleanliness of facilities, whether by supervision and motivation of cleaning staff, or reinforcing cleanliness through students and teachers using the same toilets.

Although absenteeism due to menstruation is difficult to measure, our data indicate that girls spent time at friends' houses changing their materials, or going home to change, which might cause them to miss part of the school day. If girls knew they could change their menstrual materials as needed they might spend more time at school and feel more able to participate in class and sports.

- **Educating boys and girls about physical and psychological developments in adolescence.**

Fear of leakage is partly driven by cultural taboos about the dangers of others seeing your menstrual blood, and also by adolescent discomfort with bodily changes and fear of giving ammunition to peers that would make them vulnerable to ridicule. Despite an apparent lack of teasing, girls were very fearful that if others knew they were menstruating, or if leakage happened, that they would be teased. The fear of teasing because of leakage is another way of making girls feel insecure and vulnerable, reinforcing negative social norms about menstruation.

- [Improving access to comfortable, secure, quick-dry and cheap menstrual hygiene management materials](#)

Enabling girls to access materials that they can trust not to leak is paramount in making girls feel confident during their menstruation. Although reusable sanitary pads have been promoted in Nepal, they need to be secure (not causing leakage), easily available, easy to wash and dry, and not time-consuming to make. The few girls who had received training were unconvinced that they were much better than cloth. Mothers and older girls were a source of information and a source of support in procuring sanitary pads and materials, and therefore they should also be involved in learning about reusable sanitary pads. It would also be useful to dispel myths about sanitary pads, cloths, and hygiene, so that girls can feel confident they are not damaging their health with their choice of material.

Having pads available for girls to use at school was seen as an important and effective way to keep girls in school. Girls should be aware of this facility, and pads should be kept clean and stored in an accessible place in case the focal teacher is absent. The focal teacher should also be prepared to counsel girls on menstruation and should be interested in being supportive of girls. If the focal teacher is unapproachable there is no use to having sanitary pads available in school for girls. Re-supply was an issue in schools that gave pads for free, and therefore the active participation of community members, parents, and students is important in determining strategies to sustain interventions.

- [Community waste disposal facilities](#)

Inadequate waste disposal in communities was a source of stress for women and girls. The embarrassment of others seeing menstrual cloths and the potential for adverse effects on the menstruating women if menstrual blood was seen were concerning for women and girls. Regular rubbish collection was found to remove the stress from women and should be encouraged and/or facilitated in communities where possible.

- [Pain management and positive role models](#)

Many girls reported having pain during their menstruation, which restricted their participation in community, school and household activities. It was the main cause of absence from school in our study. A few girls reported fear of negative health consequences of taking pain medication, but this was not widely discussed. The physical symptom of pain combined with cultural interpretations of the physiological process of menstruation, and a lack of knowledge about the reason for the pain, reinforces the concept that girls are vulnerable, weak, and less capable during their menstruation. There is a need to introduce positive role models, and enthuse girls about participating in activities that will make them more willing to challenge these concepts when they feel able. Teachers should also be made aware of the need to actively encourage adolescents to engage in

sports. Access to pain-relieving medication in school and a place to rest would also be useful for girls.

Annexes

Appendix 1: Recommendations for project evaluation

In describing the effect of the intervention, tools need to address the specifics of the intervention. Most questions can be used again to evaluate whether there have been any changes, but we recommend that some should be adapted. We also feel that the sample of boys should either be increased or abandoned, depending on the extent to which the intervention involves boys. If boys are a direct target group for intervention then we suggest that they should be asked questions relevant to the intervention, but otherwise we feel that the data from boys added little to our findings. For project evaluation, researchers may also want to access information from out-of-school children, and separate tools should be designed for this group.

Data from mothers was very useful in terms of understanding the community context, and the type of information that girls were receiving. It would not be necessary to do qualitative interviews about the same topic in a subsequent study. It would probably be more useful to direct the interview more towards the intervention specifics.

It would be beneficial to explore whether distance from home to school affects absence from school during menstruation. Girls stated that they went home to change their materials if necessary, and if a girl's home was far from the school this might make her more vulnerable to absence because of menstruation.

Appendix 2

Figure 2: Question-specific recommendations for questionnaire tools

Question	Question number (structured interview tool)	Reason for adaption	Suggested change
List of restrictions	26 to 34 (girls) 16 to 33 (boys)	Not all the restrictions present were mentioned in the quantitative data collection.	Add restrictions mentioned by girls in qualitative data collection.
Reasons for menstruation	21 and 22 (girls) 38 (boys)	It is difficult for boys and girls to decide between the options, as they believe in more than one – e.g. both normal healthy process and bad blood being shed.	Separate the questions so that respondents can answer yes and no to every option.
Reason for not using sanitary pads	44 (girls)	A high proportion of don't know/other answers appeared.	Add options or add an 'other please write' notification. Focus on this in training.
Teasing	85 (girls) 47 (boys)	It would be difficult for girls and boys to recall how often teasing occurs in the past three months. Also, even if it is once, it might be so severe that it has a large impact.	Delete or re-phrase quantitative questions regarding how often teasing occurs. Retain questions about teasing in qualitative methods
Absence from school	53 and 56 (girls)	We are unsure if girls can recall accurately over the past three months. The data do seem to be triangulated with qualitative data – with girls not wanting to miss school.	We could use a diary method.
Reason for leaving (being absent) from school	54, 55 and 57 (girls)	We are unsure if we succeeded in having mutually exclusive categories.	Change categories to: Fear of leakage Actual leakage Pain Other(menstruation related)
Question on how many times girls	48	The question was not well phrased. We were also unclear what is recommended best practice	We suggest splitting the question to ask: 1. How long is your menstruation?

bathe while menstruating		in terms of bathing.	(in days) 2. How many times do you bathe over that time period? (insert number)
Questions about feeling able to do things in class	68 to 79	The 'Always, Sometimes, Never' categories were not appropriate for all questions.	Change these to when you are menstruating, compared to other times, how comfortable/confident are you in ... - Comfortable - Uncomfortable
Observation checklist		It was not detailed enough to collect data in the same way from each school. Although this was not as important in this formative phase (as WaterAid and NEWAH probably chose schools that needed more support), this will be important after interventions.	A more detailed tool should be developed.

Appendix 3: tables

Table 1: List of schools

Setting	Udaypur	Sindhuli	Type of data collected
Urban	Tribani higher Secondary School, Katari	Janajyoti Higher Secondary School, Kamalamai	Qualitative and quantitative
Rural	Shree Than Pokhari Higher Secondary School, Hadiya	Kyaneshwor Higher Secondary School, Kyaneshwor	Qualitative and quantitative
	Janapriya Higher Secondary School, Risku	Netrakali Higher Secondary School, Netrakali	Quantitative
	Dipendra Secondary School, Risku	Kuseswor Secondary School, Kyaneshwor	Quantitative
	Shree Bhagawati Secondary School, Hadiya	Shree Secondary School, Sirthauli	Quantitative
	Janata Belaka Higher Secondary School, Tapeshowri	Arundayo Secondary School, Sirthauli	Quantitative
	Phusre Secondary School, Okhle	Shree Higher Secondary School, Bastipur	Quantitative
Peri-urban	Shree Secondary School, Katari	Shree Higher Secondary School, Dudhauri	Quantitative

Table 2: Characteristics of participants in the qualitative study

	Udaypur participants				Sindhuli participants			
	FGD (N=2)	GI (N=8)	Mother (N=4)	Teacher (N=2)	FGD (N=2)	GI (N=8)	Mother (N=4)	Teacher (N=2)
Caste/ethnicity								
Brahmin/Chettri	5	6	1	1	4	5	3	-
Hill Janajati	3	5	2	-	7	11	1	-
Madeshi	-	1	-	1	1	-	-	2
Terai Dalit	1	4	-	-	-	-	-	-
Terai Janajati	4	-	1	-	-	-	-	-
Total participants	13	16	4	2	12	16	4	2
Class	10	9, 10	-	-	9	8, 9	-	-
Mean Age	15	15	-	-	15	13	-	-

N=Total number of events.

Table 3: Data collected

Methodology and method	N units of data	Total number of participants
Qualitative		
Group interviews with girls	16 (Groups)	32
Focus group discussion with girls	4	25
Semi structured interview (SSI) Mothers	8	8
SSI Teachers	4	4
Total qualitative data	32 (8 per school)	69
Quantitative		
Observation checklist	16 (one per school)	
Structured interview girls	260 (~16 per school)	260
Structured interview boys	40	40
Total quantitative data	316	300

Table 4: Socio-demographic characteristics of girls

	District		Total
	Udaypur	Sindhuli	
	N (%)	N (%)	N (%)
	N=130	N=130	N=260
Mean age	15	15	15
Caste/Ethnicity			
Brahmin/Chettri	51 (39.2)	40 (30.8)	91(35)
Hill Janajati	44 (33.8)	68 (52.3)	112(43.1)
Terai Janajati	23 (17.7)	6 (4.6)	29(11.2)
Others	12 (9.2)	16 (12.3)	28(10.8)
Religion			
Hindu	124 (95.4)	84 (64.6)	208(80)
Buddhist	1 (0.8)	40 (30.8)	41(15.8)
Other (Do not follow any religion/Christian)	5 (3.8)	6 (4.6)	11(4.2)
Primary language			
Nepali	113 (86.9)	86 (66.2)	199(76.5)
Tharu	9 (6.9)	0 (0)	9(3.5)
Tamang	0 (0)	37 (28.5)	37(14.2)
Others (Rai,Thami, Maithali)	8 (6.2)	7 (5.4)	15(5.8)
Describe yourself as disabled	11 (8.5)	9 (6.9)	20(7.7)
Educational status of mother			
None	92 (70.8)	98 (75.4)	190(73.1)
Below class 10	33 (25.4)	25 (19.2)	58(22.3)
Class 10 and above	5 (3.8)	5 (3.8)	10(3.8)
University	0 (0)	2 (1.5)	2(0.8)
Educational status of father			

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Below class 10	91 (70)	59 (45.4)	150(57.7)
None	28 (21.5)	47 (36.2)	75(28.8)
Class 10 and above	11 (8.5)	21 (16.2)	32(12.3)
University	0 (0)	3 (2.3)	3(1.2)
Wealth index			
Low	14 (10.8)	33 (25.4)	47(18.1)
Middle	99 (76.2)	89 (68.5)	188(72.3)
High	17 (13.1)	8 (6.2)	25(9.6)
How has the earthquake affected your home?			
No effect of earthquake	94 (72.3)	40 (30.8)	134(51.5)
Minor cracks to home	36 (27.7)	70 (53.8)	106(40.8)
Major damage to home	0 (0)	11 (8.5)	11(4.2)
Major damage and living in temporary structure or other's home due to earthquake	0 (0)	9 (6.9)	9(3.5)

Table 5: Socio-demographic characteristics of boys.

	District		Total
	Udaypur	Sindhuli	
	N (%)	N (%)	N (%)
	N=20	N=20	N=40
Caste/ethnicity			
Terai Janajati	7 (35)	0 (0)	7 (17.5)
Brahmin/Chettri	7 (35)	7 (35)	14 (35)
Hill Janajati	3 (15)	10 (50)	13 (32.5)
Hill Dalit	2 (10)	3 (15)	5 (12.5)
Madhesi	1 (5)	0 (0)	1 (2.5)
Religion			
Hindu	17 (85)	16 (80)	33 (82.5)
Buddhist	3 (15)	3 (15)	6 (15)
Others (Christian)	0 (0)	1 (5)	1 (2.5)
Primary language			
Nepali	12 (60)	18 (90)	30 (75)
Maithali	5 (25)	0 (0)	5 (12.5)
Tamang	3 (15)	2 (10)	5 (12.5)
Describe yourself as disabled	2 (10)	1 (5)	3 (7.5)
Educational status of mother			
None	11 (55)	14 (70)	25 (62.5)
Below class 10	7 (35)	6 (30)	13 (32.5)
Class 10 and above	1 (5)	0 (0)	1 (2.5)
University	1 (5)	0 (0)	1 (2.5)
Educational status of father			
Below class 10	9 (45)	12 (60)	21 (52.5)
Class 10 and above	7 (35)	1 (5)	8 (20)

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None	2 (10)	7 (35)	9 (22.5)
University	2 (10)	0 (0)	2 (5)
Type of toilet			
Flush to septic tank	19 (95)	11 (55)	30 (75)
Pit latrine with slab	1 (5)	8 (40)	9 (22.5)
Pit latrine without slab/open pit	0 (0)	1 (5)	1 (2.5)
Main source of water			
River/spring source	13 (65)	7 (35)	20 (50)
Pipe water in compound	4 (20)	4 (20)	8 (20)
Public tap	2 (10)	9 (45)	11 (27.5)
Tube well /bore hole water	1 (5)	0 (0)	1 (2.5)

Table 6: Knowledge of menstruation before and after menarche

	District		Total
	Udyapur	Sindhuli	
	N (%) (N=130)	N (%) (N=130)	N (%) (N=260)
Knowledge of menstruation before menarche	35 (26.9)	48 (36.9)	83 (31.9)
Source of information*	(n=35)	(n=48)	(n=83)
Mother	21 (60)	26 (54.2)	47 (56.6)
Older sister	20 (57.1)	33 (68.8)	53 (63.9)
Older sister-in-law	3 (8.6)	4 (8.3)	7 (8.4)
Female relatives	3 (8.6)	4 (8.3)	7 (8.4)
Friends	12 (34.3)	16 (33.3)	28 (33.7)
Teachers	3 (8.6)	3 (6.3)	6 (7.2)
Books/magazines/health books	4 (11.4)	4 (8.3)	8 (9.6)
Radio	1 (2.9)	3 (6.3)	4 (4.8)
Others (Health worker, television, training etc.)	3 (8.6)	5 (10.4)	8 (9.6)
Information was useful	33 (94.3)	46 (95.8)	79 (95.2)
When you first started menstruating, what did you believe was the cause of menstruation?	(N=130)	(N=130)	(N=260)
Normal healthy process	20 (15.4)	37 (28.5)	57 (21.9)
Bad blood being shed	9 (6.9)	9 (6.9)	18 (6.9)
Others (curse, supernatural reason)	4 (3.1)	13 (10)	17 (6.5)
Don't know	97 (74.6)	71 (54.6)	168 (64.6)
Now what do you believe is the cause of menstruation?			
Normal healthy process	56 (43.1)	83 (63.8)	139 (53.5)
Bad blood being shed	19 (14.6)	16 (12.3)	35 (13.5)
Other	2 (1.5)	9 (6.9)	11 (4.2)
Don't know	53 (40.8)	22 (16.9)	75 (28.8)
Since you first learned about menstruation, have you heard any more information?	48 (36.9)	110 (84.6)	158 (60.8)

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Source of additional information*	(n=48)	(n=110)	(n=148)
Mother	15 (31.3)	76 (69.1)	91 (57.6)
Older sister	18 (37.5)	58 (52.7)	76 (48.1)
Older sister-in-law	3 (6.3)	8 (7.3)	11 (7)
Cousin, sister or others	2 (4.2)	8 (7.3)	10 (6.3)
Female relatives	3 (6.3)	11 (10)	14 (8.9)
Friends	25 (52.1)	69 (62.7)	94 (59.5)
Teachers	15 (31.3)	45 (40.9)	60 (38)
Books/paper/health magazines	20 (41.7)	34 (30.9)	54 (34.2)
Health worker	6 (12.5)	0 (0)	6 (3.8)
Radio	1 (2.1)	10 (9.1)	11 (7)
Institutions/adolescents' group	13 (27.1)	41 (37.3)	54 (34.2)
Others (Female community health volunteer [FCHV], television, internet)	3 (6.3)	7 (6.4)	10 (6.3)

*Multiple responses were possible, therefore the percentages can add up to more than 100%

Table 7: Support during menstruation

	District		Total
	Udyapur	Sindhuli	
	N (%)	N (%)	N (%)
	(N=130)	(N=130)	(N=260)
Who helped you to manage your menarche?			
Mother	69 (53.1)	61 (46.9)	130 (50)
Older sister	42 (32.3)	35 (26.9)	77 (29.6)
Friend	6 (4.6)	11 (8.5)	17 (6.5)
Self-managed	0 (0)	12 (9.2)	12 (4.6)
Others	13 (10)	11 (8.5)	24 (9.2)
Who do you feel comfortable talking to about your menstruation now?*			
Mother	84 (64.6)	72 (55.4)	156 (60)
Older sister	62 (47.7)	52 (40)	114 (43.8)
Older sister-in-law	9 (6.9)	7 (5.4)	16 (6.2)
Female relative	9 (6.9)	11 (8.5)	20 (7.7)
Friend	67 (51.5)	70 (53.8)	137 (52.7)
Others (teachers, FCHVs)	7 (5.4)	7 (5.4)	14 (5.4)

* Multiple responses were possible, therefore the percentages can add up to more than 100%.

Table 8: Restrictions and reasons of Udaypur girls

Restrictions	Girls (N=130)	Reasons for restriction									
		Divine retribution	Family don't allow you	Don't want to	Feel it is the right thing to do	Heavy bleeding	Spoil the food	Never do house- hold puja	Always sleeps alone	Make you feel unwell	Others
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)		N (%)
Cannot visit temple	127 (97.7)	57 (44.9)	66 (52)	0 (0)	0 (0)	-	-	-	-	-	4 (3.1)
Cannot attend religious function	96 (73.8)	29 (30.2)	62 (64.6)	1 (1)	1 (1)	-	-	-	-	-	3 (3.1)
Cannot do household puja (blessing)	126 (96.9)	47 (37.3)	73 (57.9)	0 (0)	0 (0)	-	-	4 (3.2)	-	-	2 (1.6)
Cannot touch male family members	68 (52.3)	8 (11.8)	55 (80.9)	0 (0)	0 (0)	-	-	-	-	-	5 (7.4)
Cannot cook food or enter inside kitchen	72 (55.4)	3 (4.2)	52 (72.2)	0 (0)	0 (0)	-	16 (22.2)	-	-	-	1 (1.4)
Cannot go outside as much as normal	17 (13.1)	-	9 (52.9)	1 (5.9)	1 (5.9)	-	-	-	-	-	6(35.3)
Cannot eat food or drinks of their choice	38 (29.2)	5 (13.2)	17 (44.7)	0 (0)	0 (0)	7 (18.4)	-	-	-	8 (21.1)	1 (2.6)
Cannot sleep in the same bed with others	36 (27.7)	1 (2.8)	20 (55.6)	1 (2.8)	0 (0)	-	-	-	12 (33.3)	-	2 (5.6)
Cannot sleep in the household as others	3 (2.3)	-	3 (100)	-	-	-	-	-	-	-	0 (0)

Table 9: Restrictions and reasons of Sindhuli girls

Restrictions	Girls (N=130)	Reasons for restriction									
		Divine retribution	Family don't allow you	Don't want to	Feel it is the right thing to do	Heavy bleed- ings	Spoil the food	Never do house- hold puja	Always sleeps alone	Make you feel unwell	Others
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Cannot visit temple	127 (97.7)	50 (39.4)	62 (48.8)	6 (4.7)	6 (4.7)	-	-	-	-	-	3 (2.4)
Cannot attend religious function	98 (75.4)	31 (31.6)	50 (51)	10 (10.2)	5 (5.1)	-	-	-	-	-	2(2)
Cannot do household puja	126 (96.9)	40 (31.7)	64 (50.8)	4 (3.2)	2 (1.6)	-	-	13 (10.3)	-	-	3 (2.4)
Cannot touch male family members	48 (36.9)	9 (18.8)	31 (64.6)	2 (4.2)	2 (4.2)	-	-	-	-	-	4(8.3)
Cannot cook food or enter inside kitchen	49 (37.7)	2 (4.1)	32 (65.3)	1 (2)	1 (2)	-	13 (26.5)	-	-	-	0(0)
Cannot go outside as much as normal	16 (12.3)	-	6 (37.5)	5 (31.3)	1 (6.3)	-	-	-	-	-	4 (25.0)
Cannot eat food or drinks of their choice	42 (32.3)	2 (4.8)	19 (45.2)	2 (4.8)	3 (7.1)	12 (28.6)	-	-	-	4 (9.5)	0 (0)
Cannot sleep in the same bed with others	32 (24.6)	0 (0)	10 (31.3)	5 (15.6)	5 (15.6)	-	-	-	12 (37.5)	-	0 (0)
Cannot sleep in same household as others	1 (0.8)	-	0 (0)	-	-	-	-	-	-	-	1 (100)

Table 10: Restrictions and reasons of Sindhuli and Udaypur girls

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Menstrual hygiene management in Nepal

Restrictions	Girls (N=260)	Reasons for restriction									
		Divine retribution	Family don't allow you	Don't want to	Feel it is the right thing to do	Heavy bleedings	Spoil the food	Never do household puja	Always sleeps alone	Make you feel unwell	Others
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Cannot visit temple	254 (97.7)	107 (42.1)	128 (50.4)	6 (2.4)	6 (2.4)	-	-	-	-	-	7 (2.8)
Cannot attend religious function	194 (74.6)	60 (30.9)	112 (57.7)	11 (5.7)	6 (3.1)	-	-	-	-	-	5 (2.6)
Cannot do household puja (blessing)	252 (96.9)	87 (34.5)	137 (54.4)	4 (1.6)	2 (0.8)	-	-	17 (6.7)	-	-	5 (2)
Cannot touch male family members	116 (44.6)	17 (14.7)	86 (74.1)	2 (1.7)	2 (1.7)	-	-	-	-	-	9 (7.8)
Cannot cook food or enter inside kitchen	121 (46.5)	5 (4.1)	84 (69.4)	1 (0.8)	1 (0.8)	-	29 (24)	-	-	-	1 (0.8)
Cannot go outside as much as normal	33 (12.7)	-	15 (45.5)	6 (18.2)	2 (6.1)	-	-	-	-	-	10 (30.3)
Cannot eat foods or drinks of their choice	80 (30.8)	7(8.8)	36(45)	2 (2.5)	3 (3.8)	19 (23.8)	-	-	-	12 (15)	1 (1.3)
Cannot sleep in the same bed with others	68 (26.2)	1 (1.5)	30 (44.1)	6 (8.8)	5 (7.4)	-	-	-	24 (35.3)	-	2 (2.9)
Cannot sleep in the same household as others	4 (1.5)	-	3 (75)	-	-	-	-	-	-	-	1 (25)

Table 11: Restrictions by district and ethnicity (qualitative data)

Restrictions	Brahmin/Chhetri	Hill Janajati	Hill Dalit	Terai dalit	Terai janajati	Madhesi
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Menstrual hygiene management in Nepal



	S	U	S	U	S	U	S	U	S	U	S	U
Enter kitchen	×	×	×	DNA	DNA ×	-	-	DNA	-	-	-	DNA
Cook food	×	×	×	×	DNA	-	-	DNA	-	-	-	DNA
Touch drinking water	×	×	×	×	DNA ×	-	-	DNA	-	-	-	DNA
Touch growing fruit and vegetables	DNA	×	×	DNA	DNA	-	-	DNA	-	-	-	DNA
Enter the worshipping room/worship god/touch holy basil plants	×	×	×	×	DNA	-	-	×	-	×	-	DNA
Touch people who worship (priest/people on fast)	DNA		×	×	DNA	-	-	DNA	-	×	-	DNA
Do heavy work	DNA	×	×	×	DNA	-	-	DNA	-	DNA	-	×
Use same eating utensils as others	×	×	✓	DNA	×	-	-	DNA	-	DNA	-	DNA
Sleep in the same bed where male family member sleep	×	×	DNA	DNA	DNA	-	-	DNA	-	DNA	-	DNA
Touch male family members (wearing scared thread)	×	×	×	×	DNA	-	-	DNA	-	✓	-	DNA
Facing brothers /viewing the roof of house during menarache	×	×	×	×	DNA	-	-	DNA	-	DNA	-	DNA
Staying at home during menarache	×	×	×	×	DNA	-	-	DNA	-	DNA	-	DNA
Store/dry and wash cloths as usual	✓	×	×	✓	DNA	-	-	DNA	-	DNA	-	DNA

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Menstrual hygiene management in Nepal

Participate in rituals (worshipping brothers, eating blessed food)	×	×	×	×	DNA	-	-	×	-	×	-	DNA
Touch livestock	×	×	×	DNA	DNA	-	-	DNA	-	✓	-	DNA
Look in the mirror	×	DNA	DNA	✓	DNA	-	-	DNA	-	DNA	-	DNA
Celebrate religious occasions (festivals)	DNA	×	×	DNA	×	-	-	DNA	-	DNA	-	DNA
Drink milk	DNA	×	DNA	DNA	DNA	-	-	DNA	-	DNA	-	DNA
Eat spicy foods	DNA	DNA	DNA	DNA	DNA	-	-	DNA	-	×	-	×

×: Not allowed. ✓: Allowed. DNA: Data not available. S: Sindhuli. U: Udaypur.

Table 12: Boys' knowledge of menstruation.

	District		Total
	Udaypur	Sindhuli	
	N (%)	N (%)	N (%)
	N=20	N=20	N= 40
Causes of menstruation			
Normal physical process	18 (90)	10 (50)	28 (70)
Normal health process	2 (10)	3 (15)	5 (12.5)
Bad blood being shed	0 (0)	7 (35)	7 (17.5)
The symptoms of menstruation			
Pain (all types)	9 (45)	12 (60)	21 (52.5)
Tiredness	4 (20)	0 (0)	4 (10)
Dizziness	4 (20)	7 (35)	11 (27.5)
Other	3 (15)	1 (5)	4 (10)
Source of information*			
Teacher	15 (75)	15 (75)	30 (75)
Male family member	10 (50)	6 (30)	16 (40)
Friends	11 (55)	8 (40)	19 (47.5)
Health workers	8 (40)	2 (10)	10 (25)
Female family member	7 (35)	13 (65)	20 (50)
Internet	3 (15)	1 (5)	4 (10)
Information was useful			
Useful	16 (80)	18 (90)	34 (85)
Not very useful	4 (20)	0 (0)	4 (10)
No use at all	0 (0)	2 (10)	2 (5)
Have received a class on sexual reproductive health and menstruation			
	14 (70)	4 (20)	18 (45)
	N=14	N=4	N=18
Were able to ask questions	11 (79)	4 (100)	15 (83.3)
How did you find this class?			
Interesting	11 (79)	2 (50)	13 (72.2)
Dull	1 (7)	1 (25)	2 (11.1)
Embarrassing	1 (7)	1 (25)	2 (11.1)
Not useful	1 (7)	0 (0)	1 (5.6)
How would you prefer to be taught this class?			
Class disaggregated by gender	9 (64)	1 (25)	10 (55.6)
Class not disaggregated by gender	5 (36)	3 (75)	8 (44.4)

*Multiple responses were possible, therefore the percentages can add up to more than 100%.

Table 13: Boys' beliefs about menstruating girls.

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	District		Total
	Udaypur	Sindhuli	
	N (%)	N (%)	N (%)
	N=20	N=20	N=40
Aware when your female classmates are menstruating	1 (5)	2 (10)	3 (7.5)
Girls behave differently around boys after they start menstruating			
Yes	1 (5)	3 (15)	4 (10)
No	4 (20)	8 (40)	12 (30)
Don't know	15 (75)	9 (45)	24 (60)
Boys behave differently around girls after girls start menstruating			
Yes	2 (10)	1 (5)	3 (7.5)
No	8 (40)	16 (80)	24 (60)
Don't know	10 (50)	3 (15)	13 (32.5)
Activities that can't be done by girls during menstruation*			
Sports	9 (45)	16 (80)	25 (62.5)
Going to the board to answer a question	5 (25)	8 (40)	13 (32.5)
Standing up in class to answer a question	4 (20)	8 (40)	12 (30)
Other	9 (45)	1 (5)	10 (25)

*Multiple responses were possible, therefore the percentages can add up to more than 100%.

Table 14: Restrictions and reasons – Udaypur boys.

	Reasons for restriction								
	Boys (N=20)	They don't feel well	Fear divine retribution	Family don't allow them	Don't want to	Feel it is the right thing to do	Maintain balance (between heat and cold) in her body	Have heavy periods	Spoil the food
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Cannot visit temple	18 (90)	4 (22)	7 (39)	0 (0)	7 (39)	0 (0)	-	-	-
Cannot attend religious function	19 (95)	3 (16)	5 (26)	5 (26)	6 (32)	0 (0)	-	-	-
Cannot do household puja	19 (95)	3 (16)	7 (37)	2 (11)	6 (32)	1 (5)	-	-	-
Cannot touch male family members	10 (50)	1 (10)	2 (20)	3 (30)	3 (30)	1 (10)	-	-	-
Cannot cook food	15 (75)	3 (20)	0 (0)	6 (40)	6 (40)	0 (0)	-	-	-
Cannot go outside as much as normal	8 (40)	3 (38)	0 (0)	1 (13)	4 (50)	0 (0)	-	-	-
Cannot eat foods or drinks of their choice	14 (70)	5 (36)	0 (0)	3 (21)	2 (14)	1 (7)	2 (14)	0 (0)	1 (7)
Cannot sleep in the same bed as others	11 (55)	5 (45)	0 (0)	2 (18)	3 (27)	1 (9)	-	-	-
Cannot sleep in the same household as others	7 (35)	3 (43)	0 (0)	0 (0)	4 (57)	0 (0)	-	-	-

Table 15: Restrictions and reasons – Sindhuli boys.

	Reasons for restriction								
	Boys (N=20)	They don't feel well	Fear divine retribution	Family don't allow them	Don't want to	Feel it is the right thing to do	Maintain balance (between heat and cold) in body	Have heavy periods	Spoil the food
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Cannot visit Temple	19 (95)	1 (5)	9 (47)	4 (21)	4 (21)	1 (5)	-	-	-
Cannot attend religious function	18 (90)	2 (11)	9 (50)	4 (22)	2 (11)	1 (6)	-	-	-
Cannot do household puja (blessing)	18 (90)	0 (0)	9 (50)	5 (28)	2 (11)	2 (11)	-	-	-
Cannot touch male family members	10 (50)	0 (0)	4 (40)	3 (30)	3 (30)	1 (10)	-	-	-
Cannot cook food	15 (75)	2 (13)	5 (33)	5 (33)	3 (20)	-	-	-	-
Cannot go outside as much as normal	10 (50)	5 (50)	2 (20)	2 (20)	0 (0)	1 (10)	-	-	-
Cannot eat food or drinks of their choice	10 (50)	5 (50)	1 (10)	2 (20)	1 (10)	0 (0)	0 (0)	1 (10)	0 (0)
Cannot sleep in the same bed as others	12 (60)	2 (17)	2 (17)	6 (50)	2 (17)	0 (0)	-	-	-
Cannot sleep in same the household as others	6 (30)	0 (0)	3 (50)	3 (50)	0 (0)	0 (0)	-	-	-

Table 16: restrictions and reasons – Sindhuli and Udaypur boys.

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	Boys (N=40)	Reasons for restriction							
		They don't feel well	Fear divine retributi on	Family don't allow them	Don't want to	Feel it is the right thing to do	Maintain balance (between heat and cold) in her body	Have heavy periods	Spoil the food
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Cannot visit Temple	37 (92.5)	5 (13.5)	16 (43.2)	4 (10.8)	11 (29.7)	1 (2.7)	-	-	-
Cannot attend religious function	37 (92.5)	5 (13.5)	14 (37.8)	9 (24.3)	8 (21.6)	1 (2.7)	-	-	-
Cannot do household puja	37 (92.5)	3 (8.1)	16 (43.2)	7 (18.9)	8 (21.6)	3 (8.1)	-	-	-
Cannot touch male family members	20 (50)	1 (5)	6 (30)	6 (30)	6 (30)	1 (5)	-	-	-
Cannot cook food	30 (75)	5 (16.7)	5 (16.7)	11 (36.7)	9 (30)	-	-	-	-
Cannot go outside as much as normal	18 (45)	8 (44.4)	2 (11.1)	3 (16.7)	4 (22.2)	1 (5.6)	-	-	-
Cannot eat food or drinks of their choice	24 (60)	10 (41.7)	1 (4.2)	5 (20.8)	3 (12.5)	1 (4.2)	2 (8.3)	1 (4.2)	1 (4.2)
Cannot sleep in the same bed as others	23 (57.5)	7 (30.4)	2 (8.7)	8 (34.8)	5 (21.7)	1 (4.3)	-	-	-
Cannot sleep in the same household as others	13 (32.5)	3 (23.1)	3 (23.1)	3 (23.1)	4 (30.8)	-	-	-	-

Table 17: Menstrual management.

	District		Total
	Udaypur	Sindhuli	
	N (%)	N (%)	N (%)
	N=130	N=130	N=260
Which material do you usually use to manage menstruation?			
Cloths	115 (88.5)	103 (79.2)	218 (83.8)
Sanitary pads (disposable)	14 (10.8)	26 (20)	40 (15.4)
Do not use any materials	1 (0.8)	0 (0)	1 (0.4)
Sanitary pads (reusable)	0 (0)	1 (0.8)	1 (0.4)
If you could choose one thing, what would you like best to manage your menstruation?			
Sanitary pads (disposable)	83 (63.8)	84 (64.6)	167 (64.2)
Cloth (reusable)	46 (35.4)	45 (34.6)	91 (35)
Others(reusable sanitary pad, Tissue Paper)	1 (0.8)	1 (0.8)	2 (0.8)
Shop within 20 minutes walking distance of your home to buy sanitary pad	39 (30)	42 (32.3)	81 (31.2)
Have ever used sanitary pads	82 (63.1)	100 (76.9)	182 (70)
How often?	n=82	n=100	n=182
Usually	15 (18.3)	32 (32)	47 (25.8)
Sometimes	43 (52.4)	60 (60)	103 (56.6)
Rarely	24 (29.3)	8 (8)	32 (17.6)
Who bought it?			
Self-bought	46 (56.1)	70 (70)	116 (63.7)
Relative bought	36 (43.9)	30 (30)	66 (36.3)
Where from?			
Bazaar(town) shop	52 (63.4)	58 (58)	110 (60.4)
local shop	30 (36.6)	36 (36)	66 (36.3)
others(got from school, medical shop , got with relief material)	0 (0)	6 (6)	6 (3.3)
Reasons for not using or rarely using sanitary pads*	n=72	n=38	n=110
Not easily available	17 (23.6)	22 (57.9)	39 (35.5)
Cloths is more comfortable	11 (15.3)	7 (18.4)	18 (16.4)
Expensive	10 (13.9)	5 (13.2)	15 (13.6)
Unsure of how to use them	10 (13.9)	3 (7.9)	13 (11.8)
Embarrassed to go and buy them	2 (2.8)	7 (18.4)	9 (8.2)
Difficult to dispose of	2 (2.8)	1 (2.6)	3 (2.7)
Others (never heard of them, allergies of pad/No response)	27 (37.5)	3 (7.9)	30 (27.3)
Type of cloth	n=115	n=103	n=218
Old	108 (93.9)	89 (86.4)	197 (90.4)

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New	7 (6.1)	14 (13.6)	21 (9.6)
How often do you use clean cloths?			
Always	114 (99.1)	102 (99)	216 (99.1)
Sometimes	1 (0.9)	1 (1)	2 (0.9)
How often do you use dry cloths?			
Always	112 (97.4)	103 (100)	215 (98.6)
Sometimes	3 (2.6)	0 (0)	3 (1.4)

*Multiple responses were possible, therefore the percentages can add up to more than 100%.

Table 18: Personal hygiene and rest when menstruating.

	District		Total
	Udaypur	Sindhuli	
	N (%)	N (%)	N (%)
	N=130	N=130	N=260
When you are menstruating, how often do you bathe?*			
First day	87 (66.9)	79 (60.8)	166 (63.8)
Second day	62 (47.7)	74 (56.9)	136 (52.3)
Third day	92 (70.8)	87 (66.9)	179 (68.8)
Fourth day	75 (57.7)	82 (63.1)	157 (60.4)
Fifth day	71 (54.6)	67 (51.5)	138 (53.1)
Sixth day	9 (6.9)	28 (21.5)	37 (14.2)
Seventh day	9 (6.9)	23 (17.7)	32 (12.3)
Everyday	18 (13.8)	3 (2.3)	21 (8.1)
When you are menstruating, how often do you use soap to bathe?			
Always	102 (78.5)	115 (88)	217 (83.5)
Sometimes	24 (18.5)	6 (4.6)	30 (11.5)
Never	4 (3.1)	9 (6.9)	13 (5)
When you are menstruating, how often do you able to wash genitals?			
Always	126 (96.9)	126 (96.9)	252 (96.9)
Sometimes	4 (3.1)	1 (0.8)	5 (1.9)
Never	0 (0)	3 (2.3)	3 (1.2)
When you are menstruating, where do you usually bathe?			
Household bathroom	43 (33.1)	33 (25.4)	76 (29.2)
Pump/tap in compound	40 (30.8)	9 (6.9)	49 (18.8)
Pump/tap outside compound	21 (16.2)	30 (23.1)	51 (19.6)
River	26 (20)	48 (36.9)	74 (28.5)
Pond	0 (0)	10 (7.7)	10 (3.8)
When you are menstruating, how much rest do you take?			

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More than usual	50 (38.5)	31 (23.8)	81 (31.2)
As normal	76 (58.5)	94 (72.3)	170 (65.4)
Less than normal	1 (0.8)	5 (3.8)	6 (2.3)
Don't know	3 (2.3)	0 (0)	3 (1.2)

*Multiple responses were possible, therefore the percentages can add up to more than 100%.

Table 19: Washing and drying cloths.

	District		Total
	Udaypur	Sindhuli	
	N (%)	N (%)	N (%)
	N=130	N=130	N=260
Privacy to wash reusable pads or cloth			
Yes	37 (28.5)	47 (36.2)	84 (32.3)
No	87 (66.9)	81 (62.3)	168 (64.6)
Don't use reusable cloths	6 (4.6)	2 (1.5)	8 (3.1)
Place to dry used cloth	N=124	N=128	N=252
Outside home in sunlight in the normal place where clothes are dried	52 (41.9)	57 (44.5)	109 (43.3)
Outside home in the sunlight in a place away from view	30 (24.2)	31 (24.2)	61 (24.2)
Outside home covered by other clothes	31 (25)	29 (22.7)	60 (23.8)
Others	11 (8.9)	11 (8.6)	22 (8.7)

Table 20: Observation of toilet facilities.

	Udaypur	Sindhuli	Total
	N (%)	N (%)	N (%)
	N=8	N=8	N=16
Functioning lock	4 (50)	5 (63)	9 (56.3)
Toilet just for girls was available	8 (100)	7 (88)	15 (93.8)
Bin was available	1 (13)	1 (13)	2 (12.5)
Closed bin for sanitary disposal was available	1 (13)	1 (13)	2 (12.5)
Bin was emptied regularly			
Yes	0 (0)	0 (0)	0 (0)
No	1 (13)	1 (13)	2 (12.5)
No bin	7 (88)	7 (88)	14 (87.5)
Disabled-friendly toilet	0 (0)	0 (0)	0 (0)
Water was available	2 (25)	1 (13)	3 (18.8)
Soap was available	0 (0)	1 (13)	1 (6.3)
Toilet was cleaned regularly	0 (0)	2 (25)	2 (12.5)
Presence of bad smell	8 (100)	7 (88)	15 (93.8)
Presence of floating faeces	6 (75)	5 (63)	11 (68.8)

On school compound, inward facing (safe)	5 (63)	6 (75)	11 (68.8)
Functioning or enough light	5 (63)	5 (63)	10 (62.5)
Without derogatory graffiti	8 (100)	8 (100)	16 (100)
Handwashing facility was available near the toilet	5 (63)	3 (38)	8 (50)

Table 21: Access to toilets.

	District		Total
	Udaypur	Sindhuli	
	N (%)	N (%)	N (%)
	(N=130)	(N=130)	(N=260)
Permission to use toilet during class			
Always	97 (74.6)	114 (87.7)	211 (81.2)
Sometimes	30 (23.1)	13 (10)	43 (16.5)
Never	3 (2.3)	3 (2.3)	6 (2.3)
Permission to use the toilet during break			
Always	130 (100)	120 (92.3)	250 (96.2)
Sometimes	0 (0)	10 (7.7)	10 (3.8)

Table 22: Managing menstruation at school.

	District		Total
	Udaypur	Sindhuli	
	N (%)	N (%)	N (%)
	(N=130)	(N=130)	(N=260)
When you start menstruating and you are at school, how do you usually manage?			
Go home change and stay at home	57 (43.8)	59 (45.4)	116 (44.6)
Go home change and come back	33 (25.4)	16 (12.3)	49 (18.8)
Ask teacher for materials	16 (12.3)	25 (19.2)	41 (15.8)
Never menstruated in the school	12 (9.2)	10 (7.7)	22 (8.5)
Others	7 (5.4)	12 (9.2)	19 (7.3)
Ask friends for materials	5 (3.8)	8 (6.2)	13 (5)
If you have to leave the school compound during your menstruation who do you ask?			
Other teacher (including headteacher)	86 (66.2)	39 (30)	125 (48.1)
Male/female class teacher	24 (18.5)	57 (43.8)	81 (31.2)
No-one	11 (8.5)	6 (4.6)	17 (6.5)
others	7 (5.4)	5 (3.8)	12 (4.6)
Male/female class representative	1 (0.8)	13 (10)	14 (5.4)
Friends	1 (0.8)	10 (7.7)	11 (4.2)
Do you explain the reason for leaving school?			
Yes	47 (36.2)	75 (57.7)	122 (46.9)
No	83 (63.8)	55 (42.3)	138 (53.1)

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Feel comfortable asking for materials to manage menstruation from			
Not comfortable/no one	46 (35.4)	5 (3.8)	45 (17.3)
Friends	44 (33.8)	65 (50)	109 (41.9)
Female teacher	40 (30.8)	59 (45.4)	99 (38.1)
Male teacher	0 (0)	1 (0.8)	1 (0.4)
During your last menstruation, how often did you change your materials in a school day?			
0	88 (67.7)	76 (58.5)	164 (63.1)
1	16 (12.3)	8 (6.2)	24 (9.2)
2	23 (17.7)	27 (20.8)	50 (19.2)
3	3 (2.3)	9 (6.9)	12 (4.6)
4–5	0 (0)	10 (7.7)	10 (3.8)

Table 23: Leakage and washing menstrual cloths in school.

	District		Total
	Udaypur	Sindhuli	
	N (%)	N (%)	N (%)
	(N=130)	(N=130)	(N=260)
How often do you have leaks?			
Never	86 (66.2)	79 (60.8)	165 (63.5)
Sometimes	44 (33.8)	45 (34.6)	89 (34.2)
Always	0 (0)	6 (4.6)	6 (2.3)
What you do if you have leakage when you are at your school?	(N=44)	(N=51)	(N=95)
Go home, change and stay at home	27 (61.4)	38 (74.5)	65 (68.4)
Go home, change and come back	9 (20.5)	5 (9.8)	14 (14.7)
Stay at school	8 (18.2)	8 (15.7)	16 (16.8)
Have ever washed the menstruation things at school?	(N=130)	(N=130)	(N=260)
Don't wash reusable materials	118 (90.8)	109 (83.8)	227 (87.3)
Don't use reusable materials	11 (8.5)	20 (15.4)	31 (11.9)
Yes I wash reusable materials	1 (0.8)	1 (0.8)	2 (0.8)
Reason for not washing the sanitary materials at school	(N=117)	(N=109)	(N=226)
No proper place to wash them	85 (72.6)	79 (72.5)	164 (72.2)
No soap	15 (12.8)	0 (0)	15 (6.6)
Other (No one wash at school/don't want to wash in school)	12 (10.3)	22 (20.2)	34 (15)
No water	5 (4.3)	8 (7.3)	13 (5.7)

Table 24: Absence from school due to menstruation

	District		Total
	Udaypur	Sindhuli	
	N (%)	N (%)	N (%)

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	(N=130)	(N=130)	(N=260)
Whole days absent in past three months due to menstruation			
0	114 (87.7)	102 (78.5)	216 (83.1)
1	4 (3.1)	5 (3.8)	9 (3.5)
2	3 (2.3)	6 (4.6)	9 (3.5)
3	5 (3.8)	8 (6.2)	13 (5)
4- 17	4 (3.1)	9 (6.9)	13 (5.1)
Main reason for absence the whole day due to menstruation			
	(N=16)	(N=28)	(N=44)
Pain	12 (75)	20 (71.4)	32 (72.7)
Fear of leakage	3 (18.8)	5 (17.9)	8 (18.2)
Family prevent from going to school	1 (6.3)	1 (3.6)	2 (4.5)
Had to go and get sanitary materials	0 (0)	1 (3.6)	1 (2.3)
Hidden due to first menstruation	0 (0)	1 (3.6)	1 (2.3)
Part of day absent in past 3 months due to menstruation			
	(N=130)	(N=130)	(N=260)
0	104 (80)	83 (63.8)	187 (71.9)
1	11 (8.5)	17 (13.1)	28 (10.8)
2	10 (7.7)	14 (10.8)	24 (9.2)
3	5 (3.8)	11 (8.5)	16 (6.2)
4-7	0 (0)	5 (3.8)	5 (1.9)
Reason for absence for the part of day in past 3 months due to menstruation			
	(n=26)	(n=47)	(n=73)
Pain	20 (76.9)	20 (42.6)	40 (54.8)
Fear of leakage	3 (11.5)	14 (29.8)	17 (23.3)
Toilet facilities inadequate for management (i.e. no water, no soap, too dark, no lock etc.)	1 (3.8)	3 (6.4)	4 (5.5)
Had to go and get sanitary materials	2 (7.7)	6 (12.8)	8 (11)
Menstruated suddenly in school	0 (0)	3 (6.4)	3 (4.1)
Alone in class	0 (0)	1 (2.1)	1 (1.4)

Table 25: Comfort at school.

	District		Total
	Udaypur	Sindhuli	
	N (%)	N (%)	N (%)
	N=130	N=130	N=260

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When you are menstruating, how comfortable do you feel playing sports?			
Comfortable	5 (3.8)	17 (13.1)	22 (8.5)
Not comfortable	75 (57.7)	106 (81.5)	181 (69.6)
No sports at school/don't play sports	50 (38.5)	7 (5.4)	57 (21.9)
When you are menstruating, how comfortable do you feel being in the class with boys?			
Comfortable	9 (6.9)	8 (6.2)	17 (6.5)
Uncomfortable	121 (93.1)	122 (93.8)	243 (93.5)

Table 26: Ability to participate in class and school.

	District		Total
	Udaypur	Sindhuli	
	N (%)	N (%)	N (%)
	N=130	N=130	N=260
When you are menstruating, how often do you feel you can sit in the front of classroom?			
Always	56 (43.1)	46 (35.4)	102 (39.2)
Sometimes	62 (47.7)	44 (33.8)	106 (40.8)
Never	12 (9.2)	40 (30.8)	52 (20)
When you are menstruating, how often do you feel you can focus on what the teacher is saying?			
Always	43 (33.1)	64 (49.2)	107 (41.2)
Sometimes	81 (62.3)	57 (43.8)	138 (53.1)
Never	6 (4.6)	9 (6.9)	15 (5.8)
When you are menstruating, how often do you feel you can do your class work?			
Always	45 (34.6)	59 (45.4)	104 (40)
Sometimes	75 (57.7)	53 (40.8)	128 (49.2)
Never	10 (7.7)	18 (13.8)	28 (10.8)
When you are menstruating, how often do you feel you can answer when called upon?			
Always	35 (26.9)	51 (39.2)	86 (33.1)
Sometimes	82 (63.1)	61 (46.9)	143 (55)
Never	13 (10)	18 (13.8)	31 (11.9)
When you are menstruating, how often do you feel you can raise your hand to answer when the teacher asks a question?			
Always	35 (26.9)	56 (43.1)	91 (35)
Sometimes	77 (59.2)	43 (33.1)	120 (46.2)
Never	18 (13.8)	31 (23.8)	49 (18.8)
When you are menstruating, how often do you feel you can stand up to answer a question?			

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Always	28 (21.5)	34 (26.2)	62 (23.8)
Sometimes	84 (64.6)	50 (38.5)	134 (51.5)
Never	18 (13.8)	46 (35.4)	64 (24.6)
When you are menstruating, how often do you feel you can write on the board if you are asked?			
Always	24 (18.5)	17 (13.1)	41 (15.8)
Sometimes	72 (55.4)	45 (34.6)	117 (45)
Never	34 (26.2)	68 (52.3)	102 (39.2)
When you are menstruating, how often do you feel you can stay in the class the whole day?			
Always	43 (33.1)	67 (51.5)	110 (42.3)
Sometimes	79 (60.8)	50 (38.5)	129 (49.6)
Never	8 (6.2)	13 (10)	21 (8.1)
When you are menstruating, how often do you feel you can stay at school the whole day?			
Always	58 (44.6)	60 (46.2)	118 (45.4)
Sometimes	67 (51.5)	56 (43.1)	123 (47.3)
Never	5 (3.8)	14 (10.8)	19 (7.3)
When you are menstruating, how often do you feel you can go to school?			
Always	60 (46.2)	86 (66.2)	146 (56.2)
Sometimes	65 (50)	39 (30)	104 (40)
Never	5 (3.8)	5 (3.8)	10 (3.8)

Table 27: Boys perceptions of menstruating girls.

	District		Total
	Udaypur	Sindhuli	
	N (%)	N (%)	N (%)
	N=20	N=20	N=40
Activities that can't be done by girls during menstruation*			

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Sports	9 (45)	16 (80)	25 (62.5)
Going to the board to answer a question	5 (25)	8 (40)	13 (32.5)
Standing up in class to answer a question	4 (20)	8 (40)	12 (30)
Other	9 (45)	1 (5)	10 (25)

*Multiple responses were possible, therefore the percentages can add up to more than 100%.

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