The Last Taboo:

Research on menstrual hygiene management in the Pacific

Final report

Fiji

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Contents

Acronyms

DFAT	Department of Foreign Affairs and Trade
FGD	Focus group discussion
FLE	Family Life Education
IDI	In-depth interview
INGO	International non-government organisation
IPPF	International Planned Parenthood Federation
KII	Key informant interview
MHM	Menstrual hygiene management
MoE	Ministry of Education
MoH	Ministry of Health
NGO	Non-government organisation
SRHR	Sexual and reproductive health and rights
STI	Sexually transmitted infection
UNICEF	United Nations Children's Fund
WASH	Water, sanitation and hygiene

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Executive Summary

Managing menstruation hygienically, effectively and with dignity can be challenging for girls and women in low and middle-income countries. Currently there is limited research on menstrual hygiene management (MHM) in the Pacific region.

This report presents findings from research that was undertaken in Fiji in November 2016. The study is part of a larger piece of work which includes the Solomon Islands and Papua New Guinea, and is funded through the Australian Government, Department of Foreign Affairs and Trade (DFAT). The research focuses on menstruation, and how it is managed by women and adolescent girls in Fiji. The purpose of the study is to explore the challenges experienced by women and girls in managing their menstruation, and whether these challenges make it hard for them to equally participate in school and work and engage with their communities.

The study was conducted in two research sites: an urban setting in Viti Levu (Suva) and a rural setting, in Vanua Levu (Cakaudrove Province). In total 96 people (50 women, 28 adolescent girls and 18 men) participated in the study, 56 in the urban site and 40 in the rural site. Participants were of Indo-Fijian, Indigenous Fijians and Rabian ethnicity. The study was primarily qualitative, using focus group discussions (FGD), in-depth interviews (IDIs) and key-informant interviews (KIIs) as the main strategies for data collection. A structured observation of water, sanitation and hygiene (WASH) facilities was undertaken in a small number of schools and workplaces, and an analysis of the availability and cost of sanitary products was conducted in each research site.

The study found that:

- Adolescent girls and women in Fiji have reasonably good access to education and information about menstruation and its hygiene management, although gaps in knowledge exist, especially in relation to charting the monthly cycle. Education and information has often excluded women and girls with disabilities and there is a generational gap in awareness, as older woman were not previously educated at school. Despite menstruation being in the curriculum, teachers may feel ill-equipped talking about menstruation, and require better training to do so.

- The onset of menstruation is viewed as signifying the transition from childhood to womanhood in Fiji and it is viewed as a “normal” bodily process. It is not a strictly taboo subject, however levels of secrecy and discretion vary according to religious and cultural background and prevailing attitudes and beliefs, and therefore commonly differ vary among between Fiji’s main ethnic groups, i-Taukei and Indo-Fijians.

- There are a large number of commercially available sanitary products sold for affordable prices in Fiji’s urban areas. The range includes high quality products manufactured in Australia and Thailand. However in rural and remote communities, poorer quality products are available and girls and women with less access to money faced affordability challenges. Use of re-usable cloths is common among older woman and for girls in rural areas.

- Water, sanitation and hygiene (WASH) facilities in schools, workplaces and public places are of a high standard, yet often lack soap for handwashing, toilet paper or safe and discrete disposal options for sanitary materials. Many women working in informal workplaces felt their menstrual hygiene needs were not met as there were no disposal options. Women working in informal workplaces, such as market vendors interviewed, face greater challenges in managing menstruation at work as they are often required to share sanitation facilities with the general

public. In addition, facilities are sometimes locked, unclean, require a user fee, and do not provide toilet paper or a safe and discrete disposal system.

Recommendations[1]

1. Strengthen government leadership and policy commitment on supporting MHM within the Ministry of Health (MOHMS) and Ministry of Education (MoE):

1.1 Ensure women's economic empowerment programs (such as *Markets for Change*[2]*)* consider women's water sanitation and hygiene needs and rights. Women as users of sanitation facilities must be central to the design of WASH services and participatory monitoring and evaluation may improve quality and usability of facilities. (S)

1.2 Educate those responsible for labour-related policy (such as Occupational Health and Safety Standards) about women-specific WASH needs in informal work settings. Draw on the successes achieved in formal work settings for replication in informal workplaces. (S)

1.3 Ensure national health and education policies and sub-national action plans incorporate MHM and develop good monitoring mechanisms to track progress. (M)

1.4 Increase cross-sectorial engagement on MHM through stakeholder engagement, education and advocacy to take MHM beyond WASH and education sectors. Economic empowerment, gender and disaster risk reduction initiatives all need strengthening with regard to MHM. (M)

2. Improve access to high quality information about menstruation and MHM via MoE, MoHMS and non-government organisations (NGO) working in the area of sexual and reproductive health and WASH

2.1 Review and strengthen the menstruation components of the Family Life Education (FLE) curriculum to also include MHM. In particular:

- Ensure MHM is included in the primary school component and that it targets both girls and boy's schools (M)
- Ensure education includes charting the monthly cycle and predicting menstruation dates month-to-month (M)

2.2 Develop training resources and provide training to teachers (both male and female) on menstruation and MHM as part of FLE training. (M)

2.3 Develop a disability-inclusive and accessible comprehensive sexual and reproductive health curriculum which includes menstruation and MHM. This could be implemented across special schools and mainstreamed into all schools to ensure girls with disabilities receive quality information and education on menstruation and sexual and reproductive health and rights (SRHR). This could be done in collaboration with National Disabled People's Organisations (DPO's). (M)

2.4 Develop and roll out parent education programs at primary schools on puberty, menstruation and menstrual hygiene, to ensure parents are passing on accurate information to their daughters and sons about menstruation. This should be targeted at fathers as well as mothers, to promote shared responsibility between parents in talking to girls about MHM. (M)

[1] These recommendations will be reviewed and prioritised and feasibility assessed by key stakeholders during a planned workshop in February 2017. They are currently categorised as being short (S) term, medium (M) term and long (L) term objectives.

[2] *Markets for Change* is a UNWomen six-year multi-country initiative, primarily funded by the Department of Foreign Affairs and Trade. It aims to ensure aims to ensure that marketplaces in rural and urban areas in Fiji, Solomon Islands and Vanuatu are safe, inclusive and non-discriminatory, promoting gender equality and women's empowerment. For further information see: https://unwomen.org.au/wp-content/uploads/2016/09/M4C_regionalbrief_17Feb16_email.pdf

3. Improve availability, affordability, and access to quality commercial menstrual hygiene products in rural areas

3.1 Conduct a supply chain analysis to identify pathways to increase availability of affordable and high quality sanitary pads in rural and remote communities. (S)

3.2 Pilot a local female-led livelihood project to scale up production, market-based demand and social marketing of reusable pad designs, for example Days for Girls kits. (M)

3.3 Scale up the examples of emergency access to affordable sanitary pads in schools. Adolescent girls should be consulted to identify preferred brands and products, methods of dispensing or selling pads, and also affordability. (M)

3.4 Expand emergency access to sanitary pads in workplaces and public toilets by including pad supply in operational and maintenance budgets and routine first aid resourcing. Alternatively, consider vending machine or cost sale options. (M)

3.5 Disaster recovery and response initiatives need to include access to menstrual hygiene management materials (and education or information) during and after emergencies (S)

4. Water, sanitation and hygiene facilities

4.1 Review Occupational Health and Safety standards for informal workplaces to ensure women-specific WASH needs are met, particularly safe disposal mechanisms of menstrual hygiene materials. (M)

4.2 Develop and strengthen national minimum standard guidelines and technical designs for public water, sanitation and hygiene facilities to be accessible, safe and MHM-friendly. Standards should also apply to emergency evacuation centres. (M)

4.3 Local council services responsible for market places to allocate budget and services to better maintain public toilet facilities to ensure they meet the needs of the workers who are using them. Better standards of accessibility after hours, no cost and improved safe/discrete disposal systems are critical. (M)

4.4 Consistent maintenance and cleaning of latrines by women only, to ensure privacy in schools, workplaces and public toilets. (S)

4.5 Accessibility and safety audits to be conducted in consultation with national Disabled People's Organisations to ensure public toilets are accessible and appropriately designed for people with a range of different impairments. In particular, women with disabilities should have a voice in this process. (M)

4.6 Sanitary disposal and waste services currently in formal workplaces could be scaled up to all public toilets, schools and informal work settings. They could potentially be designed to generate income for women. (L)

4.7 Small-scale pilots project to test alternative and sustainable disposable systems requiring low maintenance could be done in schools and workplaces. This could explore ways to reduce environmental impact of disposable pad use: for example new composting technologies and exploration of bio-degradable pads, eco-friendly incinerators and chutes or sealed containers. (L)

1. Background and introduction

Managing menstruation hygienically, effectively and with dignity can be challenging for girls and women in low and middle-income countries. Currently there is limited research on menstrual hygiene management (MHM)[3] in the Pacific region. Studies conducted in countries in Africa and the Asia region have detailed a range of challenges experienced by girls in relation to managing their menstruation. These include: lack of knowledge about menstruation and how to manage it; harmful socio-cultural beliefs and taboos about menstruation being unclean or dirty; inadequate water, sanitation and (private) hygiene facilities at school; lack of available and affordable absorbent materials; and, challenges washing and drying materials if disposable products are unaffordable.[4] Anecdotal evidence from the Pacific suggests similar challenges, and that these may be a barrier to school participation and attendance, and to employment and income generation.[5]

This report presents findings from research undertaken in Fiji in November 2016. The Fiji study is part of a larger piece of work which includes the Solomon Islands and Papua New Guinea, and is funded through the Australian Government, DFAT. The research focuses on menstruation and how it is managed by women and adolescent girls in Fiji. The purpose of the study is to explore the challenges experienced by women and girls in managing their menstruation, and whether these challenges make it hard for them to equally participate in school and work and to engage with their communities.

The study took place on the two main islands of sites- an urban setting Viti Levu (Suva) and a rural setting in Vanua Levu (Cakaudrove Province). It was conducted by Burnet Institute and WaterAid, with support from the International Women's Development Agency and a local research team – coordinated through the International Planned Parenthood Federation's Sub-Regional Office for Pacific.

2. Aims

The aims of the study were to:

(i) Understand how women and girls in Fiji currently manage menstruation.
(ii) Explore the barriers/challenges experienced by these women and girls in managing menstruation.
(iii) Determine the impact of menstrual management practices on women and girls' participation in education and income generation.
(iv) Identify opportunities to improve women's and girls' ability to manage their menstruation effectively and with dignity.

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[3] Definition of adequate Menstrual hygiene management: *Women and adolescent girls are using a clean menstrual management material to absorb or collect menstrual blood, that can be changed in privacy as often as necessary for the duration of a menstrual period, using soap and water for washing the body as required, and having access to facilities to dispose of used menstrual management materials. They understand the basic facts linked to the menstrual cycle and how to manage it with dignity and without discomfort or fear.* Joint Monitoring Program (2012): http:// www.wssinfo.org/fileadmin/user_upload/resources/Hygiene-background- paper-19-Jun-2012.pdf.

[4] Sumpter C, Torondel B. A systematic review of the health and social effects of menstrual hygiene management. PLoS One. 2013;8(4):e62004.

[5] Dutta, Devashish, Chander Badloe, Hyunjeong Lee and Sarah House, Supporting the Rights of Girls and Women Through Menstrual Hygiene Management (MHM) in the East Asia and Pacific Region: Realities, progress and opportunities, UNICEF East Asia and Pacific Regional Office (EAPRO), Bangkok, Thailand, 2016.

3. Context

Fiji has a population of 865,612 and while the country is made up of over 300 islands, only 110 are inhabited. There are two main islands: Viti Levu, the largest island, is home to about 75% of the population, while about 20% of the population live on the second largest island, Vanua Levu.

Fiji has four provincial administration zones. The two main ethnic groups in Fiji are i-Taukei (Indigenous Fijians) who make up 57% of the population and Fijians of Indian descent (Indo-Fijians) who make up 37% of the population.[6]

Fiji has one of the highest rates of water sanitation and hygiene coverage in the Pacific region, with 96% of the population using drinking water from improved sources and 87% with access to improved sanitation facilities.[7]

Image: Map of Fiji

The Fijian government promotes gender equality as a goal in several national planning strategies yet gender inequality is deeply rooted in Fiji's traditional customs, social norms and decision-making power structures. Among key gender inequality issues in Fiji are high rates of violence against women, and poor representation of women in senior government or leadership roles.

Violence against women is common and widespread. Sixty-four per cent of women (aged 18 to 64 years) who have ever been in an intimate relationship report having experienced physical and/or sexual abuse by their husband or partner.[8] Thirty-eight per cent of married women currently use contraception in Fiji and there are high levels of sexually transmitted infections (STIs) and unwanted pregnancy among young people. While there are not significant gender gaps in education enrolment and outcomes in Fiji, only 46% of women participate in the labour force.[9]

[6] Fiji Bureau of Statistics. 2015. Population and Labour Force Estimates of 2014. FBoS Release No. 99/2015. Suva.

[7] UN Water and World Health Organisation (2014) Global Analysis and Assessment of Sanitation and Drinking Water: Country Highlights http://www.who.int/water_sanitation_health/glaas/2014/fiji.pdf

[8] Fiji Women's Crisis Center (2013) Somebody's Life, Everybody's Business! National Research on Women's Health and Life Experience in Fiji (2010/2011). Suva.

[9] Asian Development Bank (2016) Fiji Country Gender Assessment 2015. Philippines https://www.adb.org/sites/default/files/institutional-document/210826/fiji-cga-2015.pdf

4. Study design

Ethical considerations: This study was approved by the Fiji National Health Research and Ethics Review Committee (Ref 2016:101.MC), the Fiji Ministry of Education Heritage and Arts (Ref RA 43/16) and the Alfred Hospital Human Research Ethics Committee (Melbourne Australia).

Methods: The study was primarily qualitative, using focus group discussions (FGD), in-depth interviews (IDIs) and key-informant interviews (KIIs) as the main strategies for data collection. Structured observations of water, sanitation and hygiene (WASH) facilities were undertaken in a small number of schools and workplaces, and an analysis of the availability and cost of sanitary products was conducted in each research site.

The content of FGD and interview question guides was informed by the Ecological Framework for MHM[10] and a review of relevant literature. English question guides were translated into Fijian and/or Hindi and back translated into English to confirm accuracy. FGDs included a number of participatory activities to stimulate discussion and included: body mapping, community mapping, the Ten Seed Technique[11] and drawing of an 'ideal' latrine.[12] Field work took place from 16 November to 2 December.

Study team: The study team comprised a team of six female and one male Fijian researcher and two international consultants (Burnet Institute and WaterAid Australia).

Sampling: Purposive sampling[13] via partner organisation networks was used in each study site to facilitate recruitment of pre-specified participant groups. Concerted efforts were made to ensure that the sample included both Indigenous Fijians and Fijians of Indian descent. All FGDs were sex segregated with efforts made to ensure homogeneity of socio-economic status, community hierarchy and age.

In both Viti Levu (Suva) and Vanua Levu (Savusavu) a consecutive convenience sample[14] of shops judged as likely to sell sanitary products and located in and around the central business district (Suva) and along the main road (Savusavu) was taken for the purpose of documenting availability and cost of commercial sanitary products. Where consent was given, WASH facilities were assessed in the sampled school and workplace at each site.

[10] UNICEF/Emory University. WASH in schools empowers girl's education. Tools for assessing menstrual hygiene management in schools. New York: UNICEF and Centre for Global Safe Water, Emory University 2013.

[11] Jayakaran RI. The Ten Seed Technique. People's Republic of China. World Vision, 2002.

[12] Connolly & Sommer (2013) Cambodia girls recommendations for facilitating menstrual hygiene management in school. Journal of Water Sanitation and Hygiene for Development. Vol 3, No. 4, doi: 10.2166/washdev.2013.168

[13] Etikan I, Abubakar Musa S, Alkassim R. Comparison of Convenience Sampling and Purposive Sampling. American Journal of Theoretical and Applied Statistics. Vol. 5, No. 1, 2016, pp. 1-4. doi: 10.11648/j.ajtas.20160501.11

[14] Etikan *et al*. 2016, pp. 1-4

Table 1: Summary of data collection methods and participant groups

Methods	**Site 1/urban**				**Site 2/rural**				**Total participants**
	# participants	Age	Sex	Ethnicity[15]	# participants	Age	Sex	Ethnicity	
FGD girls in school	(2 FGDs) 13	16 – 19	f	12 i-T, 1 I-F					13
FGD girls not in school	6	18 – 19	f	i-T	9	18 – 20	f	i-T	15
FGD women (formal[16] workplace)	10	23 – 35	f	6 i-T, 2 I-F, 2 R	10	25 – 52	f	9 i-T, 1 R	20
FGD women (informal[17] employment)	(2 FGDs) 14	22 – 61	f	9 i-T; 5 I-F	6	38 – 50	f	I-F	20
FGD men	5	25 – 68	m	i-T	10	38 – 63	m	i-T	15
IDI (vulnerable girls/women[18])	2	31- 35	f	i-T					2
KII vendor	1	n/a	f	I-F	1	n/a	f	I-F	2
KII employer	1	n/a	f	I-F	1	n/a	f	I-F	2
KII teacher	2	n/a	f	i-T	-	-	-	-	2
KII health worker	1	n/a	f	i-T	1	n/a	m	i-T	2
KII leader	1	58	m	i-T	1	n/a	m	i-T	2
Total participants	**56**				**39**				**95**
Observations of WASH facilities[19]	2				1				3
Documentation of availability and cost of sanitary products[20]	12				10				22

[15] Ethnicity: i-Taukei (i-T); Info-Fijian (I-F); Rabian (R)

[16] defined as work places with fixed hours such as office environments, factories etc.

[17] defined as less structured work places where women have more control over their work hours (e.g. selling food in market places or undertaking household responsibilities and subsistence farming in communities)

[18] this group was defined as including girls/women living with a disability; identifying as lesbian, bi-sexual, transgender or intersex; socio-economically disadvantaged; young mothers and young married girls; women and girls in certain professions (e.g. sex work); and women and girls of certain ethnic background.

[19] these observations occurred alongside KIIs with teachers and employers

[20] these observations form part of the KII with vendors of sanitary products, but also occurred independent of this to allow review of a larger number of shops.

Data collection and analysis: FGDs and interviews were conducted and documented in local languages (Fijian, Hindi or English depending on preference of participant group) by members of the Fijian research team. In some instances the participant groups included a mix of Fijian and Hindi speakers. If this occurred the discussion was facilitated in English, which is considered the national language. Discussions were digitally recorded with the permission of participants. Wherever possible, one member of the local research team was designated to translate discussions as they occurred for one of the international consultants; this enabled the consultants to follow the discussion, and determine interesting discussion points to probe or add to subsequent FGDs or interviews and also to take notes in English. The team discussed the English and Fijian/Hindi notes at the end of each day, enabling a more nuanced/cultural interpretation of the data.

Preliminary data analysis took place during field work. Using an inductive approach, a coding framework was developed and refined, and systematically applied to the data by the two international consultants. These codes were then organised according to overarching themes, which helped provide a structure for communication of findings. Formal data analysis (applying the same coding framework developed during the field work) took place once the voice recordings had been transcribed and translated into English. Findings were validated by the local research team. English transcripts were later analysed with reference to the preliminary coding, and using QSR Nvivo (Version 10), a qualitative data management and analysis program (QRS International PTY Ltd, Melbourne, Australia). Quantitative data (assessments of WASH facilities and scoping of menstrual hygiene products) was summarised in a narrative format.

Limitations: School holidays restricted school participation in the study. The research team conducted the study at two urban schools, but no schools could be included in the rural site. In addition, the toilet facilities were locked at one of the urban schools as the students were already on school holidays. Therefore the WASH observation checklist was only conducted at one school (rather than two as planned).

Where participant groups included a mix of Fijian and Hindi speakers the discussion was facilitated in English. While English is considered to be the national language it is not necessarily the language spoken day to day at community level among those with shared ethnic origin, and this influenced the depth of discussion. In addition, FGDs that included Fijian and Hindi speakers were interrupted from time to time if English words or expressions had to be clarified in local languages. This altered the fluency of discussion, and it would have been preferable to control for this in the sampling process and ensure that participants had similar ethnic origins. Fiji's two ethnic groups, i-Taukei and Indo-Fijians have distinct knowledge, attitudes and practices in relation to menstruation. However, there were challenges related to sampling of the 'girls in school' participant group, and most of the participants were i-Taukei.

As FGDs unfolded, it also became apparent that there were some sampling issues among adult women- a number of whom were post-menopausal. While this impacted on data collected (women spoke retrospectively about experiences of menstruation), it did add an interesting/unplanned dimension to discussions, uncovering challenges specific to peri-menopausal women, who often experience heavy and irregular bleeding.

Short data collection timeframes limited the number and breadth of consultations that could be performed. Qualitative data collection did not occur to the point of 'saturation' and a degree of sampling bias (evidenced above) is associated with convenience sampling- especially when this is driven by local staff. However, studies such as this are an expensive undertaking and a pragmatic approach is always necessary to balance the need for strong research with financial realities. As this

research is intended to inform programming, these design limitations are unlikely to negatively impact the utility of the findings.

5. Findings

Menstruation related knowledge, attitudes, beliefs and behavioural restrictions

i) Knowledge

In Fiji, menstruation is viewed as a 'natural' process and one which signifies the transition from childhood into womanhood. Most women, men and adolescent girls who participated in the study had a basic understanding of the menstrual cycle and why it occurs. Generally, adolescent girls demonstrated better understanding of menstruation than the adult women and men who were consulted.

> ***"it is when the girls eggs……are released…. and then it*** **[bleeding]** ***happens once a month… because it is not fertilized… She can get pregnant easily*** **[once menstruating]*"*** **(FGD girls in school, urban)**

While some adolescent girls felt their knowledge was sufficient, others wanted more information, especially in relation to monthly tracking of the menstrual cycle and how to anticipate when their period would occur.

Image: 'Body mapping' was used with adolescent girls to discuss the changes that occur during puberty and introduce the topic of menstruation.

Most adolescent girls said that they had knowledge of menstruation prior to menarche. Many agreed that this was important, and described feeling scared and ashamed if they didn't have prior knowledge, but *"confident"* if they were informed.

> ***"When my grandmother always talked about it I didn't want to listen, when it happened then I listened to every instruction that she said!"(*****FGD Girls out of school, urban).**

Mothers were cited as the most common source of information and many girls reported that their mothers spoke to them about menstruation prior to their first period. Friends are another key source of information, as are sisters, aunties and grandmothers. Men, although supportive of their wives and daughters, explained that culturally it is the mother's role to speak to their daughters about menstruation.

> ***"For us iTaukei, we just pushed this responsibility to the Mothers to discuss it with the daughters"*** **(FGD Men, rural).**

There was concern that some mothers may lack adequate knowledge of menstruation, and that in such instances, schools are an important source of information and support.

"I don't believe that they are being properly advised by their mothers. I was thankful to those health workers for properly explaining to the young girls at school about menstruating. Because I know that most mothers do not properly guide their children about their menstruation" **(KII Health worker, rural).**

Challenge: Some women and girls lack basic knowledge of the menstrual cycle and how to chart it from month- to- month.

Impact: As a result they may not be prepared for their period each month. They may also lack understanding about fertile periods once they become sexually active. Girls may receive incorrect information from mothers, or other sources of information.

Puberty education was integrated into Fiji's national school curriculum in 2010, as part of the Ministry of Education's 'Family Life Education' (FLE) curriculum. It starts in primary school and continues through to Year 9 and 10. Some respondents made reference to *"gender sessions"* where girls and boys have sex segregated discussions led by teachers of the same sex or even by Head students. Beyond that, students are taught about puberty in science classes. Teachers are meant to be trained in FLE, but study respondents felt teachers were not well trained or equipped to be delivering this information.

[I]*t's* [puberty and Family Life Education] ***just the information that they already get when they finished off from their tertiary institution, eh? There is no additional to that knowledge… to supplement that so… I don't think … that's sufficient"*** **(KII Teacher, urban).**

Challenge: Teacher lack formal training to deliver the FLE curriculum and other related information about puberty and menstruation.

Impact: They may 'water down' or skip content that they are uncomfortable with.

ii) Beliefs and attitudes

In Fiji, menstruation is viewed as a normal bodily function, although common terminology used for menstruation signifies that it is treated with discretion. Pseudonyms or secret words for menstruation were commonly used by girls and women, including *"my friend"*, *"Mary" "ticket"* and *"food"*. Phrases such as *"Red river is flowing" "aunty is here"*, *"a visitor is coming", "my namesake is crying", "my friend is experiencing difficulties"* or *"Mary is crying"* were also common.

In Fiji there are distinct religious and cultural beliefs and attitudes towards menstruation. Women of Hindu faith described their menstruation as *"dirty",* whereas women and girls of i-Taukei culture sometimes described menstruation as *"the body cleansing itself".*

While most girls reported that they were not treated differently by family members when they start to menstruate, it was explained that reaching menarche is celebrated within some i-Taukei families (when the eldest daughter begins to menstruate).

"According to tradition and values like this [menarche] is … a big part of especially the I-Taukei culture eh? … like they actually celebrate this…when it's like… first time so yeah… it's something important." **(FGD Girls not in school, urban).**

Girls described this celebration as making them feel special, but also scared and embarrassed too, as all their family attended the feast and they wore traditional dress. Men also described this celebration as their first opportunity (as boys) to hear about menstruation, and realise it is a *"very important thing."*

Women of Hindu faith reported a custom of cutting seven marks into the wall of the family home when a daughter begins menstruating.

> ***"When we are first time … having the menses we have to cut in the wall seven times … eya, cause that time that's the first thing happen to us eh. Now we are matured to get married … it's like that"*** **(FGD women, formal workplace, urban).**

Those of Muslim faith explained that wearing of the hijab can commence at the onset of menstruation.

> ***"For the Muslim culture, as soon as you get your period, you can wear start wearing the… cover up… the hijab"*** **(FGD Girls in school, urban).**

Many adolescent girls described experiencing negative emotions when they began to menstruate.

> ***"Sometimes they will be embarrassed because it is the first time they are seeing blood"*****(FGD Girls not in school, urban).**

Adolescent girls also said they felt shy about menstruation and that it was fairly secretive. However, in urban FGDs girls described how their families, including brothers, support them to manage menstruation.

> ***"Sometimes when I am really sick, I tell my brother to buy the pads and like they were embarrassed to go to the shop and buy the pads. My brothers are very supportive"*** **(FGD Girls not in school, urban).**

> ***"My mother… she kinda like… trained us to be very open about it… especially to our brothers… so for me personally growing up, menstruating, I think I was really open about it.. I can't keep it a secret"*** **(FGD Girls in school, urban).**

In contrast to this, older men described greater secrecy around menstruation, particularly between brothers and sisters.

> ***"We, the iTaukei, the siblings – brother and sister, are Taboo. Most brother and sister siblings don't speak to each other...the daughter can talk to her mother, or friend...but, can't tell that to her brother"*** **(FGD Men, rural).**

This different perspective highlights how attitudes towards menstruation may be changing over time, between generations. Men also described how they supported and were empathetic towards their wives, sisters and daughters when they were menstruating.

> ***"When my daughter's menses is near I went to buy plenty packets*** **[of pads]** ***for her, so she could take some to school as well…I don't want her to borrow or have none at all"*** **(FGD Men, urban).**

Most girls reported that boys did not tease them about menstruation at school. However some girls described teasing at school, linking it to bribes and absenteeism from school.

> ***"Oh they will tease us. And sometimes they will just come to you and will be like, 'I know what you have in your bag'. And through that they take money. You give me this and I will keep it as a secret. For some girls they find it fun, but some they find it embarrassing and some of them don't even come back to school for the next day"*** **(FGD Girls not in school, urban).**

Girls explained that the practice of 'spot checks' (random checks of school bags for items that are not allowed such as mobile phones) adds to this problem.

Challenge: Adolescent girls feels shy and embarrassed when they first start menstruating. Teasing by boys, while not commonplace, is experienced by some girls.

Impact: Teasing by boys may exacerbate girls' shyness and embarrassment of menstruation and may result in emotional distress and contribute to school absenteeism.

iii) Behavioural restrictions

There were very few behavioural restrictions reported across all participant groups. Where behavioural restrictions were reported, most were self-imposed and some were cultural or religious in basis.

Adolescent girls in the urban site reported that they chose not to do physical activities like sport, swimming and household chores when menstruating and preferred to stay home. Girls out of school living in a rural community reported that they do not go swimming or wet their hair because *"they would not menstruate properly"*, restrictions and beliefs that their mothers had informed them of. While most of the girls viewed these restrictions as positive because it would keep them in good health, some said they felt that not swimming in the sea was a disadvantage, as they were unable to go fishing when menstruating.

A common belief in rural and urban areas is that bathing in cold water causes stomach cramps/pain.

> ***"I always advise them not to bath in cold water when they are menstruating, but to always bath in hot water"*** **(KII Health worker, rural).**

Beliefs leading to food restriction practices were uncommon, although adolescent girls, women and healthcare workers commonly believe that drinking cold water would cause heavier blood flow.

> ***"I am not allowed to drink iced water. And sour things. I just heard it from my mother. She told me not to drink iced water because it will make me bleed more. And eating sour things causes heavy bleeding as well"*** **(FGD Girls not in school, urban).**

A healthcare worker also said she had heard that some families educate their daughters that eating meat will make their menstrual blood smell, however none of the adolescent girls described this. Participants in women's and men's groups in rural and urban areas commonly reported that sexual intercourse is not allowed during menstruation. Many respondents including community and religious leaders cited the bible's Book of Leviticus.

> ***"It is written in the Bible, do not approach a woman during her uncleanliness period"*** **(FGD Men, rural).**

Despite this commonly cited passage, respondents very rarely – if at all – described menstruation or menstruating women as 'unclean'.

Women of Rabian culture, a small Fijian ethnic group whose descendants are from Kiribati, described specific restrictions during menstruation. These include:

- Not being allowed to cook, because the boys and men will get lazy
- Not being allowed to pick fruit from plants because it will die (such as mango, eggplant)
- Not combing hair because it will fall out

Indo-Fijian women of Hindu faith described the following restrictions during menstruation:

- Not being allowed to go to the temple or pray at home
- Menstruating women are not allowed out of the home after 6pm, as evil spirits will make them sick. This time point in the evening has general cultural significance (e.g. children don't play outside after this time), but for women the restriction is followed more strictly during menstruation. Menstruating women must also not bathe after 6pm and reusable cloths hanging outside must be brought inside before 6pm.
- Menstruating women cannot cook for their husband if he is a priest and cannot touch cooked food being taken to the temple.

Some Indo-Fijian women who participated in the study said they did not like being unable to go to the temple and pray while menstruating, while others said they accepted this as part of their religious beliefs.

> ***"We don't like it. Because if there are prayers we are not able to attend it. But we believe the God is with us"*** **(FGD woman, urban, informal employment).**

> ***"We sometimes miss the important prayer ceremonies"*** **(FGD woman, urban, informal employment).**

Some women and healthcare workers reported that women would take the contraceptive pill to delay their menstrual bleeding so they could attend important religious ceremonies at the temple.

> ***"Like when they are fasting … looking forward to going to the temple… they come and ask for family planning tablets "I want to delay my period this 2 weeks cause I want to visit the temple""*** **(KII healthcare worker, urban).**

Challenge: Some religious beliefs (eg. that menstruation is dirty) create unnecessary stigma for menstruating girls and women. Other cultural beliefs (eg. that girls cannot go swimming during menstruation) and religious beliefs (e.g. that women cannot pray in the temple) impose unwanted behavioural restrictions.

Impact: Women and girls may experience negative emotions and feel excluded by being prevented from participating in religious or cultural activities, celebrations or events each month.

Menstrual hygiene management practices

i) Managing menstrual bleeding: materials, products and preferences

Availability and cost of commercial sanitary products
In Suva there was a substantial range of sanitary products for sale, with 63 products being surveyed across 12 stores in the central business district. Most of the stocked products were globally recognised quality brands such as *Libra, Stayfree* and *Carefree* and manufactured in Australia, Thailand, China and Germany. The most frequently stocked product was *Stayfree Regular* (Thailand and China), with the retail price ranging from $6.59 - $9.99 FJD for a pack of 20 pads[21]. There were a small number of poorer quality sanitary products available for a cheaper price: *Softex* was $3.75 - $4.25 FJD for 24 pack and a 12 pack of *Protex* cost around $2.50 FJD (both products are manufactured in Indonesia).

Image: A large number of quality sanitary products were available in urban areas

In the main town of the rural site there were 49 product types for sale, which is less than in Suva, but still a considerable range. In contrast to Suva however, there was less availability of *quality* products, and the Indonesian product *Softex* was the most commonly sold product (price ranging from $1.29 – 1.69 FJD for pack of 8). *Stayfree* products were the most commonly found quality product in the rural survey, marketed at the same cost as Suva. *Libra* products in rural areas were approximately $1 FJD cheaper than in the urban shops. In small canteens in rural villages several hours drive from major towns, *Softex* was the only product observed for sale. Therefore despite rural centres having good availability of sanitary products, women and adolescent girls in rural villages have more limited access to sanitary products. Vendors in both the rural and urban site reported that supply is not a challenge.

The range of sanitary products sold in Fiji is diverse with sanitary pads ranging from panty liners, maternity pads and ultrathin and thicker ones for night time use. Tampons were available in all pharmacies surveyed in both rural and urban sites, and in Suva were for sale in half of the 12 stores surveyed. A pack of 20 *Carefree Regular* Tampons in Suva cost between $6.95 - $8.48 FJD, more expensive than sanitary pads. *Tampax* were also surveyed in several shops. In most shops in both rural and urban sites, sanitary products were not kept behind the counter, so the consumer could pick them themselves without having to ask for assistance. The shops had a mixture of male and female staff providing sales service. Adolescent girls described feeling embarrassed if they needed to ask for help from male shop assistants, and both women and adolescent girls described a preference for discretion and to have their pads wrapped in newspaper before leaving the shop.

Current use/affordability
Discussions with adolescent girls and women in both urban and rural sites indicate that commercial disposable sanitary pads are the most commonly used material for absorbing menstrual blood. Quite

[21] $1 AUD = ~$1.53 FJD

a few women and girls reported using reusable cloths, and a small number of women reported using children's nappies. Very few women and girls said that they use tampons.

Most adolescent girls reported spending between $4.00 - $5.00 FJD each month, but some said they spent as little as $2.50 FJD each month. Adolescent girls said they asked parents for money to purchase sanitary pads, and some said they asked their boyfriends for money to buy pads. Healthcare workers, teachers and girls themselves reported that affordability of pads was a challenge for many girls.

> ***"Girls may use cloths or rags if they are unable to afford to purchase sanitary pads"*** **(KII health worker, urban).**

Both of the schools that were visited had sanitary pads for sale for girls who needed them. One school sold pads for $0.50 FJD each. Women employed in formal workplaces in Suva said that sanitary pads were affordable, and estimated that they spend around $10 FJD per month on pads, similar to what was reported in rural areas.

> ***"*****[We pay]** ***$4.00 to $6.00 per packet and if it's heavy we will spend $12 to $14"*** **(FGD women, formal workplace, rural).**

Women with disabilities reported additional challenges in both accessing pads and managing bleeding. This is due to physical discomfort and wheelchair use, not having money and being reliant on others to purchase pads for them.

> ***"…if someone gives me money, that's the first thing I do. I buy my own pads. Because I know that every month I have my menses so I have to look forward to buying them. I don't want to have my menses, you know, and then there is no pad around"*** **(IDI, vulnerable women (disability), urban).**

> ***"Going out and sitting for long*** **[is difficult].** ***… because if I sit for long, I have leakage, you know, and I would like to stay in bed for long"*** **(IDI, vulnerable women (disability), urban).**

Challenge: Some girls and women lack access to effective menstrual hygiene materials due to cost and lack of availability. This is especially true for adolescent girls that are dependent on their parents, vulnerable women with no or little income (particularly women with disabilities), and women and girls living in rural villages.

Impact: Women and girls that lack access to effective menstrual hygiene materials, may be less able to participate fully in school, work and broader day to day activities because of fear of leakage.

What sanitary products (or material) do women and girls prefer to use?

Overall most of the women and adolescent girls consulted, including women with disabilities, indicated a preference to use commercial sanitary pads. This preference was most commonly linked to ease of use (not having to wash out cloths), comfort and doesn't require laundry powder to wash.

> ***"For pads, it is easy to dispose, and rags you have to wash it and when you are at work you don't have the facilities to wash the rags"*** **(FGD women, formal workplace, rural).**

"Because it's usually wet **[rags]** ***and we are not comfortable in it. We have to wash it and it's disgusting. But pad is better because we don't have to use it again. And it's easy to dispose"*** **(FGD Girls not in school, urban).**

There were some exceptions to this across both rural and urban sites where some women and adolescent girls indicated preference for reusable cloths. Reasons for preferring to use cloths included: cost savings, it is easier as cloths are readily available and can be washed and re-used, cloths stay in place better and are less likely to stain clothes, cloths are more absorbent than pads (some women reported having to wear two pads at once) and the thickness can be regulated.

"We save our money… and … we can wash it and next time we can reuse it again" **(FGD women, informal workplace, rural).**

"I find it an advantage because it's thicker than pads" **(FGD Girls not in school, urban).**

As money is often cited as a barrier to usage of commercial products, women and girls were asked what product or material they would prefer to use if money was not an issue. To indicate preference, female FGD participants were instructed in use of the Ten Seed Technique.[11] They were given ten stones and asked to distribute the stones according to perceptions of preference for commonly used commercial and re-usable absorbent materials. An image from the FGD with women working in an office environment in Savusavu, the main town in the rural site is provided as an example.

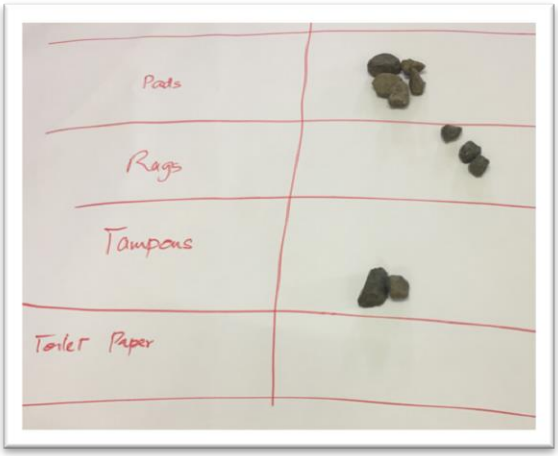


Image: Preference for various absorbent materials as indicated by women in formal workplace rural site.

While tampons are widely available in urban centres in Fiji, this was the only group in the entire study to list 'tampons' as a preferred sanitary product during the Ten Seed activity. This may be associated with there being widespread concerns and myths about using tampons among adolescent girls in rural and urban areas. Women also expressed reservations about using tampons due to discomfort, although some said they used tampons to play sport.

"My mother discourages me from using tampons because she says it's unsafe. Like… I don't know if it's true or no **[not]** ***but sometimes too… it… can uh… prick your balloon*** **[hymen]** ***of being a virgin?"*** **(FGD Girls in school, urban).**

"As far as I heard, it is for women only. And it is for people who are working. No we were not allowed to use tampons by our mothers but they don't talk about it with us" **(FGD girl out of school, urban).**

"I'm scared of how it is inserted… it's uncomfortable" **(FGD woman, formal workplace, urban).**

Challenge: Despite availability in urban centres**,** lack of knowledge, misconceptions and myths about tampons is widespread in Fiji, especially among adolescent girls.

Impact: Women's and girls' reluctance to use tampons results in them having less access to alternative sanitary products which have the potential expand their opportunities to participate in sport such as swimming and other physical activities.

ii) Changing, washing and disposal of MHM materials

Changing
Women and adolescent girls in both urban and rural areas said they change their sanitary pads twice to three times per day, depending on the flow.

Washing and drying of re-usable materials
Girls and women that use re-usable materials reported that they wash materials in the bathroom tub or shower (to disguise the smell) often while bathing or in a separate sink (like a laundry sink, or an outside sink- not in the kitchen). Washed materials are then discretely hung out to dry – sometimes inside the house, but most often outside, at the back of the clothes line out of view of family and neighbours.

> ***"Outside. In the sun to kill the bacteria- we do it when the neighbours are not watching***" **(FGD women, formal workplace, rural).**

Disposal practices
Women and girls reported going to great lengths to dispose of used sanitary products with discretion. One adolescent girl explained how she does this at home:

> ***"I usually wrapped it up three times with newspaper and put it in a black plastic bag because when they look at it, it doesn't look small, it looks big as if it's big rubbish"*** **(FGD Girls out of school, urban).**

In the urban school setting, both of the schools visited were using a professional service to provide and periodically empty sanitary bins, although it was explained that this service is not common to all schools in Suva. In one school, the professional disposal service was being funded by the 'Home and School' Association and was a new pilot as disposal of sanitary pads had become a greater challenge.

> ***"Before it was manageable… uh… but now we're getting big in numbers and you got 629 girls menstruating a month… it's a lot"*** **(KII teacher, urban).**

The same school had also done education about disposal and was providing newspaper in the toilets for girls to wrap their pads in.

> ***"We have assemblies and we… informed the form teachers that they*** **[pads]** ***go in… "This is how you will dispose of … your pads… and you must wrap it… you need to put it…" So they have newspaper… get some newspaper about this big in their own cubicles… in a little basket so they'll take it out and wrap it up"*** **(KII teacher, urban).**

In FGDs with girls attending school they reported that often the bins were full and the toilets were dirty. One of the teachers that was interviewed confirmed that the disposal service does not always come when scheduled, and that sometimes student's flush sanitary pads down the toilet and cause blockage to sanitation systems. At both of the schools visited, female teachers reported having separate staff toilets with sanitary bins provided and that managing their menstruation was not a challenge at work.

Girls in rural areas said they put used sanitary pads in regular bins. Some felt this was adequate, while others felt it would be preferable to burn them. No comment can be made about disposal mechanisms in schools in the rural site as none were visited.

In the urban site, professional disposal systems were observed in some formal workplaces (like office buildings and shopping centres). Girls and women knew the location of good toilets with disposal bins in several shopping centres in the CBD and said that if they are away from home/work these are sought out. In the formal workplace visited it was reported that the sanitary bins are emptied regularly, however we heard anecdotally that in other workplaces this is not always the case.

Image: Professional sanitary disposal systems are in place in a number of schools and workplaces in Suva

Women working in informal settings (such as market vendors) and also those employed in formal workplaces in the rural site reported challenges disposing of used sanitary materials during work hours.

> ***"There are no sanitary disposal bins at the office. We wrap it in plastic and take it home. We put it in the rubbish bins at home and the town council will dispose it"*** **(FGD women, formal workplace, rural).**

Alternative disposal practices mentioned by women in the rural area include burning pads or digging a pit and burying in the ground.

iii) Personal hygiene practices and user satisfaction of water, sanitation and hygiene facilities

The water, sanitation and hygiene facility observation tool found that institutional WASH (schools, general public and workplace toilets) services and facilities satisfied WHO and UNICEF emerging JMP service-level standards for institutional WASH, such as schools and healthcare facilities[22]. However, user satisfaction varied among women and girls, with some reporting they were unsatisfied with the standard of their WASH facilities at work, school and in public places, particularly as it failed to meet their menstrual hygiene needs. Below is an analysis of observed WASH facilities against JMP advanced service level standards (see Annex 2 for a detailed summary of the service-level standards observed at each school and workplace), the human rights to water and sanitation criteria (as applied by the JMP)[23] and the user perceptions of women and girls across the following workplace and school settings:

- Two formal workplaces (one urban, one rural)
- Two informal workplace toilets (market vendors) (one urban, one rural)
- One urban school

[22] *See WHO and Unicef emerging JMP service ladders for monitoring WASH in schools in SDG's:* http://www.wssinfo.org/fileadmin/user_upload/user_upload/Core_questions_and_indicators_for_monitoring_WinS.pdf

[23] The Human rights to water and sanitation principles are: Availability, Quality, Acceptability (and safety), Accessibility and Affordability. See http://www.righttowater.info/why-the-right-to-water-and-sanitation/the-right-to-water-a-legal-obligation/the-content-of-the-rights-explained/

Table 2: JMP global service standards, human right to water and sanitation and user perception definitions

JMP Advanced service levels of sanitation	**Type of toilet:** Improved (flush) / Single-sex / Usable: (defined as) **Accessible:** unlocked, open **Functional:** not broken, blocked, has water to flush **Private:** lockable from inside latrine
Human rights to water and sanitation criteria	**Availability:** a sufficient number of toilets must be available and open for use **Quality:** hygienically and technically safe for use. Also cleansing (water or paper) handwashing and lighting **Acceptability:** culturally acceptable, sex-segregated, privacy and dignity. It also includes cleanliness and menstrual hygiene disposal mechanisms. **Accessibility:** accessible to everyone and physical security not threatened **Affordability:** the price of sanitation services must be affordable for all without compromising the ability to pay for other essential necessities such as food, housing etc.
User satisfaction	Satisfaction is integral to an individual's decision to use available sanitation facilities. Measuring satisfaction is limited because it is a complex concept that reflects personal and social-cultural expectations. Acceptability of sanitation facilities is about socio-cultural acceptance of the technology as well as practical acceptance, such as safety, privacy, harassment and perceived cleanliness.[24]

All toilets observed were **improved**, that is they were flush toilets, which were **functioning** (not broken) with a reliable water supply (for flushing). Based on observations, all toilets were **useable**, that is **unlocked**. Most of the toilets were observed to be **private** (that is **lockable**) although a small number of stalls in school and public toilet blocks had broken locks. All of the toilets observed were **sex-segregated** and the majority of women and girls said they felt that their toilets at work and school were "safe" because they were private.

However, women working as vendors in the market, particularly those who came from rural areas, faced a range of challenges in accessing water, sanitation and hygiene. Women who slept in the market for several nights each week reported the toilets were locked at night from 7pm and reopened between 6-7am. Women said they felt unsafe accessing toilets overnight, there were inadequate number of latrines and each morning they had to queue for a long time.

> ***"I tried to sleep at the market one night... and I saw how the lives of the women... how we are being cared for... the sanitation in the toilets... I've always mentioned that it is just zero percent... the hygiene... For women that come from the villages they do not even have proper toilets... As we are already sleeping outside, we also have to deal with the smell that comes from the toilets... women that are menstruating feel threatened... Those are concerns that are not cared for nor looked into..."*** **(FGD women, urban, informal employment).**

[24] Nelson KB, Karver J, Kullman C, Graham JP (2014) User Perceptions of Shared Sanitation among Rural Households in Indonesia and Bangladesh. PLoS ONE 9(8): e103886. doi:10.1371/journal.pone.0103886

> ***"There are seven lavatories and two bathrooms. Capacity in the morning is 80*** **[people]*. Sometimes, I notice that the reason the queues are long are because there only two toilets in use"*** **(FGD women, urban, informal employment).**

These women who slept in the market also had limited access to water for bathing, which was particularly challenging during menstruation.

> ***"Some of us frequently bathe and shower so it's better for us to stay at home. Because we always pay to bath here so we can't be paying to bath three to four times a day"*** **(FGD women, urban, informal employment).**

These user perceptions demonstrate that while observations of the toilets seem sufficient, the reality of the situation is that women vendors sleeping in the market overnight do not have their WASH needs meet, particularly when menstruating.

Acceptability in sanitation standards refers to **cleanliness**, **accessibility for people with disabilities** and **menstrual hygiene material disposal mechanisms**. Most of the toilet facilities observed met these requirements, but rarely met the satisfaction of women and girls participating in the study. In the formal work settings in both Suva and the rural site (an urban garment factory and a rural government office), staff toilets were clean and had sanitary material disposal mechanisms. In contrast, women working in informal settings - the produce market - felt their toilets were not well maintained, were unclean and lacked any toilet paper and soap.

> ***"It's dirty because plenty people use it"*** **(FGD woman, rural, informal employment).**

Indo-Fijian women working in the urban market reported that their toilet facility was cleaned by a male cleaner which made them embarrassed to dispose of used sanitary materials and uncomfortable using the toilet when he was present.

> ***"We want the ladies washroom to be cleaned by women because it is a female washroom. We feel bad that a man has to come and clean our rubbish"*** **(FGD women, urban, informal employment).**

In the schools visited, students were responsible for cleaning their class toilets.

> ***"They*** **[students]** ***use their own cubicle… they clean it… they keep it tidy… et cetera"*** **(KII teacher, urban).**

Women with disabilities also reported that public toilets were not always accessible.

> ***"I find out that public facilities are not accessible for wheelchairs. Even though they try to make toilets very accessible for us, people with disability, especially wheelchair users. Because some of us cannot balance ourselves, you know using the toilet, they don't have any railings"*** **(IDI, woman with disability, urban).**

Quality sanitation standards refer to **handwashing**, **lighting** and the **availability of anal cleansing material**. WASH observations and participant responses found that public and school toilets often did not provide toilet paper. In one school, students had to go to the office to collect toilet paper before using the toilet. Soap was not available in one urban school. For women working in the market in Suva, the handwashing station cost an additional fee to use, because it was located inside the shower rooms, not in the toilet facilities. This meant after using the toilet, market vendors and

the general public had to wash their hands at one tap located outside the toilets which is shared between women and men. As a consequence it was suggested that handwashing does not always occur.

> ***"This surely is unfair, eh? For women who work at the market to be treated unfairly... we are not well looked after nor well cared for... we are left on our own to look after these needs... There isn't a woman who is bold enough to wash their hands outside... men and even other women stare at us when we wash our hands outside..."*** **(FGD women, urban, informal employment).**

> ***"Only those who want use the showers… they open the hand basin. But then after changing*** **[sanitary pads]*, we have to take our dirty hands to the tap outside in order to wash them... It's degrading treatment towards us women"*** **(FGD women, urban, informal employment).**

Affordability was a critical challenge to meeting women's sanitation needs when menstruating and during work hours. The WASH observations conducted in both marketplaces at the urban site found that public toilets either charged users $0.10 - $0.50 (depending on the facility) for toilet paper, or there was no toilet paper provided. None of the toilets observed, whether there was a fee or not, provided soap for handwashing.

> ***"We also pay... every time you want to use the toilet... you have to pay 20 cents... not every toilet cubicle has a bin... there's just a general rubbish bin provided inside the toilet building for us to place our used sanitary materials in"*** **(FGD women, urban, informal employment).**

The female market vendors in the urban market, who paid the local council a weekly fee to have their stand in the market, still had to pay to use the WASH facilities during their working hours. They paid $0.20 while the general public paid $0.50, however women felt it was unfair, unaffordable and that their fees should cover WASH facility access. They did not receive a discount for accessing the shower room facility, which costs $1.50 to use.

> ***"For one metre, they will give a metre for one stall, but some have bigger stalls. Hers is one block which is $3.25 outside and $2.75 inside. It depends on the size of the table and the amount you will pay. As I can see, the amount of money going to them but their services are not good. They couldn't even provide towels and soap from the $1.50 we are paying them to bath"*** **(FGD women, urban, informal employment).**

Interestingly, the female market vendors in the rural site who also shared toilets with the general public, which were free of charge, felt that if the general public were charged a small fee, it would fund better cleaning of the facilities and an attendant.

> ***"We should pay and it will be clean"*** **(FGD women, informal workplace, rural).**

These women agreed that the public should be charged $0.25 and the vendors themselves should have a card and pay a discounted rate of $0.10 to use the toilet. The fee would provide funding for toilet paper, soap and better cleaning.

Challenge: While most sanitation facilities met global service-level standards, they failed to meet the human rights standards of accessibility, affordability and quality for female market vendors during their work hours and when they stayed overnight.
Impact: Female market vendors are unable to access appropriate, affordable sanitation and have their hygiene, dignity and privacy compromised in their place of work. This may negatively impact their participation in income generating activities when they are menstruating.

In the rural community, adolescent girls' lack of water supply impacted their ability to bathe when menstruating. It was explained that the community water supply was being switched off for longer periods of each day due to insufficient quantity to meet the community's water needs. When the water was not on, the community use the creek for bathing. Adolescent girls reported that they did not like doing this when they were menstruating because the water was cold (which causes stomach pain) and it was not private.

In both urban and rural sites, women from Rabien culture reported that they have "dry baths" when menstruating because of a belief that they would get back pain when they got older.

Challenge: Women with disabilities and adolescent girls living in rural communities face additional challenges to accessing water and sanitation which makes managing menstruation more difficult.

Impact: women who are marginalised due to having a disability or living far from water services are further disadvantaged when it comes to managing menstruation.

iv) Pain management and traditional practices

Common analgesics (e.g. paracetamol) and hot water bottles are often used by women and girls to ease menstrual pain.

Neither of the schools involved in the study are allowed to provide paracetamol to students. If a student experiences menstrual pain her parents are called to pick her up. Feeling ill or experiencing pain was commonly mentioned by girls in both rural and urban FGDs as a reason for not participating in school or sport when menstruating. There were reports by girls themselves as well as teachers, healthcare workers and parents, that adolescent girls sometimes miss days of school during their menstruation due to feeling "lazy", "moody" or because of pain.

> ***"they are some who really suffer and they have… tummy pains, eh? And… and…. really heavy flow and I'm aware of a few girls and normally yes they have to stay home and parents who call in and let us know"*** **(KII teacher, urban).**

Similarly some women reported missing work due to pain and fatigue when menstruating. Women working as market vendors in the urban and rural site reported that they closed their market stall for one day each month.

Women working in formal employment in rural areas said they take Panadol to manage menstrual pain, however some said that they miss work and expressed concern about how this impacts on their annual performance.

> ***"Especially when our workmates are males, and when we constantly do that during our menses, we tend to be left in the black book spot, it will lower our achievement for the year. Maybe when they assess our performance, that could be lessen down"*** **(FGD women, formal workplace, rural).**

Challenge/impact: Inadequate/proactive management of menstrual pain may unnecessarily impact on school and work participation.

In Fiji, traditional medicines are commonly used during menstruation.

> ***"Yes a lot of them* [women] *come to ask for Panadol for headaches. But for menstruation I used to advise them that there are some traditional medicine that they can take to help with their menstruation"* (KII Health worker, rural).**

Women and girls in both urban and rural sites commonly reported using drinks made from Copperleaf (Kalabuci damu), spinach (Bele leaf), leaves of the red hibiscus flower (Draunisenitoa), and Gardenia flowers and leaves. All of these natural remedies are used to *"help the blood flow"*. In one of the FGDs with adolescent girls they explained that a tonic from the Gardenia plant is often used by *"pregnant women"*, suggesting that it may be used as an abortifacient.

Tonics made from the Gardenia plant are known to be used in the Asia-Pacific region to induce abortion and otherwise regulate menstrual flow.[25] Similarly, tonics made from the Hibiscus plant are used to bring on delayed menstruation, as an abortifacient and to help with menstrual pain.[26]

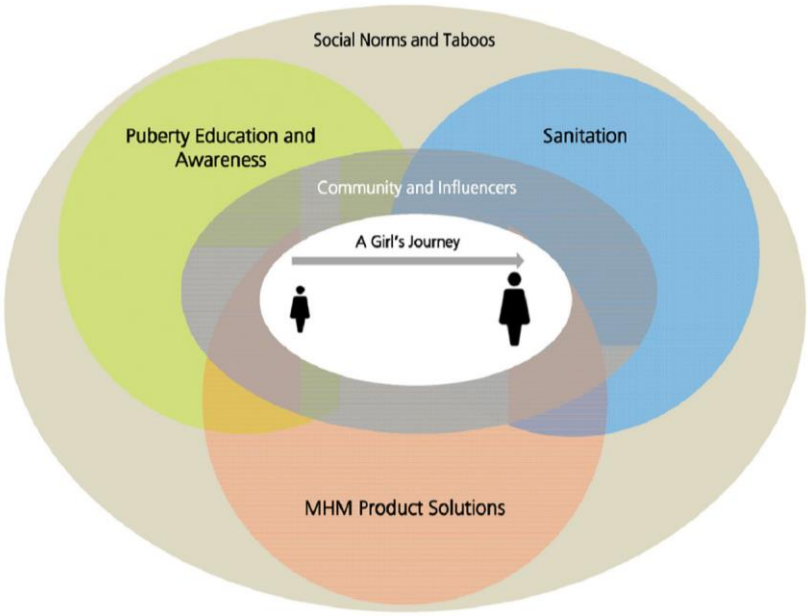
[25] Cambie RC, Brewis AA. 1997. Anti-fertility plants of the Pacific. CRIRO Publishing, Australia.
Lim TK. 2014. Edible Medicinal and Non Medicinal Plants, Vol 8, Flowers. Springer Netherlands
[26] Cambie RC, Ash J. 1994. Fiji Medicinal Plants. CRIRO Publishing, Australia.
Cambie RC, Brewis AA. 1997. Anti-fertility plants of the Pacific. CRIRO Publishing, Australia.
Quattrocchi U. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press.

Suggestions to improve women's and girls' ability to manage their menstruation safely and with dignity

This section presents findings from the study in the context of global literature about MHM.

A recent review of the determinants and health impacts of MHM and programming responses in Sub-Saharan Africa and Asia was undertaken by FSG[27] ; this study emphasised the need to avoid the traditional siloed response to menstrual hygiene, to one that encompasses the broad range of determinants of menstrual health. (Figure 1)

Figure 1: Comprehensive response to menstrual health



i) Education and awareness raising

Many suggestions were made by study participants about ways to improve education and awareness via the home, school and church.

It is clear that the Ministry of Education has focussed efforts to include information about puberty and menstruation in the national curriculum in recent years. Respondents across participant groups endorsed this response and agreed that education in schools is critical.

> ***"Has to be compulsory in the Ministry of Education. To be taught in schools about menstruation and hygiene…"*** **[It- related education]** ***should start right from Primary school. When they are growing up,*** **[so]** ***they are well informed"*** **(FGD Men, rural).**

[27] FSG is a mission-driven consulting firm that aims to supporting leaders in creating large-scale, lasting social change.

Girls suggested that as discussing menstruation can be embarrassing they could be given a brochure and there should be books available in the library. There were examples of girls in school receiving education and information about menstruation in both rural and urban sites.

> ***"In school, those people who came and talked to the girls stressed about the importance of always taking their sanitary materials wherever they go"*** **(KII, Health worker, rural).**

> ***"Lots of schools are doing that… and that is one of the reason*** **[that in]** ***some schools where we*** **[health workers]** ***talk about puberty, they are more versed … with all those gender talks they have"*** **(KII, Health worker, urban).**

There was also recognised that education and information needs to reach men and boys.

> ***"Young men should also be in the workshop. So that they are aware that when young women start menstruating, they can also get pregnant and young men should know about this"*** **(KII, Health worker, rural).**

Education at the community level is also needed in order to extend reach of current strategies beyond school-age girls.

> ***"Some 'workshops' on the topic we are discussing now. I believe it's time that children, men and women are empowered, on this topic"*** **(KII, Leader, rural).**

Some suggested that the church could have a role in disseminating information about menstruation.

> ***"…the Church could open its doors to allow topics like this one to be promoted in our communities"*** **(FGD Men, rural).**

There was also recognition that women with disabilities, especially intellectual disabilities, often miss out on education or information about menstruation.

- ***"…people who have down syndrome… they don't even know what … menstruation hygiene is…so … the Fiji Disable People's Federation*** **[needs to]** ***… work*** **[with]** ***their DPOs*** **[disabled people's organisations]** ***within their communities for them to be aware*** **[of]** ***the proper channels and the proper information to educate on… like for down syndrome, they need to use pictures… so they can identify what are they facing in reality"*** **(IDI, disability, urban).**

Women also felt that there needs to be greater awareness in the workplace about the impact of menstruation. Some women felt that additional leave should be available to them during their menstruation.

> ***"If the government can allow because when we take a day off, we are taking a local leave. …And there are only 6 days sick leave without sick sheet in a year so we then have to either apply for leave or sick leave with sick sheet. If the government can allow if we can be given time off instead of leave"*** **(FGD women, formal workplace, rural).**

ii) MHM products/solutions

During the FGDs, women and girls were shown examples of re-usable materials that are made and sold as income generating initiatives in other countries. These included (see image below, left to right):

- 'EASY" (Goonj, India: www.goonj.org)
- AFRI-pads (AFRI-Pads, Uganda: www.afripads.com)
- Days for Girls kits (DfG, International: www.DaysforGirls.org)

Many of the adolescent girls in urban areas did not like the reusable sanitary products.

> ***"The village girls would*** **[like them].** ***Especially in the village when there are no disposal places so they will find that really good. Not in town but in the village yeah"*** **(FGD Girls not in school, urban).**

Interestingly, women in the rural site didn't think that making reusable pads would be a sustainable or profitable business as they felt that most girls and women use and prefer commercial sanitary pads.

This finding conflicted with the sentiment in the urban site, where women working in both formal and informal work settings liked the re-usable pad design and felt they would be marketable.

> ***"If this [reusable pad] became available it would be very beneficial for us and the environment as well"*** **(FGD women, urban, formal employment).**
>
> ***"Ten dollars would be a good price, as money would be saved on pads every month afterwards"*** **(FGD woman, urban, informal employment).**

Participants were also shown a menstrual cup and tampons. Few of the participants had either used tampons themselves or knew others who had, but they were interested to discuss associated myths and concerns. The menstrual cup had a mixed reception. A few of the older women (who had also used tampons) expressed willingness to try it, but generally it was not very well-received by participants.

> ***"it's weird and disgusting. It's so new. Our first reaction is it is weird"*** **(FGD Girls not in school, urban).**

Working women felt that greater awareness in the workplace and with bosses could provide a more supportive workplace when they were experiencing pain.

> **"…** ***don't give them*** **[menstruating women]** ***heavy duties…And if they can order or buy sanitary pads and include them in the list of toiletries needed for the office"*** **(FGD, Women formal workplace, rural).**

Girls similarly reported that lighter duties and access to sanitary pads (or money to buy them) would help them to manage menstruation more easily.

Men in both rural and urban FGDs suggested that spare sanitary pads should be included in the workplace and schools first aid kits.

iii) Water, sanitation and hygiene

During FGDs girls and women were asked to discuss and draw the features an ideal latrine for their workplace or school. Common features of the ideal latrine articulated by girls in schools included:

- A supply of toilet paper
- Doors with proper locks
- Space inside the toilet to change
- A bin placed inside the cubicle allowing for discrete disposal
- Soap
- A free supply of sanitary pads kept in a cupboard in the toilet block
- Toilets being light and clean

Image: **An 'ideal school latrine' - as drawn by school girls in Suva**

The ability to discretely dispose of used sanitary materials was emphasised by adolescent girls.

> ***"Just to have sanitary bins at just where the toilets are because girls will have to go outside with their rubbish. And it's embarrassing"*** **(FGD, Girls in school, urban).**

One healthcare worker (urban) said some schools in Fiji have incinerators for used sanitary products which she also considered an effective disposal mechanism.

There was agreement among participants in the men's FGD that new toilet design should include MHM features.

> ***"It should be recommended that from now on, when a toilet is built, it should have all the necessary requirements that would take good care of the Women and Girls"*** **(FGD men, rural).**

Women working and sleeping in the market have additional needs to the general public. In order to meet their WASH and menstrual hygiene needs, they need to be at the centre of design and ongoing

operation and maintenance of their workplace toilet facilities. They provided many solutions which met their specific WASH needs and were entrepreneurial and innovative.

> ***"A place/bench for women to sit comfortably... if there can be a hanger for women to hang their hand bags? If we were to place our bags on the toilet floor, many usually spit carelessly on the floor... hand bag holder... and the bin should be here.*** **[in each of the toilet cubicles]*. Toilet paper needs to be closer to the toilet... also; can there be a hand basin?"*** **(FGD women, urban, informal employment).**

Affordability of sanitation needs to be taken into account for women working in informal settings where there are no private toilet facilities.

> ***"For permanent vendors like us, when we pay for our stalls, we don't have to pay for visiting the toilet. We just be given an ID card each for identification purposes etc. I think that we should just pay for the rental and don't pay for the toilets"*** **(FGD women, informal employment, urban).**

There were entrepreneurial ideas among women which both meet women's needs and provide income generation, including:

- Selling items to women sleeping in the market
- Professional cleaning service led by women only, which generates income for women

> ***"For us who use the accommodation we give $2 to the SCC. Then we have to look for our soup, colgate and toilet paper. Then I told the ladies, we can't go on this way. We need to do something about it. So I started buying toilet paper, bathing soap and toilet paper then I told them you give 20 cents each to go into our revolving fund. And now the services had increased"*** **(FDG women, informal employment, urban).**

> ***"We can start doing it as a business. All of us should have the same motive. It can be done so that the public toilets are properly looked after"*** **(FDG women, informal employment, urban).**

> ***"I am also selling tablets, paracetamol, ibuprofen and calcium. I am looking after the rural vendors, their accommodation and hygiene"*** **(FDG women, informal employment, urban).**

6. Discussion and recommendations

As an upper-middle income country, Fiji has made considerable progress on addressing the menstrual health needs of women and adolescent girls. Compared with MHM studies in the region and globally of low-income countries, adolescent girls and women in rural and urban Fiji appear to experience less challenges in managing menstruation hygienically and with dignity. Nonetheless, significant challenges remain, particularly for women working in informal settings without private sanitation facilities; adolescent girls living in rural and remote areas; women and girls with disabilities and for those who are poor.

Menstruation in Fiji is generally regarded as a normal bodily function, however related attitudes and beliefs vary across cultures and religions. For example, some i-Taukei families celebrate menarche with a traditional feast and four-day celebration, those of Hindu faith and Rabian culture impose a range of behavioural restrictions (some of which are unwanted) during menstruation.

National curriculum taught in schools across Fiji has led to most adolescent girls having some knowledge about menstruation; however there remain challenges for teachers being equipped to teach adolescents about sexual and reproductive health and menstruation. Lack of comprehensive knowledge on the menstrual cycle can potentially contribute to high rates of teenage pregnancy. School-based education efforts are positive, but there is now a generational gap in knowledge about menstruation and menstrual health. Misconceptions and myths about menstruation are widespread and often perpetuated by inadequate knowledge among older members of society. Furthermore, education efforts have not reached girls with disabilities as it is not routinely taught in special schools.

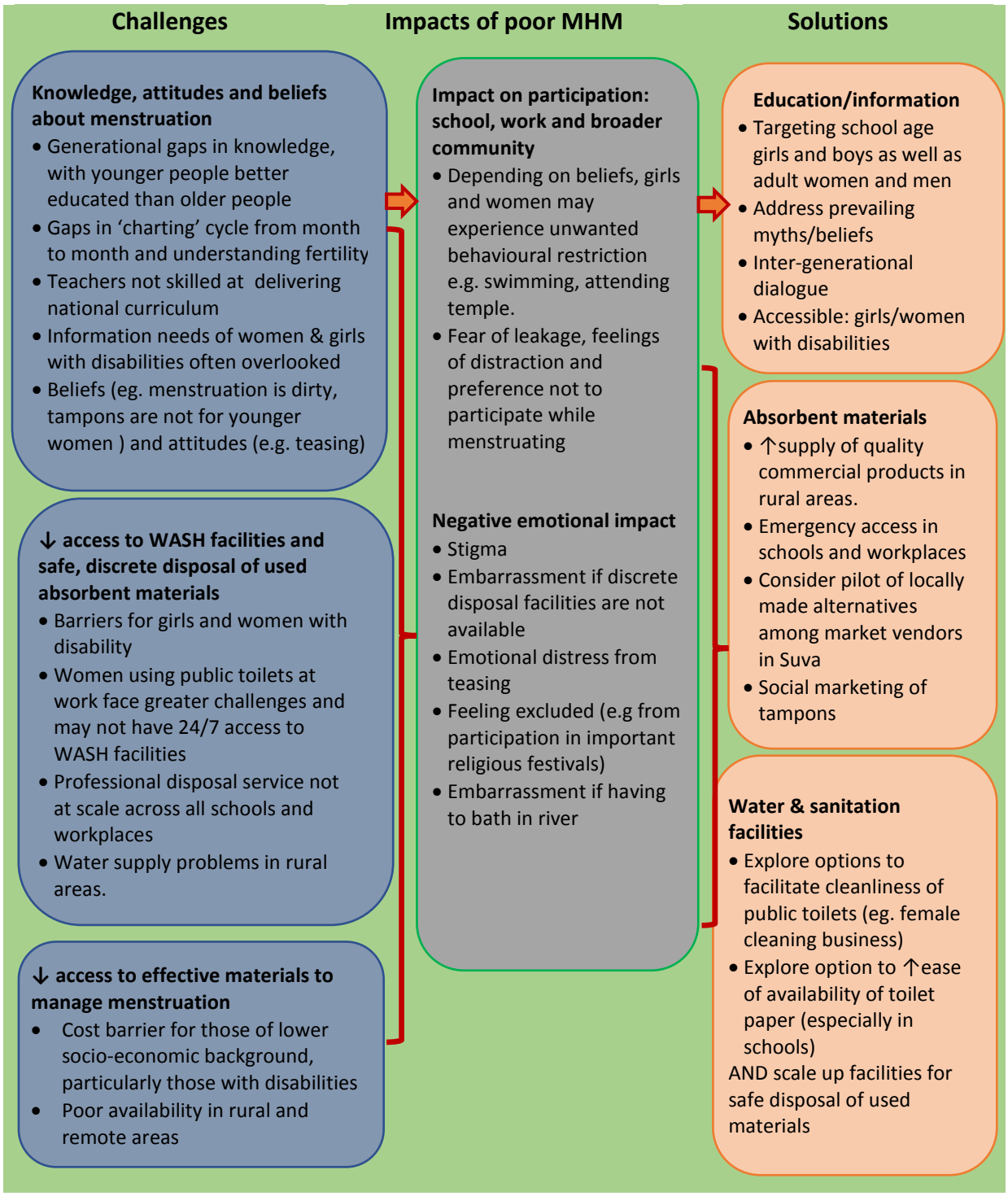
The vast range of good quality sanitary pads and tampons in Suva and in rural city centres suggest that women and adolescent girls have good access to commercial absorbent materials. However use of reusable cloths is still fairly common in both urban and rural areas, suggesting that cost and access is a challenge for some- notably women and girls who are poor or otherwise marginalised, and those living in rural and remote areas.

Managing menstruation at work is a greater challenge for women working in the informal sector, such as market vendors, because they have to share toilet facilities with the public which may be unclean and have poor menstrual hygiene disposal systems. Safe and discrete disposal remains a significant challenge in Fiji, although there are excellent examples of professional disposal systems which could be replicated and scaled up across schools, workplaces and in public places. These solutions also provide good examples for other Pacific countries.

With Fiji's high rates of national water and sanitation coverage, adolescent girls and women generally have access to these essential services. There were greater challengers in rural areas, where water supply in rural communities was not always available.

While good progress on menstrual hygiene has been made in Fiji, these efforts appear to have excluded women with disabilities, who face additional challenges in managing menstruation hygienically and with dignity. The national curriculum has not reached them, water, sanitation and hygiene facilities in public places are inaccessible and purchasing sanitary pads is unaffordable due to greater levels of poverty or physically difficult to purchase. These factors impact on participation in daily life for women with disabilities, potentially reinforcing inequality.

Summary of the findings



Recommendations

1. Strengthen government leadership and policy commitment on supporting MHM within the Ministry of Health (MOHMS) and Ministry of Education (MoE):

1.1 Ensure women's economic empowerment programs (such as *Markets for Change*[28]) consider women's water sanitation and hygiene needs and rights. Women as users of sanitation facilities must be central to the design of WASH services and participatory monitoring and evaluation may improve quality and usability of facilities. (S)

1.2 Educate those responsible for labour-related policy (such as Occupational Health and Safety Standards) about women-specific WASH needs in informal work settings. Draw on the successes achieved in formal work settings for replication in informal workplaces. (S)

1.3 Ensure national health and education policies and sub-national action plans incorporate MHM and develop good monitoring mechanisms to track progress. (M)

1.4 Increase cross-sectorial engagement on MHM through stakeholder engagement, education and advocacy to take MHM beyond WASH and education sectors. Economic empowerment, gender and disaster risk reduction initiatives all need strengthening with regard to MHM. (M)

2. Improve access to high quality information about menstruation and MHM via MoE, MoHMS and non-government organisations (NGO) working in the area of sexual and reproductive health and WASH

2.1 Review and strengthen the menstruation components of the Family Life Education (FLE) curriculum to also include MHM. In particular:

- Ensure MHM is included in the primary school component and that it targets both girls and boy's schools (M)
- Ensure education includes charting the monthly cycle and predicting menstruation dates month-to-month (M)

2.2 Develop training resources and provide training to teachers (both male and female) on menstruation and MHM as part of FLE training. (M)

2.3 Develop a disability-inclusive and accessible comprehensive sexual and reproductive health curriculum which includes menstruation and MHM. This could be implemented across special schools and mainstreamed into all schools to ensure girls with disabilities receive quality information and education on menstruation and sexual and reproductive health and rights (SRHR). This could be done in collaboration with National Disabled People's Organisations (DPO's). (M)

2.4 Develop and roll out parent education programs at primary schools on puberty, menstruation and menstrual hygiene, to ensure parents are passing on accurate information to their daughters and sons about menstruation. This should be targeted at fathers as well as mothers, to promote shared responsibility between parents in talking to girls about MHM. (M)

3. Improve availability, affordability, and access to quality commercial menstrual hygiene products in rural areas

3.1 Conduct a supply chain analysis to identify pathways to increase availability of affordable and high quality sanitary pads in rural and remote communities. (S)

3.2 Pilot a local female-led livelihood project to scale up production, market-based demand and social marketing of reusable pad designs, for example Days for Girls kits. (M)

[28] *Markets for Change* is a UNWomen six-year multi-country initiative, primarily funded by the Department of Foreign Affairs and Trade. It aims to ensure aims to ensure that marketplaces in rural and urban areas in Fiji, Solomon Islands and Vanuatu are safe, inclusive and non-discriminatory, promoting gender equality and women's empowerment. For further information see: https://unwomen.org.au/wp-content/uploads/2016/09/M4C_regionalbrief_17Feb16_email.pdf

3.3 Scale up the examples of emergency access to affordable sanitary pads in schools. Adolescent girls should be consulted to identify preferred brands and products, methods of dispensing or selling pads, and also affordability. (M)

3.4 Expand emergency access to sanitary pads in workplaces and public toilets by including pad supply in operational and maintenance budgets and routine first aid resourcing. Alternatively, consider vending machine or cost sale options. (M)

3.5 Disaster recovery and response initiatives need to include access to menstrual hygiene management materials (and education or information) during and after emergencies (S)

4. Water, sanitation and hygiene facilities

4.1 Review Occupational Health and Safety standards for informal workplaces to ensure women-specific WASH needs are met, particularly safe disposal mechanisms of menstrual hygiene materials. (M)

4.2 Develop and strengthen national minimum standard guidelines and technical designs for public water, sanitation and hygiene facilities to be accessible, safe and MHM-friendly. Standards should also apply to emergency evacuation centres. (M)

4.3 Local council services responsible for market places to allocate budget and services to better maintain public toilet facilities to ensure they meet the needs of the workers who are using them. Better standards of accessibility after hours, no cost and improved safe/discrete disposal systems are critical. (M)

4.4 Consistent maintenance and cleaning of latrines by women only, to ensure privacy in schools, workplaces and public toilets. (S)

4.5 Accessibility and safety audits to be conducted in consultation with national Disabled People's Organisations to ensure public toilets are accessible and appropriately designed for people with a range of different impairments. In particular, women with disabilities should have a voice in this process. (M)

4.6 Sanitary disposal and waste services currently in formal workplaces could be scaled up to all public toilets, schools and informal work settings. They could potentially be designed to generate income for women. (L)

4.7 Small-scale pilots project to test alternative and sustainable disposable systems requiring low maintenance could be done in schools and workplaces. This could explore ways to reduce environmental impact of disposable pad use: for example new composting technologies and exploration of bio-degradable pads, eco-friendly incinerators and chutes or sealed containers. (L)

Annexes

Table 1a) Sanitary product availability urban (Suva CBD)

SHOP DESCRIPTION: kiosk; mixed business; supermarket; pharmacy.	PRODUCT	COST/FJD	COUNTRY OF MANUFACTURE	SEX STAFF	LOCATION IN SHOP
1. Supermarket	Kotex-maxi 18	$2.17	malaysia/Indonesia Kimberley Clarke Worldwide	M/F	shelf
	Kotex-maxi 10	2.25	malaysia/Indonesia Kimberley Clarke Worldwide		
	Kotex-fresh liners 20	2.55	malaysia/Indonesia Kimberley Clarke Worldwide		
	Kotex-overnight 16	4.26	malaysia/Indonesia Kimberley Clarke Worldwide		
	Kotex-regular 20	4.26	malaysia/Indonesia Kimberley Clarke Worldwide		
	Kotex-heavy 20	4.26	malaysia/Indonesia Kimberley Clarke Worldwide		
	Libra-invisible 10	3.40	Australia, Asaleo Care		
	Libra-super 10	3.40	Australia, Asaleo Care		
	Libra-regular 12	7.90	Australia, Asaleo Care		
	Libra classic 10 reg	1.90	Australia, Asaleo Care		
	Libra goodnight ultrathin	3.49	Australia, Asaleo Care		
	Libra extra 14 reg	4.36	Australia, Asaleo Care		
	Libra extra 12 super	4.63	Australia, Asaleo Care		
	Libra extra 18 reg	4.46	Australia, Asaleo Care		
	Libra extra goodnight 10	4.26	Australia, Asaleo Care		
	Libra maternity 10	4.54	Australia, Asaleo Care		
	Libra tampons 16 super		Australia, Asaleo Care		
	Libra tampons 16 reg	4.73	Australia, Asaleo Care		
	Libra daily liners 28	4.69	Australia, Asaleo Care		
	Stayfree All nights 10	4.54	Thailand and China, J & J Pacific		
	Stayfree Spirit reg 14	4.54	Thailand and China, J & J Pacific		
	Stayfree reg 10	2.45	Thailand and China, J & J Pacific		

	Stayfree super 18	6.59	Thailand and China, J & J Pacific		
	Stayfree reg 20	6.59	Thailand and China, J & J Pacific		
	Stayfree super 12	4.54	Thailand and China, J & J Pacific		
	Stayfree reg 14	4.54	Thailand and China, J & J Pacific		
	Stayfree ultrathin 12	4.73	Thailand and China, J & J Pacific		
	Stayfree maternity 10	6.59	Thailand and China, J & J Pacific		
	Carefree light 20	4.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree liners reg 28	7.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree sweet dreams 7	5.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree ultrathin heavy 7	5.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree ultrathin reg 10		Thailand and China, J & J Pacific and J & J ANZ		
	Carefree ultrathin super 10	5.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree liners scented 30	5.59	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree ultrathin reg 12	4.73	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree liners unscented 30	5.59	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree barely there liners 42	8.96	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree barely there liners 24	5.97	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree tampons super 16	7.68	germany, J & J Pacific		
	Carefree tampons reg 20	7.68	germany, J & J Pacific		
	Carefree tampons reg 40	12.94	germany, J & J Pacific		
	Carefree tampons sup 32	12.95	germany, J & J Pacific		
2. Mixed business	Libra extra goodnight 10	5.90	Australia, Asaleo Care	M/F	shelf
	Stayfree reg 10	3.50	Thailand and China, J & J Pacific		
	Stayfree reg 20	9.99	Thailand and China, J & J Pacific		
3. Mixed business	Softex 8	2.80	Indonesia, Softex	M/F	shelf
	Chinese pink 10	2.99	China		
	Chinese blue 10	2.99	China		
	Stayfree reg 10	3.50	Thailand and China, J & J Pacific		

4. Pharmacy	Stayfree All nights 10	4.54	Thailand and China, J & J Pacific	M/F	shelf
	Stayfree Spirit reg 14	4.54	Thailand and China, J & J Pacific		
	Stayfree reg 10	2.46	Thailand and China, J & J Pacific		
	Stayfree super 18	6.59	Thailand and China, J & J Pacific		
	Stayfree reg 20	6.59	Thailand and China, J & J Pacific		
	Stayfree super 12	4.54	Thailand and China, J & J Pacific		
	Stayfree maternity 10	6.59	Thailand and China, J & J Pacific		
	Carefree light 20	10.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree liners reg 28	10.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree sweet dreams 7	7.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree ultrathin heavy 7	7.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree ultrathin super 10	7.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree barely there liners 42	8.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree barely there liners 24	5.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree tampons super 16	6.95	germany, J & J Pacific		
	Carefree tampons reg 20	6.95	germany, J & J Pacific		
	Carefree tampons reg 40	11.95	germany, J & J Pacific		
	Carefree tampons sup 32	11.95	germany, J & J Pacific		
	carefree long liners 24	10.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree tampons mini 16	6.95	germany, J & J Pacific		
5. Pharmacy	Softex 8	1.64	Indonesia	M/F	shelf
	Julie 12	4.46	OH USA, Healthcare products Inc		
	Libra classic 10 reg	2.27	Australia, Asaleo Care		
	Libra extra 12 super	5.65	Australia, Asaleo Care		
	Libra extra goodnight 10	5.61	Australia, Asaleo Care		
	Libra maternity 10	5.64	Australia, Asaleo Care		
	Stayfree All nights 10	4.54	Thailand and China, J & J Pacific		
	Stayfree Spirit reg 14	4.54	Thailand and China, J & J Pacific		

	Stayfree reg 10	3.31	Thailand and China, J & J Pacific		
	Stayfree super 18	7.15	Thailand and China, J & J Pacific		
	Stayfree reg 20	6.59	Thailand and China, J & J Pacific		
	Stayfree super 12	4.54	Thailand and China, J & J Pacific		
	Stayfree reg 14	4.54	Thailand and China, J & J Pacific		
	Carefree liners unscented 30	6.13	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree barely there liners 24	5.15	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree tampons super 16	7.96	germany, J & J Pacific		
	Carefree tampons reg 20	7.96	germany, J & J Pacific		
	Carefree tampons mini 16	7.96	germany, J & J Pacific		
	Carefree tampons reg 16	7.96	germany, J & J Pacific		
	Tampax super plus 20	17.30			
	Tampax regular 20	10.76			
	Tampax regular 12	11.50			
6. Pharmacy	Libra classic 10 reg	2.50	Australia, Asaleo Care	M/F	shelf
	Stayfree All nights 10	4.54	Thailand and China, J & J Pacific		
	stayfree regular 10	2.46	Thailand and China, J & J Pacific		
	Stayfree super 18	6.59	Thailand and China, J & J Pacific		
	Stayfree regular 20	6.59	Thailand and China, J & J Pacific		
	Stayfree maternity 10	6.59	Thailand and China, J & J Pacific		
	Carefree liners 30 scented	5.99	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree liners unscented 30	5.99	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree barely there liners 42	8.59	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree barely there liners 24	5.99	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree tampons reg 20	6.99	germany, J & J Pacific		
	Carefree tampons reg 40	11.99	germany, J & J Pacific		
	Carefree tampons super 32	11.99	germany, J & J Pacific		
	Carefree tampons reg 16	6.99	germany, J & J Pacific		

7. Mixed business	Kotex maxi 10	2.40	malaysia/Indonesia Kimberley Clarke Worldwide		
	Chinese pink 10	1.70	China		
	chinese pink single	0.5	China	M/F	behind counter
	Stayfree Spirit reg 14	6.2	Thailand and China, J & J Pacific		
8. Pharmacy	Stayfree All nights 10	5.49	Thailand and China, J & J Pacific	M/F	shelf
	Stayfree Spirit reg 14	5.49	Thailand and China, J & J Pacific		
	Stayfree reg 10	2.97	Thailand and China, J & J Pacific		
	Stayfree super 18	7.82	Thailand and China, J & J Pacific		
	Stayfree reg 20	7.82	Thailand and China, J & J Pacific		
	Stayfree super 12	5.49	Thailand and China, J & J Pacific		
	Stayfree reg 14	5.49	Thailand and China, J & J Pacific		
	Stayfree ultrathin 12	6.39	Thailand and China, J & J Pacific		
	Stayfree maternity 10	8	Thailand and China, J & J Pacific		
	Carefree light 20	5.15	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree liners reg 28	8.27	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree sweet dreams 7	6.20	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree ultrathin heavy 7	6.20	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree ultrathin reg 10	6.20	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree ultrathin super 10	6.20	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree liners scented 30	5.35	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree liners unscented 30	5.63	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree barely there liners 42	8.48	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree barely there liners 24	5.35	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree tampons super 16	7.19	germany, J & J Pacific		
	Carefree tampons reg 20	7.19	germany, J & J Pacific		
	Carefree tampons reg 40	12.27	germany, J & J Pacific		
	Carefree tampons sup 32	11.84	germany, J & J Pacific		
	carefree long liners 24	8.27	Thailand and China, J & J Pacific and J & J ANZ		

	Carefree tampons mini 16	7.19	germany, J & J Pacific		
	Carefree tampons reg 16	7.19	germany, J & J Pacific		
9. Mixed business	Lady Comfort 10	1.99	? Kissskin	M/F	shelf
	BCC Close Touching 10	1.49	Taiwan, Blue Dragon		
10. Pharmacy	Softex 8	1.50	Indonesia	M/F	shelf
	libra regular 12	2.05	Australia, Asaleo Care		
	Libra extra 12 super	5.49	Australia, Asaleo Care		
	libra extra 10 goodnight	5.49	Australia, Asaleo Care		
	Libra daily liners 28	5.43	Australia, Asaleo Care		
	Stayfree All nights 10	4.54	Thailand and China, J & J Pacific		
	Stayfree super 18	6.59	Thailand and China, J & J Pacific		
	Stayfree reg 20	6.59	Thailand and China, J & J Pacific		
	Stayfree super 12	4.54	Thailand and China, J & J Pacific		
	Stayfree reg 14	4.54	Thailand and China, J & J Pacific		
	Stayfree maternity 10	6.59	Thailand and China, J & J Pacific		
	Carefree liners unscented 30	5.60	Thailand and China, J & J Pacific and J & J ANZ		
	carefree barely there liners 24	5.69	Thailand and China, J & J Pacific and J & J ANZ		
	carefree tampons reg 20	8.48	germany, J & J Pacific		
	carefreen tampons mini 16	6.90	germany, J & J Pacific		
11. Mixed business	Sun care 12	1.40	China, Kayns Distributor Co	M/F	shelf
	Soft Comfortable 8	1.25	China, Kayns Distributor Co		
12. Mixed business	Kotex maxi 10	2.50	malaysia/Indonesia Kimberley Clarke Worldwide	M/F	shelf
	Kotex heavy 20	4.50	malaysia/Indonesia Kimberley Clarke Worldwide		
	Softex 24	4.25	Indonesia		
	Softex 8	1.65	Indonesia		
	Soft comfortable 20	2.95			
	Soft comfortable 8	1.50			
	Stayfree All nights 10	4.54	Thailand and China, J & J Pacific		

	Stayfree Spirit reg 14	4.54	Thailand and China, J & J Pacific		
	Stayfree reg 10	2.46	Thailand and China, J & J Pacific		
	Stayfree super 18	6.59	Thailand and China, J & J Pacific		
	Stayfree reg 20	6.59	Thailand and China, J & J Pacific		
	Stayfree super 12	4.54	Thailand and China, J & J Pacific		
	Stayfree reg 14	4.54	Thailand and China, J & J Pacific		
	Stayfree ultrathin 12	4.54	Thailand and China, J & J Pacific		
	Stayfree maternity 10	6.59	Thailand and China, J & J Pacific		
	Carefree liners 30 scented	4.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree liners unscented 30	4.95	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree barely there liners 24	4.95	Thailand and China, J & J Pacific and J & J ANZ		
	Protex/Her's 24	3.95	Indonesia, Wings care		
	Protex/Her's 12	2.50	Indonesia, Wings care		
	Protex/Her's 10	2.50	Indonesia, Wings care		
	Protex/Her's 8	1.95	Indonesia, Wings care		

Table 1b) Sanitary product availability urban (Savusavu)

SHOP DESCRIPTION: kiosk; mixed business; supermarket; pharmacy.	PRODUCT	COST/FJD	COUNTRY OF MANUFACTURE	SEX STAFF	LOCATION IN SHOP
1. Mixed Business	Protex/Her's 8	$1.75	Indonesia, Wings care	N/A	N/A
	Protex/Her's 12	2.5	Indonesia, Wings care		
	Protex/Her's 5	1	Indonesia, Wings care		
	AllFree/reg 10	1.75	No information		
2. Mixed Business	Protex/Her's 8	2.29	Indonesia, Wings care	N/A	N/A
	Protex/Her's 12	2.69	Indonesia, Wings care		
	Protex/Her's 10	2.69	Indonesia, Wings care		
	Protex/Her's 24	3.99	Indonesia, Wings care		
	Softex 8	1.69	Indonesia		
	Kotex-regular 20	4.69	malaysia/Indonesia Kimberley Clarke Worldwide		
	Libra extra goodnight 10	4.95	Australia, Asaleo Care		
	Libra classic 10 reg	2.49	Australia, Asaleo Care		
	Stayfree maternity 10	6.59	Thailand and China, J & J Pacific		
	Stayfree super 12	4.54	Thailand and China, J & J Pacific		
	Stayfree reg 14	4.54	Thailand and China, J & J Pacific		
3. Supermarket	Protex/Her's 10	2.29	Indonesia, Wings care	N/A	N/A
	softex 8	1.29	Indonesia		
	softex 24	3.75	Indonesia		
	softex Liner 20	2.24	Indonesia		
	Libra daily liners 28	3.95	Australia, Asaleo Care		
	Libra invisible 12	3.19	Australia, Asaleo Care		
	Libra super 10	3.75	Australia, Asaleo Care		
	Carefree Tampons mini 16	6.62	germany, J & J Pacific		
	Carefree Liners 24	5.35	Thailand and China, J & J Pacific and J & J ANZ		

	Stayfree maternity 10	6.59	Thailand and China, J & J Pacific		
	Stayfree super 12	4.54	Thailand and China, J & J Pacific		
	Stayfree reg 14	4.54	Thailand and China, J & J Pacific		
	Stayfree regular 18	6.59	Thailand and China, J & J Pacific		
	Stayfree reg 20	6.59	Thailand and China, J & J Pacific		
	Tena regular 10	13.34	Netherlands via NZ (CSA Hygiene)		
4. Mixed Business	Softex 8	1.29	Indonesia	N/A	N/A
	kotex-regular 10	2.99	malaysia/Indonesia Kimberley Clarke Worldwide		
5. Pharmacy	Carefree tampons sup 32	13.95	germany, J & J Pacific	N/A	N/A
	Carefree tampons super 16	7.95	germany, J & J Pacific		
	Carefree liners unscented 30	6.99	Thailand and China, J & J Pacific and J & J ANZ		
	Carefree tampons reg 20	7.95	germany, J & J Pacific		
	Carefree tampons reg 40	11.95	germany, J & J Pacific		
	Stayfree Goodnight 10	4.54	Thailand and China, J & J Pacific		
	Stayfree reg 10	2.46	Thailand and China, J & J Pacific		
	Carefree Tampons mini 16	8.48	germany, J & J Pacific		
	Stayfree maternity 10	6.59	Thailand and China, J & J Pacific		
	Stayfree super 12	4.54	Thailand and China, J & J Pacific		
	Stayfree Spirit reg 14	4.54	Thailand and China, J & J Pacific		
	Carefree tampons reg16	7.95	germany, J & J Pacific		
	Tampax regular 12	14.99			
	Tampax super 12	14.99			
	Tampax super 20	24.6			
6. Mixed Business	Protex/Her's 8	1.65	Indonesia, Wings care	N/A	N/A
	Protex/Her's 12	2.45	Indonesia, Wings care		
	Protex/Her's 10	2.45	Indonesia, Wings care		
	Softex 8	1.29	Indonesia		
	softex 24	3.99	Indonesia		
	Libra goodnight 12	4.89	Australia, Asaleo Care		

	Libra classic 10 reg	1.99	Australia, Asaleo Care		
	Stayfree super 12	4.45	Thailand and China, J & J Pacific		
	Stayfree reg 14	4.45	Thailand and China, J & J Pacific		
7. Supermarket	Protex/Her's 8	1.99	Indonesia, Wings care	N/A	N/A
	Protex/Her's 12	2.99	Indonesia, Wings care		
	Protex/Her's 5	2.79	Indonesia, Wings care		
	kotex-regular 8	2.99	malaysia/Indonesia Kimberley Clarke Worldwide		
	Libra extra 12 reg	4.99	Australia, Asaleo Care		
	Libra regular 18	5.99	Australia, Asaleo Care		
	Libra extra goodnight 10	4.99	Australia, Asaleo Care		
	Stayfree reg 10	3.99	Thailand and China, J & J Pacific		
8. Supermarket	Black & Gold 18	2.65		N/A	N/A
	Black & Gold 14	4.25			
	Black & Gold 16	4.6			
	Black & Gold 20	3.65			
	Libra classic 10 reg	3.75	Australia, Asaleo Care		
	Libra extra 10 reg	4.25	Australia, Asaleo Care		
	Libra daily liners 28	3.95	Australia, Asaleo Care		
9. Mixed business	Always 10	1.2	Kenya/Ethoiopia (Hasbah Kenya Ltd)	N/A	N/A
	Carefree tampons super 16	7.7	germany, J & J Pacific		
	Softex 8	1.3	Indonesia		
	kotex-regular 10	1.75	malaysia/Indonesia Kimberley Clarke Worldwide		
	Carefree tampons reg 40	7.7	germany, J & J Pacific		
	Stayfree Goodnight 10	4.54	Thailand and China, J & J Pacific		
	Carefree tampons reg 20	7.7	germany, J & J Pacific		
	Carefree Tampons mini 16	6.59	germany, J & J Pacific		
	Stayfree reg 14	4.54	Thailand and China, J & J Pacific		
10. Supermarket	Protex/Her's 8	1.41	Indonesia, Wings care	N/A	N/A
	Softex 8	1.5	Indonesia		

	softex Liner 20	2.49	Indonesia		
	kotex-regular 10	1.99	malaysia/Indonesia Kimberley Clarke Worldwide		
	Libra extra 10 reg	3.59	Australia, Asaleo Care		
	Libra classic 10 reg	3.4	Australia, Asaleo Care		
	Libra extra goodnight 10	4.15	Australia, Asaleo Care		
	Libra daily liners 28	4.15	Australia, Asaleo Care		
	Stayfree reg 10	4.73	Thailand and China, J & J Pacific		
	Carefree Tampons mini 30	4.95	germany, J & J Pacific		
	Stayfree super 12	6.59	Thailand and China, J & J Pacific		
	Stayfree regular 18	6.59	Thailand and China, J & J Pacific		
	Stayfree reg 20	6.59	Thailand and China, J & J Pacific		
	Tena regular 10	14.87			
	V Class 28	4.36	Indonesia (Welfare PRC)		
	V Class 10	4.36	Indonesia (Welfare PRC)		

Annex 2

Table: observed JMP service levels of sanitation and hygiene for schools and workplaces

	Sanitation	**Hygiene**
School: urban *Assessment:* **Advanced service level met**	Advanced service level: 'Improved' sanitation facilities (flush) which are single-sex; are useable because functional and half of latrines are lockable (private). Acceptability for girl students: high because of cleanliness (half of latrines), but poor as no MHM disposal bins inside latrine stalls, no toilet paper for anal cleansing.	Limited service: Handwashing facilities had water but no soap.
Formal Workplace: rural **No global standards exist for workplaces, but advanced service level features observed**	2 improved toilets (flush) for 12 staff are useable (private, functional, accessible) and sex-segregated. Advanced service level features: sufficient quantity, clean, bin for MHM materials located inside the stall and toilet paper.	Handwashing facilities with piped water and soap located inside latrine block.
Informal workplace: rural **No global standards exist for workplaces, but advanced service level features observed**	4 out of 6 improved toilets (flush) for general public and market vendors are **usable** (private, functional, accessible) and **sex-segregated**. Advanced service level features met: Accessible (no steps) sufficient quantity and somewhat clean. Advanced service level features not met: bin for MHM materials outside toilet block, no toilet paper for anal cleansing (and no where to purchase it).	Handwashing facilities with piped water inside latrine block, however no soap available.