



Menstrual
Health
Management
Symposium

Menstrual Health Management in East and Southern Africa: a Review Paper

Siri Tellier and Maria Hyttel, WoMena

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Abbreviations

BMI	Body Mass Index
CSE	Comprehensive Sexuality Education
CRC	Commission on the Rights of the Child
ESARO	UNFPA East and Southern Africa Regional Office
FGD	Focus Group Discussion
HMLICs	High, Middle and Low Income Countries
HRC	Human Rights Council
IASC	Inter-Agency Standing Committee
ICPD	International Conference on Population and Development, 1994
IFRC	International Federation of the Red Cross and Red Crescent Societies
IRC	International Rescue Committee
IUD	Intrauterine Contraceptive Device (sometimes referred to as IUCD)
KAP	Knowledge, Attitude and Perceptions
LSHTM	London School of Hygiene & Tropical Medicine
LSTM	Liverpool School of Tropical Medicine
MDGs	Millennium Development Goals
MHM	Menstrual Hygiene Management or Menstrual Health & Management
NGO	Non-Governmental Organization
QALY	Quality-Adjusted Life Year
RCT	Randomised Controlled Trial
RTI	Reproductive Tract Infections
SDGs	Sustainable Development Goals
SRHR	Sexual and Reproductive Health and Rights
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UN-OHCHR	United Nations Office of the High Commissioner for Human Rights
UN Women	United Nations Entity for Gender Equality and the Empowerment of Women
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization

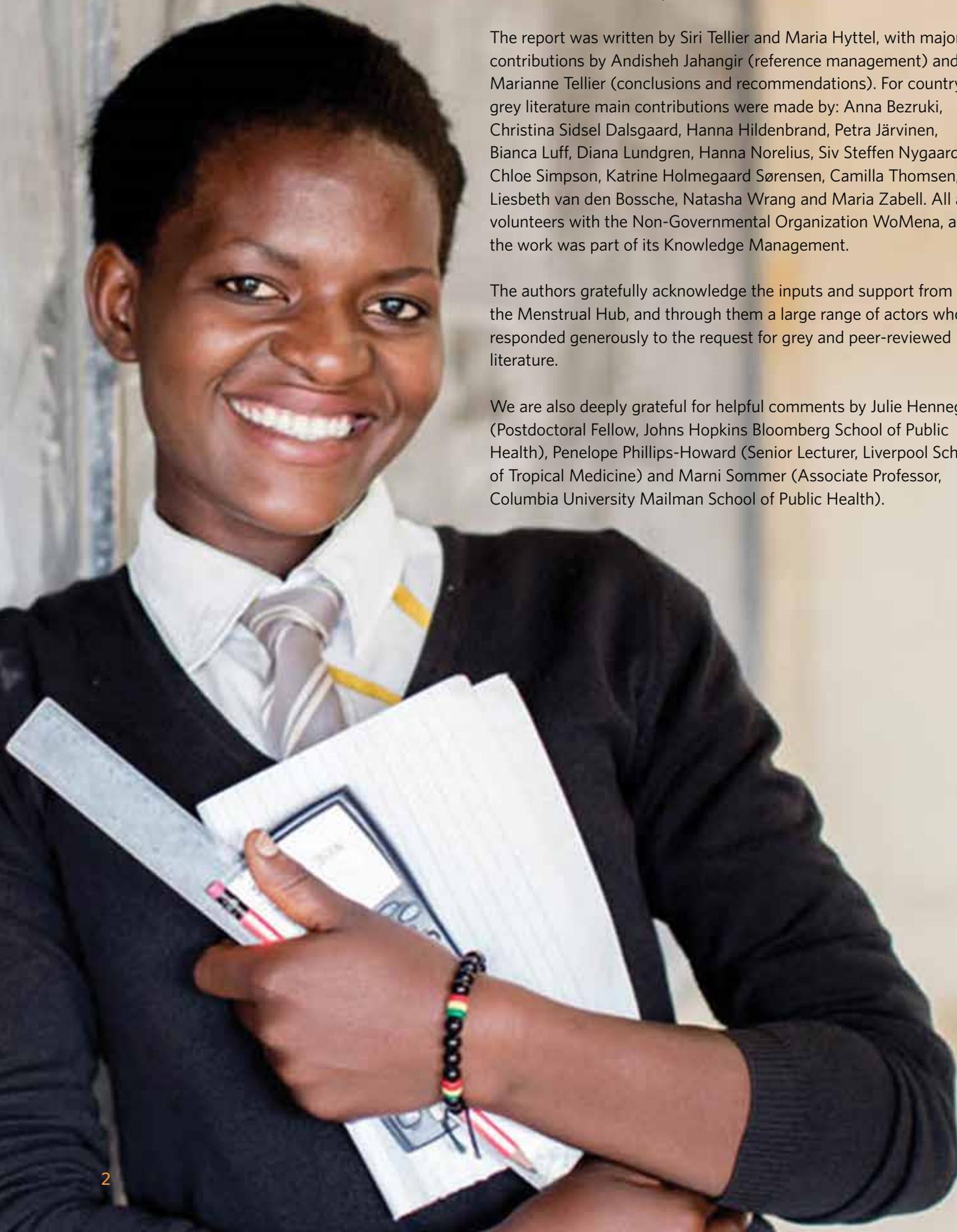
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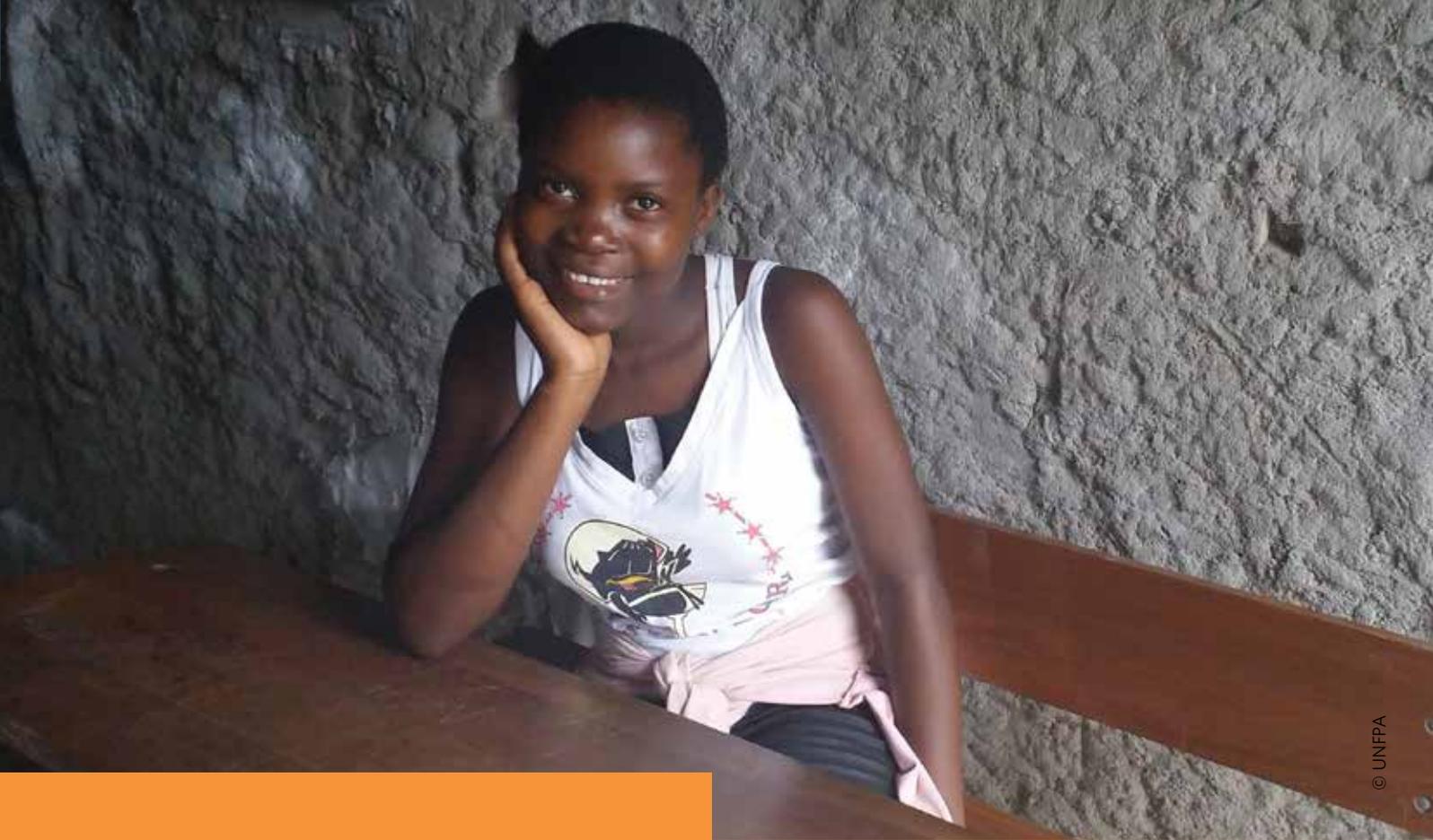
This report has been commissioned by UNFPA East and Southern Africa Regional Office, under the leadership of Dr. Julitta Onabanjo, Regional Director, with technical support from Maja Hansen, Adolescent and Youth Specialist.

The report was written by Siri Tellier and Maria Hyttel, with major contributions by Andisheh Jahangir (reference management) and Marianne Tellier (conclusions and recommendations). For country grey literature main contributions were made by: Anna Bezruki, Christina Sidsel Dalsgaard, Hanna Hildenbrand, Petra Järvinen, Bianca Luff, Diana Lundgren, Hanna Norelius, Siv Steffen Nygaard, Chloe Simpson, Katrine Holmegaard Sørensen, Camilla Thomsen, Liesbeth van den Bossche, Natasha Wrang and Maria Zabell. All are volunteers with the Non-Governmental Organization WoMena, and the work was part of its Knowledge Management.

The authors gratefully acknowledge the inputs and support from the Menstrual Hub, and through them a large range of actors who responded generously to the request for grey and peer-reviewed literature.

We are also deeply grateful for helpful comments by Julie Hennegan (Postdoctoral Fellow, Johns Hopkins Bloomberg School of Public Health), Penelope Phillips-Howard (Senior Lecturer, Liverpool School of Tropical Medicine) and Marni Sommer (Associate Professor, Columbia University Mailman School of Public Health).





1. Introduction

Menstruation, and Menstrual Health Management (MHM), have always been an issue for women. However, they are also issues which have been considered private, and sometimes shameful. It is therefore remarkable how quickly public attention has grown since the turn of the millennium.

Many different factors and actors have contributed to this change. International and national activists and non-governmental organizations (NGOs) have advocated to break down taboos and strengthen response, and initiated pilot projects. UN organizations and governments have developed goals and standards at global, regional and national levels. Key universities have had a consistent research focus, helping define 'good-enough' evidence. Menstrual products, such as the disposable pad, tampon or reusable cup, were first introduced in the 1930s. But more recent innovations have improved their range, quality, safety and availability, for example reusable or biodegradable products, and using experience to improve safety. Knowledge technologies such as menstrual calendar apps have also been developed.

External factors may also have contributed to the increased attention to MHM. As birth rates and age at menarche decrease, women are faced with MHM for more years. It has also been suggested that there has been great success in diminishing gender inequality in *primary school education*, and therefore attention is turning to factors which might cause girls to drop out of *secondary education*, including inadequate MHM.

MHM is now widely recognized as a rights and a development issue. While the Millennium Development Goals (MDGs) made no reference to MHM, the Sustainable Development Goals (SDGs) do so (indirectly) under Goal 3 (Good Health and well-being), 4 (Quality Education), 5 (Gender Equality), 6 (Clean Water and sanitation), 8 (Decent Work and Economic Growth) and 12 (Responsible consumption and

production). It is also essential for the advancement of the Programme of Action of the International Conference on Population and Development. Human rights processes made little, if any, reference to the issue before 2012, but for example in 2016 reference was made in four different human rights fora, both as a precondition for attaining other rights such as health or education, and also as an issue of dignity in its own right.

1.1 Purpose of the Review

At the operational level, the field of MHM is complex and overlaps with many sectors. Sommer et al. (2015a) find that past attention from international actors has come mainly from the education and the water, sanitation and hygiene (WASH) sectors, focusing on how inadequate MHM negatively impacts girls' school attendance or engagement. Many small-scale projects have been undertaken, but one challenge at this point seems to be translating these experiences into scalable and sustainable solutions, with a realistic combination of 'hardware' (e.g. provision of water and sanitation or menstrual products) and 'software' (e.g. education and advocacy).

In the field of sexual and reproductive health and rights (SRHR), Sommer finds that there has been less attention to MHM, and hypothesizes that this may be because the main focus in SRHR has been on girls above the age of 15 years, who are more at risk for sexually transmitted infections and unintended pregnancy (2015a). Indeed, overall strategies on reproductive health seem to place little explicit focus on MHM. For example, the 2015 Global Strategy for Women's, Children's and Adolescent's Health makes no reference to the topic.

The humanitarian sector (particularly UNFPA) was early to identify MHM as an issue, but many observers note that this has not translated into more strategic approaches. Sommer hypothesizes that this is because MHM is not typically seen as a life-threatening issue (Sommer et al., 2016d). UNFPA was instrumental in introducing MHM into humanitarian settings (introducing 'dignity kits'), and has begun a number of country-level approaches to improve MHM in these settings, but does not yet have an overall approach or corporate technical guidance on how to position the

issue within its country programmes as part of the broader SRHR focus.

This literature review was commissioned by the UNFPA East and Southern Africa Regional Office (ESARO). It is intended to form the basis for a situational analysis of the current state of menstrual health management in East and Southern Africa (ESA) that can guide UNFPA ESARO in the development of a strategic and holistic approach to MHM, including its approach to humanitarian situation, within its corporate strategic goals and principles (UNFPA, 2017).

The review links MHM to consensus documents such as SDGs and is informed by the principles of the Programme of Action of the International Conference on Population and Development (ICPD), adopting a life cycle approach (looking at the issue of MHM throughout the life cycle, from menarche to menopause), and providing informed choice (access to the widest possible range of safe, effective and acceptable means to manage menstruation, and information to make a choice among those means). It will also be informed by the UNFPA strategic goal of *empowering young people, especially adolescent girls and women*, contributing to the benefit which individuals and societies can draw from the 'demographic dividend'¹ and hence, contributing to the achievement of Africa's Agenda 2063: The Africa we want.

As noted above, at the global level there is incomplete, but rather convincing, evidence being assembled in some areas of MHM. This review attempts to build on this evidence. It highlights available literature from the 23 ESA countries², but in cases where there is no or limited literature, it also refers to other regions. The review is exploratory, identifying possible linkages to SRHR-related issues that may not have received much attention to date. It aims to provide an overview of MHM policies and programmes in the ESA region, with a focus on education, school and community-based sexuality education, WASH, sexual and reproductive health, workplace support and humanitarian programming, as well as opening up the discussion regarding marginalized groups of women and girls such as disabled, prisoners and transgender men. It addresses barriers and enablers for scalability of MHM programmes such as knowledge, attitudes, and

¹ 'Countries with the greatest demographic opportunity for development are those entering a period in which the working-age population has good health, quality education, decent employment and a lower proportion of young dependents. Smaller numbers of children per household generally lead to larger investments per child, more freedom for women to enter the formal workforce and more household savings for old age. When this happens, the national economic payoff can be substantial. This is a "demographic dividend." <http://www.unfpa.org/demographic-dividend>

² Angola, Botswana, Burundi, Comoros, Democratic Republic of the Congo, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mozambique, Namibia, Lesotho, Kenya, Rwanda, South Africa, Seychelles, South Sudan, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe.

cultural perceptions, availability of menstrual products and supplies and sanitation facilities as well as policy. Additionally, the review attempts to identify research gaps both in terms of topics and methodological issues, and providing recommendations for how to address the gaps identified. The authors were asked to provide an explanation of concepts related to MHM to help build a shared understanding and further discussion.

The evidence base around MHM varies a great deal in terms of design (both qualitative and quantitative) and academic strength. The present review concentrates on academic literature (whether published or not), as well as grey literature such as programme documents, reports, and evaluations. Much of the potentially most useful information has arisen from formative studies, including pilot studies and small-scale qualitative

studies. We build on existing literature reviews such as SHARE (LSHTM) or conference proceedings (e.g. Columbia University/UNICEF). For the more explorative elements, the main approach has been to follow up on dimensions mentioned in interviews and documents. For the grey literature review we built on our existing knowledge from the field of organizations, programmes and policies related to MHM in the ESA region. Internet searches were conducted with all the 23 ESA region country names combined with the key search terms; *menstruation, menstrual hygiene and menstrual health* and review literature for each country. Additionally, the 'MH Hub' included in their menstrual memo sent to over 1,300 persons working or interested in the field of MHM a request to share relevant literature on MHM in the ESA region, which resulted in the identification of additional grey literature.

1.2 Menstruation - The Concepts

There are many concepts related to menstruation, and many calculations of levels and trends, some of them contradictory. Therefore, we will state our current understanding, and hope to develop further based on discussion and comment.



Menstruation

The flow of blood and tissue lining the uterus through the vagina. Most sources note that flow happens for 5 days (range 2-7 days), every 28 days (range 21-35 days) (e.g. Fraser, 2011).



Menarche

The onset of menstruation, which signals the start of a woman's fertile age, when the female body is biologically able to become pregnant. We could find no recent global comparison of age at menarche. One older global survey of 11 countries across 5 continents estimated that the average age at menarche was 14 (varying between age 13-16, with African countries generally higher than other regions) (Morabia et al., 1998). Newer studies have found a trend of declining age at menarche, attributed to improved health and nutrition, but these generally refer to high-income countries (HICs) (Downing et al., 2009; Pierce et al., 2012). Small-scale studies from ESA seem to confirm this. For example, a study from Uganda finds the average age of menarche to be 14 (MoH, Uganda 2016). One study from South Africa comparing the age of menarche in 2004 to earlier levels finds that it had declined from 14.9 in 1956 to 12.4 for black girls,

and from 13.1 in 1977 to 12.5 for white girls, leading the authors to conclude that the convergence of ages reflected nutritional and socio-economic changes (Jones et al., 2009). Researchers find it difficult to make a conclusion on global levels (Parent et al., 2003; Sommer et al., 2013a). This would seem to be a data gap.



Puberty

UNESCO refers to puberty as a 'time of rapid physical, psychological and cognitive changes, when gender norms and identity are being shaped' (UNESCO, 2016). For girls, menarche is one clear physical indication, among several.



Menopause

The cessation of menstruation, which signals the end of the fertile age. We could find no updated global comparisons of ages. The above-mentioned study by Morabia et al. (1998) found the average age at menopause to be 50 (varying between 49-52). There seems to be less attention to the need for data on age at menopause, which would seem to be a data gap.



Women of Reproductive Age

The term refers to women aged 15-49, and is used for statistical purposes, rather than indicating precise biological function. The proportion of the world population in this category is approximately 25%, varying between 20% in Japan and 30% in Iran (UN World Population Prospects, 2017).



Menstruating Age/Menstruating

Given the above estimates for menarche and menopause applied to the ESA region (age 14 and 50 respectively), slightly more than 25% of the total population would be of menstruating age. Given the high birth rate (4-5 children per woman) and postpartum amenorrhea influenced by breastfeeding, around 20% would actually be bleeding or actually menstruating, meaning that 4-5% of the total population would be menstruating on any given day.³ This does not include estimates of other bleeding, for example lochia (bleeding immediately postpartum).



Adolescence

The concept of adolescence was coined by Hall in 1904 in but there is no universally accepted definition. UN sources refer to the age bracket 10-19 years, again for statistical purposes rather than indicating biological function (WHO/UNFPA/UNICEF, 1989). The United Nations Convention on the Rights of the Child (CRC) refers to individuals from birth to 18 years as 'children', and therefore adolescents are covered under the protection of the CRC until the age of 18 (UNFPA, 2009).



Menstrual Hygiene Management (MHM)

Menstrual hygiene management (MHM) is a widely used term, now often based on a definition formulated at a meeting of the WHO/UNICEF Joint Monitoring Programme (2012): 'Women and adolescent girls using a clean material to absorb or collect menstrual blood, and this material can be changed in privacy as often as necessary for the duration of the menstrual period. MHM includes soap and water for washing the body as required, and access to facilities to dispose of used menstrual management materials' (Sommer et al., 2015b). Building on this, Sommer et al. (2015a) use similar wording to define a 'holistic MHM response in complex emergencies', 'comfortably, safely, and without shame: 'The provision of safe, private, and hygienic water and sanitation facilities for changing menstrual materials and bathing, easy access to water inside or near toilets, supplies (e.g. laundry soap, separate basin) for washing and drying menstrual materials discreetly, disposal systems through waste management, and access to practical information on MHM, for adolescent girls in particular' (Sommer et al, 2015a).



Inadequate Menstrual Hygiene Management

Presumably, inadequate MHM refers to any situation which does not live up to the above definitions of MHM. However, as noted by Balls et al. (2017) and Mills et al. (2016), there is still a need for universal agreement on metrics defining what 'adequate' levels are. We could find no global estimate, but smaller studies on school girls indicate high proportions. For example, a recent study from Uganda with 205 school girls found that 90.5% of study participants failed to meet the stated criteria for adequate MHM (Hennegan, et al., 2016b). Recent reports by PMA2020 include estimates of adequacy for individual countries, using criteria such as whether the 'MHM place' can be locked, but this might be another area where agreement on criteria and data sourcing would be useful (PMA2020).



Dysmenorrhea

Pain (e.g. cramps) or discomfort related to menstruation, either primary (associated directly with menstruation) or secondary (related to an underlying gynecological disorder) (Medical Dictionary - The Free Dictionary, Fraser 2011).



Menstrual Health Management

The term 'menstrual hygiene management' focuses on hygiene, and studies at times also take this approach, for example the study 'How hygienic is the adolescent girl?' (DasGupta, 2008). Some authors note that this reinforces the thought that menstruation is something dirty or unhygienic; that it leaves out health aspects such as dysmenorrhea or wider aspects of dignity or stigma; or that it may promote medically unnecessary or harmful practices such as repeated douching which may lead to changes in the biome and pH, thereby reducing resistance to infection (Jenkins et al., 2017; Bobel, 2018).

Therefore, some actors suggest instead using the term 'menstrual health management' (or menstrual health and management), building on the WHO definition of health as *"a state of complete physical, mental and social well-being"* (WHO, 1946). Menstrual health is considered to be *"an encompassing term that includes both menstrual hygiene management (MHM) as well as the broader systemic factors that link menstruation*

³ One estimate is that globally, on any given day, more than 800 million girls and women menstruate (FSG, 2016a). That is presumably based on a global average of 2.5 births per woman. Our calculations are that it would be around half of that, or 350-400 million. The number is significant in order to plan puberty education, and calculate need for products, and we would be grateful for comments which might help to arrive at consensus.

with health, well-being, gender, education, equity, empowerment, and rights” (FSG, 2016b).

We will use both ‘hygiene’ and ‘health’ in this report, depending on the term used in the literature that is referred to (both conveniently abbreviated to MHM). When nothing else is mentioned we will use the more encompassing term referring to ‘menstrual health management’.



1.3 International Normative Frameworks

International interest in MHM is recent, but growing rapidly, in human rights fora, global conferences, and goals, as well as in normative operational guidelines.

In human rights fora, there was little, if any, mention of MHM before 2012 (Boosey, 2014). In 2012, the Special Rapporteur on the right to safe water and sanitation introduced MHM as a human right, especially with regard to WASH in schools (Special Rapporteur, 2012). The NGO WASH United provided background material for this, as an example of NGOs engaging productively with UN processes (WASH United, 2012). In 2014, Jyoti Sanghera of the Human Rights Office noted the importance of MHM to attain a wide range of economic, social and cultural rights (Sanghera, 2014). In 2016, reference to MHM was made both in the Committee on the Rights of Women (especially rural women), in a resolution on sexual and reproductive health, in the Committee on the Rights of the Child (CRC), and in the Human Rights Council (UNHRC) itself (CEDAW,

CRC, UNHRC, 2016). There has been less explicit discussion on working conditions, but an early reference to conditions at work (ILO 1985) was followed up, also in 2016, by a clarification in the Committee on Economic, Social and Cultural Rights that work facilities should “meet women’s specific hygiene needs” (CESCR, 2016). Winkler et al. (2014) links MHM to a broad range of human rights. The Human Rights Watch with WASH United also recently published guidelines on MHM from a human rights perspective (Human Rights Watch, 2017). Thus, it seems there is a strong basis for considering MHM to be a human right.

In international conferences and goals, the report of the 1994 International Conference on Population and Development (UN, 1995a) mentions MHM only in the context of fertility control. The report of the Women’s Conference in 1995 (UN, 1995b) mentions ‘hygiene conditions at work’, but otherwise makes no mention. The MDGs (UN, 2015b) make no mention. The WHO/UNICEF Joint Monitoring Programme on WASH advocated strongly for inclusion of MHM in the SDGs (WHO/UNICEF, 2016). Indeed SDG 6, which deals with WASH (6.2 access to adequate sanitation and hygiene), mentions the urgency for taking into consideration the ‘special needs of women and girls’, which is widely accepted as a reference to MHM, although still making no explicit mention. Indicator 4.a.1 for education refers to ‘single-sex sanitation facilities’ which is likewise seen as significant for MHM (UN Stats, 2016, UN General Assembly 2017). In addition, MHM can be seen as closely related to the attainment of Goals 3, 4, 5 and 8. In Goal 3 (health), it comes under 3.7- access to sexual and reproductive health services, in Goal 4 (education) it comes under 4.1 and 4.3 - dealing with equal access to primary, secondary and tertiary education, in Goal 5 (gender equality) it is in particular 5.6 - sexual and reproductive health and reproductive rights and Goal 8 - economic growth and employment. There are also interactions with goals on innovation, sustainability (including the issue of disposal of products), and inequality in general (for example, the particular challenges for poor girls to access costly products).

In operational normative guidelines and pilot programmes among UN agencies, WHO makes detailed reference to MHM in its 2009 guidelines for WASH in schools (WHO, 2009). In 2009 UNESCO published sexuality education guidelines, including issues of MHM, and updated the guidelines in 2018, with UNFPA UNAIDS, WHO, UNICEF and UN Women as co-sponsors (UNESCO, 2017). In 2014 UNESCO also adopted operational guidelines for puberty education with much attention to MHM (UNESCO 2014). The 2015 global strategy for women’s, adolescent’s

and children's health makes no direct mention of menstruation (WHO, 2015). WaterAid and other NGOs have also produced technical guidance, as well as material for advocacy (House et al., 2012). UNICEF together with Columbia University initiated a process in 2014 specifically dealing with MHM in schools (UNICEF/Columbia University 2014), setting a detailed agenda: 'MHM in Ten 2014-2024' with five key priorities (building the evidence base, guidelines for MHM in schools, cross-sectoral advocacy, allocating responsibilities and budgets, integrating into the education system). Many other UN associated programmes have focused on MHM, for example the Water Supply and Sanitation Collaborative Council (WSSCC) has developed country case studies including several from Africa, sometimes in collaboration with UN Women, as well as country level guidelines (WSSCC 2016, 2017). We could find no example of an overall conceptual framework or theory of change, and this may be an area for further work.

The humanitarian sector was one of the first to make explicit reference to MHM. In 2001, UNFPA began providing so-called 'dignity kits', including MHM materials (Abbott, 2011), presently hosted by the 'Protection Cluster' of the Humanitarian Inter-Agency Standing Committee (IASC). UNHCR also included provision for MHM products as part of one of its five commitments to refugee women, followed up most recently by a briefing paper on WASH, protection and accountability (UNHCR, 2001, 2005, 2017b). Under the Health Cluster, guidelines recommend provision

of MHM materials (Inter-agency Working Group on Reproductive Health, 2010). However, in a field which is otherwise particularly 'coordination-sensitive,' there seems to be no overall mechanism for coordination and strategy among the clusters, and no IASC operational guidelines for this. Both the 2004 and 2011 Sphere Guidelines for NGOs and the Red Cross/Red Crescent Movement, which are widely referenced as standards for humanitarian action, refer to the need for MHM, although with little detail (Sphere, 2004, 2011). The draft for the 2018 revision of Sphere is quite detailed. The International Federation of Red Cross and Red Crescent Societies (IFRC) has tested field approaches, comparing products with a strong emphasis on ongoing consultation in Burundi, Madagascar, Somalia, and Uganda (Robinson, 2016). UNFPA has developed a toolkit for services for adolescents in emergencies including MHM (UNFPA 2009). More recently, Columbia University and International Rescue Committee (IRC) with 27 co-publishing humanitarian response organizations (including UNFPA), have developed an operational tool kit in 2017 (Columbia University/IRC, 2017). IASC has also produced revised guidelines for gender in emergencies, including much reference to MHM (IASC 2018).

Thus, there is a great deal of attention to MHM in various fora, although perhaps still needing consolidation at policy level. As will be mentioned below, individual countries have made major strides, with wide involvement of a wide range of partners, for example India and Kenya.

1.4 Menstrual Health Partners and Stakeholders

As described above, there is a very wide range of stakeholder and partners within the field of MHM. This table provides an overview of the different types of stakeholders. Although it will probably be difficult to obtain a full listing, it might be a useful exercise to map some of the actors in each category, in particular actors from the ESA region.

Stakeholder types	Examples
Governments	Ministry of Education, Ministry of Health, Ministry of Works/Drinking Water and Sanitation, Ministry of Labour, Ministry of Gender, Ministry of Youth etc
UN organizations	UNFPA, UNICEF, UNESCO, UNHCR, UN Women, WHO, WSSCC/UNOPS
Non-government organizations (NGOs)	International and national NGOs, Civil Society Organizations (CSOs) and youth led organizations
Research institutions & researchers	Universities, research societies and councils, advisory bodies
Producers	International and national (private sector and social enterprises) producers of disposable and reusable products - pads, cups, tampons, panties



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2. Impact of Inadequate Menstrual Health Management

There are various documented effects on health, education, and work for girls and women that do not have adequate MHM. The following sections outline some of those effects.

2.1 Impact on Health

For 'health' we use the broad framework of WHO's definition, encompassing physical, mental, and social well-being, in line with the definition of menstrual health defined in section 1.2.

Urogenital Infections

A number of studies mention a concern that 'inadequate' menstrual hygiene, in terms of personal hygiene or products used, leads to higher levels of urogenital infection (Das Gupta, 2008). However, there seems to be no agreed-upon standard for 'adequate' personal hygiene, including, as far as we could determine, in UNESCO guidelines. It would seem that authors at times assume that certain products (for example disposable pads) or hygienic practices (for example, perineal washing before and after intercourse) are superior, whereas others have different assumptions (Srivastava, 2018).

HIGHLIGHTS:



486 Women
in **Odisha, India**, find that women using reusable pads were slightly more likely to have symptoms of, or be diagnosed with at least one urogenital infection, than women using disposable pads.



Some studies from Kenya find that **schoolgirls engage in transactional sex** to pay for menstrual products.

Furthermore, girls in some traditions are discouraged from touching their genitals or bathing during menstruation, making universal application challenging (House et al., 2012).

The evidence for an association between different MHM practices and health outcomes is limited. Much of the literature comes from India. Sumpter et al. (2013), in a systematic review of 14 articles from 2013, including two from Tanzania, find seven articles that report an association between MHM and RTIs, but the association is weak and the methodologies varied greatly. As noted in the SHARE review by Balls et al. (2017).

"It is biologically plausible that unhygienic MHM practices can affect the reproductive tract but the specific infections, the strength of effect, and the route of transmission, remain unclear."

Several studies focus on the correlation between different products and infections. Since the Sumpter review, Das et al. (2015), in a hospital-based case-control study of 486 women in Odisha, India, find that women using reusable pads were slightly more likely to have symptoms of, or be diagnosed with at least one urogenital infection, than women using disposable pads. Mishra et al (2015) find that infections were more common in women using reusable cloth for MHM. A pilot trial in Kenya also highlights the relevance of menstrual products for infections. The study reports lower laboratory-confirmed bacterial vaginosis in cup users, and higher rates in pads, than for usual practice after a year of use. It also reports no difference in prevalence of vaginal colonization of staph aureus between pad, cup, and traditional materials (Juma et al., 2017; Phillips-Howard et al., 2016b).

Zarkin-Smith et al. (2017), in an unpublished systematic review of 14 studies in low- and middle-income countries (including Kenya), notes that infection rates in general were low, but slightly higher

for methods that need to be not only washed but also dried, for example cloth or reusable pads, whether commercial or homemade. This is confirmed by a report by Balls et al. (2017), which concludes that there is a narrowing of the evidence gap, indicating that reusable absorbents cleaned and dried under unhygienic conditions have higher infection rates. A study from Uganda, in addition to noting the lack of standards for 'adequate' MHM, finds that, surprisingly, using materials dried outside was associated with higher levels of (self-reported) symptoms of infection (Hennegan et al., 2016b).

It is, however, important to distinguish between urogenital infections in general, and sexually transmitted infections specifically, since the causality pathway may differ.

Transactional Sex

Transactional sex is defined as obtaining money, favours or gifts in exchange for sexual relations. Some studies from Kenya find that schoolgirls engage in transactional sex to pay for menstrual products, particularly for the younger, uneducated, economically dependent girls, and hypothesize that this increases their risk of HIV, unintended pregnancy and school dropout (Phillips-Howard et al., 2015; Oruko et al., 2015; Amornkul et al., 2009; Mason et al., 2013, Phillips-Howard et al 2012). Globally, many studies confirm the added risk from transactional sex for HIV transmission, also found in an ethnographic study of Tanzania (Wamoyi et al., 2010), a systematic review of sub-Saharan Africa (Wamoyi et al., 2016) and a study in Kenya (Puffer et al., 2011). In Uganda, a cross-sectional community based quantitative study among 4715 adolescents by the Ministry of Education and partners finds that more than a quarter report engaging in transactional sex (MoH Uganda, 2016), although not specified for what purpose. This highlights the importance of looking at the whole economic situation of girls, and their possibilities for accessing resources to meet their basic needs. Further confirmation and



In a systematic review of 50 studies, find that dysmenorrhea is a major gynecological complaint of adolescents, that many do not seek medical care, and that it causes diminished quality of life including poorer school attendance.



In Botswana, Ama (2013) finds that there is a need to integrate the issues of menopause into the health system, as there are major physical, mental and social effects related to hormonal changes, which are possible to address.

understanding of the interrelationships among all these elements will be important.

The above-mentioned study by Phillips-Howard et al. (2016b) reports that provision of menstrual cups and disposable pads for approximately one school year to school girls in Western Kenya was associated with a lower STI risk. They hypothesize this could be related to a reduced level of transactional sex. An ongoing randomized controlled trial (RCT) in Kenya by Phillips-Howard et al. (2017) will hopefully further narrow the evidence gap. The study will also look at the biological plausibility (e.g. vaginal biomes).

Menstrual Disorders, Dysmenorrhea and Irregularity

Mohite et al. (2013) note that menstrual irregularities include a wide range of conditions, including irregularities of timing, the amount of menstrual flow, amenorrhea, dysmenorrhea, and premenstrual syndrome. Multiple causes for irregularity have been identified, including general physical ill-health, reproductive problems such as endometriosis or fibroids, the effect of medication, stress and lifestyle factors (NICHD, 2017), genetic, socio-economic and nutritional elements such as high or low Body Mass Index (BMI), psychosocial status (Dars et al., 2014) and side effects of contraception (see below). A study from the USA indicates that black women may have higher prevalence and more severe symptoms resulting from fibroids than do white women (Stewart et al., 2013), and this might be a field for further study. Results from a study by ZanaAfrica (2011) finds that girls who have undergone female genital mutilation (FGM) experience longer and more painful periods than girls who have not undergone FGM (House et al., 2012).

DeSanctis et al. (2017), in a systematic review of 50 studies, find that dysmenorrhea is a major gynecological complaint of adolescents, that many do not seek medical care, and that it causes diminished quality of life including poorer school attendance. Peuranpää et al. (2014) confirm this. This is also

confirmed by a recent study in Uganda (MoH, Uganda, 2016), which finds it to be a major reported reason for school absenteeism. Some authors conclude that menstrual irregularities should be considered as a public health concern and, but are not given sufficient attention, especially education for health service providers and service delivery in low- and middle-income countries (Sheetal et al., 2015; Dars et al., 2014, Sommer et al., 2017b). A recent study by Miiro et al. (2018) also refers to the high prevalence of dysmenorrhoea.

Roomaney et al. (2016a), in a study from South Africa, refer to estimates that 10-15 percent of women suffer from endometriosis. The women covered by the study cope with the dysmenorrhea caused by the condition by scheduling work and social activities according to their menstrual cycle (Roomaney et al., 2016b). Yamada et al. (2017), in a study of 66 patients experiencing premenstrual dysphoric disorder, conclude that the condition, if untreated, can be expected to cause a Quality-Adjusted Life Year (QALY) loss of about 3 years for patients during their lifetime. Although this study is small-scale, it opens the window of measuring the impact of poor MHM in a wider sense of health than has been the case until now than Global Burden of Disease considerations.

Menopause

The 'life cycle approach' should also include issues related to menopause, but this receives little attention in global health. UNFPA has begun supporting related research, for example in Palestine, where Nasr et al. (2017) note the need to address the psychosocial health of Palestinian menopausal women. In Botswana, Ama (2013) finds that there is a need to integrate the issues of menopause into the health system, as there are major physical, mental and social effects related to hormonal changes, which are possible to address. The scope of this review did not allow a thorough investigation of this topic and how it might best be addressed, and this is a topic for further review.



Contraception and Unintended Pregnancy

Menstrual irregularity is also associated with discontinuation of contraception. Tolley et al. (2005), in a study in Egypt, report contraceptive discontinuation associated with both injectable contraceptives and IUD users, as menstrual periods were prolonged (11-12 days for injectables, 6 days for IUDs, and heavier flows for IUD users). Hyttel et al. (2012), in a study from Uganda, find that a major driver of discontinuation of long-acting contraceptives is the concern among women and their partners that the contraceptives lead to irregular menstruation or other negative effects. Operational research by the UNFPA ESARO (2017b) finds that participants express concerns that modern contraceptive methods cause menstrual irregularities, in particular excessive bleeding, and this in turn results in an unacceptable economic burden to buy menstrual products. Participants cite this as a reason for contraceptive discontinuation. Sedgh et al. (2016), based on DHS data from 52 countries between 2005 and 2014, report that the most common reason (26%) given by women for discontinuation of contraception is a concern about contraceptive side effects and health risks. The DHS does not ask women which particular side effects they are concerned about, but qualitative studies from women in sub-Saharan Africa note that they are concerned about not knowing how their bodies or contraception work. They are particularly concerned about cessation or excessive menstruation (Williamson et al. 2009).

The issue of breastfeeding, its influence on postpartum amenorrhea and therefore on birth spacing, received much early attention, with observers noting that lower levels of breastfeeding which occurred as populations moved to cities, for example in Africa, might have resulted in higher birth rates (Brown, 1982). We have found little recent literature dealing with this topic.

FAO estimates that globally, 43 percent of infants younger than six months were exclusively breastfed in 2016, up from 36 percent in 2005, but with great regional differences, for example 57 percent in Eastern Africa, 25 percent in Western Africa (FAO, 2017). Breastfeeding also interacts with the issue of anaemia. 35 percent of women of reproductive age in Africa are estimated to be anaemic (FAO, 2017). Given the increasing levels of contraceptive prevalence leading to lower birth rates, fewer women are amenorrheic due to pregnancy and breastfeeding. That is, the need for improved MHM is likely to grow in ESA, if birth rates continue to drop.

Mental and Psychosocial Well-being

One of the most consistently mentioned issues for MHM is the high level of fear, shame, and either social or personal imposed limitations to mobility or other restrictions, which prevent girls and women from participating in school or other social events. A systematic review (Sumpter et al. 2013) finds examples of girls and women being excluded from touching water, cooking, cleaning, attending religious ceremonies, socializing, or sleeping in their own home or bed. A systematic review of cross-sectional surveys covering articles (including studies from Ethiopia, Kenya, Malawi, Tanzania and Uganda) finds consistent evidence of inadequate knowledge and negative attitudes toward menstruation as contributing to discomfort of girls (Chandra-Mouli et al., 2017). There is great heterogeneity in study design, making comparison difficult. For example, a study from Uganda notes that 90.5 percent of girls reported they did not have adequate MHM, and that this might result in shame, not standing in class to answer questions, or concerns about odour (Hennegan et al., 2016b). A report from Uganda brings out the fear of teasing by classmates as a reason for absenteeism (MoH, Uganda 2016). This is confirmed by a variety of small-scale qualitative studies (Zabell, 2016; Refstrup-Skov, 2015, Hennegan et al., 2017, Hyttel et al, 2017). We could find no studies explicitly linking mental health and MHM, although a study from India by Sahoo et al., 2015 describes psychological stress related to dealing with MHM. This would be another possible area for research, disentangling the many complex interrelationships between MHM, contraception, and mental health.

Early Marriage

In some societies, menarche is associated with being ready for marriage, especially for girls from poor households, whereby the financial responsibility for taking care of the girl passes to the husband. A recent review of 24 studies from low- and middle-income

countries (including studies from Malawi, South Africa and Zimbabwe) found that early age at menarche was associated with early sexual debut, early marriage, early pregnancy and increased risk of STIs, concluding that early menarche may have negative impacts for girls' sexual and reproductive health (Ibitoye et al, 2017). As an example, a study from Malawi showed the median age at marriage for girls reaching menarche before age 14 compared to girls reaching menarche at age 16 or older was lower by 3.4 years (age 16.9 and age 20.3 respectively) (Glynn et al, 2010). Most recently, the association between early menarche and early marriage was highlighted by President Museveni of Uganda in 2017 in a High Level Panel for 'Girls not Brides', who stated that "menstruation does not mean a child is ready for marriage". While the way menarche is perceived seems to be associated with early marriage, some reports from the ESA region (Zimbabwe and Uganda) also suggest that the high cost of dealing with MHM, including buying menstrual products, may also increase the risk of early marriage, as parents want to pass on the expenditure (Gade et al., 2017; Nyakanyanga, 2017). Ibitoye et al. conclude that more research is needed to better understand how menarche is associated with adolescent girls' SRH outcomes in different settings (2017).

2.2 Impact on Education Outcomes

Early international interest in the topic of menstruation focused on the negative effect that inadequate MHM may have on girls' education. Striking statistics on this negative effect were widely quoted, for example '1 in 10 school-aged African girls do not attend school during menstruation' (WHO/UNICEF, 2013; The World Bank, 2005, 2016; World Economic Forum, 2015). A Lancet editorial repeated the statistic, but was questioned by Hennegan et al. (2017), as the statistic, originally model-based, had limited empirical evidence to back it up over time.

Gender equality at primary and to some extent secondary level in sub-Saharan Africa has improved the last decade (McCarthy et al. 2016), but according to the 2015 MDG report it has deteriorated from 2000-2015 at tertiary level, the only region to show that trend (UN, 2015b).

A multitude of studies have attempted to identify and quantify the link between MHM and school outcomes (attendance at school and engagement in educational activities) and with a variety of methods, including reports by girls and teachers/policy makers, as well as empirical observation.

Sumpter et al. (2013), in a systematic review of 14 articles, found weak evidence for an association

between MHM and school attendance. Another systematic review (Hennegan et al., 2016a) in a review of eight studies also found moderate, insignificant effect. However, as noted in that study, standardized measures of absence were then, and remain, an issue. An unpublished cross sectional systematic review by Bezruki et al. (2016) covering 29 studies, found great heterogeneity in magnitude of the effect, in the causes cited (which include lack of products, inadequate sanitation, cultural factors, shame and embarrassment), as well as pain and discomfort. Eleven of the studies addressed student engagement in educational activities, thus not only absenteeism, and showed a negative effect, that is, that inadequate MHM limits engagement. Several studies have assessed the outcome of such interventions on both school attendance and quality. Mucherah et al. (2017) in a study of 150 school girls from Kenya found that provision of products seemed to have a marked effect on reducing dropout and feelings of shame and discomfort. A recent study by Montgomery et al. (2016) in a study of 1124 school girls in Uganda found improvements, in that girls who had been provided with products and/or education had significantly (17.1%) lower dropout rates than girls in the control schools.

The pilot study in Kenya by Phillips-Howard et al. (2016b) did not find sufficient evidence to confirm a difference in absence between groups given reusable pads, cups and usual practice, but did report a five-fold higher self-reported absence in girls during menstruation compared with when not menstruating. Several subsequent studies, including cross sectional surveys and systematic reviews, covering over a hundred individual studies, confirm these findings, and particularly focus on the negative effect for poor households (Udayar et al., 2016; van Eijk et al., 2016 for India; Abanyie et al., 2016 for Ghana; Salim et al., 2016 for Bangladesh). Although the type (and strength) of the studies vary greatly, they do all indicate a trend in the same direction.

The link between menstruation and educational outcomes is confirmed in studies from the ESA region. This includes Ndlovu et al. (2016) in a study of the Masvingo District in Zimbabwe and Njue and Muthaa (2015) in Kenya, both finding that participants perceived a strong association between inadequate MHM and absenteeism and poor classroom performance. McMahon (2011), in Kenya, noted that schoolgirls express distraction from school work, fear of being ostracized by other girls, or sexually harassed by boys. Mason et al. (2013), in Kenya, described difficulties schoolgirls have 'engaging in class, due to fear of smelling and leakage, and subsequent teasing.' A study from Uganda indicated that around 25 percent of school

girls have been absent from school at least 2 times a term due to MHM issues (pain, lack of products, fear that the class would make fun of them). There is less effect for better-off families (MoH Uganda 2016). A study by Miiro et al. (2018) notes that all policy makers interviewed 'reported poverty and menstruation as the key factors associated with school attendance'.

Hennegan et al. (2016b) in Uganda also emphasize that absenteeism and dropout should not be the main focus, and that engagement is also commonly affected by MHM, such as not standing in class to answer questions and concerns about odour. Grant et al. (2013) in a study from Malawi conclude that about one third of girls missed at least one day of school during their last period, but that factors such as co-residence with grandmother had a greater positive effect on attendance than school environment. This is not a common finding, however. A pilot study in Bwagiriza Refugee camp in Burundi reported that pain, infections, fear of leakage, or blood stains due to lack of products had caused girls to stay away from school (IFRC, 2013). There is a wide range of research noting the connection between school dropout, early sexual debut, pregnancy and HIV (Jukes et al., 2008; Hargreaves et al., 2008 a and b).

There are few studies on the effect of MHM on tertiary education. Adebimpe et al. (2016) in Nigeria and Thakur et al. (2016) in India show absenteeism related to menstrual cycle, but do not describe the reasons. Given that, as noted above, the UN Millennium Development Goals report (2015) estimated that female participation in primary and secondary education in sub-Saharan Africa has improved, but female attendance in tertiary education has decreased, this is a notable omission.

As noted above, the methods vary greatly, including both reports and observation. Reports take many forms - direct questions, either anonymous or face-to-face, individual or group (e.g. Crofts, 2010). Miiro et al. (2018) used diaries to assess. Results vary considerably depending on method.

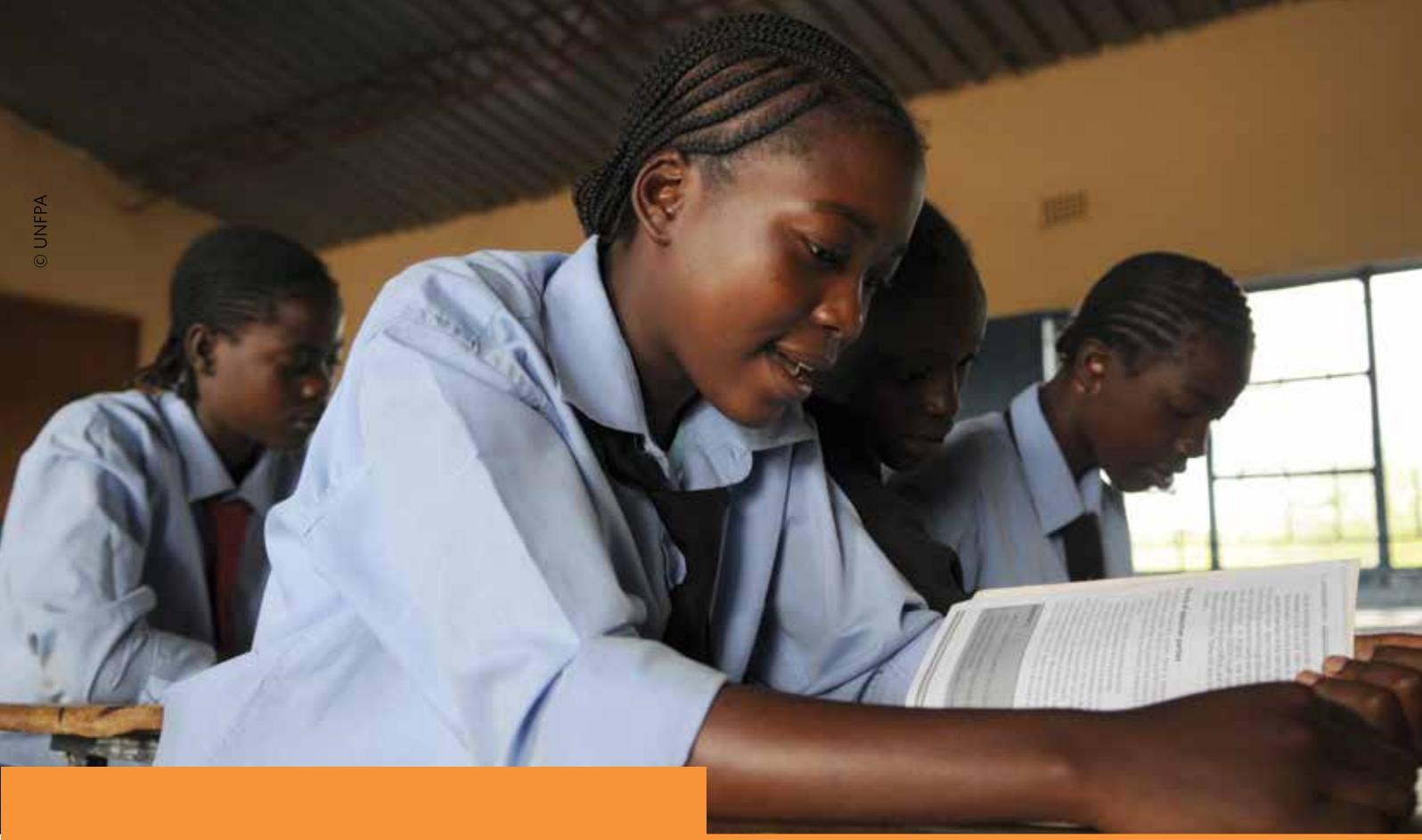
2.3 Impact on Employment and Work Performance

In the literature, 'work' is often interpreted as 'paid work outside the home'. We found little literature on impact of MHM on unpaid work in the home and there is also limited literature on the economic impact of paid work related to menstruation. Indeed, Sommer et al. (2016b) note that this is an overlooked issue.

We found very little evidence from ESA. Most comes from North America or Asia. Ichino et al. (2009) and Herrmann et al. (2013) find that patterns in absenteeism can be linked to the menstrual cycle. Côté et al. (2002) estimate a 'work loss of \$1,692 annually per woman' due to menstruation in the United States of America. A study from Bangladesh finds that some factory workers in Bangladesh take contraceptive pills to avoid menstruation, that 73 percent of women working in these conditions miss work on average six days a month, and that this proportion drops to 3 percent if sanitary pads are made available (WSSCC, 2013). A report by the World Bank (2008) assumes that female employees in Cambodia, Indonesia, the Philippines, and Vietnam were absent for one day a month due to a lack of sanitation facilities, and concludes that this results in an economic loss of USD 13 million and USD 1.28 million per year in the Philippines and Vietnam respectively. These cost estimates give an idea of the potential economic loss, but as was the case for early estimates of school absenteeism, some of the studies are model-based rather than empirical, that is, they still need to be checked against empirical data and evidence of actual absenteeism.

In a comparative study of working condition in several countries, it is noted that female workers in Cambodia report problems with menstruation and discharge due to spending long periods sitting, with limited access to sanitation facilities (Taylor, 2011). In line with this finding, Caruso et al. (2017) introduce the term 'sanitation insecurity,' mapping a wide array of concerns by women in India related to sanitation, including at work. Hulland et al. (2015) also find women rating menstruation as a high stress sanitation activity. However, a SIDA evaluation of the HER project in Kenya, which provided SRHR awareness including MHM among female factory and farm workers, found limited effect, as they were already well-informed (Bryld et al., 2014).

In summary, there has been substantial focus on MHM in adolescence and the effect on school attendance but results have until recently been curiously inconclusive, possibly related to the heterogeneity of methods, with many small scale qualitative studies and testimonies and few randomized controlled trials. Recent studies are, however, beginning to give more clear indications of a negative effect. There is little research on quality of school engagement and its effect on educational outcomes, and very little on higher level education, health and work performance, throughout the life-cycle.



3. Enablers and Barriers For Menstrual Health Management

We will refer to MHM 'enablers', meaning factors that are essential to ensure adequate menstrual health. Sommer et al. (2016d) refers to education, awareness, products, and sanitation, and FSG (2016) adds the enabler of 'policy'. The following four sections will describe how these factors play a major role as barriers and enablers to menstrual health, the landscape of interventions in the ESA Region, and the evidence on the effectiveness of interventions. Additionally, we will point towards possible research and intervention gaps.

3.1 Education and Awareness on Menstrual Health Management

One of the main components of MHM is puberty education, related to what menstruation is and how to handle it, as well as general awareness in wider communities on how to tackle the cultural and social perceptions and practices around menstruation challenging girls and women.

3.1.1 Lack of Education and Awareness as Barrier for Menstrual Health Management

There is a very extensive and rapidly growing literature describing the general knowledge and perceptions of menstruation, especially among adolescent girls in low- and middle-income countries. The above-mentioned review by Chandra-Mouli et al concludes that girls are generally uninformed, faced with 'menarche shock', deeply ashamed, fearful, and afraid to seek medical attention when they require it (Chandra-Mouli et al., 2017). As a result, the lack of knowledge about menstruation and their own bodies is a major barrier to menstrual health for girls and their surrounding communities, who lack accurate knowledge on how to react to and manage menstruation.

Globally, including in the ESA region, lack of knowledge leads to misconceptions, taboos and negative cultural and social norms around menstruation. For example, in the Toposa tribe in South Sudan, it is believed that wearing underwear can lead to a woman's husband dying, meaning only widows should wear underwear (SNV, 2014b). Some girls fear disclosing menarche even to mothers, teachers and peers, because it is believed to be associated with sexual behaviour, which is considered improper (House et al., 2012). In a study on youth's perceptions of sexual and reproductive health from DRC girls reported lack of information on menstruation as a major concern (Nsakala et al., 2012).

Religious and cultural leaders are reported to have negative views about menstruation, while boys and men in general often lack knowledge on menstruation, leading to boys teasing and bullying girls (UNICEF, 2015b; Tekle, 2017). In Malawi, boys were included in MHM training, since it was recognized that they were teasing girls on menstruation issues. It was reported as a good initiative, as boys are now supportive of girls' menstrual issues (Plan International 2015).

The general taboos and negative perceptions surrounding menstruation are also often widespread among teachers and others implementing MHM interventions. Thus, communications and teaching styles may be a barrier for the quality of MHM education. A systematic review notes that mothers and teachers in Kenya, Malawi, Ethiopia and Uganda feel discomfort discussing menstruation with girls, and may unwillingly promote misconceptions (Chandra-Mouli et al., 2017). Teachers report that they do not always feel it is their role, nor that they have the skills, to educate girls on the topic and girls report that male teachers at times tease them. A study from Rwanda notes that students are keen to be taught by someone else than their home room teacher, as they are afraid to be punished and cannot speak freely (MEDSAR IMCC, 2015). Experience gathered through Columbia University pilot schemes in Tanzanian refugee camps confirm these findings, noting the importance of providing training on MHM needs and value clarification for teachers (Columbia University, 2017). This is confirmed by Blake et al (2017).





Another barrier for quality MHM education is related to the variability of topics and content covered in puberty education, which may not adequately include a broad view of MHM. UNESCO has produced guidance (UNESCO 2014, a and b) which might usefully be applied, but we found little reference to those guidelines in teaching material. Balls et al (2017) note the need for minimum standards for MHM education in schools. Woog et al (2017) cite studies from Kenya which find adolescents have gained high levels of awareness of HIV/AIDS, but little knowledge about the menstrual cycle and family planning, as only 14% could identify the fertile period. Abdelmoneium (2010) in a study of educational content from South Sudan notes a focus on maternal mortality, to the exclusion of broader topics. Wayte et al. (2008) likewise notes a narrow focus. Bello et al. (2017) in a study of schools in Nigeria find that both children and parents welcome puberty education, but parents want an emphasis on how to avoid risk taking behaviour, whereas children are interested in understanding bodily changes. Additionally, the extent to which information not only on the menstrual cycle but also on availability and use of menstrual products, good hygiene practices, menstrual irregularities throughout the lifecycle, and dealing with physical and emotional symptoms and addressing misconceptions and negative perceptions varies greatly. Distinguishing between personal or 'contextual' beliefs with medical, evidence based knowledge can be difficult. As an example, some researchers, such as Shoor (2017), present the standard that cleaning the vaginal area more than 3 times daily is the benchmark, whereas others do not give a particular standard, and bio-medical evidence for standards is not cited.

3.1.2 Education and awareness as an enabler for MHM

Education programmes related to MHM have mainly focused on integrating MHM into school curricula on comprehensive sexuality education, puberty and adolescence, while there has been less focus on out-of-school education programmes.

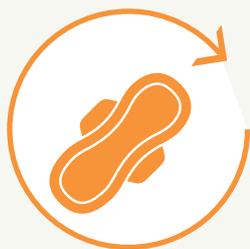
In the ESA region some of the countries with the strongest focus on MHM in education are Kenya, Tanzania, Uganda, Ethiopia, Malawi, Zambia, Burundi, Mozambique and South Sudan, often with the support of UNICEF, UNESCO, UNFPA or NGOs, while for most of the other countries in the region we found no or little documentation for integration of MHM in education (Malawi Government, 2009; MoH Uganda, 2013b; SNV, 2013). A good example of MHM in education is Tanzania's educational booklet on MHM integrated into primary school curriculum and national WASH in Schools strategy by the Ministry of Education with support from UNICEF and other partners (Sommer et al., 2013b; UNESCO, 2014; MoESP Tanzania, 2012). Other examples are Malawi where a menstrual hygiene booklet have been distributed in schools by the Ministry of Education with UNICEF support (Barsky, 2015), in Kenya the Girl Child Network has worked on integrating MHM in schools (FSG, 2016c), while in South Sudan a teacher's guide included MHM as part of adolescence (MoEST South Sudan, 2013).

An additional component related to MHM in and out of schools is support groups to create supportive environments for girls and women to discuss and learn about issues such as MHM often with the aim to prevent school dropout as well as early pregnancy and child marriage. Examples of these programmes are implemented by the Keeping Girls in School programme in Malawi and the programme EmpowerNet in Kenya (Barsky, 2015; Vaughn, 2013).

3.1.3 Research and Interventions Gaps on Education and Awareness

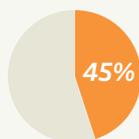
Knowledge and awareness around menstruation are a relatively well researched area of MHM. This refers especially to the situation analysis, with less research on the impact and quality of the interventions to address the issue. Some gaps remain, for example with respect to (a) topics: how to ensure a broad approach over time, reflecting the needs perceived by girls and women as well as their parents, teachers and partners and how to ensure that MHM education is provided as part of a lifelong learning approach as opposed to one off trainings; (b) timing: given the sensitivities

HIGHLIGHTS:



In the **ESA region**, **PMA2020** estimates the prevalence of use of sanitary pads in

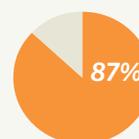
Ethiopia



Uganda



Kenya



involved in comprehensive sexuality education (CSE), might menarche education (as a neutral topic, before puberty) provide a more acceptable entry point for discussion; (c) teachers: given the misgivings of both teachers and children, should the recommendation be to have sexuality education undertaken by specialist rather than the 'home room teacher;' (d) boys and girls: should they be educated together? (e) programming: what combination of software (for example education) and hardware (products and sanitary facilities) is most effective (e) method: survey results vary significantly depending on how the data are collected.

There seem to be missed opportunities when CSE is provided in a partial manner, for example educating only on preventing AIDS, without using the opportunity to also educate around general sexual and reproductive issues, including MHM.

Research gaps remain regarding the effect of interventions remain high (Montgomery et al., 2016). Phillips-Howard et al. (2016) notes that there is a plethora of observational studies, which describe the negative effect on girls' lives, but a need remains for studies which quantify the impact of improved information and facilities. Studies are underway in Kenya, which may help provide better evidence such as a six-arm RCT in 100 schools to understand the impact and relative importance of providing school girls with pads and education and awareness materials by Population Council and ZanaAfrica (FSG, 2016c); as well as a RCT on provision of menstrual cups and cash transfers to reduce sexual and reproductive harm (e.g. risk taking behaviour) (Phillips-Howard, 2017).

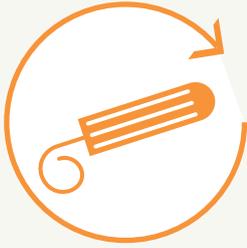
Several authors, including Phillips-Howard et al. (2016a) note a need for a strong evidence base for different settings, standardized definitions regarding MHM outcomes, improved study designs and methodologies, and the creation of MHM research consortia. They also conclude that girls themselves have many ideas about how interventions can be made more helpful, and this might form the basis of studies

and programme design. Sumpter et al. (2013) conclude that there is a gap in the evidence for high quality RCTs on interventions which combine hardware and software (Hennegan et al. 2016a), and this is reiterated by FSG (2016).

Much menarche education, including seemingly that from UNESCO, focuses on the fact that menstruation can take many forms, and reassures girls that this variety is 'normal'. This seems a reasonable approach in order to reduce stigma and shame. However, given that irregularity may be linked to gynaecological issues such as fibroids, cancers or treatable dysmenorrhea, which may indicate that girls should seek medical advice, information on such conditions might also be included in MHM education. This is all the more so since several studies (e.g. Chandra-Mouli et al., 2017) indicate that girls are ashamed to seek medical advice. From an empirical point of view, we note that, in pilot projects by the NGO WoMena in Uganda, some of the most frequently asked questions by girls and women relate to irregularity (WoMena, 2018). We found no articles presenting the effect of interventions on, for example, relieving dysmenorrhea, and this would appear to be a major gap in research.

3.2 Menstrual Methods/Products and Supplies

An important factor for MHM is menstrual products and supplies. Whereas many analysts note that we need to consider the wider picture, beyond the products and supplies, they remain important. One historical analysis claims that the introduction of the tampon, along with the contraceptive pill, were important factors in improving women's access to education and the labour market in the 1960s (Laneth, 2006). Beyond impact, the choice of products is of vital importance for scalability, including cost and environmental concerns. To give an example: if all girls and women in South Africa were to use disposable pads, that would mean 5-10 million pads per day, to be financed, produced, distributed, and disposed of.



We found reference to **tampons** only in a study from Madagascar (UNFPA-ESARO 2017a), contrasting with its very wide use in HICs.



Few surveys collect information on **cups**, but several are locally produced (for example MPower Cup from South Africa).

Menstrual methods/products range from traditional approaches (e.g. staying home or in menstruation huts) commonly available materials such as newspapers, old leaves, corn cobs, cotton gauze or cloth strips. Homemade materials also include disposable or reusable pads. Commercially produced menstrual products include disposable menstrual pads and tampons, reusable pads, menstrual cups, and 'menstrual panties' (reusable panties with built-in absorptive material, for example BeGirl and ThinX). Some biodegradable products (especially menstrual pads) are also available.

Supplies can include items such as underwear, soap, basins, and pain killers, but this is not included routinely in studies (with a few exceptions, e.g. Miiro et al. 2018, Wilson et al. 2015).

We have not been able to find comparable estimates of the prevalence of use of the above methods and products, either internationally or nationally. Some such studies may exist in market analyses, but access to such studies is beyond the financial means available for this review.

In the ESA region, PMA2020 estimates the prevalence of use of sanitary pads in Ethiopia, Uganda and Kenya to be 45%, 65% and 87% respectively, but does not report separately on reusable versus disposable pads or less prevalent products, for example cups (PMA2020). This makes it more difficult to compare to other studies, for example a study by the MoH of Uganda found 52% of girls reported using disposable pads (MoH Uganda 2016). Smaller scale studies very frequently include estimates of product prevalence, ranging from home-made products such as rags and cotton, to commercial products (Catholic Relief Services, 2016; Pillitteri, 2011; Tamiru, 2015). Beyond ESA, studies around the world collect data on prevalence, but again with different forms of disaggregation, for example van Eijk found approximately 30% of rural, and 60% of urban adolescents in India using commercial pads (van Eijk et al., 2016).

Common reporting standards might be helpful, both for surveillance, epidemiological studies, planning and advocacy, including to track the changing patterns of menstrual product mix. Possibly this is an area where it would be useful to access business marketing sources. It may be instructive to compare, once more, with the field of family planning. It took time before metrics were agreed, including 'contraceptive prevalence', 'method mix' and the distinction between 'modern' and 'traditional' methods, and to include these in overall approaches such as the MDGs/SDGs.

3.2.1 Adequacy of Menstrual Products

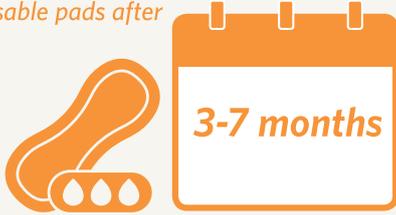
There are a number of ways to assess adequacy of products. Here we will use the human rights standards, the so-called 'AAAQ' – availability, accessibility, acceptability and quality as a starting point (UN-CESCR 2000). Possibly this could be harmonized with the characteristics proposed by Sommer et al., 2015a.

Availability: Information on availability comes mainly from anecdotal reports on what is available in markets, as well as reports on prevalence of use from individual studies.

There seem to be great regional and national differences, but for 'modern' methods, menstrual pads (especially disposable pads) seem to be widely available. Again, it is difficult to estimate, given differences in reporting categories. As noted in the table in section 1.4, many of these pads are locally produced, including disposable (ZanaAfrica), biodegradable pads (e.g. Makapads) and reusable pads (e.g. AFRipads). We found reference to tampons only in a study from Madagascar (UNFPA-ESARO 2017a), contrasting with its very wide use in HICs. Few surveys collect information on cups, but several are locally produced (for example MPower Cup from South Africa), with a further more than 100 brands available for purchase via the internet, and evidence from HICs that prevalence is increasing rapidly. We found no mention of menstrual panties.



Reusable pads become cheaper than disposable pads after



Menstrual cups become cheaper after



At present prices, menstrual panties would cost 90-120 USD over two years.



In addition to market availability, both cloth, disposable and reusable menstrual pads, as well as cups have been distributed to girls and women, particularly in humanitarian situations in Uganda, Kenya, Tanzania and Malawi (Hyttel et al, 2017; The Cup Effect, 2016-17, OneWorld, Robinson, 2016).

Accessibility: This includes the issue of cost, which is a key consideration mentioned by both end 'rights holders' (girls and women) and 'duty bearers' (husbands, policy makers, programme staff, engineers). Cost estimates vary widely, depending on the source. Disposable pads generally cost 0.7-1.0 USD per cycle (with 13 cycles per year), reusable pads (for example AFRIPads) are marketed as costing around 5 USD for a double package, lasting at least 12 months, menstrual cups are sold at between 5-15 USD and marketed as lasting up to ten years. Menstrual panties are marketed as costing around 30-40 USD per pair, with a need for 2-3 per menstrual cycle, and lasting approximately 2 years. Some of these costs may be reduced over time with global competition. Homemade menstrual pads are also being produced, but we could find little information on the cost, quality or durability, yet it would seem important to assess that also.

To reduce cost of menstrual products, and sometimes after pressure from advocates, several countries have removed tax from menstrual products (for example Kenya and Uganda) or local resources used to manufacture menstrual products, such as Zimbabwe.

Cost thus depends on the time perspective. Reusable pads become cheaper than disposable pads after 3-7 months, menstrual cups become cheaper after 5-21 months depending on the cost variations. At present prices, menstrual panties would cost 90-120 USD over two years. Supplies such as knickers, soap, basin, pain killers etc. are an added, albeit modest, cost.

These amounts are high, and are considered to be so even in HICs (for example the UK Labour Party has proposed to provide free pads to poor girls, to address 'period poverty'). As noted in chapter 2.1 there are indications that girls from lower income backgrounds resort to transactional sex to afford pads.

Water requirements are the highest for washing cloth or reusable pads (several litres per period). They are lower for reusable cups but they require boiling once per cycle. Drying facilities are needed for reusable cloth or pads, and this is reported by some girls and women to be a problem in the rainy season, as well as for privacy reasons.

Environmental sustainability is yet another cost perspective, especially for 'duty bearers' such as environmental engineers. Several observers note that this issue is often overlooked. There is a need for discarding used disposable pads in ways which are not only discreet, but which do not involve burning them (considered ill-fated in some cultures, and contributing to air pollution), which mean they are not accessible to ill-intentioned neighbours, who could use them to cast a curse, or to animals. An example of the challenges related to adequate disposal of used pads is from studies in Malawi and Lesotho, which reported that used menstrual pads discarded in open pits due to the lack of adequate disposal mechanisms were carried around school grounds by dogs and crows (Vaughn, 2013).

Acceptability: An important factor for products is 'acceptability'. Here, it might be useful to review several components, such as acceptability depending on how, by whom, what, and when a product is introduced, as well as the precise metrics used to measure that acceptability.

With respect to how, it is important to identify drivers and barriers in the environment for long term use, including those which go beyond WASH. For a new product such as cups, a pilot study from refugee settlements in Uganda (Gade et al. 2017) notes that providing support through mothers and teachers help sustainability and long term use of cups beyond the learning curve of the first 1-2 months. One driver is the perceived higher quality (increased comfort, independence, confidence and mobility due to reduced leakage) (Hyttel et al, 2017). Several small scale studies in Uganda indicate that a theory of change which includes discussion with community leaders, including both teachers, parents and others, sometimes providing MHM products for them so that they can help young girls once products are introduced to them. Involving boys in the education can be extremely effective in ensuring longer term continuation of products (Hyttel, 2017; Gade, 2017). This is confirmed in pilot studies on boys involvement from India (Sahin et al., 2015 and Mahon et al., 2015) and also more broadly for introduction of other aspects of comprehensive sexuality education. However, it should not be taken as a blueprint; some studies indicate that women will not feel comfortable discussing reproductive health issues with male providers (Sohrabizadeh et al., 2018).

Including adult women with whom the girls have direct relationships, e.g. mothers, female guardians, sisters, teachers (Hampton & Reid, 2017) or peer-to-peer relationships improves acceptability and use (Mason et al., 2015).

Peer and community support is particularly important dealing with hymen concerns. Several studies from Kenya, Uganda and South Africa report high acceptability of menstrual cups among schoolgirls when introduced with community/parent/teacher support (Mason et al., 2015; Beksinska et al., 2015; Phillips-Howard et al., 2016b; Hyttel et al., 2017).

This is closely related to 'by whom'. Whereas the intention of the standard may be to measure acceptability to the 'rights holder', in practice acceptability to 'duty bearers' has a strong effect, as has been reported repeatedly for contraceptive provision (Hyttel et al., 2012; Chandra-Mouli et al., 2018).

With respect to what, some studies indicate different perceptions of which product is best, for example Garikipati notes a 'disengagement' between women (who prefer reusable pads) and policy makers (who promote disposable pads) (Garikipati et al., 2017). Building on the principle of informed choice, some pilots note that giving girls/women access to more than one product means that they can switch as they find appropriate. For example, since reusable pads require more water and soap than cups, one pilot study in a refugee settlement where girls had access to both cups and reusable pads found that girls would use cups when water was less available for washing, or when the air was too humid for drying (Gade et al., 2017).

With respect to when, UNFPA dignity kits provide cloth and/or disposable pads for the first three months, and then reusable pads thereafter. A recent pilot project in Uganda also indicates that, for women and girls who have faced protracted displacement, menstrual cups can be sold at a low or subsidized price (approximately 4-5 USD), which is promising in terms of broadening the range of sustainable menstrual solutions (Hytti, 2017). Several studies indicate that new products such as the cup may be less acceptable short term (1-2 months), but then more acceptable, for example compared to tampons (Howard et al., 2011).

The concept 'privacy' is frequently mentioned, at times operationalized in terms of the possibility of locking the place where changing and washing is occurring (PMA2020). The concept of privacy is variable in different settings, and it would be helpful to be as explicit as PMA2020 in defining it for any given study.

Quality: Quality includes both effectiveness in dealing with MHM (controlling leaking, odour, comfort and dignity), as well as safety.

Numerous studies attest to the increased levels of comfort, freedom and general satisfaction experienced

by girls when they are provided with new products (often commercially available) compared to 'usual practice'. Comfort levels include a reduction of irritation such as scratchiness and chafing, reduced leaking and odour. The time factor should be taken into account - some studies indicate that cup users have high and increased levels of satisfaction over time, and are most satisfied if they have access to more than one product, so they can use intermittently (Gade, 2017). 'Dignity' might be another component, that is, whether girls find they are more 'free' when using a product (Refstrup-Skov, 2015, Mason et al 2015, Sommer et al, 2015a, Hyttel et al., 2017).

With respect to safety, as noted in section 2.1 above, there is limited information on the impact of traditional methods on reproductive tract infections (RTIs). Disposable pads seem to have high levels of safety. There seems to be slightly higher rates of RTIs for reusable absorbents (pads or cloth), particularly depending on how they are washed and dried, while there are indications of lower rates of RTIs and STIs for menstrual cups.

3.2.2 Menstrual Product Interventions

Distribution of menstrual products, until recently most commonly disposable pads, has been a main part of many MHM interventions, mainly in schools and combined with MHM education in the region. Most known is the Kenyan government's distribution of disposable pads to schoolgirls since 2011 to reduce school absenteeism and increase participation and performance in education (UNESCO, 2014). The President of Uganda has promised to provide free pads to schoolgirls, although this is delayed, due to funding limitations. There have also been concerns about the high cost of Kenya's pads distribution programme (UNFPA-ESARO, 2017a). Some menstrual product social businesses, such as ZanaAfrica in Kenya, have

focused on providing locally produced, low cost and high quality disposable pads, often combined with other interventions such as "empowerment clubs" and internet-based MHM learning (House et al., 2012). Due to concerns of potential high-cost and environmental sustainability, some efforts have been put into producing biodegradable menstrual pads, such as Makapads from Uganda. In Rwanda, the so-called SHE28 initiative included the manufacturing and distribution of affordable, eco-friendly menstrual pads locally produced from banana stem fibres in eastern Rwanda (Sommer et al., 2015c). However, so far, a challenge has been producing high-quality pads that are comfortable to use with a good absorption ability. Cost is another factor - it will be important to establish whether local production is in fact lower cost than commercial products.

More recently, reusable menstrual products are becoming increasingly commercially available and popular. Reusable pads are produced locally and sometimes home-made, as well as by social businesses such as AFRIpads in Uganda and Huru International in Kenya, with large-scale sale and distribution of menstrual kits in the region. The most successful brands are high-quality, low cost, comfortable and have a waterproof material to prevent leaking of blood. A commonly reported disadvantage of reusable pads is the increased need for soap, water, and space for washing and drying, which in some contexts can be challenging and may increase the risk of RTIs (Montgomery et al., 2016, Hennegan et al., 2017).

Another increasingly popular reusable menstrual product is the menstrual cup, typically made of medical silicone that is inserted in the vagina. It is washed after being emptied, and boiled after each period, and can then be reused up to ten years. As described in 2.1 above it is safe and effective, and is beginning to be commercially available, with more than 100 brands are



"Kenyan government's distribution of disposable pads to schoolgirls since 2011 to reduce school absenteeism and increase participation and performance in education (UNESCO, 2014)."

for sale on the internet, including several from Africa, such as MPower Cup from South Africa. Menstrual cups have been distributed to girls and women, particularly in Uganda, Kenya, Tanzania and Malawi (Hyttel et al, 2017; The Cup Effect, 2016-17). Menstrual cups cost approximately 15-40 USD, and some brands are sold to NGOs for approximately 5-8 USD.

The main concern related to menstrual cups is acceptability, including hymen concerns for young girls. However, several studies from Kenya, Uganda and South Africa reported high acceptability of menstrual cups among schoolgirls (Mason et al, 2015; Beksinska et al 2015; Phillips-Howard et al., 2016; Hyttel et al 2017). The quality of the training and support seem to have high effect on uptake and continued use of cups. The cups have been found to be more acceptable when simultaneously including adult women with whom the girls have direct relationships, e.g. mothers, female guardians, sisters, teachers (Hampton & Reid, 2017). Increased comfort, independence, confidence and mobility due to reduced leakage and long-term use are other drivers of continuation (Hyttel et al, 2017). A recent pilot project in Uganda also indicate that menstrual cups can be sold at a low or subsidized price (approximately 4-5 USD) among rural Uganda women, which is promising in terms of broadening the range of sustainable menstrual solutions (Hytti, 2017).

A possible general lesson refers to informed choice. Having access to more than one product may increase satisfaction. One pilot study in a refugee settlement where girls had access to both cups and reusable pads found that girls would use cups when water was less available, or when the air was too humid for drying, and use reusable pads when the flow was light, or plenty of water was available (Gade et al., 2017).

In order to increase accessibility and availability of menstrual products, numerous interventions have been reported in the region, as well as globally, on teaching and supporting (e.g. with sewing machines and materials) local or homemade production of reusable pads, such as Uganda's National Strategy for Girls' Education, which targets 18,400 primary schools, 3,000 secondary schools, and 500 tertiary institutions, and aims to include handicraft lessons in how to make reusable pads in primary schools (Sommer et al., 2015c; MoES, 2013a), as well as a SNV programme targeting 606 primary schools in Uganda (SNV, 2016). Other examples include a joint UN education programme targeting 81 schools in Malawi (Chimbali, 2016; UNDP, 2017), as well as the CARE/UNFPA/Rutgers programme in Burundi, where girls learn how to produce their own pads more affordably (Rutgers/CARE, 2016a; Rutgers/CARE, 2016b).



Although most programmes focus on schools, some programmes, such as the ActionAid project in Malawi, are training and supporting mothers in communities to make reusable pads, benefiting both menstruating girls and mothers, who can earn an income by selling surplus products in the market (ActionAid, 2017). Similarly, in Burundi, SaCodé has implemented production of reusable pads in local communities (Pangea, 2017; SaCodé, 2017). However, some reported issues with the local production of reusable pads have been issues of quality, due to these pads being less durable and comfortable. Also, there are concerns that since production of these pads is small-scale it is likely to also be more ineffective and less cost-effective compared to large-scale commercial production.

3.2.3 Research and Intervention Gaps on Menstrual Products

When it comes to ensuring that adequate menstrual products are available and accessible, the main challenge is the cost and sustainability of distribution of menstrual products. Many girls and women in the region, as well as globally, seem to prefer disposable pads (and in some places outside the region tampons) if they are able to afford them. However, the global trend towards environmentally friendly and more sustainable options have created the market for reusable products, with many new brands and products being introduced. As mentioned above, data on prevalence are difficult to find, however historical accounts note that in High Income Countries women widely used reusable cloth pads until the 1950s, switching to disposable pads and tampons (Laneth, 2006), and now there is a trend back again toward reusable methods such as the pad or cup.

For products, terms such as 'culturally acceptable' or 'cultural context' are mentioned repeatedly in guidelines, for example over 30 times in the review of UNFPA's provision of dignity kits (Abbott, 2011). As mentioned above, this rather fuzzy concept might be disaggregated - acceptance of what? when? by whom? how? and what metrics are to be used? For example, as mentioned above, in India a study by Garikipati (Garikipati et al., 2017) found that whereas public advocacy was for disposable pads, women preferred reusable products. Another study from India notes that engineers are concerned with the high cost of disposing of used pads, and argue that the menstrual cup would be a preferred option due to fewer infections, higher effectiveness in containing leaking and fewer environmental hazards (Chintan et al., 2017). Kragelund (2017), in a study of a refugee camp in Tanzania, notes that women answer questions very differently depending on which translator

is asking the questions. For example, if the translator is open toward new approaches, the women she interviews find them culturally acceptable, and vice versa. As noted by Schmitt (Schmitt et al., 2017) preferences for displaced women and girls change over time. As noted by the 2017 Conference on MHM in Schools, this underscores the importance of periodic consultation with users. That would also harmonize with the human rights standards expressed in the ICPD for contraception, that women and men should have access to the widest possible range of safe, effective and acceptable products.

As mentioned above there seems to be scarce evidence on programmatic approaches to deal with other products related to MHM, with a few exceptions (Miironen et al., 2018). Other products related to sanitation will be discussed more in the following section on sanitation facilities.

3.3 Sanitation Facilities

Sanitation facilities play an important role as enablers and barriers to menstrual hygiene management.

3.3.1 Lack of Sanitation Facilities as a Barrier for Menstrual Health Management

As mentioned in the introduction and section 1.2, the WASH sector was one of the earliest to draw attention to MHM. The WHO/UNICEF Joint Monitoring Programme (2012) as well as Sommer et al. (2015a) have elaborated on what this implies. The WHO 2009 guidelines for WASH in schools included concrete references to adequacy, such as possibilities for washing, drying and disposal of products, as well as separate and private toilets, and that the cultural context should be taken into account. The focus was translated into a specific target in SDG 6, and an indicator in SDG 4 (UN, 2016). WHO/UNICEF 2016 technical consultations make repeated reference to MHM, including a call for precise indicators. Thus, the initial stages of goals and accountability systems are there, but more is needed to be done to strengthen data collection, analysis, and dissemination.

However, McGinnis et al. (2017), in a systematic review of costing and financing for WASH, found that approximately one third of schools around the world lack adequate sanitary facilities, and would indeed need minimal additional modifications to make them 'MHM-friendly' (e.g. a wash basin). Alexander et al. (2014) found that schools in rural Kenya rarely had adequate WASH facilities, with only 2% having soap present. Oduor et al (2015) also identify a number

of factors beyond the mere availability of sanitation facilities which influence behaviour, and Nyothach et al. (2015) particularly focuses on the behaviour related to handwashing. A particular need that is mentioned is for budgeting/costing related to MHM, for example for wash basins. One identified barrier is a lack of knowledge about costing models for both hardware and software, where less is known than for community WASH. The importance of covering both hardware and software is supported by Caruso et al. (2013) in a study in Freetown, Sierra Leone, which finds that girls identify several enablers for adequate MHM in schools: WASH facilities, support by others, information and materials (both MHM products and supplies). A WASH scoping study in a review by WHO/UNICEF (2017) finds that data on 'sex-separated toilets and facilities for menstrual hygiene management' were still not collected in the surveys identified. Furthermore, the standards may need further contextualization including focusing on the 'cultural context', for example Girod et al. (2017) in a qualitative study in Nairobi informal settlements finds that the sanitation facilities, although available, were inadequate for Muslim girls to perform ablutions (washing of oneself before prayer). A pilot study in three Tanzanian refugee camps notes that WASH facilities are not sufficiently private, and disposal approaches do not consider cultural barriers (Columbia University, MHM in Schools Conference, 2017). Disposal is a major concern, not least for the engineering sector.

Most schools are unable to provide sufficient private space for girls when they are menstruating. One example is the KGIS programme in Malawi that included the construction of girl-friendly latrines



and whereby girls were still reluctant to wash their menstrual cloths because of beliefs that menstrual blood should not be seen by others (Barsky, 2015). Thus, the definition of 'privacy' may need to be established for different settings.

3.3.2 WASH Interventions Integrating Menstrual Health Management

In recent years, MHM has increasingly become a more integral part of WASH programmes globally. We found documentation on WASH programmes with MHM components for a number of countries in the region, including Kenya, Ethiopia, Madagascar, Malawi, Tanzania, South Sudan, Uganda, Zambia and Zimbabwe (Chatterley & Thomas, 2013). These are also among the countries focusing on MHM in regards to education and products, as most MHM programmes include all three enablers (education, products and WASH).

The majority of identified interventions focused on WASH in school, which, in addition to MHM education and awareness, included improving school sanitation facilities such as WSUP/DFID's programme. Since 2002 WSUP/DFID has improved sanitation and hygiene with an MHM focus in 1,800 primary schools (15% of all primary schools) in Madagascar (Adams, 2016). Other projects have had a smaller reach such as the SNV project in South Sudan targeting 9 schools (SNV, 2014c; SNV, 2014a). While most WASH programmes focus on schools, there are a few examples of other WASH programmes outside of the school setting, such as a pilot project in Uganda aimed to improve management of menstrual product disposal in a sustainable way in informal settlements in Kampala (Sommer et al., 2015c).

3.3.3 Research and Intervention Gaps for MHM Integration into WASH Interventions

A challenge and intervention gap identified for WASH interventions in the ESA region is large-scale coverage. The majority of countries in the region do not seem to include MHM in WASH programming, but even where they do bringing it to scale is a challenge. As an example, although Kenya has an unusually strong focus on MHM in school WASH programmes, and has a government policy that all schools provide appropriate disposal bins for sanitary towels, management of menstrual waste remains a neglected issue in most schools (Sommer et al., 2016). In Ethiopia, although examples of WASH programmes with MHM components were identified, it has been reported that on an overall level, few WASH programmes have an MHM component (FSG 2016a). This is also likely to be the case for the other countries, and thus it is likely that it remains a challenge to mainstream MHM into WASH programming, despite the WASH sector being at the forefront in terms of MHM programming.

In terms of research gaps, Sommer et al. (2016a) and Phillips-Howard et al. (2016) note a need for better indicators on WASH adequacy, research methodology and guidelines, as well as identification of responsibility for budgeting and implementation. Possibly, this should include concretization of what is meant by the term 'cultural context', and how one might measure the impact of culture on MHM.

3.4 Policies on Menstrual Health Management

The national policies on MHM in the region vary greatly. For the majority of countries in the region we have found no or limited documented programmes and policies, while a few countries have more solid policy frameworks on MHM.

The Kenyan government has shown great and increasingly strong commitment to MHM over several years, with the establishment of the National Sanitary Towels Campaign Coordinating Committee in 2008. This is hosted by the Ministry of Education and the Girl Child Network, working to standardize the methodology for national pad distribution and coordination, research to assess its impact (House et al., 2012), the removal of import duties and VAT on MHM products in 2011 (UNICEF, 2017), policy and materials for teacher training as well as the inclusion of several MHM elements in the Environmental Sanitation and Hygiene Policy (2016-2030) from the Kenyan Ministry of Health.

Uganda serves as another strong example of school related MHM policies, where a National Menstrual Hygiene Steering Committee was established under the Ministry of Education, Science, Technology and Sports with relevant line ministries and CSO partners. The ministry also developed a National Strategy for Girls' Education, committing to improve menstrual health through a comprehensive approach including a menstrual booklet, improving school sanitary facilities, awareness raising, teacher training and reusable pad production (MoES Uganda, 2013a; MoES Uganda, 2014; MoESTS Uganda, 2015).

An example of a broader MHM policy framework beyond schools is from Ethiopia, where the government has committed to creating supportive conducive work policies for menstruating women, increasing access to adequate WASH infrastructure and addressing cultural, social norms and taboos on menstruation. National MHM guidelines have been developed under a cross-sector technical working group led by the MoH and UNICEF in Ethiopia (FSG, 2016a). MHM is also incorporated into the National Adolescent and Youth Health Strategy with a costed plan (UNFPA ESARO, 2017a). However, despite this progress, a country analysis on menstrual health in Ethiopia notes that lack of government-approved high-quality MHM curricula limits girls' and boys' access to puberty education at scale (FSG, 2016a).

In Zambia, there are several MHM related policy initiatives, including development of a National

MHM Guidelines and toolkit (MoE Zambia, 2016), introduction of a law called "mother's day" although it applies to women in general, which allow women one day off a month during their menstruation, and the government created a new budget line in the 2017 budget for menstrual wear (UNFPA ESARO 2017a).

Tanzania has also integrated MHM into WASH plans and strategies with focus on schools, while in Botswana information about MHM as a part of puberty information is included in National Health and School Health policies and strategies for in- and out-of-school youth with UNFPA support (UNFPA ESARO 2017a). Some countries where MHM is not included in national policy are starting initiatives to form a policy base. For example, in Eritrea, where MoH, MoE, National Union of Eritrean Women and UNICEF initiated a country study on barriers to good MHM in school to generate an evidence-base for policy dialogue (UNICEF, 2015a). In Lesotho, there are strategies and policies in place but it is reported that there is lack of framework and funding for implementation (UNFPA ESARO 2017a).

A recent analysis of education policy documents in low- and middle-income countries by Sommer et al. (2017a) also highlight that gender and education policies and plans lack inclusion of MHM reflecting a larger issue of gender discrimination in schools. Similarly, this review highlights that despite some good country examples, particularly on inclusion of MHM in school WASH and general WASH policies, the overall gap on MHM policies in the region seems to be a lack of broader integration of MHM in relevant policies such as gender and health policies, particularly adolescent health, as well as work-related policies. The lack of broader focus on MHM apart from WASH in schools also reflect a limited focus on vulnerable groups such as mentioned in the next section.





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4. MHM in Humanitarian Contexts

Menstruation, and Menstrual Health Management (MHM), have always been an issue for women. However, they are also issues which have been considered private, and sometimes shameful. It is therefore remarkable how quickly public attention has grown since the turn of the millennium.

4.1 Introduction

MHM can be a particular issue for some groups, including girls who are out of school, girls and women who have disabilities, who are homeless, in prison or recently out of prison, and transgender men. The time availability for this review did not allow a scoping of the situation for these groups, although there are indications they may be key populations (as found, for example, by Thapa et al., 2017 and Mills et al., 2016). This would seem to be an area for further research.

Here, we will focus on a large group with particular vulnerabilities, namely the forcibly displaced and girls

and women in humanitarian contexts. The ESA Region includes countries with major challenges related to forced displacement. For example, UNHCR (2017a) estimates that Uganda hosts more than one million refugees, and Tanzania around 250,000. Many of these situations are protracted, lasting more than 20 years. Women living in humanitarian situations, in particular in forcible displacement, are faced with particular challenges with respect to MHM, such as availability of products (not least in isolated or mobile situations), accessibility (less income to purchase products) and acceptability, for example less opportunity to wash and dry products with due privacy (Sommer, 2012; Robinson et al., 2016; Norelius 2017, and Atuyambe

et al. 2011, Sommer et al. 2016d). Health problems, for example irregularity, may increase (Samari, 2017; Li, X.H et al., 2011). Given the culture-specific nature of MHM, host population MHM services may not be appropriate or available for displaced people (Parker, 2014; Ussher, 2017). There is limited but increasing evidence on these challenges.

As mentioned in section 1.3 above, the humanitarian sector was earlier than many other sectors in identifying MHM as an issue. The health cluster mentions MHM in the Minimum Initial Service Package (MISP) for reproductive health, recommending to ‘... ensure that culturally appropriate menstrual protection materials (usually packed with other toiletries in “hygiene kits”) are distributed to women and girls (IAWG-RH, 2010). However, there seems to be no overall allocation of responsibilities among sectors, for example the ‘hygiene’ or ‘dignity kits’ are used by several organizations, and distributed as ‘non-food items’, but it is a challenge to get an overview of who is doing what, or what the strategic approach is, for example to go beyond the usual humanitarian ‘cowboy kit approach’, where success is measured by process indicators related to providing short-duration materials (Tanabe in IAWG-RH 2015; Zarkin-Smith, 2017; Brunson, 2017; Krishnan et al, 2016). Studies from refugee camps in Tanzania finds that organizations (and refugees) are concerned that their work is still ‘kit-based’ after 20 years, and are keen to find more sustainable approaches, including for better disposal of used material and adaptation of WASH infrastructure to make it more ‘MHM friendly’ (Kragelund, 2017).



Sommer et al. (2016d) in a scoping review concludes that there is a lack of consensus on how best to include MHM in response across involved clusters (WASH, protection, health, education, camp management) to ensure a complete response, and insufficient guidance on monitoring and evaluation, including indicators. Sommer concludes there is a critical need for improved technical guidance and documentation on how to effectively integrate and implement in relevant sectors.

The recent development of a tool kit will no doubt help at the operational level (Columbia University/IRC, 2017), and the next step will be a stronger and more visible comprehensive policy, hopefully resulting also in addressing important budgeting issues.

4.2 Activities

There have been many activities in the ESA Region focusing on distributing MHM products within hygiene or dignity kits. For example, in South Sudan the humanitarian response led by Oxfam included provision of ‘feminine hygiene kits’ to newly arrived refugees in Gendrass, Jamam and Jamam transit camps (Oxfam, 2012: 4). The kits included new clothes; the women’s old clothes could then be reused to make MHM products (Oxfam, 2012: 4). In Uganda, UNFPA provided dignity kits, which included menstrual pads to South Sudanese and Congolese refugees (UNFPA-ESARO, 2017a). UNICEF took steps towards emergency preparedness by pre-positioning reusable menstrual hygiene kits for 10,000 women (UNICEF, 2015c). Pre-positioning was found to be a crucial component for effective relief work (Sommer et al., 2015c).

Some actors added further components such as WASH to their interventions. For example, in the Democratic Republic of Congo (DRC), the response included constructing washing facilities, as well as providing “intimate hygiene kits” to vulnerable displaced women (Cluster WASH, 2014). UNICEF also provided gender-segregated toilets and shower spaces in displacement sites and cholera treatment centres. Additionally, knowledge and behaviour around MHM was analyzed during the WASH sectoral rapid situation assessment (Sommer et al., 2015c).

A number of projects have focused on trying out different approaches. IFRC piloted a comprehensive study on improving MHM in emergencies in Burundi, in the Bwagiriza refugee camp and provided MHM kits with disposable and reusable pads. Women in Burundi reported satisfaction with reusable pads as they helped them to save money in the long term. Adolescent girls who received kits reported reduced irritation and itchiness during periods, and that they were now

better able to conduct their normal activities, like going to school or travelling on buses during their period (IFRC, 2013). Further pilot projects were later initiated in Northern Uganda, Somaliland and Madagascar, comparing different MHM kits (distributing cloth as well as reusable and disposable pads). Demonstration sessions and post-distribution follow-up were found important for success in both pilot and follow-up studies.

In Madagascar, health promotion sessions were found to be more successful when they included a health clinic representative to help with health promotion. Providing the MHM kits was shown to be successful in improving health, dignity, knowledge and hygiene amongst women in Burundi, Uganda and Madagascar. In Madagascar, women found they were less afraid of leakage. Whilst women in Madagascar preferred reusable pads, a shift of preference from reusable to disposable pads was reported in Uganda, which IFRC attributed to lack of water during the dry season (IFRC, 2016). Additionally, in Uganda, adolescent girls found it difficult to manage to wash and dry pads during their daily routine. Other elements for successful MHM included, for example - in Burundi and Uganda - the need for appropriate infrastructure around MHM, including safe and private spaces for maintaining hygiene (IFRC, 2013; IFRC, 2016). In Burundi, collaboration between humanitarian actors and implementing partners was found to be necessary to ensure that improvements to latrines, bathing areas and solid waste management facilities were prioritized (IFRC, 2013; Robinson, 2016; IFRC, 2016).

Challenges during implementation were reported across all three countries of Burundi, Uganda and Madagascar. The main barriers identified were cultural and religious views regarding MHM, poor sanitation and lack of access to water (IFRC, 2016; UNICEF, 2016a; Robinson, 2016). In Uganda, women and girls found it difficult to dry their reusable pads during the rainy season and therefore required extra pads (IFRC, 2015b). Overall, it was found that more context-specific research was needed into procurement, distribution, FGDs and monitoring surveys to assure effective project implementation (Robinson, 2016). Additionally, the need for projects in regions with a high risk of natural disasters to adopt flexible budget plans was identified as an important way to mitigate risks of floods and cyclones (IFRC, 2016; Robinson, 2016).

The NGO WoMena is working with a number of partners in Uganda in refugee settlements to test different combinations of integrating reusable pads and menstrual cups in humanitarian settings. It includes partnership with other service providers, strong community involvement including men and boys,



reliance on local capacities (for example training of trainers), choice of method and longitudinal input and monitoring, as well as close monitoring of results to facilitate subsequent scale-up. For example, Gade et al. (2017), in a pilot study from the Rhino settlement in Uganda, find that girls and their support network are eager to access products. When given a choice, many choose and intermittently use both menstrual cups and reusable pads, depending on their personal situation and context (for light flow days they use pads, if water is less available they switch from pads to cups). They know about hygienic practices but have difficulty accessing necessary facilities, such as soap, underwear and wash basins. In general, after some hesitation, girls and women are eager to use products such as the cup, show high levels of satisfaction, and are willing to pay (4-7 USD) for it.

Evaluations and reviews of intervention effect have begun to address MHM as well (Onyango et al., 2013, Krause et al., 2015). Evaluations indicate that women place high priority on the issue (Abbott et al., 2011), are grateful when MHM is supported, and deeply frustrated when it is not or when staff attitudes limit access (IAWG-RH, 2015). As always, context specific approaches are important, for example women in some settings report they will not speak to male programme staff about menstrual matters (Sohrabizadeh et al., 2018). The evaluation by Abbott et al. note many barriers, including issues related to storage facilities and budgets. It refers frequently to the idea that kits should be 'culturally appropriate', but hypothesizes that this may result in a double disadvantage - a slow response as kits are contextualized, yet no long-term

contextualization at different phases of an emergency, and no systematic testing of different approaches, including a clear theory of change. Three challenges are raised: how the provision of dignity kits can be streamlined into overall strategies and goals of implementing organizations, what the opportunity costs of the kits are versus other activities, and finally how the activity be used as an entry point for longer term activity (e.g. using menarche education as an entry point for broader comprehensive sexuality education).

A review of the UNHCR Age, Gender and Diversity Policy (AGDP) approach finds that refugees and field staff state that the priority placed on MHM should be balanced against other priorities (Thomas et al., 2010).

4.3 Research Gaps

Observers note the need for an overview of which actors are doing what and how, for agreement on metrics and methods for collecting evidence, for

documentation from pilot schemes testing various approaches and products including WASH, for operational guidelines (including a more concrete approach to identifying what is 'culturally appropriate') and theory of change for sustainable, scalable approaches, including reusable products (Sommer et al., 2016d, Abbott et al., 2011; Budhatokhi et al., 2016).

It should be noted that, for humanitarian assistance generally, two of the most pervasive overall problems are (a) the difficulties in linking humanitarian with longer term sustainable development approaches (Ruaudel et al., 2017), and (b) establishing a good evidence base for action (Blanchet et al., 2017; Checchi et al., 2017). In particular the linking of humanitarian and developmental approaches was one of the priority challenges referred to in the 2016 Humanitarian Summit. Thus, whereas there may be particular issues for MHM, they are not unique.





5. Conclusions and Recommendations

Menstruation, and Menstrual Health Management (MHM), have always been an issue for women. However, they are also issues which have been considered private, and sometimes shameful. It is therefore remarkable how quickly public attention has grown since the turn of the millennium.

5.1 Menstruation - The Concepts

Some consider the concept of 'Menstrual Hygiene Management' to be too narrow. To capture the range of physical, mental and social interactions throughout the life cycle, and to provide a basis for engagement of a broader range of actors (including the SRHR sector), others suggest the term 'Menstrual Health Management'. This is probably not worth a major battle, but one possibility is to see 'menstrual health management' as an umbrella term, and seeing 'menstrual hygiene management' as one sub-component. For the time being, we use the abbreviation MHM.

5.2 International Normative Frameworks

In the last 15 years or so, there is rapidly increasing attention to MHM in human rights, international development frameworks such as the SDGs, operational guidelines as well as public discourse in general. The discussion is ongoing in a wide range of sectors. There seems to be a need for a clearer, more comprehensive end goal and strategy, clarification of roles, and cross-sectoral collaboration opportunities. Such a need has been mentioned many times for the humanitarian sector, but may be just as important in more stable situations. It might be helpful to see MHM not as a separate 'sector' but as a something which can help

achievement of a wide range of existing goals such as the SDGs, and possibly the SDGs could form the basis for such a framework. Organizations such as UNFPA would be exceptionally well placed to contribute to the development of such a framework, since the topic relates to many of its organizational goals within SRHR. There is an opportunity for greater impact on the lives of girls and women beyond primary and secondary school attendance, and without necessarily greatly increasing budgets.

5.3 The Evidence Base in General

With respect to topics, there is a profusion of studies in some areas of MHM (for example, with regards to knowledge, social impact, school attendance), but for other areas there is very little evidence, including many areas related to SRHR and the life cycle approach, or the issues faced by particularly vulnerable groups such as the displaced, disabled, prisoners or out-of-school youth.

With respect to methodology, there is a major challenge in reconciling different streams of research. On the one hand there is strong formative research in many areas, for example, powerful testimonials by school girls and teachers about missing school, which seem hard to ignore. On the other hand, empirical observations of actual school absenteeism show very variable levels of effect, making it difficult to draw conclusions with confidence. This is perhaps not surprising, given the many sensitivities surrounding MHM. Nor is it unique – the field of family planning faced a similar issues in the 1960s and '70s, for example in defining the concepts of 'unmet need for family planning', 'contraceptive prevalence', or 'traditional' versus 'modern' contraception. There was also much focus on 'cultural acceptability', which was

seen by some as an insurmountable barrier, and metrics were developed to assess that. The HIV/AIDS response was similarly facilitated by the gradual definition of metrics. For both fields this helped in the development of surveillance as well as policy attention, as the metrics found their way into the MDGs. It underlines the need for development of methods, both metrics and standards, of for example what constitutes 'adequate' MHM or school attendance, which would be important in monitoring progress against the SDGs, and protocols to allow capturing of (culturally) sensitive issues in a manner that is replicable, and which take into account the wide variation in results depending on the manner in which data are obtained. For example, DHS has developed a replicable series of questions to assess 'unmet need for family planning'.

Research consortia and targeted systematic reviews might be useful to systematize and share existing and future knowledge, and engage a wide range of actors in a productive manner.

5.4 Impact

Health: In general, there is limited evidence on the impact of inadequate MHM on different aspects of health, in particular SRHR, but a number of significant concerns are appearing. There are a number of studies investigating whether different hygiene practices, products and environmental factors, for example, WASH, cause increased levels of urogenital infections, including reproductive tract infections (RTIs). For example, several sources seem to assume, or advocate for, certain levels of personal hygiene to prevent RTIs, but there is a wide range of definitions of what would be 'adequate' from the health perspective, both in terms of products and practices.





There are a few studies comparing different products, some concluding that products which require thorough drying such as cloth and reusable pads have marginally higher levels of RTIs. It is notable that levels of RTIs attributed to MHM seem rather modest (apart from the toxic shock problems associated with one type of tampon in the 1970s which has since been withdrawn), and the exact attribution is still in question (including plausible biome studies). However, one main conclusion seems to be that it is important to provide not only the products, but supplies which make it possible to wash them including soap, wash basins, drying facilities and possibilities for boiling if required. The absence of these facilities is mentioned frequently by users as a barrier.

As can be expected, disparity, and particularly disparity related to poverty, is an important factor, notably both in HICs and LICs. There are worrying examples from the ESA that especially poorer girls (and sometimes the youngest girls) may resort to transactional sex in order to pay for pads, exposing them to new risks including STIs and HIV. There is also some evidence that interventions may help prevent this, and that some products may help provide a protective vaginal biome.

There is strong evidence that dysmenorrhea is perceived as a major problem for physical well-being, although at varying levels in different societies. We found little evidence programmes dealing with this, and this would seem to be a major gap. Other issues, such as interactions with breastfeeding and anaemia, or issues surrounding menstrual irregularities, gynaecological issues or (peri)menopause, would also seem to be important for the SRHR field, but we found limited recent literature on the problem or on interventions.

There is fairly strong evidence, from Uganda and other ESA countries, that fear or experience of menstrual irregularities may lead to discontinuation of some methods of contraception, particularly IUDs or injectable hormonal methods. The irregularities include heavy bleeding, which women report as a reason for discontinuation of use, as they experience discomfort as well as unacceptably high costs associated with paying for pads. Given major concerns about method discontinuation, this is an important issue to follow up.

Comprehensive Sex Education guidelines seem to have limited focus on these issues.

With respect to social well-being, there is strong evidence that school girls and women experience high levels of shame and embarrassment with inadequate MHM, thus decreasing social well-being. As noted below, there is also strong emerging evidence that interventions among school girls and others can improve social well-being, even where evidence on improvements in levels of attendance is weak.

If feasible, it might be explored whether WHO could help in developing health-related criteria for hygiene practices and products, or, if that is not feasible, whether another sharing platform could be established.

Education outcomes: A rapidly increasing number of studies focus on the impact of inadequate MHM on dropout rates or school attendance. The general conclusion at this point seems to be that there is powerful formative evidence, especially from small scale qualitative studies, which show negative impact. Only a few quantitative studies have substantiated exact levels, although a few recent studies provide some progress. It remains a challenge to reconcile these findings. Ongoing RCTs will hopefully help do that. There is less evidence on engagement (that is, whether MHM prevents girls from engaging in school activities) although formative evidence would indicate that this may be even more important than dropout or attendance.

There are few studies looking at impact at tertiary education level, and we could find nothing in the ESA region. Gender equality at primary and to some extent secondary level in Sub-Saharan Africa has improved over the last decade, but deteriorated at tertiary level - the only region in the world where such a trend is reported. Therefore, this might be a gap.

Work: There is little evidence related to the impact of poor MHM on work, with only a few estimates, and few empirical studies, few if any of them from ESA. A number of interventions are being discussed internationally, for example 'period leave' (women taking off unpaid days of work during their period) is being discussed in several Asian countries, the UK and Australia as well as Zambia. It may be interesting to study how this is implemented, including whether it contributes to well-being, and whether it causes discrimination. There is a need for further research, particularly relevant to realize the 'demographic dividend' of young women entering the workforce, possibly building on historical experience of the importance of MHM in women's advancement in education and work.

5.6 Enablers and Barriers



Education and Awareness

This is the field where there is arguably the most, and fairly conclusive, evidence. Ignorance, negative attitudes, and powerful feelings of shame related to menstruation have been widely documented among young girls and women, as well as among their parents and teachers, including numerous studies in the ESA region. There is less information on attitudes of boys and young men, but they appear to have very limited knowledge and often tease and bully girls.

Practical examples of engaging boys and men have been shown to create positive and supportive attitudes towards MHM, although not in all contexts (some females would rather not discuss SRHR in the presence of males). There are many interventions to introduce some aspect of MHM education in schools. However, there is variation in the topics included, they do not always include 'menarche education' (as characterized as being introduced before puberty and including basic information about bodily changes - not just distribution of products). They also rarely include information on menstrual problems such as irregularity, menopause or other MHM related changes throughout the reproductive life cycle. In many cases, teachers feel uncomfortable about teaching this topic, and students feel uncomfortable about receiving the education from the teacher assigned.

Pilot studies show good effect of educational approaches which take these issues into account. Many observers note that menarche education could be a promising entry point, as it might be seen as a comparatively 'neutral' issue, and would meet an expressed need by parents for better education. It could be introduced before puberty and continued as part of a life long learning approach to SRHR, preferably by someone specialized in the task. There is broad acknowledgement agreement that in many societies menarche is seen as a signal that girls are ready to marry. Leaders, including in the 'Girls not Brides' campaign, have called for education to help change that attitude. Menarche education could therefore also be an entry point for that, particularly if parents and boys are included. Various approaches have been developed for involving parents in ways which are seen as feasible by the parents (including addressing practical issues such as distance, time of day, amount of time needed).

The term 'culturally sensitive' recurs throughout the literature, but like the concept 'privacy' it seems

to be a barrier that is rarely operationalized. Some interpretations seem to be that this is achieved by service providers asking end users one time what they would like. Questions remain related to What? (what 'culture' are we measuring, and how do we do it?), Who? (sensitive to the culture of rights holders or also to the attitudes or constraints of duty bearers?), When? (different age groups, adapting to changes in culture over time, or at different stages of a humanitarian crisis?) and How? (the manner in which new knowledge and practices are introduced?). Approaches which are sensitive to changes over time and independent of researcher/provider bias would be useful.

Menstrual Products and Supplies: there is a great profusion of different products, but few regional or inter-country comparisons of prevalence of use, and a variety of products included or excluded in the assessment. This again may not be surprising - similar issues were encountered for family planning - metrics and concepts such as 'contraceptive prevalence', 'traditional vs modern means of contraception', or 'unmet need' took time to be developed, data gathered and included in global frameworks such as the MDGs. This would be important to inform epidemiological studies, for provision of education and services, for advocacy and for policy.

There is even less information on supplies, for example, underwear, soap, buckets or pain killers, regarding availability or cost. Regulations vary by country, but the materials are generally considered to be consumer products or medical devices, requiring reporting on adverse effects but not testing in the same rigorous manner as would be the case for drugs. Most products have been used for decades (e.g. tampons, pads and cups) and some have been modified to address negative effects (e.g. tampons) but issues such as the effect of chemicals in tampons or pads, or the comparative risk of infections for various products, as yet have limited evidence.

Comparisons of different products, as well as positive changes with small-scale pilot projects show promising results in terms of the feasibility and effect of introducing various products, in combination with training in their use. In LICs, and also among poorer segments of MHICs, cost is an overpowering concern for accessibility, and research which looks at different ways of providing affordable products will be crucial. Similarly to contraceptives, there are enormous issues related to funding and scaling up production, distribution and disposal of different products, including environmental concerns. Reusable products (for example pads or cups) are increasingly available and used in the ESA region, and are promising in terms

of limiting waste and increasing cost-effectiveness and product mix. Several authors note the need for assessing the impact of combinations of hardware and software approaches, and in particular, establishing cost models which are central to any scale-up.



Sanitation Facilities

There is documented progress in WASH, including in schools. However, although there are fairly clear standards for 'MHM sensitive' WASH in schools, monitoring seems weak. Given that the SDG WASH target (and Education indicator referring to WASH) are the only ones which makes (indirect) reference to MHM, it might be helpful to develop clearer indicators. Information about cost and budgeting is scarce, in particular costing which covers both 'hardware' and 'software'. There is little information on WASH outside primary/secondary school, for example, tertiary education, workplace or at community level, and this would seem a barrier as well as a research gap.



Policy

Until recently, the issue of MHM was close to invisible at the global level. However, the last 5-10 years have seen an upsurge of policies and guidelines. This is also the case in the human rights fora and in global strategies such as the SDGs. The WASH and humanitarian sectors were relatively early on in drawing attention to the issue, and are developing increasingly operational guidelines.

At the regional level in East and Southern Africa, there are a few countries with solid MHM policy frameworks, most notably countries such as Kenya, Uganda, Ethiopia and Tanzania, while many other countries seem to have very limited, yet an increasing focus on MHM in national policies and programmes. The policies focus mostly on schools and WASH, while broader MHM inclusion in relevant fields such as adolescent, sexual and reproductive health as well as work and labour policies is very limited. It is reported that a resolution by the East African Legislative Assembly (EALA, 2013) urges partner states to waive taxes on sanitary pads and make pads and pain killers available to schoolgirls. A few countries have removed taxes or provided free product supplies. It is important to standardize, mainstream and scale-up the inclusion of MHM in all relevant policies, and possibly share good practices between countries in the region. If means permit, it might be helpful to regularly share and complete the richness of country level creative solutions and experiences, which may not be captured in more academic literature.

5.7 MHM in Humanitarian Situations

Many groups have particular vulnerabilities, including out-of-school girls, women with disabilities, women in prison or recently out of prison, homeless women, transgender men. Here we focus on the large number of displaced women and girls, who face particular issues related to reproductive problems and long term access to the necessary products and services.

The humanitarian sector identified MHM as an issue relatively early, and there is a range of operational guidelines, activities and evaluations, including recent practical toolkits. As is often the case in humanitarian action, much of the early emphasis was on supplying MHM products, often in the form of 'dignity kits', with an emphasis that this should be done in a 'culturally sensitive manner'. However, there has been limited overall focus on more sustainable and strategic issues, for example coordination among the different 'clusters' involved in humanitarian action, or how to address the issue over time beyond the 'kit culture'.

There is growing interest, and a wide range of pilot projects in the ESA region, contributing to an evidence base regarding what might be feasible in different contexts. A further documenting and sharing of these experiences of these experiences might help build a longer term strategy and theory of change, and include not only appropriate consultation with end users for appropriate and sustainable solutions, but also programme, policy and funding considerations, that is, developing approaches which are scalable and sustainable.



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United Nations Population Fund, East and Southern Africa Regional Office

9 Simba Road, PO Box 2980, Sunninghill, Johannesburg, 2157, South Africa

Tel: +27 11 603 5300

Web: esaro.unfpa.org

Twitter: [@UNFPA_ESARO](https://twitter.com/UNFPA_ESARO)

Facebook: UNFPA East and Southern Africa Regional Office