

Period poverty impact on the economic empowerment of women

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Question

To what extent does period poverty (lack of access to sanitary products, WASH facilities, dignity, and information about menstruation) impact on the economic empowerment of women?

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1. Summary

Improving menstrual health management (MHM, also known as 'period poverty') can substantially improve girls' education, health and wellbeing. The literature, as well as experts consulted for this rapid review, confirm that that MHM has an impact on the lives of women and girls, albeit indirectly (expert comment). Economy is not the only measure of women's empowerment: links have been found between and across themes – key points of which are highlighted below:

- WASH: period poverty influences experiences of water, sanitation and hygiene facilities (expert comment). Lack of safe WASH facilities increases the vulnerability of women and girls who may practise open defecation (Aïdara, 2016).
- SRHR: provision of menstrual products was associated with lower risk of STI, likely due to a reduction in transactional sex. This is a potential mechanism by which the issue may be interacting with girls' economic empowerment, however, the results are unclear (Sumpter and Torondel, 2013).
- Health: Without access to toilets, women and girls develop coping strategies during menstruation: they eat and drink less (Aïdara, 2016). This is related to negative cultural stigmas around menstruation.
- Education: girls' school experiences are negatively impacted if they are distracted, uncomfortable, or unable to participate because of anxiety over menstrual leakage and odour (Mason et al., 2013). Although education on MHM is important, MHM has yet to be included within the numerous activities underway to improve girls' educational outcomes in LMICs (Sommer et al., 2016a).
- Economic: apart from changes to diet, MHM restrictions also include being excluded from religious and other social activities, any interaction with males, or travelling outside the home. Such practices are likely to contribute to economic consequences where increasing numbers of adult women are engaging in the workforce. Recent data from the Pacific reflects this (Mohamed et al., 2018).

Given the shortage of information on period poverty globally, the expected sensitivities around the topic, and the lack of standardised tools and methods (Phillips-Howard et al., 2016), evidence is predominantly provided from qualitative, participatory, and descriptive methods. It is difficult from the qualitative studies to determine the **extent** to which period poverty impacts any of these outcomes or economic empowerment, or how influential period poverty contrasts with other challenges facing women and girls in the contexts studied. The experts consulted for this review confirmed that there is clearly a need for more research in this area.

Lessons learned and recommendations:

- Quantitative studies of the associations between MHM and girls' health, education and psychosocial outcomes are scarce (Sumpter and Torondel, 2013; Hennegan et al., 2016; Hennegan and Montgomery, 2016; Muthengi et al., 2017).
- There is a growing body of qualitative evidence, some of it of very high quality, that menstruation is experienced negatively, that it influences experiences of WASH facilities, contributes to absenteeism (from school and the workplace), and is a source of psychosocial stress (expert comments).

- There has been, and continues to be, lots of programmes purportedly aiming to keep girls in school by providing them with menstrual products. However, there is sparse information that this has been working. There is also little information indicating that: a) girls are missing more school than boys, or b) the reason girls don't attend school is entirely lack of menstrual products (for example, a part of girls not attending school seems to be due to period pain, which is not solved through more pads). It is also difficult to measure attendance (expert comments).
- Hennegan et al. (2016) suggest that additional work is needed to capture the impact of menstruation on concentration and engagement, even if girls are at school.
- Empowered women and dignified work are critical to better business. However, there is even less data on the impact of period poverty on the workplace and psychosocial impacts (expert comment). The Business for Social Responsibility (BSR) HERproject work-based MHM intervention has reduced absenteeism in Bangladesh garment workers by providing health education materials, including on menstrual hygiene. 'Menstrual leave' from work is also worth exploring further.
- There is mixed evidence from trials on the effectiveness of interventions to improve knowledge of or access to menstrual products (expert comment).
- There is no 'good' evidence on the *extent* to which period poverty impacts any of these outcomes or economic empowerment (expert comment).
- Although well-meaning, non-government organisations (NGOs) and social businesses may be ill equipped to evaluate programmes (expert comment).
- There is a need for research which could explore the hypothesised relationships *beyond* the qualitative findings – for example, social norms, pain, and managing expectations of productivity need to be addressed (expert comments).
- As the majority of data available doesn't address shame and/or stigma: a 360-degree approach for future interventions would help multi-layered community-based education, instead of focussing solely on sanitary product access (Bodel, 2019).
- Further research should explore the experiences and needs of various populations, including migrants and refugees as mentioned in the article, as well as individuals deprived of liberty; menstruators with disabilities; and transgender, queer, and non-binary menstruators. This requires an intersectional approach to menstrual health by exploring how, for instance, income interacts with race, ethnicity, age, and needs across the life cycle (Winkler, 2019).

2. Introduction

Definitions

'Period poverty' (or menstrual hygiene management, MHM) refers to having a lack of access to sanitary products due to financial constraints. According to WHO/UNICEF (2012) MHM is defined as:

- Women and adolescent girls being able to use clean materials to absorb or collect menstrual blood, and to change them in privacy as often as necessary throughout their menstrual period.

- Being able to use soap and water for washing the body as required and having access to safe and convenient facilities to dispose of used menstrual management materials.
- Women and girls having access to basic information about the menstrual cycle, and how to manage it with dignity without discomfort or fear.

Improved MHM is directly linked to fulfilling several of the proposed Sustainable Development Goals, (SDGs), including Goal 4 (Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all), Goal 5 (Achieve gender equality and empower all women and girls), and Goal 6 (Ensure availability and sustainable management of water and sanitation for all) (UNDESA, 2015).

Global situation

Period poverty is a problem in high as well as low- and middle-income countries: For example, it is a widespread problem in Kenya – with UNICEF finding 7% of women and girls that they surveyed relying on old cloths, pieces of blankets, chicken feathers, mud and newspapers. 46% used disposable pads and 6% used reusable pads (Oppenheim, 2018).

Currently, Australia is leading the way in fighting period poverty by officially removing the tampon tax for residents beginning on 1 January 2019.¹ The menstrual equity non-profit Period.org noted that 35 US states have a so-called ‘tampon tax,’ where products are subject to a value-added levy, unlike other necessities.

International advocacy

Increasing interest has led to a large range of actors engaging on the issue of MHM in schools around the world. Columbia University and the United Nations Children's Fund (UNICEF) convened members of academia, non-governmental organisations (NGOs), the UN, donor agencies, the private sector, and social entrepreneurial groups in October 2014 (“MHM in Ten” conference) to identify key public health issues requiring prioritisation, coordination, and investment by 2024 (Sommer et al., 2016a). These are:

Priority 1: Build a strong cross-sectoral evidence base for MHM in schools for prioritisation of policies, resource allocation and programming at scale.

Priority 2: Develop and disseminate global guidelines for MHM in schools with minimum standards, indicators and illustrative strategies for adaptation, adoption and implementation at national and sub-national levels.

Priority 3: Advance the MHM in the school’s movement through a comprehensive, evidence-based advocacy platform that generates policies, funding and action across sectors and at all levels of government.

Priority 4: Allocate responsibility to designated governments for the provision of MHM in schools (including adequate budget and M&E) and reporting to global channels and constituents.

¹ <https://www.sbs.com.au/news/no-more-tampon-tax-and-visa-changes-the-new-laws-taking-effect-in-2019>

Priority 5: Integrate MHM, and the capacity and resources to deliver inclusive MHM, into the education system.

The third annual ‘MHM in Ten’ meeting,² which was held on 26 October 2016 in New York, further expanded the group of participants, including additional representation from national partners such as national women’s unions, and increased representation from the range of sectors noted above.

Annual “MHM in Ten” meetings will continue to be organised by UNICEF and Columbia University to review progress. However, Bobel (2019) calls for more rigorous evidence to inform policy, and the rapidly growing number of implementers interested in the topic. In March 2020 a handbook will be available, focussing on new lines of inquiry, including research questions and social justice engagements, on menstrual health and politics across the lifespan (C. Bodel-personal communication).

Causes of period poverty

Research shows that period poverty affects several low-income women due to a variety of causes, as noted in the sections below:

Lack of access to sanitary products

The literature focusses more on girls’ lack of access to menstrual care - a point raised by Bobel (2019:13), who adds that “meanwhile, a more holistic view of menstrual experiences and their impact on physical, psychological, and social realities fades from view” (Bobel, 2019:13).

Kenya: It has been reported that girls are forced to have in sex in exchange for sanitary products: “New exclusive research” by UNICEF found that 65% of females in Kibera – an area of the capital of Nairobi which is one of the largest urban slums in Africa – had traded sex for sanitary pads, due to the prevalence of period poverty and the shame, stigma and public health misinformation which surrounds menstruation (Oppenheim, 2018). However, reports that girls have sex with boda boda (motorcycle taxi) drivers because they have power, money, and access to the product have been disputed: UNICEF Kenya³ state that UNICEF data has been ‘misquoted.’

Lack of WASH facilities

Poor access to safe water, sanitation and hygiene (WASH) persists despite the United Nations General Assembly’s adoption of two resolutions in 2010 and 2015 that recognise the human rights to water and sanitation. The December 2015 resolution placed emphasis on sanitation, which proved a greater challenge over the course of the SDGs. However, sanitation is often neglected, unless addressed as a separate right (Aïdara, 2016). Under the framework of the

²

<https://static1.squarespace.com/static/5988738af9a61e3bd699b5e4/t/5988f10f6a49634eccfc27e0/1502146831786/2016+MHM+in+Ten+Meeting+Report.pdf>

³ https://www.the-star.co.ke/news/2018/11/12/are-65-of-girls-in-kibera-trading-sex-for-sanitary-towels_c1848879

Water Supply and Sanitation Collaborative Council (WSSCC) and UN Women Joint Programme on Gender, Hygiene and Sanitation, interviews were conducted with women working in marketplaces in West and Central Africa (WSSCC and UN Women, 2015a, 2015b). These women voiced their concerns about the lack of sanitation facilities (including access to soap and water in safe spaces at work) and the negative impact on their productivity, especially during menstruation (Aïdara, 2016).

Lack of dignity

According to Bobel (2019:13): “menstrual stigma is potent, ubiquitous, and impactful, even if its intensity varies place to place.” The taboo of menstruation helps inflict indignity upon millions of women and girls, but it also does worse: the grave lack of facilities and appropriate sanitary products can push menstruating girls out of school, temporarily and sometimes permanently (WSSCC, 2013:3).

Even though a woman menstruates on average for more than 30 years in her lifetime, toilets are built without taking their needs into account (Aïdara, 2016). The WSSCC believes that ignoring the menstrual hygiene needs of a woman is a violation of her rights, most importantly the right to human dignity, but also the right to non-discrimination, equality, bodily integrity, health, privacy, and the right to freedom from inhumane and degrading treatment from abuse and violence (WSSCC, 2013).

Lack of education about menstruation

One of the most significant barriers for women is the social restrictions, beliefs and myths that influence the management of menstruation (Patkar et al., 2016). Many girls do not understand what is happening when they start menstruating, and they have limited knowledge on biological processes. Using education can be used to prevent perpetuate such menstrual restrictions (often repeated by females). In Nepal, the *Her Turn* and *His Chance* MHM workshops for adolescents who have dropped out of school allow 12-16 year old to learn and empower themselves to tackle social taboos, as well as also maintain their personal hygiene.⁴

3. Impact on empowerment: wider outcomes for women

Studies are currently being conducted to assess if the provision of improved MHM information and supplies impacts girls' educational, psychosocial and sexual and reproductive health outcomes (Sommer et al., 2017). A summary of these, with country case study examples, is provided below:

Access and use of WASH facilities and services

To date, much of the leadership and activities on MHM in schools has been through the WASH (water, sanitation and health) sector (Sommer et al., 2016a). In recent years, issues deriving

⁴ <http://www.her-turn.org/new/what-we-do/workshops/>. There are also similar educational workshops for boys: His Chance

from the lack of adequate MHM have been highlighted in the WASH sector, particularly in relation to girls reportedly missing school because of poor MHM (World Bank Group, 2017: 2):

Ghana: It is estimated that 11.5 million women in Ghana lack hygiene/sanitation management facilities that adequately separate waste from human contact. According to the latest UNICEF water and sanitation in schools monitoring report, 59% of primary schools in Ghana have adequate water and 62% have adequate sanitation. A randomised control trial (RCT) is being planned against the context of the school WASH component of the Greater Accra Metropolitan Area (GAMA) Sanitation and Water Project. The objective is to secure evidence on the impact of MHM informed WASH on girl's education. As the project is due for completion in 2020, there are no results on impact available.

Tanzania: A project on empowering adolescent girls in schools focussed on MHM. Supported by SDC (the Swiss Agency for Development and Co-operation), the project was implemented at the primary school and community level in seven districts in the Dodoma region; It includes both hardware (providing materials, improving WASH and disposal facilities) and software interventions (creating awareness around MHM). It adopts a multi-sectoral approach and involves education, health and community leaders.

Before the project, access to water in schools was a challenge since water points were located far away; latrines were dilapidated and poorly maintained. The project constructed or renovated many latrines with the participation of the communities living near the school to build ownership and ensure sustainability of the infrastructure. Educating children has also had an impact raising awareness about hygiene in households. The project also established health clubs and empowers health promoters. It celebrates Menstrual Hygiene Day in partnership with local authorities and communities, to raise awareness on MHM and win their support. As a result, districts are now allocating resources for MHM and WASH facilities in their comprehensive council health plans. SDC has used evidence-based information from this region at other levels as well to promote policy dialogue. Tanzania has developed the National School Health Strategic Plan for 2015-2020, with input from SDC for minimum standards in MHM/ WASH.

Uganda: In the Menstrual Health and School Absenteeism among adolescent girls in Uganda (MENISCUS)-2 intervention, uptake and acceptability of a reusable pad, paracetamol and school WASH facilities⁵ was tested. Results showed less association between menstruation and school absenteeism at the programme end-line, compared to baseline (p-value for interaction=0.006).

Effect on Health

Without access to toilets, women and girls develop coping strategies: they eat and drink less, and defecate in the open, hiding wherever they can (Aïdara, 2016). However, reviews of studies indicate that there is a lack of rigorous studies demonstrating the effect of MHM on girls' general health and well-being (Muthengi et al., 2017).

While several programmes have previously been developed to address girls' MHM needs globally, few have been rigorously evaluated, and where evidence does exist the results have been mixed. A 2013 systematic review of the literature identified 14 studies that examined health

⁵ This included fixing toilet doors, installing door locks, and provision of bins, toilet paper in a holder, and a soap dispenser.

outcomes such as reproductive tract infections (STIs) and 11 articles that examined psychosocial outcomes of menstrual hygiene (Sumpter and Torondel, 2013). The authors concluded that while there is some evidence on the impact of MHM on psychosocial outcomes, the impact on health outcomes, specifically reproductive tract infections, is unclear. Furthermore, there is no quantitative evidence on the effects of MHM on reducing school absenteeism. They also noted the lack of rigorous studies showing the impact of MHM on girls' general health and well-being.

Cameroon: As noted by Sommer et al. (2016b) women and girls may delay urination and defecation, but it is not possible to stop menstrual flow. The lack of facilities also exacerbates anxiety and stress during menstruation and increases their vulnerability (Aïdara, 2016).

Kenya: In collaboration with ZanaAfrica, the Population Council is evaluating the Nia Project, a set of interventions for adolescent girls in Kilifi County. Using a randomised controlled trial (RCT) research design, this evaluation analyses the effect of distribution of Nia brand disposable sanitary pads and provision of reproductive health education (i.e., facilitated sessions and the Nia Teen magazine) on girls' education and reproductive health outcomes (Muthengi et al., 2017).

Findings describe a cohort of Class 7 girls aged 10-21 years old, with high educational aspirations despite anticipated challenges, and substantial parental approval for education despite low levels of parental education. While most girls believe they are capable of doing well in school, a gap exists in some of the social and personal competencies (particularly knowledge and attitudes related to menstruation and reproductive health) that would empower them to complete secondary education, and even continue to tertiary education.

School and work: attendance and performance

Research shows that poor school attainment reduces girls' economic potential over her life course (Sommer et al., 2016a), impacts population health outcomes (Herz and Sperling, 2004); which extends to girls' sexual and reproductive health outcomes, self-esteem, and sense of control (McMahon et al., 2011; Mason et al., 2013; Sommer et al., 2015).

The most common claim among MHM advocates is an implied causal relationship between menstruation and school attendance (Hennegan and Montgomery, 2016; Bobel, 2019:51). Many studies argue that inadequate MHM forces many girls to miss class or drop out of school altogether (Sahin et al., 2015; WSSCC and UN Women, 2015a). Perhaps the top-cited statistic is that one out of ten African girls misses school due to menstruation. This claim appears often (Bobel, 2019:51), such as in pieces generated by the World Bank (Rop et al., 2016) and the World Economic Forum (Thomson, 2015). However, UNESCO (2014) acknowledges the difficulty in capturing a relationship between school attendance and MHM by stating: "Partly due to the difficulties in measuring absenteeism and its causes,⁶ especially when linked to menstruation, there are differing opinions on the impact of lack of menstrual hygiene materials" (Bobel, 2019:51). Therefore, additional work is needed to capture the impact of menstruation on concentration and engagement, even if girls are at school (Hennegan et al., 2016).

⁶ For example, classmates sign each other in, or pupils attend registration and then leave school part-way through the day, etc. (expert comment).

The Performance Monitoring and Accountability 2020 (PMA2020) surveys in 2017 included self-report questions on the extent of school and work absenteeism among women and girls due to menstruation in a selection of west African countries. The findings from the survey suggest that women and girls do miss school and work during menstruation: of women who had worked outside the household in the past month in Burkina Faso, Niger and Nigeria, 19%, 11% and 17% respectively, reported missing work due to their last period. Among those 15-24 years old who attended school in the past year, 17%, 15% and 23% reported having missed school in the past year due to menstruation. However, the data doesn't enlighten us about the extent to which this is due to period poverty (and if so, what parts) or menstrual pain. That said, menstrual pain is also poorly addressed because of deficits in education, access to care, availability of pain relief options and open use of pain relief (expert comment).

Burkina Faso: A recent economics paper using the PMA2020 data from Krenz and Strulik, 2019, does suggest that the menstrual materials used may contribute to this work absenteeism. However, their findings may not be nationally representative (Hennegan et al., 2018).

Cameroon: Research of behaviour and practices in Kye-Ossi and Bamoungoum found that women also stop working during menstruation (WSSCC and UN Women, 2015b).

Ghana and Uganda: The ESRC-DFID funded project 'Menstruation and the Cycle of Poverty: does the provision of sanitary pads improve the attendance and educational outcomes of girls in school?' was built on a small pilot study in Ghana. It found a relationship between menarche, sanitary provisions, reproductive health and girls' educational outcomes. The pilot was scaled up in Uganda to identify the effects of puberty education and sanitary pads on school attendance - and to determine how the absenteeism and anxiety that goes otherwise unchecked results in poor performance, discouragement, and drop out. Results show that girls increased their attendance when provided with sanitary pads by 17%, which equates to 3.4 days out of every 20 days.⁷

Kenya: However, in the rural west, frequent follow-up to evaluate use and safety of menstrual products by primary schoolgirls 14–16 years may have positively influenced participants' attitudes to attending school, affecting school outcomes, including in the control arm (Phillips-Howard et al., 2016). Provision of menstrual cups and sanitary pads for approximately one school-year was associated with a lower sexually transmitted infection (STI) risk. Cups were associated with a lower bacterial vaginosis risk, but there was no association with school dropout risk (control=8.0%, cups=11.2%, pads=10.2%).

Uganda: Research of impact of poor MHM in menstruating schoolgirls aged 10-19 years in rural primary schools in the Kamuli district by Hennegan et al. (2016) found that additional work is needed to capture the impact of menstruation on concentration and engagement, even if girls are at school. However, the cross-sectional nature of the study limits causal inference, and the analyses are limited by the lack of ability to adjust for potential sociodemographic confounds, the small sample size, and lack of existing literature on which to base power analyses.

⁷ <https://www.soas.ac.uk/news/newsitem130674.html>

Other research shows that all policy makers interviewed in the peri-urban Entebbe sub-District secondary school study by Miiro et al. (2018) – in preparation for the MENISCUS programme - reported poverty and menstruation as the key factors associated with school attendance.

Education: to empower and inform

Compared to the health sector, the education sector has been less engaged, even though girls' school experiences are negatively impacted if they are distracted, uncomfortable, or unable to participate because of anxiety over menstrual leakage and odour (Mason et al., 2013); or without the support of teachers, adequate latrines (Oduor et al., 2015), or a place to rest if menstrual cramps become painful (McMahon et al., 2011; Sommer et al., 2015).

India: In 2012, the WSSCC spoke to 12,000 women and girls in five states of India over 56 days during the Nirmal Bharat Yatra (The Great WASH Yatra), which was a national mega-campaign around sanitation and hygiene. They created a safe space to talk about menstruation, resulting in a tremendous response: women and girls gathered in large numbers with mothers, grandmothers, sisters and friends to discuss, share and ask the most intimate of questions. They tested simple training and communication tools and partnered in developing methodologies to break the silence and create safe MHM conditions together (Patkar et al., 2016).

West Africa: In 2014, WSSCC took this approach to West Africa and launched the Joint Programme "Gender, Hygiene and Sanitation" with UN-Women. The programme undertook a series of studies aimed at breaking the silence on menstruation and menstrual hygiene in the region (Patkar et al., 2016).

These studies' findings echo the silence and concerns from many countries around the world. A first - and very critical - problem is limited or incorrect knowledge and information (Patkar et al., 2016). However, studies on menstruation in rural African primary schoolgirls are compromised by the increasingly younger age girls' complete school, with fewer girls reaching menarche during primary school (Phillips-Howard et al., 2016).

Uganda: Irise International, a charity dedicated to ending period poverty and improving menstrual health in the UK and East Africa, have been collaborating with academia as well as conducting research and evaluation in this area over the last five years. They currently have a DFID funded project focused on creating menstruation friendly schools in Uganda (E. Wilson-Smith - personal communication).

The MENISCUS-2 study, which piloted a MHM intervention in two secondary schools in the Wakiso district, is now complete, and the results are currently being prepared for publication (H. Weiss – personal communication). A summary of the findings is available on the webcast of the Virtual MHM conference (Kansiimi, 2018). Use of the MENISCUS-2 intervention packages improved knowledge of puberty and menstruation, pain management and WASH; it also reduced stigma and anxiety around menstruation. However, results may be confounded with older age and difference in school attendance in different terms (e.g. due to examinations).

Another important finding is that MHM is being prioritised by the Government: the Ministry of Education and Sports (MoES) is now promoting MHM. The group has been shortlisted to submit a full proposal for MENISCUS-3 (full scale school-randomised trial) by the DFID/MRC/WT Joint Global Health Trials scheme (H. Weiss - personal communication). Plans for a cluster-randomised trial in 30 schools to evaluate the impact of the MENISCUS-2 package on school attendance, performance, and other outcomes is underway (Kansiimi, 2018).

Education on SRHR

Girls' SRHR underscores the importance of engagement from the education sector, given the evidence showing that educated girls are more likely to delay first sex, have fewer sexual partners, use contraception, and are less likely to become infected with HIV/AIDS (Sommer et al., 2016a).

If girls are not in school, it is more likely they will be forced into child marriage or teenage pregnancy. Early marriage radically increases the risk of child pregnancy, repeated pregnancy without sufficient birth spacing, and complications such as obstetric fistula.

Although education on MHM is important, MHM has yet to be included within the numerous activities underway to improve girls' educational outcomes in LMICs (Sommer et al., 2016a). Many girls in LMIC receive no or factually incorrect guidance prior to menarche about the normal physiological process of menstruation or the pragmatics of MHM (Sommer et al., 2016a). This in turn results in numerous misconceptions about their own fertility, creating vulnerability to adolescent pregnancy if girls are sexually active. Therefore, the adolescent sexual and reproductive health and rights (SRHR) sector is called on to expand its focus and intervention timing beyond contraception (i.e. family planning) and disease prevention to include puberty and menstrual care guidance.⁸

Formative evidence has raised awareness that poor MHM contributes to inequity, increasing exposure to transactional sex to obtain sanitary items, with some evidence of an effect on school indicators and with repercussions for sexual, reproductive, and general health throughout the life course (Sommer et al., 2016a):

Kenya: Menstrual needs of impoverished females in rural LMICs settings likely leads to increased physical and sexual harms: two-thirds of pad users from the rural west received them from sexual partners (Phillips-Howard et al., 2015). However, the country has been making progress on the issue. Through government, UNICEF, and partners' initiatives, about 90,000 girls in 335 schools now have access to safe and hygienic toilets with MHM facilities, as part of the Basic Education Amendment Act, 2017.

Because of the lack of clear evidence on the impact of MHM interventions on girls' education and health, ZanaAfrica received funding in 2015 from the Bill and Melinda Gates Foundation to implement a holistic solution combining sanitary pads and reproductive health education, including multimedia health education resources. The package of interventions was branded as "The Nia Project," from the Swahili word *nia*, which means "purpose." (Muthengi et al., 2017:2). This has been described as a "progressive" study (expert comment). Analyses at end-line will determine whether poor school quality serves as a barrier to programme impact (Muthengi et al., 2017:20); these results are expected in Spring 2019 (C. Bodel - personal communication).

⁸ In Nepal, during Her Turn 24-day empowerment workshops, the girls learn about health issues (nutrition, safe water handling, puberty, menstrual hygiene management), safety issues (bullying, domestic violence, human trafficking, early marriage, sexual harassment) and leadership skills development (public speaking, confidence building, problem solving). http://her-turn.org/Her_Turn_Annual_Report_2017.pdf

Other research from Kenya shows that having attended secondary school increased the odds of using commercial pads among married (adjusted odds ratios [AOR] 4.8, 95% confidence interval [CI] 3.25–7.12) and single females (AOR 2.17, 95% CI 1.04–4.55) (Phillips-Howard et al., 2015).

Effect on Health

Quantitative studies of the associations between MHM and health, education and psychosocial outcomes are scarce (Hennegan et al., 2016). Studies have yet to confirm if inadequate information and facilities for MHM significantly affects quantifiable school and health outcomes influencing girls' life chances (Phillips-Howard et al., 2016).

Reports link the use of unsuitable absorption materials to health issues: for instance, when girls and women don't dry materials properly, this can lead to infections (Wateraid, 2012). However, the research to support this link remains poor (Sumpter and Torondel, 2013). The health impacts of menstruation can also affect girls indirectly: early marriages and pregnancies sometimes have a profound impact on the girls' health and that of their babies (Williamson, 2013; WHO, 2014).

One study (Hulland et al., 2015), recommended by an expert consulted for this review, found that women do report menstruation as their most stressful sanitation-related activity.

Kenya: In 2017, president Uhuru signed a law that requires government provision of free menstrual pads for schoolgirls aged 12-18 years, as well as providing "a safe and environmental sound mechanism for disposal". In that same week, the Menstrual Health Hub was launched to build connection and community among those working on issues of menstrual health and politics (Bobel, 2019:4). In 2018, it was reported that project will no longer be run by the Ministry of Education's Basic Education department. The sanitary pads will be given to school heads, who will in turn organise to have needy children get them. The new Education Information Management System will also play a vital role in helping identify needy girls.

Senegal: In 2015, the Government signed a memorandum of understanding to improve women's and girls' rights to water and sanitation (Patkar et al., 2016). The agreement is an integral part of the Ministry of Water and Sanitation's aim to include the issue of menstrual hygiene management in the updated national sanitation policy.

Economic empowerment

According to the OECD, economic empowerment is the capacity of women and men to participate in, contribute to and benefit from growth processes in ways that recognise the value of their contributions, respect their dignity and make it possible to negotiate a fairer distribution of the benefits of growth.⁹

⁹ <http://www.oecd.org/dac/gender-development/womenseconomicempowerment.htm>

At the level of countries, a lack of education for girls can lead to substantial losses in national wealth (Wodon et al., 2018:1). World Bank figures estimate that wider society and national economies can profit from better menstruation management: with every 1% increase in the proportion of women with secondary education, a country's annual per capita income grows by 0.3%.¹⁰ Empowered women and dignified work are critical to better business - business that is more ethical and more productive. Other than improved finance, impacts in Bangladesh, Kenya, and India include behaviour improvements in health and workplace gender equality outcomes, as well as improvements in self-esteem.¹¹

Southeast Asia: Substantive financial costs of inadequate workplace environments for MHM were highlighted in a four-country study analysing the economic impacts of sanitation by the World Bank (2008). Around a quarter of all workplaces did not have toilets in Cambodia, and around 14% of workplaces had inadequate toilets in the Philippines. In Vietnam, around 3% of health stations and 74% of market places had no toilets, and 11% and 13% respectively had inadequate toilets (The World Bank, 2008). Assuming women employees were absent for one day a month due to a lack of WASH facilities during their menstrual period, the study estimated 13.8 and 1.5 million workday absences in the Philippines and Vietnam respectively, with an economic loss of USD 13 and 1.28 million per year (The World Bank, 2008).

4. Lessons learned and recommendations

As MHM cuts across many development sectors, it aims to be relevant to development practitioners looking for practical resources to integrate this approach into interventions in the water sector, but also in health, education, social protection, community development, and other related development programmes (World Bank Group, 2017:1-2). However, there are gaps in the research:

Research gaps

Hennegan and colleagues have recently undertaken a systematic review of qualitative studies (j. Hennegan - personal communication). One of the findings of that review (that is currently under peer review) is that this common collection of aspects of period poverty **neglects pervasive silence and negative social norms around menstruation**. It also overlooks menstrual pain – which is a different but critical issue, and the role of explicit cultural or religious restrictions placed on women and girls. These vary in adherence and severity across countries. Restrictions include changes to diet, being excluded from religious and other social activities, any interaction with males, or travelling outside the home. Such practices are likely to contribute to economic consequences where increasing numbers of adult women are engaging in the workforce (expert comment). A recently published qualitative paper including the role of these restrictions in the Pacific (Mohamed et al., 2018) reveals that participants identified restrictions, such as not being

¹⁰ <https://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-5753>

¹¹ BSR HERproject: <https://herproject.org/impact>

able to attend church or hygienically wash menstrual hygiene materials, as unwanted, in some cases impacting on participation in school, work and community life.

Further research that centres on patients' experiences and seeks to understand the effects of stigma on health care-seeking behaviour is needed, as well as on health care provision to ultimately ensure better training and improved clinical practice to overcome these challenges (Winkler, 2019).

There is no good evidence on the **extent** to which period poverty impacts any of these outcomes or economic empowerment. There is a very limited body of quantitative evidence on this topic and need for research which could explore the hypothesised relationships beyond the qualitative findings. It is difficult from the qualitative studies to determine the extent of the association, or how influential period poverty contrasts with other challenges facing women and girls in the contexts studied. Many more quantitative studies, and studies using higher quality measurement tools is needed (expert comment). Although well-meaning, non-government organisations (NGOs) and social businesses may be ill equipped to evaluate programmes (expert comment).

There has been a lot of discussion of **school absenteeism**, partially because it is intuitive to measure. But studies need to think more about discomfort and disengagement at school as well as psychosocial/mental health consequences of negative menstrual experiences (expert comment).

The regional conference on the reduction of gender inequalities in WASH organised by WSSCC and UN Women in June 2018 in Dakar have also highlighted research gaps (expert comment).

Future recommendations for empowerment from period poverty include:

Increased community engagement and knowledge sharing

Drama skits were successfully used to engage students (boys and girls), staff and parent communities on puberty, menstruation and addressing stigma as part of the MENISCUS-2 MHM school programme in Uganda (Kansiime, 2018). Community-wide approaches, including boys and men, are also needed, as these have also proved successful in reducing stigmas (WSSCC, 2013:12). A 360-degree approach for future interventions would help multi-layered community-based education, instead of focussing solely on sanitary product access (Bodel, 2019).

It is also important for organisations to learn from others and, at the same time, to share learnings with partners and other interested stakeholders. It is essential to raise awareness among religious, community and other leaders to support the participation of women and girls in decisions that concern their lives, and it is also important to work with women and men as well as girls and boys (Patkar et al., 2016). Breaking the silence around menstruation is essential for women and girls to be able to reach their full potential (Patkar et al., 2016).

Private sector involvement

In 2014, Essity (formally SCA - a Swedish hygiene and forest products company) - and WSSCC entered a strategic partnership to break taboos around MHM. SCA sponsored the participation of a female team in the Volvo Ocean Race – a predominantly male arena – to break the silence around MHM and inspire people to take action. Essity brought out a global insight report with the

objective of raising the hygiene standards of the world. This consumer study looks at people's perceptions of hygiene and its links with health and wellbeing. The 2018-2019 report was launched in May 2018 (Essity and WSSCC, 2018). It states that "by providing hygiene facilities adapted for women's needs and integrating menstruation management in policy work, we can increase women's workforce participation and create a path to women's empowerment."¹²

National advocacy

Adolescent girls need the **support of their governments** to provide adequate infrastructure, access to affordable sanitary products, and gender equity for them to manage their periods (Day, 2018). For example, in the US, currently Women, Infants, and Children (WIC) and Supplemental Nutrition Assistance Programme (SNAP) benefits for low-income individuals do not cover menstrual products (Winkler, 2019). Taking the human rights perspective further, meeting menstrual needs should not be a question of charity and donations (Winkler, 2019).

Women and girls need **services and infrastructure**; in particular private, clean and equipped spaces where they can change, wash, and dispose of sanitary materials safely and discretely. In the era of the SDGs looking towards universal access to WASH services, public places and work environments should be seen as strategic locations to deliver these services. Improving access to WASH in the workplace will be beneficial for all: for women's and girls' rights to health and to an adequate standard of living as well as for their productivity and increased workplace participation, and for men and boys who will also benefit from a better work environment (Aidara, 2016).

Evidence-informed programming and evaluations

MHM has been neglected and rarely appears in donor strategies, national government policies, or advocacy agendas (Millington and Bolton, 2015). Given the shortage of information on MHM globally, the expected sensitivities around the topic, and the lack of standardised tools and methods, research has predominantly provided evidence from qualitative, participatory, and descriptive methods (Phillips-Howard et al., 2016).

Progress is beginning, however: Kenya now provides free sanitary pads to girls in education, and Ethiopia has established menstrual hygiene management clubs in schools (Day, 2018). There is a growing body of qualitative evidence, some of it very high quality, that menstruation is experienced negatively, that it influences experiences of WASH facilities, contributes to absenteeism, and is a source of psychosocial stress (expert comment).

There is also a lack of formal evaluations of programmes supporting access to menstrual hygiene products (Millington and Bolton, 2015). Hennegan and Montgomery (2016) summarised and critically appraised the evidence for the effectiveness of menstruation management interventions in improving women and girls' education, work and psychosocial wellbeing in low- and middle-income countries (LMICs). The authors concluded that there was insufficient evidence for the effectiveness of trialled menstrual health interventions for improving education or psychosocial outcomes. The conclusions would not change if they were to include the few studies published since the review (J. Hennegan - personal communication). The subsequent trial of sanitary pad and puberty education provision in Uganda (Montgomery et al., 2016) did find

¹² <https://www.wsscc.org/wp-content/uploads/2016/06/MHM-SDGs-and-the-Private-Sector-Women-Deliver-2016-Side-Event-WSSCC-Highlights-Report.pdf>

positive impacts, but also had a number of caveats. The qualitative companion to this trial (Hennegan et al., 2017) highlights some future considerations.

Increased workplace data

More research from workplaces is needed in this area. The Business for Social Responsibility's (BSR) HERproject deliver and evaluate work-based interventions to improve gender equality; one pilot was a menstrual health intervention with women working in factories in Bangladesh. Results show that 73% of women missed work for an average six days a month; when women are paid by piece, those six days away present economic damage not only to them but also to the business supply chain. However, when the HERproject provided pads and a behaviour change work-based intervention, absenteeism dropped to 3% after the intervention. 'Menstrual leave' from work is an area to explore, as it looks beyond the potential impact of the lack of access to products and facilities focussing on the impact of intangible barriers such as the lack of information, the stigma around menstruation, and the resulting lack of confidence in addressing matters related to menstruation (I. Winkler- personal communication).

A safe work environment should include access to these services as a critical component of a decent work environment, as outlined by the International Labour Organisation. Private sector companies have a role to play alongside governments as main providers of social services and social protection. While menstrual leave policies are under discussion in some Asian (e.g. Cambodia) and European countries, it is critical to develop safety regulations and standards for WASH in both the formal and informal workplace, to ensure that women have access to toilets that are adequate for the management of menstruation. Even more critical is the enforcement of these regulations (Aïdara, 2016).

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Key websites

- HEART - Menstrual Health Management: <https://www.heart-resources.org/tag/menstrual-hygiene-management/>
- Menstrual Health Hub Hive¹³: <https://mhhub.org/hive/>
- BSR HERproject: <https://herproject.org/impact>

¹³ The MH Hub seeks to overcome geographical and thematic barriers to help professionalise a fragmented field and strengthen collective impact at the local, regional and global level.

- Her Turn (workshops for adolescents school drop-outs): <http://www.her-turn.org/new/2018/05/28/happy-menstrual-hygiene-day/>
- Zana Africa: <http://www.zanaafrica.org/research-the-nia-project/>
- MENISCUS-2 study information: https://www.dropbox.com/sh/u6sqaefyn4ukquw/AAbazb1DAnHagbVqy8onmSK_a?dl=0&preview=3.+MENISCUS-2+in+Wakiso+district%2C+Uganda.pdf
- Virtual MHM Conference 2018: <https://events.xelivebroadcast.com/mhm/events/mhm2018/?captions=off#video>
- Performance Monitoring and Accountability 2020: <https://www.pma2020.org/>

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