

Funafuti Menstrual Hygiene Management Survey

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Finally, I would like to thank the citizens of Funafuti who took part in the survey for giving us your time and for your patience. We trust that your responses will guide and lead to improvements to health and wellbeing of future generations of Tuvaluans in Funafuti.

ACRONYMS

ADB	Asian Development Bank
CCD	Climate Change Department
GoT	Government of Tuvalu
MHM	Menstrual Hygiene Management
MoH	Ministry of Health, Social Welfare and Gender Affairs
MPWIELD	Ministry of Public Works, Infrastructure, Environment, Labour,
NGO	Non-Governmental Organization
PWD	Public Works Department, Government of Tuvalu
RO	Reverse Osmosis
TA	Technical Assistance
TANGO	Tuvalu Association of Non-Governmental Organizations
TNCW	Tuvalu National Council of Women
TuFHA	Tuvalu Family Health Association
WASH	Water, Sanitation and Hygiene

EXECUTIVE SUMMARY

The Funafuti Menstrual Hygiene Management Survey and the Funafuti Hygiene Behaviours and Practices Survey were conducted simultaneously by TuFHA in February 2022 on behalf of ADB. The purpose was to collect information from Funafuti residents to inform the design and implementation of a Hygiene Awareness Education Programme (HAEP). This in turn will support the health protection goals that the ensuing Funafuti Water and Sanitation Project (FWSP) promises.¹

The HAEP will address a wide range of WASH-related topics identified in the surveys, for example hand-hygiene, household rainwater and sanitation system maintenance, communicable disease awareness, menstrual hygiene management (MHM) and other hygiene related topics.

Our TuFHA enumerators interviewed 328 women and girls for the Funafuti Menstrual Hygiene Management Survey. The results will help raise awareness about the issues women and girls face in managing their menstrual hygiene needs in the context of Funafuti. The survey exposed important problems, such as a lack of preparedness for menarche in many young women and girls, a lack of suitable facilities and conditions to manage their menstrual hygiene needs, both at home and in their places of work or at school, misunderstandings about the menstrual cycle and the importance of good hygiene practice for health, and a lack of support for carers of disabled women and teenage girls dealing with MHM matters.

The Funafuti Menstrual Hygiene Management Survey should be considered in tandem with the Hygiene Behaviours survey as the issues highlighted in it have a direct effect on the practices and behaviours of menstruating women and girls as well. Indeed, the problems are sometimes more acute when managing menstrual needs as privacy, security and health related risks are more impactful. Further, the experience of menarche in particular was a harrowing experience for many young women in Funafuti, with respondents often relaying their memories of panic, fear, and embarrassment when it occurred. These are matters that should be better managed by society. This will improve with more open and accurate discussion of the issues of MHM, and by teaching girls about what to expect and how to manage things when they experience their first period.

¹ The Asian Development Bank (ADB) funded Funafuti Water and Sanitation Project (FWSP) aims to improve access to water, sanitation and hygiene for the Funafuti community through a major upgrading of water and sanitation facilities and services.

INTRODUCTION

The Asian Development Bank (ADB) funded Funafuti Water and Sanitation Project (FWSP)² aims to improve access to water, sanitation and hygiene for the Funafuti community. As part of this major upgrade a suite of hygiene awareness raising initiatives will be introduced to support the health protection improvements that the FWSP promises. In preparation for this, two hygiene surveys were conducted in early 2022: the Funafuti Hygiene Behaviours and Practices Survey, and; the Funafuti Menstrual Hygiene Management Survey. The surveys were implemented locally by the Tuvalu Family Health Association (TuFHA) in February and March, 2022 and were supported by the ADB Regional TA³.

Menstrual hygiene management (MHM) as an issue of social justice within the context of public health. Despite recent efforts to raise the level of awareness and action on MHM, there continues to be a need to bring attention and resources to address the menstrual-related shame, embarrassment, and taboos experienced by many women and girls in low- and middle-income countries, and to improve the often inadequate, unhygienic, and unsafe circumstances in which many women in low-resource contexts manage their monthly menses.⁴ Around the world, over 300 million people menstruate every day,⁵ making menstrual health and its management a crucial part of our lives.

Globally women and girls have developed their own personal strategies to cope with menstruation. These vary greatly from country to country, and within countries, dependent on an individual's personal preferences, available resources, economic status, local traditions and cultural beliefs and knowledge or education. Due to these restrictions women often manage menstruation with methods that could be unhygienic or inconvenient, particularly in poorer settings.⁶

Good menstrual health has significant positive impacts on education achievement, workforce participation, physical and mental health and wellbeing, and community participation. In turn, this can lead to gender equality, economic growth, and improvements in sanitation, waste management, and the environment. Good menstrual health is when individuals are:

- (i) using clean menstrual management materials to absorb or collect menstrual blood, that can be changed as often as needed,
- (ii) using soap and water as required,
- (iii) having access to safe, private, and comfortable facilities,
- (iv) being able to clean and dry reusable materials, and dispose of single use materials,
- (v) understanding the basic facts of menstruation and the menstrual cycle and how to manage menstruation with dignity and without discomfort, fear, harassment, or stigmatization.⁷

There has been limited research into menstrual health and its management in Pacific Island countries, even though global evidence has clearly identified the strong connection between menstrual health and participation in education, income generation, and socio-cultural activities. Qualitative studies that have

² ADB Grant 6031-TUV Funafuti Water and Sanitation Project, PRF: Preparing the Funafuti Water and Sanitation Project (formerly Integrated Urban Resilience Project) <https://www.adb.org/projects/53417-001/main>

³ The ADB regional TA has the aim to strengthen WASH practices and improve hygiene behaviours in a number of Pacific Island countries including Tuvalu. TA-6551 REG: Strengthening WASH Practices and Hygiene Behavioral Change in the Pacific (54227-001) <https://www.adb.org/projects/54227-001/main>

⁴ <https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2014.302525>

⁵ Water Supply and Sanitation Collaborative Council (WSSCC). 2013. *Celebrating Womanhood: How better menstrual hygiene management is the path to better health, dignity and business.*

⁶ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3637379/>

⁷ Adapted from the Joint Monitoring Program definition of MHM.

been conducted in the Pacific have found that both adolescent girls and women face significant challenges in managing menstruation. One of the most comprehensive studies is the Pacific Menstrual Health Network's landmark 2022 *Period Poverty in the Pacific* report. The research explores the menstrual health situation in Fiji, Papua New Guinea (PNG), Samoa, Solomon Islands, and Vanuatu. It found that progress in menstrual health policy in the Pacific is primarily focused on schools, menstrual health remains largely absent from national goals and targets, menstrual health data is extremely limited (only Samoa has some national data), and the menstrual health needs of gender diverse people are unclear and overlooked. None of the reviewed countries have standalone menstrual health policies.⁸

Prior to this survey, no large-scale research into menstrual health had been conducted in Tuvalu.

⁸ Pacific Menstrual Health Network. 2022. *Period Poverty in the Pacific*.

FINDINGS

HOUSING AND SOCIO-ECONOMIC STATUS⁹

Key findings

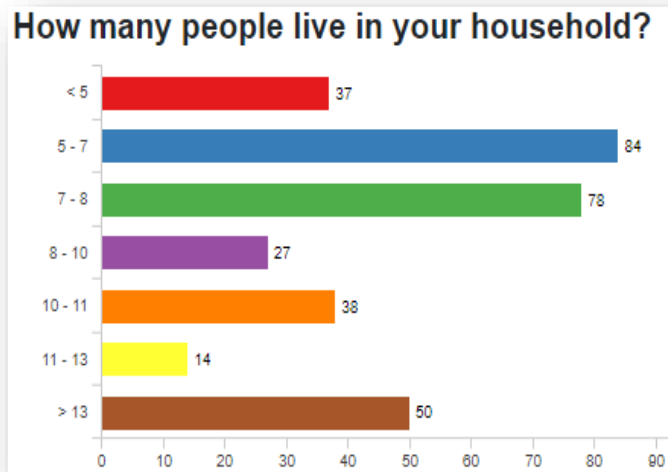
- Half of respondents reported living in households of between five to eight persons
- 15% living in homes with 13 or more persons

Background

Although listed by the UN as a Lower Middle Income Least Developed Country (LDC), Tuvalu scores very high in terms of Economic Vulnerability Index, with a rating of 79.7 out of 100 in 2009, leading the UN to state that Tuvalu is the most "economically vulnerable country in the world".¹⁰ Our survey found that 54% of respondents subsisted on a monthly household income of less than \$500 (AUD), and another 36% between \$501 and \$1,000 (90% total). Seventy percent reported not being employed at the survey time (225 respondents) suggesting they either rely on family members or friends to purchase MHM materials for them, or they make their own. When asked: "Do you always have enough money to purchase menstrual hygiene materials when needed?" a quarter responded that they often don't have enough money for this. This is a common problem for women in low-income countries and it forces them to find makeshift methods to manage their MHM needs such as the use of old cloth or perhaps toilet paper when they'd prefer not to.^{11 12}

Overcrowding

Overcrowding leads to a lack of privacy and unhygienic spaces for MHM¹³ and is widely acknowledged as a problem in Funafuti by locals. Half of the respondents reported living in households of between five to eight persons, and over a quarter said they lived with ten or more others (15% reported living in homes with >13 people). Her experience would be worsened where household income is relatively low and hygiene consumables such as soap are quickly depleted, and when drought reduces the availability of clean water.



⁹ <https://sdd.spc.int/tv>

¹⁰ https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/PDFs/Least_Developed_Countries_Resolutions_and_Reports/vulnerability_profile_tuvalu_2012.pdf

¹¹ <https://embryo.asu.edu/pages/menstrual-hygiene-management-low-income-countries>

¹² <https://borgenproject.org/poverty-in-tuvalu/>

¹³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6266558/>

PERCEPTIONS OF MENSTRUATION AND SEEKING SUPPORT

Key findings

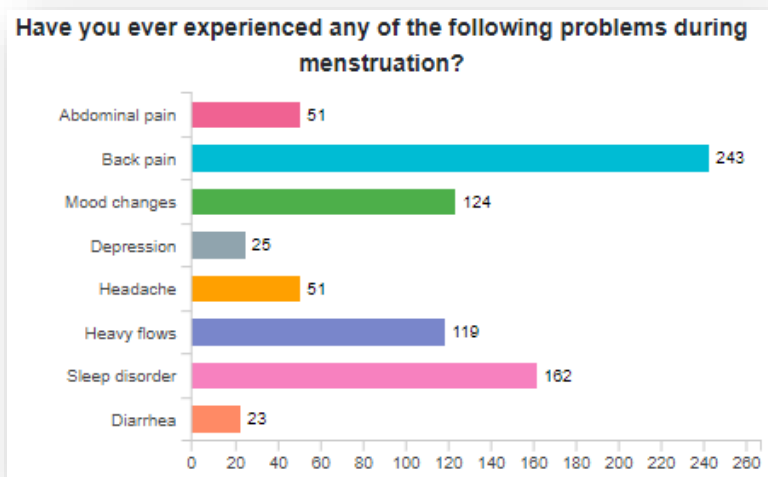
- The attitudes of individuals who menstruate towards menstruation are generally positive
- 46% of respondents always experience pain during menstruation and another 41% often or sometimes experiencing pain
- Close female relatives are usually the source of information and support on menstruation. 48% of respondents said they most trust their mother to discuss menstrual issues, while 22% preferred their sisters. Only 5 respondents mentioned a male relative.

Attitude towards menstruation

Unmet menstrual management and environment needs are important parts of individuals' menstrual experiences. Further, unmet needs are consistently described as leading to distress, and have implications for participants health, well-being, education and social participation¹⁴. As will be shown, there are a number of challenges for women and girls trying to manage their MHM needs in Funafuti. Much of this relates to the hygiene and privacy afforded at their home, school or workplace.¹⁵ Respondents across all age groups talked about feeling embarrassed or shy during their periods, but it was particularly prevalent for girls to report this. Nevertheless, when asked to describe their feelings about menstruation most respondents reported having a generally positive attitude towards it. Many mentioned the connection to their ability to have children using terminology such as "blessed" and having "an opportunity to have children". One mentioned it being "God-given". For those few who described it as a negative experience, they always qualified it with "sometimes", and this was either due to the effect it had on their mood, if it caused pain or discomfort, or if it impacted on their ability to participate in everyday activities.

Dysmenorrhea (period pain) management

Respondents were asked: "What is the worst part about having your period?" The most common response was having to deal with cramps and abdominal pain, but back pain featured prominently as well. Dysmenorrhea is common and affects around three quarters of all young women under the age of 25. The majority of young women think of period pain as 'normal' and something to be managed or endured. This normalisation of pain results in young women using self-care strategies to manage their pain rather than seeking medical advice.¹⁶ It has been shown that the more pain a woman endures during her period the greater the effect on



¹⁴ <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002803>

¹⁵ <https://iwaponline.com/washdev/article-abstract/3/3/283/30301/Girls-and-women-s-unmet-needs-for-menstrual>

¹⁶ <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0220103>

her participation in social and physical activities¹⁷

Forty six percent of respondents told us they always suffer from pain during menstruation and another 41% do so often or sometimes. Only 12% reported either not or very rarely suffering from pain.

When asked how they managed their pain the vast majority (82%) told us they lay down and rest. Around 10% said they would visit a health clinic or use pain relief. Only five respondents reported using traditional remedies for this.

Respondents often mentioned having mood swings and or bad tempers associated with menstruation and reported this as a problem. Fatigue was also identified in this context. Many talked about relaxing or even sleeping to make themselves feel better, or even having long baths or showers which seemed to help.

Other issues reported included fatigue and tiredness, or “being exhausted”. One respondent specifically mentioned the negative effect it had on her mood. The annoyance of needing to change pads constantly was raised by several respondents, along with the need to shower “multiple times per day”. In the context of Funafuti, this requires most women and girls to return home from work or school where the facilities are private and more secure.

Preferences for seeking support

Eighty six percent of respondents preferred talking to a female family member, with mothers (48%) and sisters (22%) being the most trusted to discuss menstrual issues. Eleven percent said a friend was the most likely person they’d turn to for advice, and only five respondents mentioned a male relative (and this was their father in each case). Twelve respondents reported not trusting anyone to discuss menstrual issues. When asked whom they’d prefer not to talk to about menstrual problems, the majority said males, men or boyfriends. Whilst this clearly shows a preference for female support on menstrual matters, it doesn’t necessarily exclude males from supporting the women and daughters in their lives if that is needed. Males should be wary of these matters given women’s desire not to involve them, but there is no reason why fathers and husbands shouldn’t be armed with basic menstrual hygiene management knowledge and awareness. This would allow the females in their lives to reach out to them for support but also provide the potential for increased societal advocacy for better MHM facilities and services within communities.

¹⁷ <https://obgyn.onlinelibrary.wiley.com/doi/abs/10.1111/jog.13768>

KNOWLEDGE OF MENSTRUATION AND MENSTRUAL HYGIENE MANAGEMENT

Key findings

- Around one-third of respondents do not understand that menstruation is a normal physiological process, instead understanding it as a curse of God or a sickness, or not knowing at all why menstruation occurs
- 56% of respondents are able to track their menstrual cycles, however 75% do not understand how to use this information to track their fertility
- One quarter of respondents do not agree that good personal hygiene can prevent infection and illness, and 42% percent do not know about the main risks to health from inadequate menstrual hygiene management
- 90% of respondents want to know more about menstrual health and management.

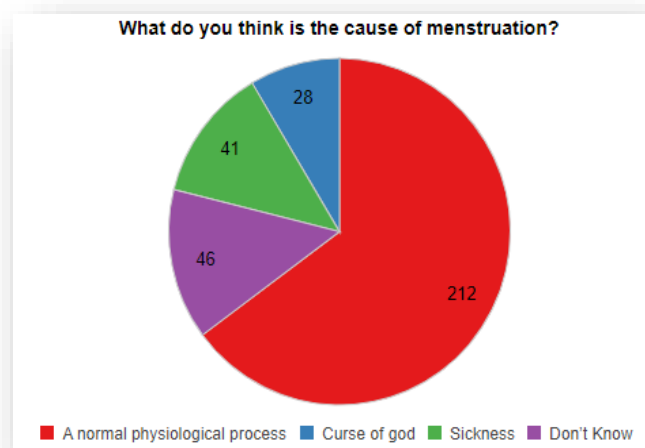
Understanding menstruation and MHM

Menstruation is a regular physiological and psychological occurrence in women's reproductive life. However, only two thirds of respondents in Funafuti agreed with the natural explanation for menstruation. The topic of menstruation still remains taboo in many countries and discussions of problems related to menstruation are treated as shameful. The attitude and behaviour towards menstruation among women and girls is influenced by their socio-economic, cultural and religious background and moreover their knowledge about menstruation.¹⁸

Twenty-eight respondents called menstruation a curse from God, thirteen percent referred to it as a sickness whilst nearly 50 respondents replied that they didn't actually know why menstruation occurred. Respondents were asked: "At what age do you think most girls usually get their first period? Two thirds of respondents selected between 11 and 13.5 yrs. Fifteen percent thought most girls had their first period at >14yrs old and 18% chose <11.5 yrs. old. Respondents may have referred back to their own experience of menarche to estimate this. Given the need for proper understanding of the physiological impact of menstruation on a woman's body and the risk factors associated with MHM it would be wise to emphasize the importance of compulsory reproductive health education from an early age to help adolescent girls in Tuvalu (and elsewhere) manage menstrual symptoms and increase their awareness.

Period tracking

There are important reasons for women and girls to track their period, primarily health-related. A change in the menstrual cycle is often the first noticeable symptom of health issues.¹⁹ An irregular menstrual cycle can be the result of a host of health conditions including hormone (Polycystic ovary syndrome) or thyroid



¹⁸ https://www.researchgate.net/profile/Najwa-El-Karout/publication/282434879_Knowledge_and_beliefs_regarding_menstruation_among_Saudi_nursing_students/links/5623695a08ae93a5c92ac1a8/Knowledge-and-beliefs-regarding-menstruation-among-Saudi-nursing-students.pdf

¹⁹ <https://www.webmd.com/women/why-is-my-period-so-random>

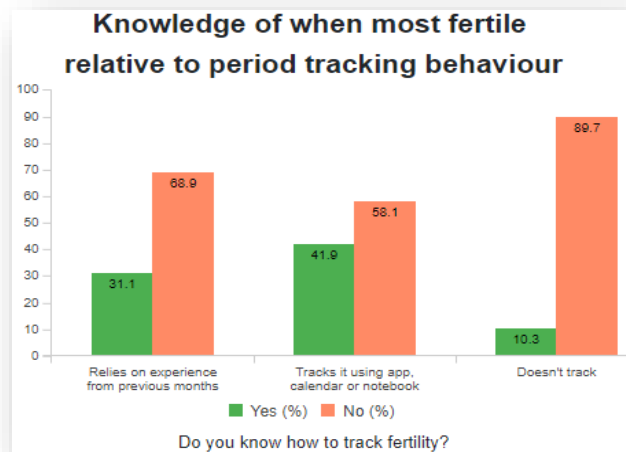
issue, stress, diabetes and many other issues.²⁰ Fifty six percent of respondents said they were able to track when their next period would occur though two thirds of these relied exclusively on their own anecdotal evidence rather than tracking via a calendar or using online tracking apps (no one reported using an online app). The remainder reported not being able to track their period cycle at all.

Community exercise is a feature of life in Funafuti with sporting events occurring at the airport each evening when the sun's heat is less intense. Women and girls partake in rigorous activity during this time such as competitive volleyball or personal fitness training. Intense exercise can lead to changes in the hormones responsible for regulating the menstrual cycle causing lighter periods than normal, breakthrough bleeding when one is not on their period, and sometimes, no period at all.²¹

Tracking fertility

Women need to understand their own menstrual cycle characteristics and track their fertile days for the purposes of pregnancy prevention or pregnancy planning.²² For many women, a missed period may be the first sign of pregnancy. Accurate period tracking allows a woman to avoid sex during her most fertile days (12-14 days before her period) and on the flipside when she is most likely to conceive if she is trying to become pregnant.²³

Three quarters of respondents (250) said they did not know how to use period tracking to estimate fertility. Interestingly, a breakdown of the data by period-tracking behaviour shows that those who use the more sophisticated counting methods, such as calendar tracking, were more likely to report knowing their fertility cycle than those who relied on anecdotal tracking (42%). However, of the total number of respondents (299), only 12 answered "14 days before or after my period", and only two responded: "14 days before my period". Ovulation usually occurs around 14 days prior a women's period. For cycles of 28 days, a woman would be most fertile between days 12 -14. For cycles of 35 days, it would be around days 19 - 21²⁴



²⁰ <https://www.mayoclinic.org/diseases-conditions/pcos/symptoms-causes/syc-20353439>

²¹ <https://www.verywellhealth.com/exercise-effects-on-menstruation-4104136#:~:text=Summary,sometimes%2C%20no%20period%20at%20all.>

²² <https://www.nature.com/articles/s41746-019-0152-7>

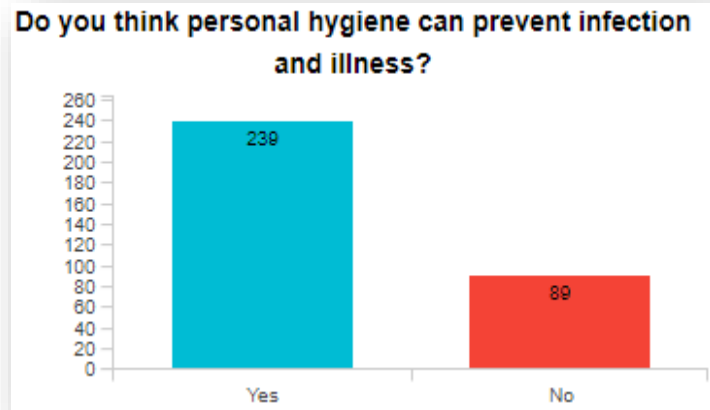
²³ "To figure it out, chart your menstrual cycle and record how long it lasts. Day 1 is the first day of your period. Since the length of your cycle can vary slightly from month to month, it's best to keep track for a few months. Once you have an average, subtract 18 days from the length of your shortest cycle. This is the first day you're likely to be fertile. Next, subtract 11 days from the length of your longest cycle. This is the last day you're likely to be fertile. Having sex between those two dates will give you the best shot at getting pregnant."

<https://www.webmd.com/baby/charting-your-fertility-cycle#:~:text=Once%20you%20have%20an%20average,re%20likely%20to%20be%20fertile.>

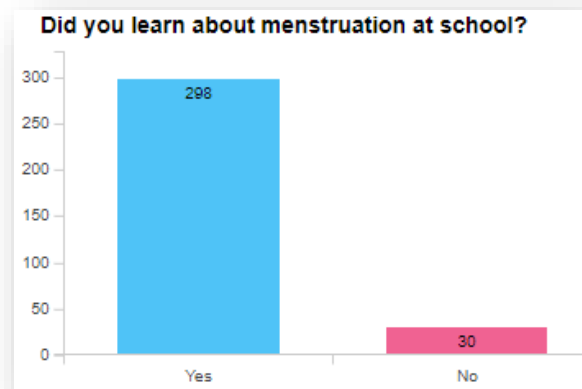
²⁴ <https://www.yourfertility.org.au/everyone/timing#:~:text=Ovulation%20happens%20about%2014%20days,days%2019%2C%20and%2021.>

Basic hygiene

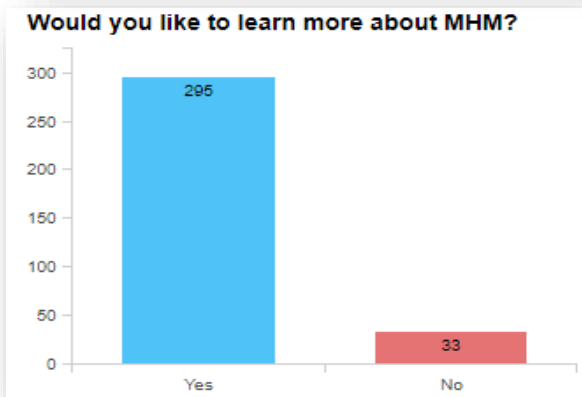
A quarter of respondents answered no to the question: “Do you think personal hygiene can prevent infection and illness?” Misunderstanding this basic health protection message has implications not only for MHM but for hygiene awareness more broadly in Funafuti. The links between hygiene and disease prevention are well established and public health workers will need to review the delivery of existing hygiene related programmes and provide for the proper evaluation of future community-based hygiene awareness education.



Of those that agreed that personal hygiene protected them from disease, 42% percent said they didn’t know what the main risks to health from inadequate menstrual hygiene management were, and a further 47% answered bad smell, itchy, blisters, skin rash and discharge. Ten percent answered either STIs, RTI, UTI or cervical cancer, suggesting a relatively advanced understanding of the health impacts of poor MHM practice.



This relatively wide variation of answers reflects the lack of formal education provided to women and girls on MHM in Funafuti to date, and suggests there could be sizeable public health gains from a campaign on MHM which provides simple clear messaging and reaches the majority of women and girls in Funafuti (and across the outer island communities also). Respondents were asked “Would you like to learn more information about MHM?” Of the 328 respondents, 295 (89.9%) answered “Yes”, indicating not only a genuine need, but a desire to understand more about MHM, how it affects their bodies and how best to protect themselves.



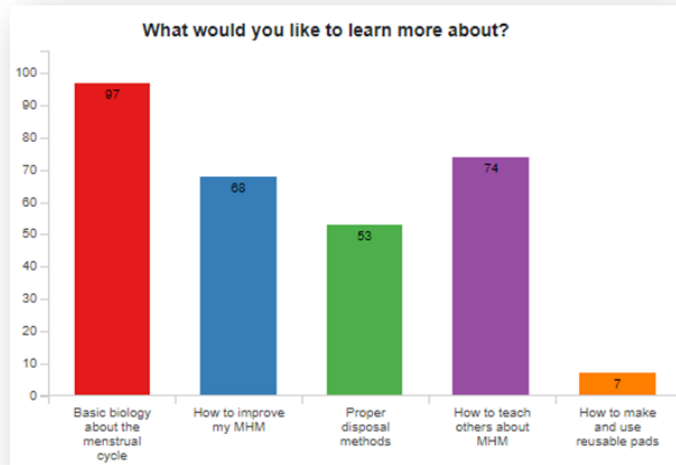
Formal education on MHM

When asked to describe how information on MHM is delivered to girls at school, respondents reported it being taught in general science or biology class as a science-based lesson. When we spoke to teachers it was less clear if a specific programme for MHM information for girls was in place. The majority of respondents reported that boys are also taught about menstruation which suggests that it is delivered as part of a general science or biology class.

The development of a school-based curriculum on MHM will probably be needed in Funafuti and across the rest of the nation. An assessment of the specific information provided at school on MHM prior to the development of a curriculum on MHM is recommended.

Sources of information

Mothers and sisters are the most trusted source of support for girls when discussing MHM, so it is vital they have access to easily understood and accurate information. Many also identified school as a suitable setting to learn more about menstruation issues. Enumerators asked about preference for how the respondents preferred to receive information on MHM using the following list of media choices: Internet; Magazines; Radio, Books, or none. Of the 328 responses, four said “radio” but the remaining 324 responded “none”.



Respondents were asked: “Who at school did you talk to about your menstrual needs and issues? The vast majority identified friends as the main source of advice and support at school, with only a handful suggesting teachers were the source they were most comfortable talking to. Respondents were then asked whether male teachers could teach MHM at school. The responses were mixed with the majority saying they should as “these are issues that everyone should know about”. However, a large group indicated the opposite saying that “female teachers have experience with menstrual hygiene so they can better relate to other females”. These findings suggest that the teaching of basic MHM could be undertaken by trusted male teachers if necessary though a preference for female teachers may be prudent, but that this in no way suggests that teachers should be expected to provide one-on-one advice as there is little demand for it in Funafuti.

Misunderstanding about the role that hygiene plays in disease prevention, as well as the value in proper period tracking, the lack of preparation for menarche and so on, it would be prudent to develop and deliver a comprehensive MHM awareness lesson for all girls that properly explains practices and what to expect to reduce the fear and anxiety that girls reportedly experience during menarche.

EXPERIENCE OF MENARCHE

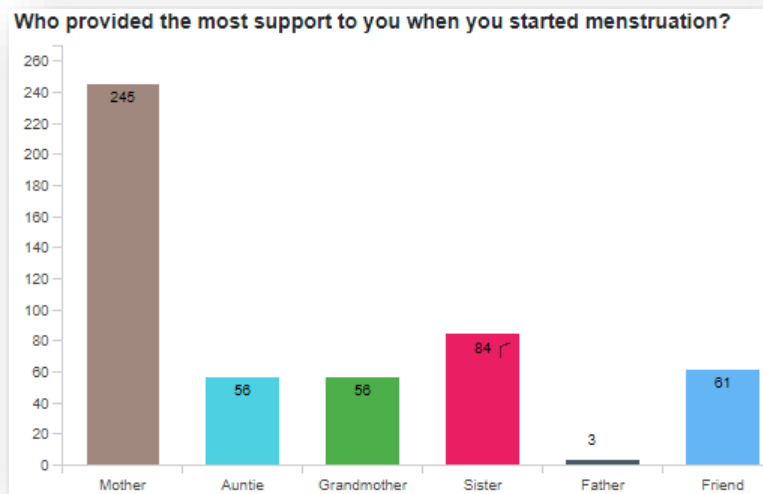
Key findings

- 55% of respondents first learned about menstruation from their mothers
- 21% of respondents were never told about menstruation prior to menarche, and the most common emotion reported at menarche was 'scared'

Fifty five percent of respondents in Funafuti first learned about menstruation from their mothers, with friends being the next most likely source for this information. Studies from low-income countries show that many girls are not properly prepared for menarche and start menstruating without any idea of what is happening to them or why.²⁵ For this reason, girls in low-income countries report facing stress during menarche, confusion, shame, and fear due to a lack of knowledge and poor menstrual hygiene practices.²⁶

An important and emotional experience

Respondents described their first experience with menstruation. For the vast majority, it was a profound and intense experience. For many, if they were at home during menarche, their mum helped them, telling them to have a bath to clean themselves and helping them to use a pad for the first time. For those at school, their friends often supported and assisted them with finding and using a pad. The experience of using a pad for the first time and needing help with it was frequently reported to the enumerators as a key memory of the day. Sisters, cousins, aunts and grandmothers were on hand to help many of the girls too. However, some respondents received no help from anyone because they were either too shy or felt they could deal with it alone.



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Fear and anxiety

The most common emotion the respondents remembered was being scared. Some used terms like frightened, nervous, panicking, embarrassed, and shy. A few also mentioned being shamed because they were at school when it happened. One respondent talked about being sad - she was only 11 years old when she had her first period. Another who was only 11 years old said she was too young to handle anything like that and needed her mum. Some didn't tell anyone, including their mums, because they were too shy. However, for some the experience wasn't quite as distressing. There were feelings of excitement for one or two as this meant they were "turning into adults". Eighty eight percent of respondents reported feeling supported when they first experienced menstruation. They were told by women close to them what would happen beforehand (although 21.3% of respondents reported never being told about periods prior to menarche).

²⁵ <https://www.hindawi.com/journals/jeph/2018/1730964/>

²⁶ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7943554/>

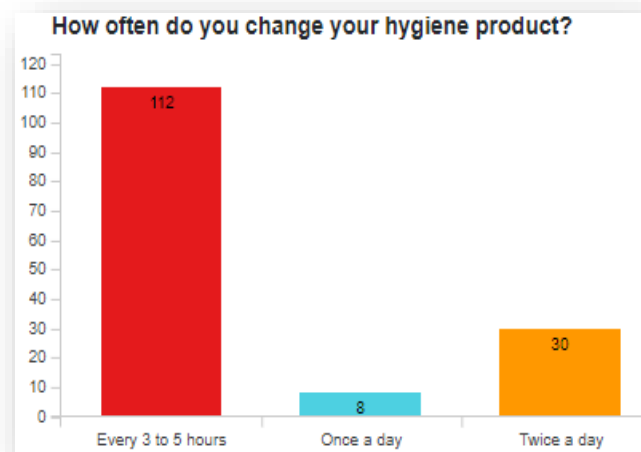
The responses indicate that talking to girls beforehand about what will happen will help to reduce their anxiety when they experience their period for the first time. However, the potential situation they find themselves in may also affect their experience, mainly if they are not around people they can trust or in situations where they need to change and wash and cannot.

MENSTRUAL MANAGEMENT PRACTICES

Key findings

- Privacy and safety is a key concern: 40% of respondents report being worried they would be seen when changing their menstrual materials, and 23% report are worried about being harmed by someone or something when changing their menstrual materials
- Most menstruators purchase menstrual materials, but 28% of respondents make their own
- Menstruators who reuse their menstrual materials report problems with water, soap, and drying: 25% only sometimes have enough water to soak their materials and 6% never have enough water; 17% sometimes do not have enough soap to wash their menstrual and 4% never have enough soap; and 33% said their menstrual materials were not always dry before use.

Multiple systemic reviews and meta-analyses of studies of MHM behaviour and practices in low and middle-income countries show that women and school girls report substantial health, as well as social challenges, when it comes to managing their menstruation.^{27 28 29} The failure to fully acknowledge the physical reality of women has a range of serious impacts on the practices they are forced to use to manage their needs adequately.³⁰ Studies have found a lack of safe and clean hygiene facilities, which leads to unsatisfactory opportunities to clean external genitalia and to change stained absorbents. Existing evidence highlights either a lack of disposal facilities for absorbents or inadequate and poorly maintained means of disposal.³¹



In most societies, the management of menstruation is handled covertly, something girls are often instructed about at menarche. The management of vaginal bleeding is often discreet, although behaviours are not well documented. In many societies, cultural taboos frequently hinder open discussion around vaginal bleeding, restricting information and early access to healthcare.

Although girls and women living in high-income countries may struggle to understand the nature and length of their menstrual cycle, most will at least have access to information resources and support (i.e., internet, clinics, libraries) to confirm their bleeding is healthy or if clinical care is needed.³² This is less the case in the context of Tuvalu where internet access is restricted due to extremely high pricing and adequately resourced health clinics and libraries do not exist. Basic information such as this will assist in

²⁷ Sumpter C, Torondel B. A systematic review of the health and social effects of menstrual hygiene management. PLoS ONE. (2013) 8. doi: 10.1371/journal.pone.0062004

²⁸ WSSCC and UN WOMEN. Menstrual Hygiene Management: Behaviour and Practices in Kye-Ossi and Bamoungoum, Cameroon. Cameroon: WSSCC and UN women (2015).

²⁹ Sommer M, Sahin M. Advancing the global agenda for menstrual hygiene management for schoolgirls. Am J Public Health. (2013) 103:1556–9. doi: 10.2105/AJPH.2013.301374

³⁰ Goldblatt B, Steele L. Bloody unfair: inequality related to menstruation — considering the role of discrimination law. SSRN Electron J. (2019). doi: 10.2139/ssrn.3485987

³¹ Oduor C, Alexander KT, Oruko K, Nyothach E, Mason L, Odhiambo FO, et al. Schoolgirls' experiences of changing and disposal of menstrual hygiene items and inferences for WASH in schools. Waterlines. (2015) 34:397–411. doi: 10.3362/1756-3488.2015.037

³² <https://gh.bmj.com/content/2/2/e000405>

giving women and girls some peace of mind when they fall within the “normal range” for days of bleeding, but also point those who experience longer duration episodes towards seeking professional advice to ensure there aren’t underlying health reasons for it. We asked respondents how many days on average they experience bleeding during their menstrual cycle. Nearly three quarters answered three days and a further 17% said four days combining to include nine out of ten respondents. Just five percent reported seven days or longer.

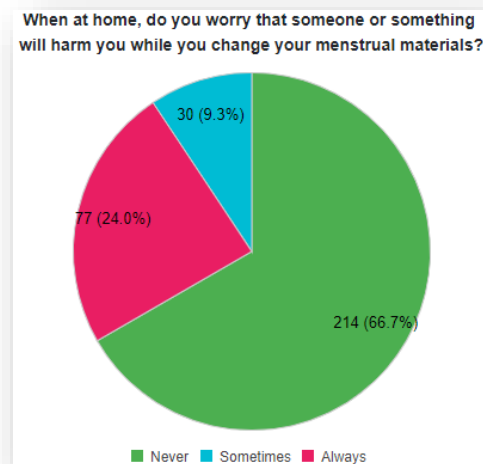
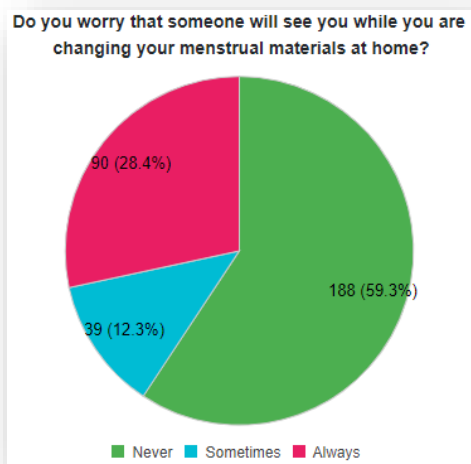
Access to MHM supplies

For those respondents with longer duration or heavy bleeding there will be more disruption and greater cost implications to manage their personal hygiene.³³ In terms of supply of products, 44% reported purchasing their products themselves with their own money, 28% said they receive assistance from family members to access supplies for menstruation and a further 28% said they make them at home. Twenty percent of respondents answered yes when asked if they’d ever run out of supplies when they needed them, but for the majority it was a rare occurrence.

There were a range of reasons given for why they ran out of supplies, such as there being no supplies in the shops (17% answered no to whether the shops always had supplies when they needed them), not having them on their person when having their period away from home, having extra heavy bleeding, sharing them with their siblings then finding there were none left when they needed them. Being out on the outer islands without enough supplies packed was also reported. When asked what they did when they ran out, most said they made their own pad with cloth or asked family and friends for help if they were on hand. Some said they choose not to use pads at all, preferring to shower regularly instead. We found that 49 respondents (15%) avoided the use of menstrual hygiene materials altogether due to them causing skin sores and irritation.

Privacy and security

Most respondents said they are always able to change their menstrual materials when they wanted to at home, and this is usually done in the bathroom, though a small number do it in their bedroom. When asked how the facilities at home could be improved to improve their MHM experience, the majority were satisfied that they had what they needed and were comfortable with things at home. However, some reported having problems at home including the need for locks on the toilet door or having the lock on



³³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6142441/>

the outside rather than the inside, broken sinks needing replacement, no way to dispose of their menstrual materials properly, a lack of adequate water storage to supply for the needs of women in the house and a lack of soap. Eleven percent said they sometimes couldn't change at home and eight respondents said they are never able to change at home. One respondent said she had to change in the bushes.

Privacy is a major issue for women and girls when they're needing to change their materials. We asked whether they were worried that someone would see them while they were changing their materials. Just under half of all respondents said this is an issue for them at home. We also asked whether they felt in danger of harm when changing their materials at home either due to a stranger, insects or animals' dogs or rats), or perhaps and unsafe structure. Well over a quarter of respondent's report that they do feel threatened in some form from time-to-time.

Disposal practices

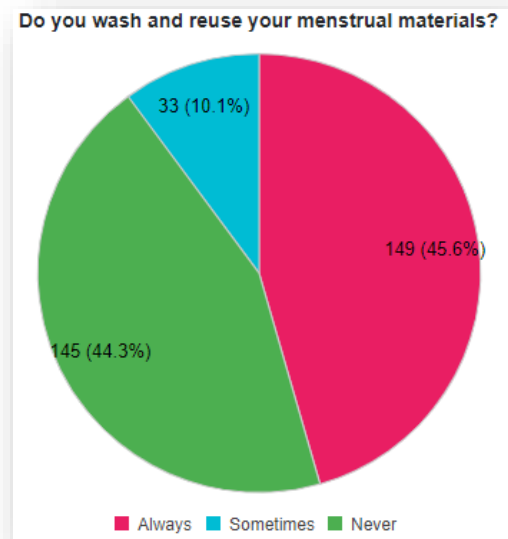
When they are at home the vast majority throw their used hygiene materials into the "routine waste", and only 5% reuse it. Many put their used hygiene materials in a plastic bag when they're out and take it home with them to dispose of it there. There are very few public spaces in Funafuti, including the schools, where women and girls can properly dispose of their materials at this time. Thirty seven percent of respondents reported either sometimes or always worrying about where to dispose of their used menstrual materials whether at home or away from home. A large number were worried that people might see their used materials, including other family members.

Reuse and cleanliness of MHM materials

Of those that reuse their menstrual materials (see chart), 25% reported that they sometimes only have enough water to soak them, and a further 6% said that they never have enough water. Seventeen percent said that they occasionally have no soap to properly wash their materials and a further 4% reported never having enough soap.

Thirty percent of respondents said they either weren't or were only sometimes satisfied with the cleanliness of their menstrual materials. A further 33% reported that their menstrual hygiene materials are not always dry before they have to use them. These are issues that directly impact on the risk for infection. In general, wearing damp or unclean material can lead to rashes and infections.³⁴

The majority of respondents who reuse their materials dry them in the sun, providing an extra layer of sterilization due to the UV rays. However, nearly half report that they cover them when they're hanging out to dry. Women and girls will often cover them because they do not want others to see their menstrual materials.³⁵ Covering their menstrual materials negates the sterilizing effect of the sun's UV rays, and coupled with the humid hot environment in Tuvalu this creates an environment where bacteria and viruses can thrive and proliferate, leading to the risk of infection when the pad is reused. Drying menstrual materials with a hot iron can also sterilize these materials, and speed up the drying



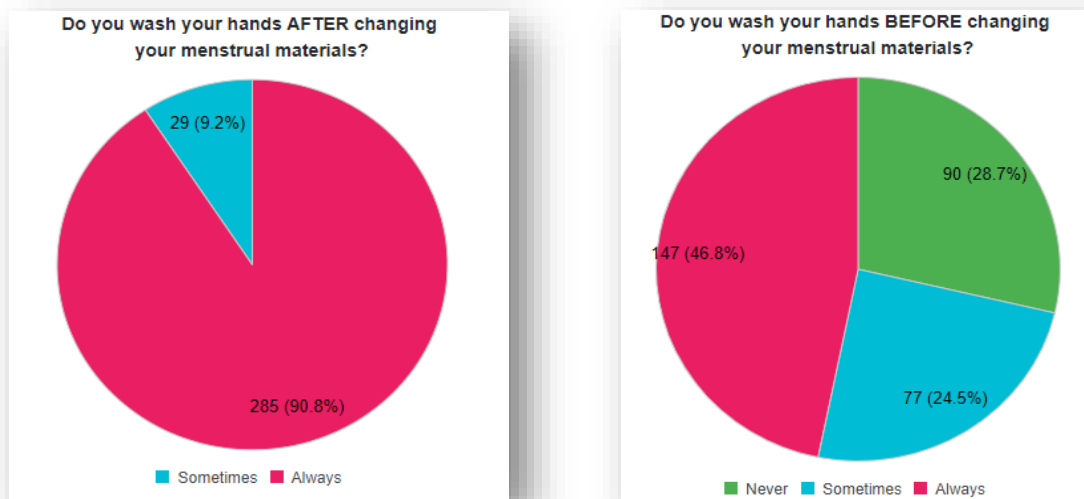
³⁴ <https://www.unicef.org/media/91346/file/UNICEF-Guide-menstrual-hygiene-materials-2019.pdf>

³⁵ <https://www.panafrican-med-journal.com/content/article/41/146/full/>

process. However, only 10 respondents reported doing this. Only 19 respondents answered yes to using a menstrual cup and none of these reported boiling it to assist with sterilization.

Personal hygiene and care for others

The majority pay particular attention to washing their hands after changing their menstrual materials (see charts), but less than half always do this beforehand. If girls or women are handling contaminated sources such as pigs, or changing babies nappies, then it is possible that they could transfer pathogens from their hands to their MHM product or directly to their body. Whilst the risks of infection if hands are not washed after changing MHM materials are well established,³⁶ the conditions are such that pathogen growth is certainly possible if hands are contaminated prior to replacing pads or tampons, so it is better to wash hands both before and after changing materials if possible.



Caring for disabled women or girls with their MHM needs

Inaccessible latrines mean disabled people who cannot stand or see often have to crawl, or sit on dirty latrine seats to change their pads or cloths.³⁷ People with visual impairments may be unable to identify when their period started and finished, and people with hearing, communication or intellectual impairments may be less able to communicate when they are in pain or need support. For the carers of a disabled family member, they may face having to do this with little guidance on how to manage MHM for this person. This can easily lead to feeling overwhelmed and unsupported.³⁸

One hundred and six respondents reported the need to care for a disabled family member with their menstrual hygiene needs. They report being called on to provide menstrual hygiene materials as it's difficult for them to visit the shops, or they're unable to afford to purchase materials themselves. There is also a need to assist with bathing and showering after changing a pad. An adequate examination of the experiences of both the carer and the woman or girl being supported with her MHM needs was beyond the scope of the survey, but it is recommended that this be studied in more detail.

³⁶ <https://www.worldbank.org/en/topic/water/brief/menstrual-health-and-hygiene>

³⁷ <https://www.jstor.org/stable/43288983>

³⁸ <https://www.tandfonline.com/doi/abs/10.3109/13668250.2011.651615>

BARRIERS AND CHALLENGES

When asked to describe the challenges faced by girls and women in the Funafuti community managing their menstrual hygiene needs the same issues kept coming up: lack of MHM supplies, no proper facilities, particularly for girls relating to their needs at school, but also for women at some workplaces and at home, and a lack of soap and water. As one respondent said: “There are always problems with a lack of water here and you can’t keep yourself clean!” There were also a number who mentioned that it was taboo to talk about menstruation and that it made it more difficult for them. A one respondent put it: “No one can talk about it so we can’t get anything done to improve the situation in the community.”

Some women said they feel restricted from undertaking certain activities when experiencing menstruation. For example, many said they had been taught that swimming in the sea was not allowed, with one respondent saying it was due to it affecting her flow. Many others have been told that eating raw fish is not allowed, though why this is more important when they’re having their period was not explained. Heavy lifting, doing hard chores at home and not playing too much were also mentioned.

Just under half of all respondents (45%) said they miss out or pass on activities because of their menstrual cycle such as community and family functions, outings and church events. Sporting activities was mentioned often as being impacted on, particularly volleyball, which is an important health and wellbeing activity in Tuvalu that many partake in. The overwhelming reason why they choose to not partake in these events is concern about being embarrassed due to heavy bleeding and feeling uncomfortable about being in public.

Religious belief is very important in Tuvaluan culture at this time. In terms of religious teachings related to menstruation the respondents were often told to stay away from men and boys and to not have sexual encounters. But most often there is very little spoken of it in the context of church or religious teaching. The overwhelming sense is of a community where MHM is not spoken about and remains a taboo subject, particularly around the men.

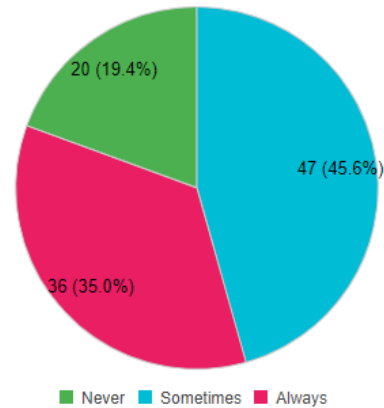
WORKPLACE MENSTRUAL MANAGEMENT PRACTICES AND ATTITUDES

Key findings

- Almost two-thirds of women and girls experience problems changing their menstrual materials when away from home
- 45% of working women are unsatisfied with their workplace’s menstrual facilities, and many respondents take used menstrual materials home due to lack of disposal facilities.

Around two thirds of women and girls experience problems being able to change their menstrual hygiene materials when away from home (see graph). For some the experience of having their period during work hours is made more challenging due to the facilities not being properly designed for their needs. Many reported not being able to wash themselves easily as there is only a sink available and no shower. Some of the bathrooms at work provide little privacy for this as well. In some cases, they have to share a single toilet with male colleagues. Indeed, 40 respondents said they simply go home to change their materials and if menstruation starts unexpectedly at work the majority of women are able to return home to change and shower. Eighty-six respondents reported needing to return home to change their menstrual hygiene materials during their last period.

When at work or away from home, are you able to change your menstrual materials when you want to?

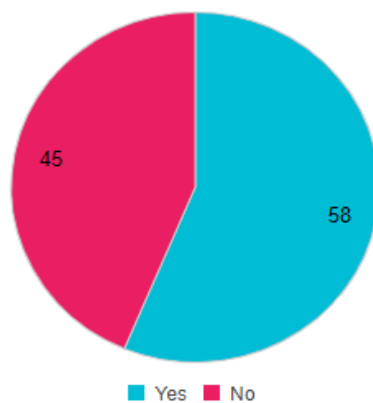


Satisfaction with facilities at work

Only 56% of women reported being satisfied with the menstrual facilities at their workplace. However, it was striking, that despite this, many still reported the toilets at work to be hygienic and clean. This may be due to the availability of cleaners to keep them clean, though it may also be a reflection of the standard of hygiene that they experience outside of the workplace, including at home.

One respondent, a teacher, did report that her workplace toilet was unhygienic. She said that this was due to her being forced to use the students’ toilets because the staff toilets were broken. It is widely known that at some schools the teachers are expected to share the toilet with their students and that these are not up to a reasonable hygienic standard. A lack of soap was reported widely as a problem in the workplace.

Are you satisfied with the menstrual facilities at your workplace?



Women were particularly concerned about the need to keep the toilets clean at work and to provide soap and water for their needs. The lack of a shower was a widely reported concern as mentioned earlier, and the lack of bins to dispose of their used materials was reported also. 83 respondents reported putting the materials in their bag and taking them home to dispose of them due to no other option available to dispose of them appropriately at work.

Experiencing menstruation while at work

Over half (57%) of those in employment said that having their period at work made them feel uncomfortable, tired and fatigued. They reported feeling physically sick or weak (56 respondents), unable to concentrate properly (39 respondents), and 18 reported not being able to attend work at all. Reports about feeling embarrassed or shy were less prevalent for employed women than for girls at school. But for those who did report feeling embarrassed it was often due to them being worried that they might stain their dresses in front of their colleagues or their students in the case of teachers.

Fifty-two respondents reported missing one day of work each month due to their period, 22 respondents reported missing more than one day each month, and 16 respondents reported falling behind with their work due to having their periods and needed to either do the work at home later or work extra time to make it up in the evening or weekends.

SCHOOL-BASED MENSTRUAL MANAGEMENT PRACTICES AND ATTITUDES

Key findings

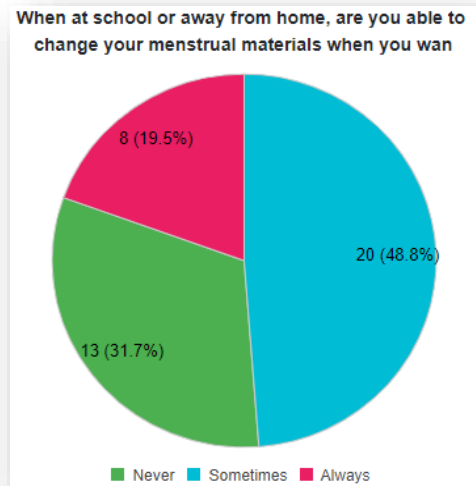
- 81.5% of schoolgirls surveyed are not able to change their menstrual materials when at school or outside the home
- 80% of respondents feel shy, embarrassed, or uncomfortable having their period at school
- Most schools do not have supplies of menstrual materials for students to access
- 18% of respondents report that male students bully, tease, or harass girls during menstruation.

Progress has been made in recent years to bring attention to the challenges faced by school-aged girls around managing menstruation in educational settings, the overarching vision being that girls have the information, support, and enabling school environment for managing menstruation with dignity, safety and comfort.³⁹

Experiencing menstruation at school

There were more reports of feeling shy or embarrassed by school pupils than by adults in relation to their school or workplace experiences. Eighty percent of respondents reported either feeling shy, embarrassed or uncomfortable about having their period occur at school (58% expressly stated that they do not feel comfortable about having their period at school, with most worried that they'd stain their clothing). Eighty percent of respondents said that they either never or only sometimes are able to change their materials when they want to when at school.

Some girls (57%) reported feeling physically weak at school during their periods or unable to concentrate properly (30%). Five respondents reported having to stay away from school entirely and one said she felt "psychologically affected". Eight girls said they will often need half a day off school each month due to their period and two reported needing longer.



Participation in school activities and learning

Three quarters of respondents reported not participating as much during class time as they do when they are not having their period and 10% said they fall behind in their school work as a result of the effects and challenges of having their period. Many said they needed to catch-up later at home or with their friends.

Schools meeting needs and providing support

Menstrual hygiene materials are not provided to girls at the school and when asked if they are able to access supplies 73% said they could not. When asked who they reach out to for assistance it is most often a close friend rather than the teachers, though when it comes to needing actual advice, many did identify their teachers as being able to provide it. Many respondents said the teachers were helpful to them while they were having their periods, providing advice and assistance if they needed it. In the case of a girl having an unexpected accident they are treated with care and respect and assisted to leave the school

³⁹ <https://health-policy-systems.biomedcentral.com/articles/10.1186/s12961-020-00669-8>

without causing unnecessary embarrassment. Many girls reported the need for much better menstrual facilities at school and to make pads and other hygiene materials available to them.

Eighty two percent of respondents said they feel comfortable talking with other female students about menstruation though many did still feel shy and uncomfortable around the other students. An important concern for girls at school is staining their skirts and the other kids seeing it. It does appear that girls are particularly sensitive to boys noticing this.

Evidence shows that the solutions most likely to reduce school drop-out rates and enhance female empowerment are those that combine sexual and reproductive health education, with appropriate sanitary infrastructure, and the availability of sustainable and affordable menstrual products⁴⁰ Sixty six percent of respondents said they were unsatisfied with the facilities at school to properly manage their menstrual hygiene needs. Many complained about them being unhygienic and unclean, lacking in privacy and not properly designed for their needs. Only six percent reported changing their materials at school and would either return home to do it or wait until after school. There are very few options available for girls to dispose of used materials at school and the need for regular cleaning of the facilities and emptying of the bins may not be occurring at this time.

Bullying and harassment

Only 5% of respondents said they had been treated unkindly at school due to them experiencing menstruation. Eighteen percent said that boys tease, bully and harass girls who have their period at school though 81% disagreed with this.

⁴⁰ <https://blogs.worldbank.org/water/menstrual-health-and-hygiene-empowers-women-and-girls-how-ensure-we-get-it-right>

CONCLUSION

The Funafuti Menstrual Hygiene Management Survey provides a launch pad for raising awareness throughout the community about the situation that women and girls are facing regularly in managing their menstrual hygiene needs. The survey touched on some highly sensitive and personal issues that nevertheless expose important problems that everyone will be concerned with including fathers and husbands, law makers and community leaders.

Women and girls in Funafuti face many challenges when managing their menstrual hygiene needs. Much of this relates to the condition and availability of suitable facilities where they can change their materials safely and discreetly and keep themselves clean. Cleanliness and hygiene are sub-standard in many locations and a lack of privacy and security is a problem at their home, school or workplace. This forces many to use inadequate, makeshift practices to get by which put their health at risk, or result in them being excluded from social interactions.

Of particular concern in Funafuti is the plight of girls who need to manage their periods while at school - though in some cases, women too have similar issues at their workplaces. We found that teachers are a reliable source of support and care for girls when needed, but schools do not provide the necessary facilities and maintenance standards to do this safely and securely.

There is a need to improve education and awareness of MHM in Funafuti. We discovered widespread misunderstandings about important issues related to hygiene and risks to health that in the context of public health should be addressed as a matter of urgency. A programme of MHM education targeted at girls prior to menarche is recommended, but carers such as mothers and sisters of young girls or women with disabilities require educational support also.

The experience of menarche should be a positive one for a girl, but often isn't due to her being unprepared when it happens. Girls, reporting to us their feelings of being scared, frightened, nervous, panicking, and embarrassed, are an indication that carefully designed and delivered education on menstruation and menarche will be a huge step towards improving a girls experience of this important moment in their lives.