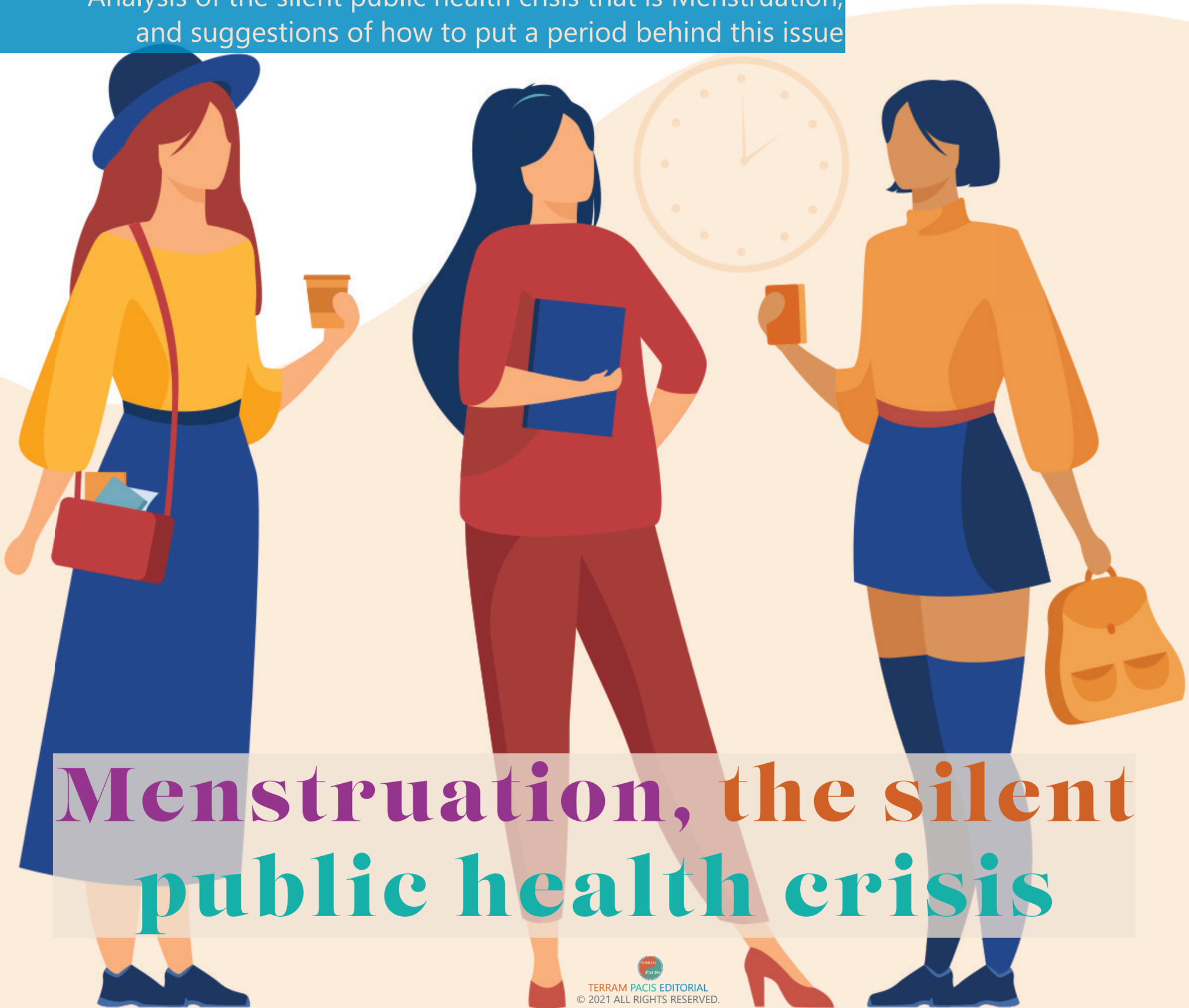
Analysis of the silent public health crisis that is Menstruation, and suggestions of how to put a period behind this issue

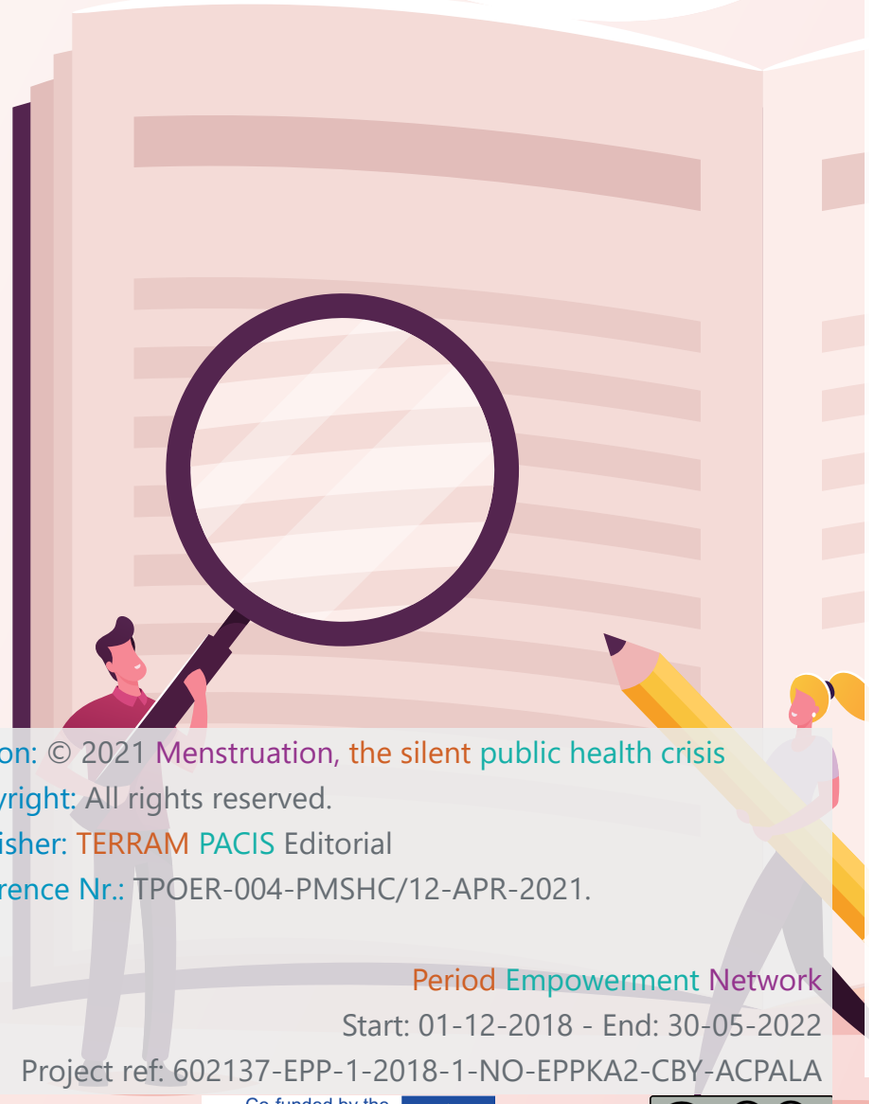


Menstruation, the silent public health crisis

TERRAM PACIS EDITORIAL

What's inside

About this research



Throughout the research, referring to people who menstruate as women or girls is used as shorthand to expedite reading but it refers to all who menstruate whether girls, women, transgender, and non-binary persons. To provide a clear foundational understanding, chapter one contextualises the more detailed study of menstruation and Menstrual Health/Hygiene Management (MHM) and provides insight into its importance in the public health arena. It provides an overview of what both menstruation and MHM entail, how it is measured. This background information reveals the impact of the problem in terms of numbers and distribution based on the secondary research. To understand MHM's place in the public health arena, the chapter further explores a relationship between public health and MHM as well as its historical placement in the public health arena. Specific mentions of how MHM is and was viewed by organisations such as the United Nations and World Health Organisation, national and local governments, communities, and individuals are made.

Chapter two evaluates the specific public health areas affected by MHM like inequality, menstrual poverty, menstrual hygiene, education, physical and mental health, taboo and stigma, and its environmental impact. This in sum, illustrates the magnitude of challenges faced in MHM and inform their identification. Moving further, methodology of the research design is set out in chapter three and is aimed at providing a clear understanding of the primary and secondary research methods with specific mention of the study area, research analysis, and sampling procedure. The chapter further clarifies data collection and analysis and finally cover any ethical considerations relevant to primary research. The goal of the final chapter is the identification of the most pressing challenges in the field of MHM and the possible innovative solutions. Hence, the chapter makes known and analyse the data and findings of the primary and secondary research before discussing data to reach the objective of putting forth suggested solutions to current challenges faced in the field of Menstrual Health/ Hygiene Management.

Menstruation is a part of life, but we have been indoctrinated into pretending that it does not exist. This created a public health crisis under wraps. No more! Let us lift the veil, use the word menstruation openly and freely and let everyone of us be a changemaker that stops the shame.

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ABSTRACT

With monikers like Aunt Flo, Girl Flu and Shark Week to name a few, menstruation is a dreaded part of life affecting billions of women around the world. As a normal bodily function, around since Eve, one would imagine that society globally would be aware of what it involves and how to effectively deal with it. There should be nothing left to talk about but cursory reading on the subject left the researcher stunned. Despite all the advances of modern society, lack, stigma, and prejudice relating to menstruation were rife. How is it possible that such a normal process, affecting almost half the human population, could not have been dealt with to a satisfactory standard? Why has this multifaceted and complex field of Menstrual Health Management (MHM) been ignored and/or glossed over for the longest time and why is it called a public health crisis by some and yet almost goes unnoticed? Although patriarchy and inequality may underlie the ignorance, it is a discussion for another day as this study will focus on the challenges faced today when dealing with MHM.

Aims and objectives

A perfunctory reading of the literature reveals various issues grouped under the umbrella of MHM. This study aims to analyse and provide a detailed description of MHM globally, specifically in a public health management context. It will highlight the current challenges faced by organisations active in the field and aim to offer recommendations to deal with these challenges.

Methodology

The study commenced with secondary research to provide a basis of current information. The predominantly qualitative study method made use of secondary sources such as research papers, books, webpages, and articles on all relevant areas covered by MHM and the relationship between menstruation and public health. Information from webpages of organisations specialising in MHM issues such as equality, menstrual poverty, menstrual hygiene, menstrual education, physical and mental health effects, stigma, and taboos as well as environmental health issues caused by menstruation were perused and information gathered to provide a full picture. Literary searches provided a review of all readily available material and online articles, news, magazines, scholarly articles, and discussions as well as other relevant published materials. Quantitative methods were used to a lesser extent to highlight certain features of the study. To fully answer the question of challenges currently faced by organisations in the field, primary research in the form of questionnaires were sent to various agencies and organisations active directly or indirectly in the field of MHM and used to supplement the gap left by secondary research.

The questionnaire was designed to answer specific questions that directly pertain to the challenges faced by organisations in the various areas of MHM. To further explore the issue interviews were conducted with role players to understand the challenges faced on ground level. The advantage of this data is that it is up-to-date and provides personal insights by those active in the field. A questionnaire sent via email was chosen because of ease of delivery and little time and effort expected from the respondent whilst having a relatively short turnaround time.

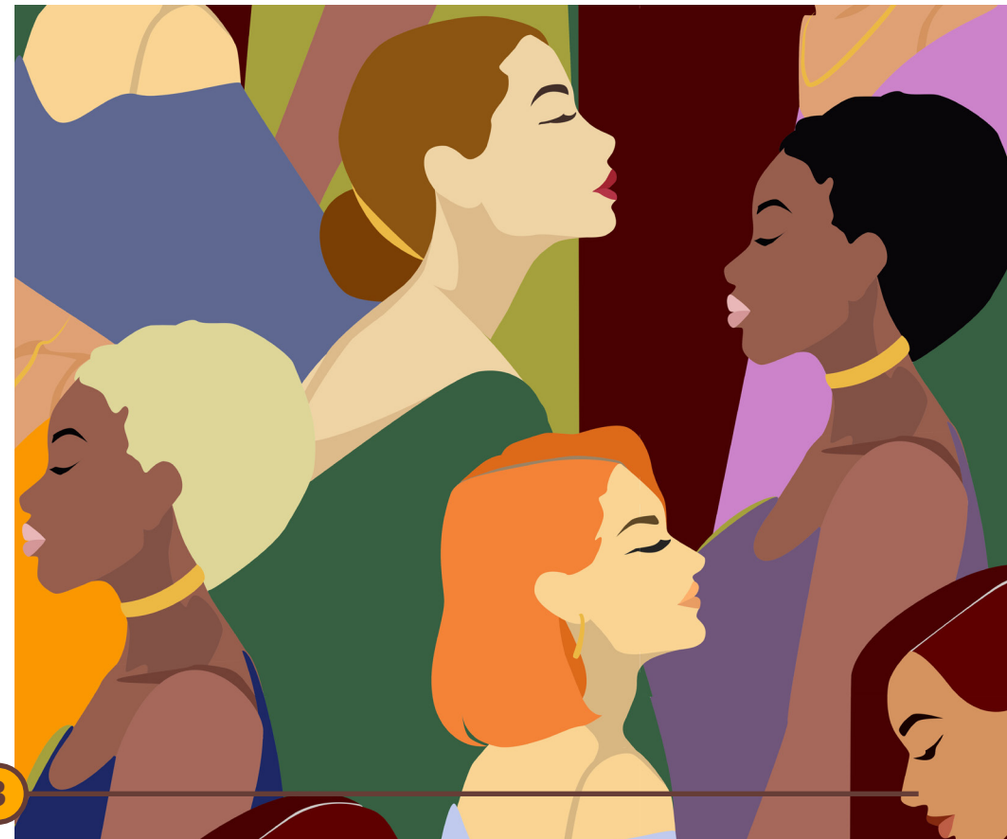
Research questions

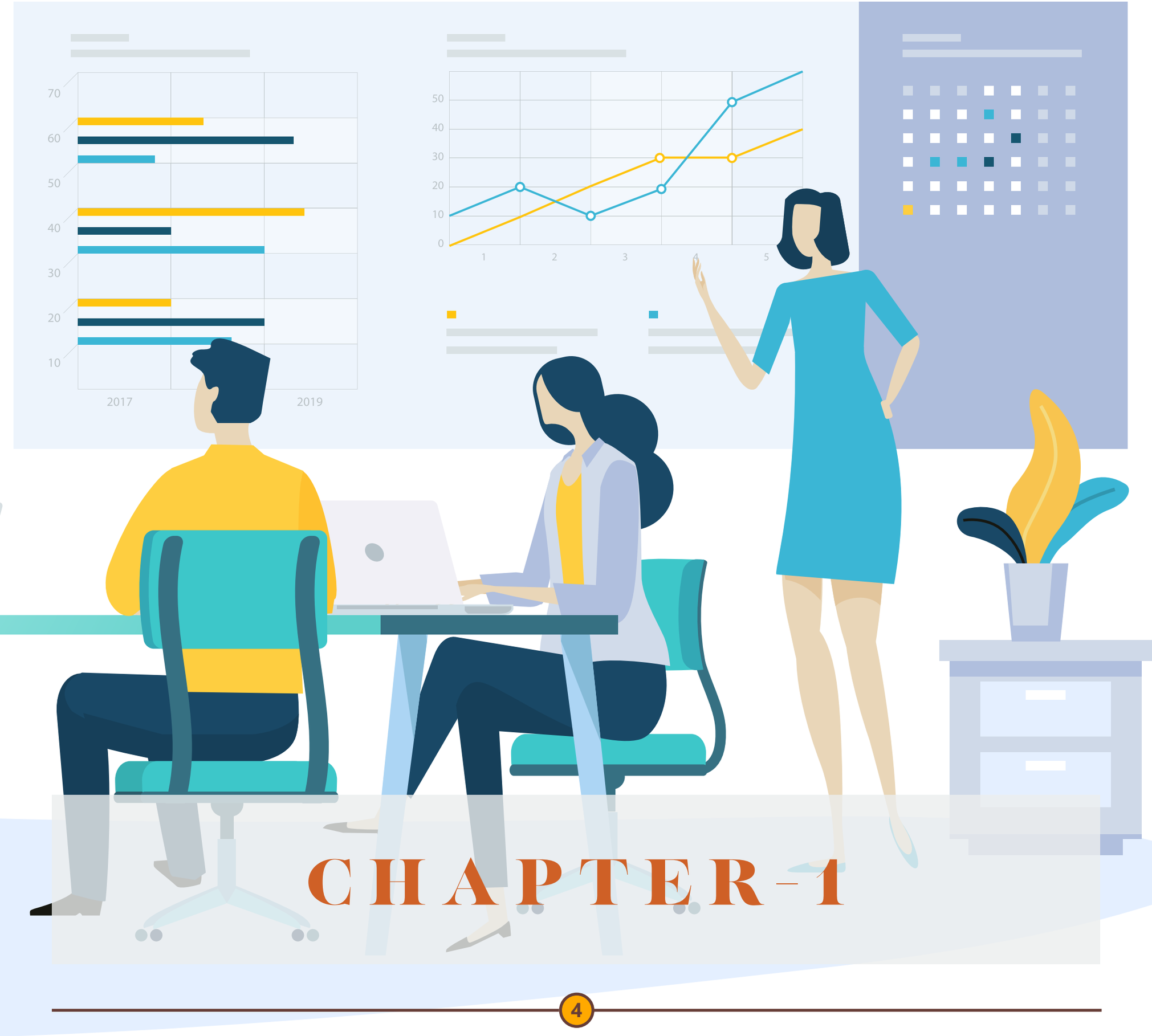
To reach the intended study aim, the following questions will be answered to systematically complete the study objective.

1. What is the impact of menstruation and how does it form part of the public health arena?
2. Which specific areas of public health are affected?
3. What are the major challenges faced by organisations in the field and possible innovative solutions to these problems?

Scope and limitations

Instead of reiterating the challenges faced by individuals the study will focus on the challenges faced by organisations and individuals working in the field of MHM. Furthermore, it aims to provide possible solutions to these challenges. Research bias is a reality when dealing with primary research and must be kept in mind when interpreting this data. As the gathering process is absolute it can affect the findings because there are no comparisons that can serve as checks and balances. The global scope of MHM would ideally necessitate feedback from every organisation in the field but reaching agencies and organisations in every conceivable corner of the world is an almost impossible task and therefore inevitably leads to a degree of generalisation. Certain organisations were also unwilling to participate in primary research and referred the researcher back to secondary research, limiting primary data collection.





CHAPTER-1

1.1. Introduction

One may ask "Why the fuss and that about a couple of women on their period?" but when grasping the impact of menstruation on the human population and how it fits into the public health arena an aha! moment follows. It is important to understand what this bodily function entails, who it affects and for how long. Reliable knowledge of how it is dealt with and measured both privately and collectively is prerequisite to identifying the problems people encounter and need help solving. As menstruation reaches beyond the health and well-being of the individual its place and history in the public health arena will be illuminated to provide a solid foundation for understanding this simple yet impactful bodily function.

1.2. Menstruation and its impact

Biologically, menstruation is well described and forms part of the menstrual cycle, a 28-day period during which the uterus prepares for potential pregnancy. In the absence of pregnancy, the inner lining of the uterus breaks down and is excreted with the unfertilised egg through the vagina once a month. Depending on the individual, this stage can last between 2 to 7 days (Hawkins and Matzuk 2008). Menarche (the onset of menstruation) starts when a girl reaches puberty with menstruation continuing up to menopause (end of menstrual cycles) around the age of 50. The age of menarche has been decreasing especially in High Income Countries (HICs) where girls as young as 9 are reported to be menstruating, postulating changes in nutrition and health as possible explanations but the lack of comparative data from Low Income Countries (LICs) hinders a definitive global conclusion at present (Karapanou and Papadimitriou, 2010, Pierce and Hardy 2012). Unless she is pregnant, a woman will menstruate monthly for roughly 35-40 years of her life. Hormonal and health conditions, as well as irregular cycles caused by these factors, complicate the issue where women are already struggling to cope with the normal demands of menstruation. Global population data presented by the United Nations (Gender Statistics 2020) reveals that approximately 26% of the total population of around 8 billion people are female and of reproductive age which equates to more than 2 billion people directly affected by menstrual issues.

There is no disagreement that culture, popular belief systems and education within social groups affect how the subject is treated (Sommer et al 2015) nor that the menstruation experience has historically been viewed with a sense of shame leading to many women "suffering in silence" and obscuring the multitude of needs created by menstruation. The fact that 40% of women in the UK cannot afford sanitary products provides perspective of the gravity of the situation when extrapolated to the global female population especially considering that the UK is an HIC (Plan International 2020). While period poverty is a major problem, the menstrual experience is a complex reality that goes beyond the need for sanitary products. Lack of sanitary products and conditions should be viewed not only as a poverty or access issue but also in terms of its wider health impact. It is stated as a factor that may increase the risk of Urinary Tract Infections (UTIs) up to 70% while untreated UTIs and reproductive tract infections in turn lead to higher risk of contracting HIV and STIs (Sumpter and Torondel 2013, Kuhlman, Henry and Wall 2017).

Despite the documented efforts of the WASH sector, clean and private toilets essential during menstruation are still unavailable to almost 1.25 billion women and around 526 million women still without access to a toilet at all (House Mahon and Cavill 2012). The impact of menstruation on education is a concern that is well established and one of the major contributors that catapulted MHM into the spotlight as future prospects of women suffer greatly when as much as 20% of a girl's school year may go unattended due to MHM issues (Oster and Thornton 2011, Proctor & Gamble 2014). The existence and impact of stigma and taboo that affect millions to varying degrees are widely acknowledged but remains contentious and an issue most seem to sidestep in order to maintain good relations with communities to proceed with poverty, sanitation, and education programmes. The numbers make it clear that this natural occurrence cannot be ignored. It requires proper management and clear definitions of what is measured and researched.

1.3. Menstrual health management and measurement

UNICEF (2012) includes in the MHM definition not only access to menstrual hygiene products to manage bleeding but also privacy to change used materials, and access to appropriate disposal facilities. They also include broader systemic factors that connect menstruation to health, such as "well-being, equality, education, equity, empowerment, and rights". This definition provides for personal and community rights and needs inside and outside the public health domain. Scholars agree that MHM not only deals with human rights and equality issues, menstrual poverty (lack of sanitary supplies) and menstrual hygiene (provision of proper water and bathroom facilities) but also health education (educating society about menstruation and dispelling misinformation and breaking down stigma) and formal education (the loss of school days affecting education outcomes and ultimately prospects of women). Other considerations agreed upon in the complex field of MHM include physical (pain, and infections), mental (shame, bullying and marginalisation) and environmental health (waste management and sustainable sanitary products) as affected by menstruation (Caruso et al 2018, Sommer et al 2015). Increased awareness and advocacy in the field of MHM identified the basic requirements during menstruation in line with the MHM definition.

To ensure a comparison of apples with apples when determining MHM requirements, involves a clear understanding of how issues are measured. Hennegan, Brooks et al (2020) identifies inconsistencies in both the definition and use of concepts measured in MHM. They call for researchers to "clearly define the constructs they aim to measure and outline how these were operationalised for measurement". There is a call to better define core constructs such as menstrual and hygiene

practices to potentially decrease limitations on quantitative studies in MHM and for clearly defined, transparent reporting of measured concepts where researchers cannot agree. Implementation of the Menstrual Practice Needs Scale that provides and links qualitative and quantitative data and aims to standardise measurement of menstrual issues should go a long way in providing global data that will serve the global MHM endeavour (Hennegan, Nansubuga et al 2020).

1.4. The relationship between menstruation and public health

Winslow's (1920) definition of public health set the standard for public health issues. Literature agrees that MHM fits the definition and consistently describes menstruation as a public health issue (Kennedy 2018, Lunette 2020, Rapp and Kilpatrick 2020) but it has not always been the case. It required concerted efforts by various stakeholders including the WHO, UN, governments, communities, and individuals to venerate MHM to public health status despite prevailing perceptions of privacy, stigma, and taboo.

1.5. Historical placement in the public health arena

There is agreement that menstruation was traditionally considered a socially stigmatised condition dictated by culturally designed menstrual etiquette with menstrual blood seen as dirty and treated as a very private matter. Shame and complexity of MHM was perceived as part of the social order and not part of public health which had bigger fish to fry such as the plague and cholera. Many agree with Sommer et al (2015) that emphasis was placed on contraceptive uptake resulting from the vulnerability of young women to HIV and other STDs. WASH efforts did not integrate menstruation management into their programming either, partly because of the perception of absolute privacy and taboo of the topic at the time but unintentional gender-related bias on the part of mostly male engineers could have been a contributing factor to the oversight. Limited resources were therefore focused on policy and programmes that met these goals. The focus on education for girls as part of efforts to close the gender gap in the mid-2000s illuminated MHM as a public problem (Sommer et al 2015).

The increase in literature over the past ten years is proof of the emergence of MHM as a key issue influencing public health. The global geo-political volatility also highlighted the plight of menstruating women who are displaced because of war or environmental disasters (VanLeeuwen and Torondel, 2018). Despite a growing body of evidence, HICs like the USA pay little public health attention to menstruation challenges of low-income girls. Sommer et al (2015) points out that most of the resources in the USA are allocated to clinical not public health issues faced by specific groups and calls for expansion that will include challenges faced by all people who menstruate.

1.5.1. United Nations and WHO

The WHO and UN has since their inception worked to improve the world and the health of its populations. Initial efforts did not focus directly on menstruation but rather indirectly on surrounding social and health related issues. The United Nations MDGs were signed into being in September 2000 and set targets, many related to health, to combat poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women by 2015. The 2013 launch of Menstrual Hygiene Day as well as International Women's Day created global platforms that encourage cooperation between role players, promote and drive MHM awareness, advocacy, and integration of MHM into global policy and programmes (George 2013). In 2015 the MDGs were replaced by the SDGs, designed to create a better and more sustainable future for all. MHM plays an important role in girls' and women's rights, a key objective of the SDGs. Through the SDGs, global health, and triple billion initiatives, these organisations strive to improve health and wellness of individuals and populations.

1.5.2. Government level

The persistence of stigma and taboo have led to politicians shying away from policy that address menstruation and issues relating to it directly. Other than instances where lives or emotional well-being are endangered advocates also seem wary to address stigma directly. Governments seem willing to include puberty and body changes in educational curricula but are unwilling to offend voters by addressing stigma and taboo relating to menstruation. Sommer et al (2015) reveals how India, Kenya and South Africa were in favour of market-oriented approaches (subsidising sanitary products) rather than infrastructure-oriented approaches which are complex, expensive and may endanger political careers. Patkar (2020) however delivers some hope with reports that through sustained collaboration between private and public sector and initiatives such as the MHM Lab (a safe space to talk about menstruation and build evidence for policy change) and The MHM Lab Manual (a training methodology to raise awareness and replace stigma around menstruation and promote pride in one's own body) governments in India, Senegal and Kenya endorsed the initiatives and were moved to develop and implement policy directed at MHM management. In 2019 Kenya enacted the world's first dedicated MHM policy breaking the silence and highlighting MHM as a rights issue. Bringing MHM into the mainstream of health and development enables women to be informed and participate fully in all walks of life (Government of Kenya 2019).

India, Senegal, and Kenya seen as influencers in their respective regions drove change and collaboration in West, Central and East Africa as well as South Asia. Although many countries like India, Australia, Canada, and some US States have taken the positive step to make sanitary products tax exempt, poverty, access, stigma, and taboo remain pressing issues (Zraick 2018). Policy without buy-in and implementation at grassroots level is useless as seen in Nepal where despite being outlawed in 2005 and being recognised as a harmful form of violence against women by the National Plan of Action against Gender-Based Violence in Nepal

in 2010, "Chhaupadi" (the practice to banish menstruating women to sheds outside town without heat, nutritious food, adequate sanitation, or schooling) persists amid myth and ignorance (UN Women 2017). In 2020 Scotland became the first country to legislate free sanitary products to all who need them, but implementation was left to local authorities and it remains to be seen how successfully it will be implemented (Chadwick 2020). Although a step in the right direction, period poverty is one cog in the complex MHM machine that also requires MHM education and provision of proper sanitation and disposal facilities that will end shame, stigma, and taboo.

1.5.3. Community level

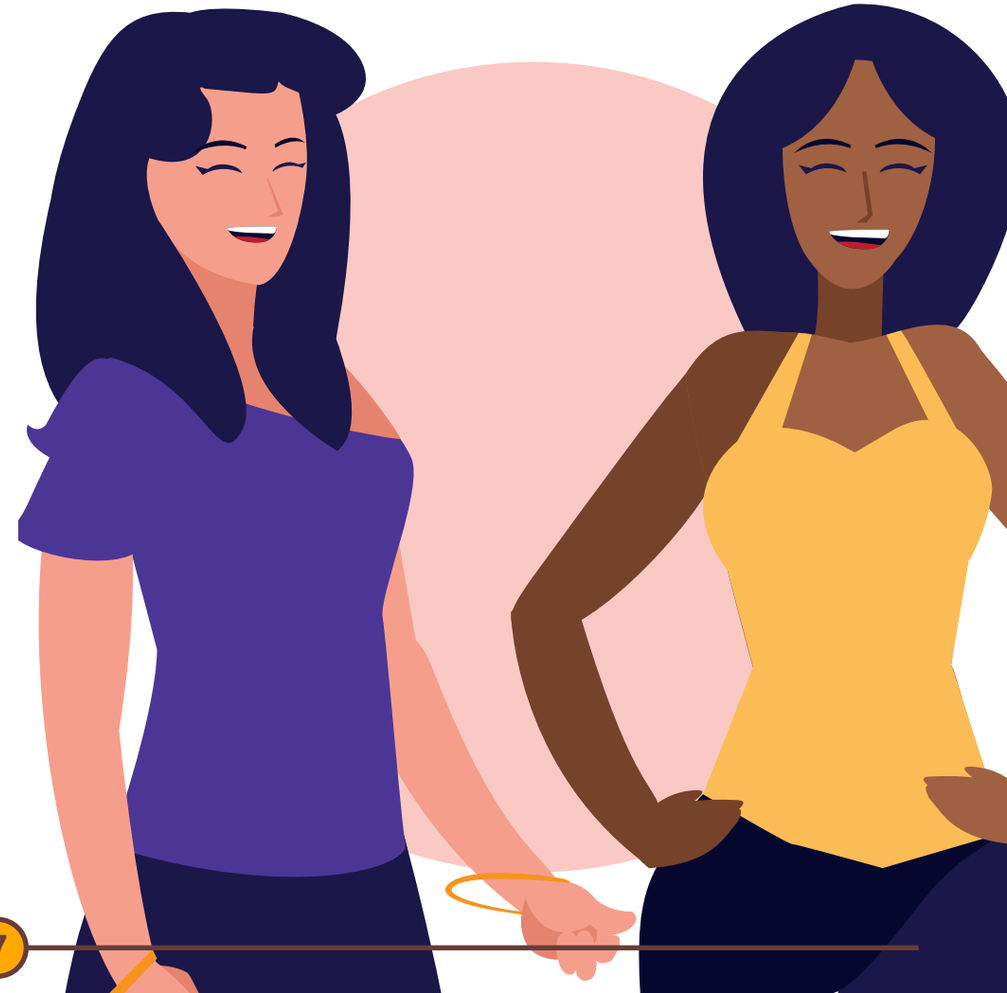
Efforts to promote the MHM agenda prior to 2010 are scant and mostly covertly formed part of efforts to address gender and sexual health issues in the over 15 age group at risk of contracting HIV. Research suggests that 2004-2005 was a time of slow awakening to the now obvious MHM need. It was gradually introduced into the educational sector when NGOs commenced distribution of comfort kits and menstruation was introduced in education programmes as part of closing the gender gap. The WASH movement similarly began considering menstruation in their programmes when improving female bathroom facilities in schools (Sommer et al 2015). As an early adopter The Rockefeller Foundation played an important role in research and policy development and supported the development of re-usable sanitary pads in Uganda (Maka-Pads). Collaboration between The Forum of African Women Educationalists and P&G moved for the removal of VAT on imported sanitary products in parts of Africa. P&G combined educational efforts with marketing to educate girls about menstruation and menstruation management (Kirk and Sommer 2006). The WASH sector initiated a couple of small projects in LICs to improve sanitation and disposal of menstrual products. Recent controversial initiatives seen in India in the form of menstrual leave by Indian companies attracted praise for allowing women 10 days paid leave a year to deal with period related issues but also criticism blaming the practice for gendering the workplace (Sohngen 2017, Kohli 2020).

1.5.4. Individual level

Evidence on individual menstrual experience emerged as a recent phenomenon with increased research and outreach programmes reaching beyond period poverty. It is agreed that the lives and menstrual experiences of women are shaped by powerful cultural and social norms (House, Mahon and Cavill 2012, Sommer et al 2015). Menstruation and its many impacts are slow to move from the shadows of misinformation, stigma and taboo often conveniently mistaken for privacy. Women still experience shame and mistreatment daily despite strides made to reiterate that menstruation is but a bodily function and not some mystical power for evil. Its impact however is complex and there are many contexts in which girls are punished or experience shame because they are menstruating. The disappointing results of behavioural and individualistic approaches to public health issues such as MHM combined with the ecological approach to public health that highlights the fact that the individual is not an island warrants a second look at structural approaches because of the numerous influences bearing on an individual's choices or lack thereof (Auerbach, Parkhurst and Caceres, 2011, Sommer and Parker, 2013). Social media plays an integral part in modern life and is acknowledged by the UN to raise awareness and participation in MHM initiatives (Rahman et al, 2018, Choi, 2020). MHM management and especially taboo and stigma requires social mobilisation efforts that promote education, respect, and open honest dialogue.

1.6. Conclusion

Menstruation and its management are complex issues which not only affect the female population but because of its psycho-social and cultural implications involve the whole social group and is heavily influenced by generationally transmitted beliefs. Because of its impact on a large portion of society and complex influences on various health and well-being spheres it has emerged and is recognized as a public health issue. Due to its complexity and the deep-rooted myths and taboos clouding the issue, researchers agree that efforts need to be prioritized to address MHM. Despite the tremendous progress that has been made in the past ten years MHM still has a long way to go before it is truly treated as an independent public health issue and not merely as a sideshow to gender, education, sexual health, or WASH initiatives.



CHAPTER-2

2.1. Introduction

While period poverty is a crucial part of dealing with menstruation, a closer look reveals that it is only the tip of the iceberg and that many other aspects of the human environment and experience are involved. Not only does menstruation expose many to discrimination resulting from misinformation, stigma, and taboo leading to loss of dignity and equality but it also requires menstrual materials to deal with the flow as well as water and sanitation facilities to maintain proper hygiene. Without education to foster biological understanding neither males nor females can truly respect the female body and only proper uninterrupted schooling facilitates future opportunities and economic prosperity for women. Both physical and mental health is essential to ensure well-being and all the above needs to take place while minding the environment to ensure a better future for the next generation.

2.2. Public health areas affected by menstruation

The complexity of the menstrual experience has a profound influence on the health and well-being of the population as many MHM aspects are interconnected and compound the effect on public health in the following ways:

2.2.1. Equality

Despite concerted efforts to address inequality, it remains a woeful fact of the globalised world influencing suffering and disease because of menstruation on numerous levels (Smiles, Short and Sommer 2017). Equality is evident when poverty constitutes a barrier to sanitary products or when access to safe ablution facilities is exclusive (Garg and Anand 2015). To paraphrase Wall's (2020) argument, the failure to provide sanitary products in the same way that toilet paper and hand washing facilities are routinely provided to meet the biological needs of the public should be considered a denial of equal protection under the law. UNICEF (2019) identifies teasing, stigma and restrictions that deny menstruating girls access to community life either because fear and shame force them to withdraw from extra-curricular or social activities or through structured cultural prohibitions that mandate their exclusion from contact with livestock, handling of food and religious ceremonies.

Menstruating women are believed to have diminished emotional and physical abilities reinforcing gender inequality and barriers to opportunity. A review of the literature highlights the unequal burden of women during humanitarian crises when dealing with menstruation where there are lack of appropriate bathing and sanitary disposal facilities (VanLeeuwen and Torondel 2018, Williams, Chopra, Chikanya, 2018). This is documented in the secondary effect of the COVID-19 pandemic where menstruating healthcare workers face lack of supplies, leaks resulting from cumbersome donning and doffing of PPE and quarantined individuals that do not have access to supplies or WASH facilities, issues of no concern to non-menstruators (UNICEF 2020). The onset of menstruation exposes young girls to the risk of child marriage and sexual violence denying them opportunities that are afforded to their male counterparts. Disabled menstruators face added barriers as their needs are not prioritised during facility design and an emerging point of discussion is the inclusion of transgender men and non-binary persons when considering menstrual equality (Thompson et al 2019). Inequality whether based in class, age, gender, or sex remains an important identified determinant of public health implying that menstrual equity through safe access to menstrual needs without fear and shame will contribute to a healthier society.

2.2.2. Menstrual poverty

Period poverty may refer to the struggle and economic vulnerability to afford menstrual products, but it may also include any lack including WASH and disposal facilities (Rapp and Kilpatrick 2020). In the narrower context, it includes not only affordable sanitary pads and tampons, but also related costs such as pain medication and underwear. Data dispels the misconception that period poverty is restricted to LICs clearly revealing that the impact of menstrual poverty in HICs are easily overlooked (Plan International 2020). The lack of menstrual products is linked to absenteeism from school or work, extended unsafe use of the same pad/tampon or unsafe rags, leaves or paper that increase the risk of infection. Although tax exemption and/or free sanitary supplies have become hot topics of debate globally and many countries have taken steps to scrap taxes and provide free supplies; it is still an ongoing issue in many, revealing the lack of understanding of this biological process often resulting in the choice between food and menstrual supplies (Kirk and Sommer 2006, Chadwick 2020). It is well reported that girls often use "transactional sex" to obtain or afford menstrual products (Phillips-Howard et al 2015, Williams, Chopra and Chikanya 2018, Sagala 2019). Both ill-suited sanitary substitutes and "transactional" sexual practices have been shown to have profound public health implications as they raise possible UTI, STD and HIV infections that strain public health resources (Sumpter and Torondel 2013, Kuhlman, Henry and Wall, 2017).

2.2.3. Menstrual Hygiene

It is an indisputable fact that access to water and sanitation is essential during menstruation. Women need to wash themselves, their hands and re-usable supplies but also require safe, private spaces to change and dispose of used sanitary materials regularly. The lack of running water remains a huge problem in LICs both in schools and homes. Women must get up before first light to walk considerable distances just to wash sanitary pads in private (Sommer and Sahin 2018). Many schools lack basic sanitation never mind cater for menstrual needs.

This lack of clean and safe facilities is compounded by misinformation, stigma and taboo that ban girls from water sources or forbidding them from touching their genitals during their period exposing many to discomfort and infection (UNICEF 2019). Proper drying facilities are required to ensure reusable pads are safe, but reports reveal that menstrual shame causes stress as women attempt

to hide drying pads and lack of private drying spaces often lead to the use of damp pads which are breeding grounds for bacteria and fungi especially in humid conditions (Kuar, Kuar and Kuar, 2018). Although drying needs are mentioned in passing, literature reveals no resource allocation or programme development outside specific facility design for disaster areas within the WASH sector. Another identified issue impacting hygiene is the availability of proper waste disposal facilities. Overflowing bins and improperly disposed menstrual material are potential spreaders of disease with detrimental effects on public health. Although still lacking, efforts are being made to circumvent problems with disposal and include promotion of re-usable pads, menstrual cups, and on-site disposal by providing specially designed ablution facilities where menstrual material may be incinerated privately (Kuar, Kuar and Kuar, 2018).

2.2.4. Taboo and stigma

Even a superficial reading reveals that menstrual taboos and misconceptions have been rife throughout history and continues to be a problem globally. It depicts menstrual blood as toxic and promote the idea that menstruating women can cause harm to their environment (food, plants, or animals). It is a serious barrier to health that needs to be addressed as it leads to practices where girls are excluded from normal activities or even banished from the home as is seen with Chhaupadi (UN Women 2017) potentially exposing them to sexual violence. There is an agreement that taboo and stigma contribute to women being denied proper access to education and economic opportunities, perpetuating the notion that menstruation is dirty and women inferior.

A surprising discovery from the research reveals that stigma extends to non-menstruating women or those with irregular cycles and are labelled as not being "real women" resulting in reluctance to use contraception because it may disrupt menstrual cycles (UNFPA 2020). These judgements similarly affect transgender men who menstruate and experience menstrual poverty, lack of hygienic facilities and discrimination. Although social media has been instrumental in opening the discussion on menstruation; exposing taboo and stigma, the way menstruation is portrayed in the media still reflects it as something dirty that modern menstrual products will hide (Choi 2020). The media can be a powerful activism tool evident in recent advertisements showing menstrual blood instead of the standard blue liquid. This departure from the usual discourse of period shame is welcomed by most but public backlash to these efforts in 2017 in the UK and 2019 in Australia unfortunately reveal that the fight to normalise menstruation in the public arena is far from over (Lloyd 2019). It is hoped that the increase in female advertising executives will change the way menstruation is dealt with (Schulte 2019) to increase social discussion that may break down stigma and taboo. To eradicate stigma and taboo requires strong, educated leaders, and implemented policy without fear of cultural backlash, an almost unsurmountable task in predominantly patriarchal societies (George 2019).

2.2.5. Education

Education in menstrual context refers to informing all sexes about menstruation and keeping girls in school. Literature reveals that many girls are totally unaware as to what is happening to them at the onset of menarche. Mothers and close female relatives do not teach them, or they receive misinformation from adult women themselves shamed and uninformed about personal body functions and hygiene (Emory University, 2012).

Men are even less informed but could play a supportive role as they are often in positions of authority at home and at work and frequently those who decide policy. Men and women, non-binary persons alike require education regarding proper menstrual hygiene, dispelling myths that washing during menstruation leads to infertility, as seen in Afghanistan (UNICEF 2019). Education regarding the disposal of sanitary materials is important as many people burn used material or bury it believing that it will curse animals or attract evil spirits (Garg and Anand 2015, UNICEF 2019). A major area of concern is the notion that menarche equals girls being ready for sexual activity or getting married especially since girls under 10 are now menstruating. This results in sexual violence, unwanted pregnancy, and child marriage where children are not psychologically or emotionally mature to deal with sexual relationships or the demands of marriage or motherhood. Education further involves getting and keeping girls in school. Where poverty or cultural norms combat higher education for girls, the onset of menarche at a time when girls are moving from primary to secondary school is just another nail in the coffin for girls' education. Girls miss extended periods of the school year due to period poverty, shame or health issues (Montgomery et al 2012). Astonishingly teachers are cited as a reason for absenteeism as they often do not allow regular bathroom breaks and their refusal lead to leaks that attract teasing and shame. To improve community health and overcome stigma and taboo, the education level of both men and women need to increase.

2.2.6. Physical and mental health issues

The lack of hygienic sanitary products may increase the risk of infection and is a particular problem in humid climates where re-usable pads cannot dry properly. There is mounting evidence of an increased risk of urogenital infections when proper hygiene is not complied to during menstruation which include bathing and changing supplies regularly (Anand, Singh and Unisa 2015, Vishwakarma, Puri and Sharma, 2020) but more studies are needed to establish a clear causal relationship between external bacteria and infections. Dysmenorrhea or period pain is a major issue that can be debilitating during menstruation (Shabham and Khyrunnisa 2012, Fernández-Martínez et al 2020) whilst depression, lethargy and lack of concentration are other confirmed symptoms related to menstruation (Agarwal and Agarwal, 2010, George, Priyadarshini and Shetty 2014). Other conditions that may complicate menstruation are menorrhagia (excessive bleeding), metrorrhagia (irregular bleeding-once in a couple of months or more than once in one month) and meno-metrorrhagia (excessive and irregular bleeding). These conditions may

cause anaemia, fatigue, and fainting that are compounded when women do not have equal access to public health resources or refrain from seeking help because of shame or restriction embedded in lack of education (UNFPA 2020).

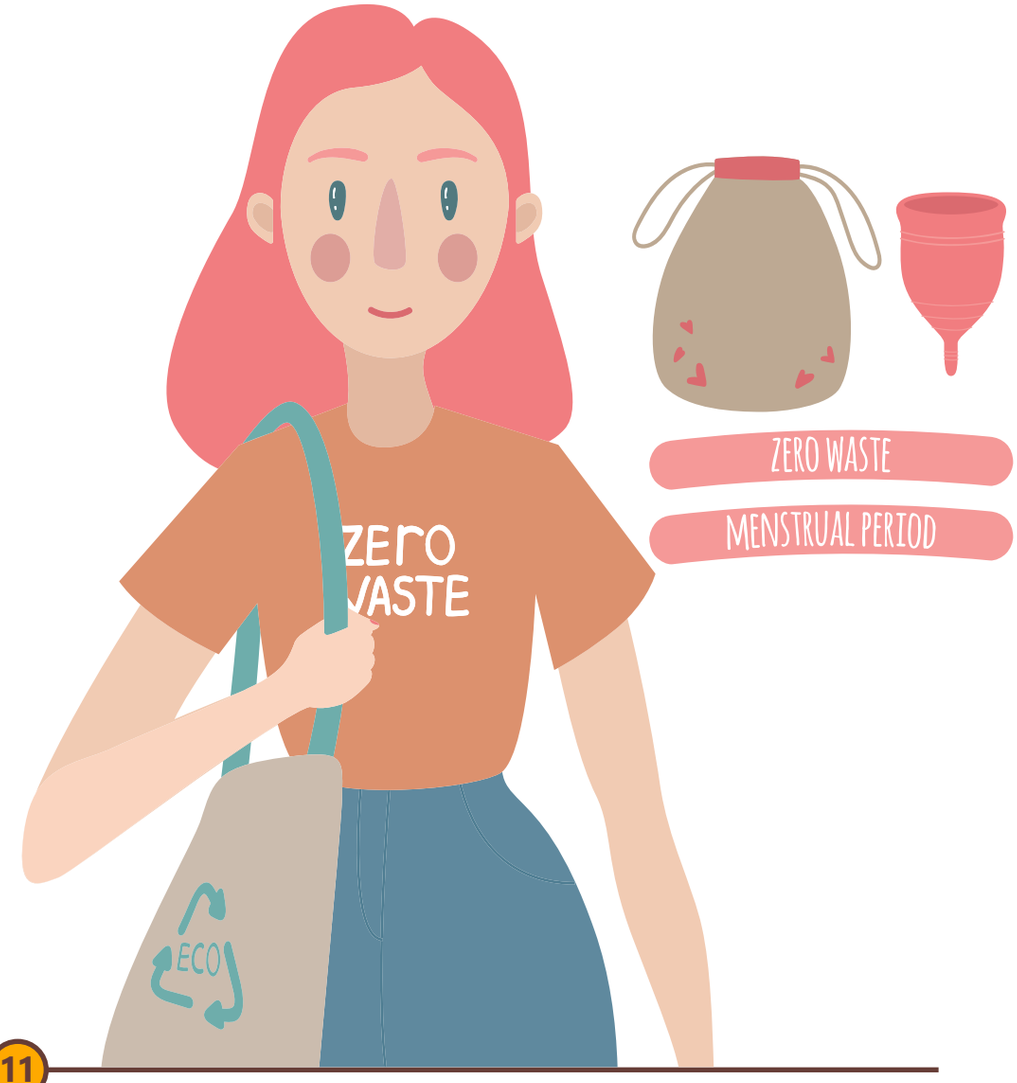
Health risks also extend to those in LICs who collect waste manually for a living that expose workers to diseases such as Hepatitis B and C and HIV as well as mental distress when handling these products in countries where stigma around menstrual blood abound (Lopez 2020). Mental health conditions often go undetected but is of real concern in menstruating women under constant stress and duress because of menstruation. The negative mindset and vocabulary surrounding menstruation becomes embedded in culture and is named by McHugh (2020) as "menstrual moaning". This negative communication surrounding menstruation stems from the secrecy and stigma which reiterates the notion that the menstruating body is flawed and diseased perpetuating the vicious circle of self-degradation and associated mental health issues.

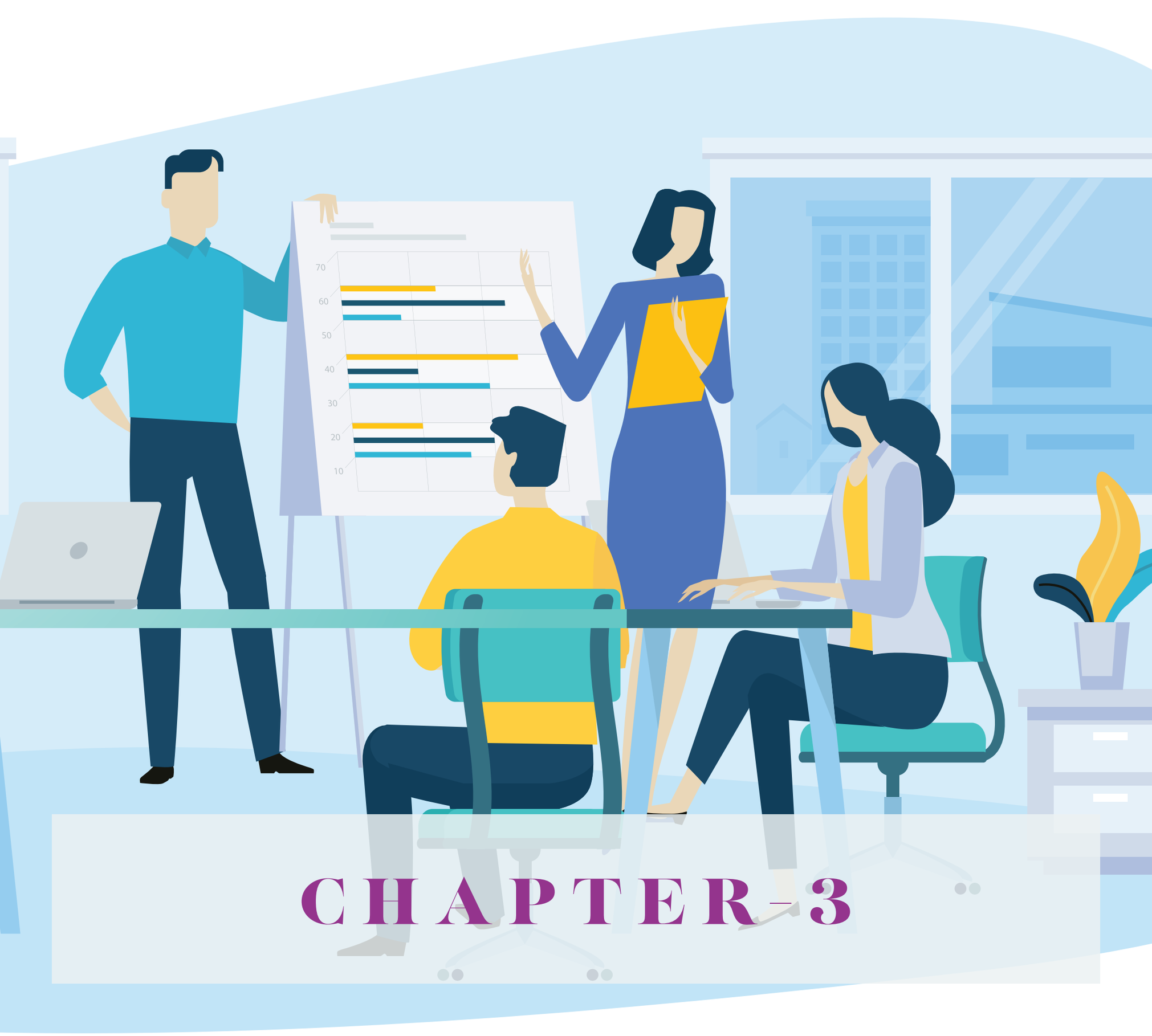
2.2.7. Environmental health

Menstruation itself does not have harmful environmental effects but depending on the materials and processes used, the manufacture and disposal of sanitary products may be harmful. Many products containing plastic are not bio-degradable, their manufacturing processes are chemically fuelled, and they increase pollution of land and waterways. Relieving period poverty often leads to the increased use of disposable products causing waste management problems. In countries like India sanitary bins often overflow (Kilpadi, 2020) and globally landfills and sewage systems are flooded with used sanitary products because of insufficient waste management. Even worse are women in India bathing in the same water where they dump their used sanitary products (Mukherjee 2017). Many people dump used pads into flush toilets causing blockages or into pit toilets where it cannot break down causing already limited systems to fail. Stigma surrounding menstrual blood often hamper proper management of used menstrual products. Environmentally friendly options are on the rise including menstrual cups and reusable and/or biodegradable pads like Maka-pads and Afripads. These alternatives are not always accepted or suitable for the individual though. Many believe menstrual cups to be uncomfortable or leading to a loss of virginity and ensuring proper drying facilities for re-usable pads (both safe and private) is challenging. Given the potential environmental consequences of disposable products, it is important to expand the range of sustainable methods available to women, allowing them to make informed choices that fit their needs.

2.3. Conclusion

MHM affects and interacts on multiple levels of public health. Equality affects access to supplies, education, and physical and mental healthcare. Without access to period products women live in fear of leaks and odours and resort to unhygienic alternatives exposing them to increased risk of infection and resulting in health consequences. The lack of products results in women withdrawing from public life, school, and work with dire economic outcomes. Period poverty increases the risk of infection and disease and without proper education misinformation abounds and women are refused the opportunities of a proper education and subsequent economic prosperity effectively subjugating them and perpetuating the spread of disease. The increased physical and mental health issues associated with menstruation cause unwanted suffering and place unnecessary strain on public health resources. Sustainability is a must requiring manufacture and disposal of menstrual products in a responsible and humane way. When society ignores taboo, stigma, and shame, it allows misinformation and discrimination to abound. Menstruation affects many aspects of health and well-being all of which overlap and have the potential to fuel the vicious cycle of discriminatory behaviour that prevents menstruators from bleeding with dignity.





CHAPTER-3

3.1. Analysis

The current study revealed that despite 70% of organisations originating in Europe most programmes are focused on Africa and Asia. The data indicates 30% activity in Africa, but the 40% of reported global activities all without fail included programmes in Africa and Asia. The disparity between programme activity and organisational origin begs two questions. First, why are High Income Countries (HICs) mostly working in Low Income Countries (LICs)? This may be ascribed to global positioning as well as poverty and inequality in the global economy but is subject to investigation. Secondly, is the menstrual crisis not seen in HICs? Quite the contrary. These figures reveal a dangerous assumption that women in HICs do not suffer the same lack, a fact belied by data from this study. Such conjecture puts these women at risk when all finances and efforts are focused on LICs. Even during this research several larger HIC organisations stated that they do not address this issue while smaller organisations in the same country reported it as an unmet need.

Other obstacles that could be ascribed to cross-border activity are difficulties experienced by currency shortages and unclear or non-existing import regulations. In countries where cups are classified as medical devices it complicates imports and creates a barrier to access. During interviews corruption was also reported as an obstacle during importation of materials and products into LICs. An important factor when working across borders is cultural sensitivity and caution against westernisation efforts. Programmes and findings cannot be "copied and pasted" from one country to another. During interviews, the respondents mentioned that "we look at the information coming from the USA, but we cannot use it as it is not appropriate locally".

3.1.1. Focus areas, sex, and age

Multi-country involvement was more prevalent during this study and largely reported from individuals at larger organisations while single country involvement was more prevalent under smaller NGOs. Given the fact that funding and resource shortages were prominently reported as obstacles; this was not surprising. As expected, the largest percentage of recipients of services are female but it is encouraging to see at least 10 respondents conducted programmes aimed at males. This is important as men remain, to a large extent, responsible for policy and decision-making in the household and community. Proper menstrual education to males is therefore an investment in the future of the discipline and females at large.

It was somewhat surprising to see the young adult age group edge in front of the adolescent group given the large concentration of efforts directed at schools, but this is not necessarily the case globally and could be ascribed to the specific programme characteristics of the research respondents. The fact that interest in the 31-50 age group is lacking could be a shortcoming as this age group are often parents. Mothers need to convey the correct information to their daughters, and it is therefore crucial to ensure that this group is properly tended to. One should also not lose sight of the fact that these women still have menstrual needs. Males in this age group are heads of households that often hold the purse strings or are in positions of power that could affect policy and taboo. Keeping them in the dark by failing to dispel myths or educate them on the importance of the issue stunts policy advances and efforts to dispel stigma and taboo, identified as a major obstacle in the current research and perpetuates the problems experienced due to menstruation. As an example, during interview, a respondent noted that "Congolese men blame women for their ignorance saying that they do not know anything about menstruation because women keep it a secret".

3.1.2. Partners and areas of activity

Respondents reported programmes focused on funding, advocacy, research, hygiene, and sanitation as well as education of male and female adults, students and teachers through books and workshops. Education efforts included basic education about the human body, puberty, and menstruation, use of menstrual cups, gender and human rights education, women's leadership, and online magazines. Distribution of menstrual products were conducted through workshops, clinics, and vending machines. Awareness and advocacy efforts included online magazines and support of menstrual hygiene day. Manufacturers of menstrual products included re-usable pad manufacturers and social enterprises. Programmes seem to operate without fail in partnerships. Partnerships took several forms and most respondents (85%) partnered with NGOs and 75% with community organisations. Business and individual partnerships were reported by 60% of respondents but only a small number (30%) of larger organisations partnered with the UN and WHO.

When considering that most organisations operate outside their country of origin and require help with local language, culture and bureaucracy, collaboration is often the only way to get the work done. Pooling of resources is warranted since funding and resources emerged as major obstacles during the study. When attempting to effect policy change or industry standards, cooperation is crucial. The fact that a couple of respondents mentioned ignorance and misinformation of larger NGO leadership highlights the importance to keep abreast of innovation and remain open to initiatives such as menstrual cups. It was encouraging to see increased monitoring and evaluation efforts, even a mobile app, to collect data to improve future programmes. Finances emerged as a major obstacle across quantitative and qualitative findings, which is understandable considering most of the organisations were NFP and dependant on grants and donations to proceed with operations. Donor aversion to this specific cause was mentioned in questionnaires and confirmed during interviews noting that "Donors find the cause icky and unappealing". Efforts are clearly required to properly inform donors of the importance and larger social and economic impact of funding programmes connected with menstrual health. The reported interruption of funding because of the Covid-19 pandemic is somewhat expected but also tragic as menstruation continues unabated despite ramblings outside the human body.

Social media campaigns like #periods do not stop for pandemics, had an ameliorating affect but did not return funding to pre Covid levels. It did however assist in spreading awareness. Education on menstrual issues remains a major obstacle and especially misinformation and ignorance regarding the matter. A call for more efforts aimed at menstrual education of all sexes at a younger age certainly makes sense as it will properly prepare for menarche and aid in stripping secrecy and shame from the subject. A surprising finding was the small number of responses specifically aimed at keeping girls in school although it could be reasoned that sustained focus on alleviating period poverty and stigma as causes of absenteeism would automatically reduce this problem. An interesting finding was a comment during interviews, stating that there is some controversy in the USA as to "whether girls are absent because of period poverty or actually attend during their periods to receive free products". This would be an interesting subject for further research, but current data does not seem to support the notion of attendance for free products as very few schools currently provide free products. Pain management was the only item noted under menstruation and health and visibly absent was the issue of infections. Pain could certainly contribute to absenteeism but as none of the respondents were equipped or authorised to offer medical services, the absence of health issues both physical and mental are understandable.

Most respondents were active in period poverty albeit providing or manufacturing period products. In this area, obstacles emerged in the form of finances, partnership, education, and policy. There was a strong call for universal product standards, and this is saluted as it may ease some of the import problems experienced. Policy is especially important where cups are concerned as it is classified as medical devices in several countries creating barriers to access and distribution. There were still respondents who reported luxury taxes on menstrual products as an obstacle and this will probably remain the case for some time as scrapping of taxes in Australia took 10 years of intensive efforts to achieve. The only issue reported under menstrual hygiene was the safe disposal of used products and then more in the context of stigma than hygiene. Once again expected, as very few of the respondents were primarily active in the WASH sector. Most probably because of the deep rooted cultural and societal norms, stigma and taboo remain a major obstacle across questionnaire and interview responses. In this domain community education efforts were in the majority followed by education programmes specifically focused on males. Any programmes touching on this subject are welcomed, as misinformation, secrecy and ignorance were reported as the leading causes of persisting stigma and taboo. Environmental considerations were not seen as direct obstacles to programme implementation but efforts to move towards re-usable pads and menstrual cups certainly speak to the need for sustainable products. When comparing quantitative and qualitative data there were no real differences in the types of obstacles reported, nor their importance, providing clear issues that may be tackled to improve the MHM efforts globally.

3.1.3. Proposed initiatives

The difference between questionnaire and interview responses can be explained at the hand of the semi-structured nature of interviews which invited more discussion and introduction of new themes. On closer inspection terminology, research and advocacy all connect with current themes. Terminology is just an extension of stigma dealing with the secrecy implied by the acronym MHM and research informs policy and education programmes. The needs expressed by the respondents align with the identified obstacles. Advocacy lies at the heart of tackling any obstacle in the MHM field as misinformation affects funding, education, stigma, health, and policy alike.

3.2. Discussion

Thinking of menstruation as only a biological process is a gross underrating of the complexity of the subject matter. Data collected in this study reiterates the complexity of the MHM arena and reveals a crisis under wraps. As a relatively new field, it has grown in leaps and bounds during the last 10 years and its scope and impact has left no doubt of a fully-fledged public health concern. The approximately 2 billion menstruators across the world will continue to increase as the world population barrels towards the 8.5 billion mark expected by 2030 (United Nation 2018). The unequal population distribution between LMICs (Low to medium Income Countries) and HICs, both in terms of number and age, means there will soon be an exponential increase in the number of people in Africa and Asia affected by menstruation. Given the economic and cultural realities in these geographical areas, women will inevitably be at a disadvantage, highlighting the real need for MHM support. The fact that current data reflects most programmes already active in these geographical areas serves as encouragement but those requiring menstrual assistance in HICs should not be forgotten especially given the migration to HICs resulting from poverty, war, and famine but also the increasing need for care by the ever-aging population in HICs.

3.2.1. Global and public health impact of menstruation

The use of the term MHM seems to be ruffling some feathers as there is a growing feeling that the acronym enforces secrecy, and the term menstrual health/hygiene management indicates something dirty. While some may consider it a trivial issue, detracting from the actual issues, it is important to remember that words have a tremendous impact. Just as using euphemisms to name our periods reinforce the idea of secrecy and shame one should be vigilant not to fall into the same trap when naming and discussing the discipline and relevant issues. Utilising terms such as "menstrual health" or "periods" ensures that everyone knows exactly what is discussed and the increased verbalisation escalates the normalisation of the issue, breaking down secrecy, stigma, and taboo. Our world has evolved beyond simple male/female classifications and requires inclusion of menstrual needs and terming of transgender and non-binary persons. The acceptable term is still uncertain as reference to "menstruators" has been criticised as either too inclusive or reducing people's existence to this biological function. The myriad of opinions when talking

about the ever-increasing list of gender associations underscores the fact that no one approach will be universally accepted. This is a sensitive matter and should be handled thoughtfully. We should however admit that the aim of MHM is to alleviate all aspects of suffering associated with menstruation irrespective of sex and/or gender assignment. It would therefore be appropriate to include gender diversity in terminology, educational and planning efforts to ensure that every person who menstruates has equal access to period products and programmes.

It is not disputed that menstruation has slowly but surely established itself as a Public Health issue, but one should not limit its scope to preventing disease, improving health, and prolonging life. It is important that it should also ensure a certain standard of living adequate to maintain health to every individual in the community. Living a life where a crucial part of your biology is relegated to shame and secrecy does not adhere to this definition. What is required is free discussion, access to period products, sanitation, and equality to ensure quality of life for all who menstruate. Public Health is further responsible for organised community efforts to ensure the sanitation of the environment and education regarding personal hygiene is achieved. Once again, one should not mistake this as only relevant to dealing with physical health issues resulting from menstruation. As stated, menstruation is extremely complex and notoriously prone to secrecy, stigma, and taboo. The resultant menstrual inequity, poverty, hygiene, and disposal of menstrual product issues all have potential physical and mental health consequences ranging from infections, fear, and humiliation to the spread of disease resulting from irresponsible disposal of used menstrual products. The current situation in many countries do however beg the question whether governments are as convinced of the public health status of menstruation as the organisations that work in the field. Menstruation has a large and impactful global footprint that cannot be confined to bleeding. It is relevant to ensuring a healthy, prosperous world population and its impact on various public health areas is evident from the following section.

3.2.2. Specific areas of public health that are affected

In chapter-2, the specific areas of public health affected by menstrual issues were discussed. Equity, poverty, hygiene, stigma, health, policy, and the environment were identified as relevant to the discussion and one should not underestimate their interconnectedness. Inequality can be identified as a root cause and may be based on income, class, age, ability, gender, or sexual orientation. Women in LICs are already at a disadvantage because they lack necessities like water and often cannot afford menstrual products or are denied these "luxuries" because of their position in society and the household. They are not in positions of power to implement policies that may fight taboo and stigma. Period poverty is rampant in both LICs and HICs because of inequality in society. When period poverty results in school drop-out or regular absence from work and school it affects prospects of women and perpetuates the cycle of inequality. The lack of suitable products results in the use of ill-suited often unhygienic substitutes and practices and increase the risk of "transactional" sexual practices all of which increase Urinary Tract Infections, Sexually Transmitted Diseases and HIV infection risks. To address period poverty efforts evolved from the supply of disposable pads to re-usable pads and more recently the inclusion of menstrual cups. While the choice of product depends largely on personal and cultural choices, misinformation, lack of education and policy restrictions also play a role when deciding on a product. Both economic and environmental sustainability renders the use of disposable pads and tampons unconscionable, but alternatives deliver their own obstacles.

Where water is a problem; washing of re-usable pads becomes an issue and drying in areas where taboo and stigma is rife presents challenges that may lead to health risks. When insertion is culturally unacceptable because of perceived loss of virginity it will take time and money to educate society to the advantages of menstrual cup use, but proper training is also required to ensure cups are used correctly. Menstrual hygiene becomes an issue because of inequality, period poverty and stigma resulting in health problems. When there are no clean, safe, and private bathroom facilities available, or women lack adequate menstrual supplies they tend to use the same product for longer than is safe which potentially leads to infections. Stigma and taboo also lead to refusal to change pads at school or work in fear of judgement and the constant secrecy and various restrictions because of menstruation lead to serious often suppressed mental health issues. Policy changes are required to address many of the problems and strong leadership is needed to understand, create, and implement legislation that will lead to health equity. The environmental impact of menstruation is enormous. A woman may use approximately 11,000 disposable pads and/or tampons in her lifetime and the time it takes for these products to degrade is centuries longer than the lifespan of the user. The environmental impact does not only derive from the fact that pads are almost 90% plastic but also from raw material extraction and manufacturing processes. Improper disposal cause pit toilets to overflow, toilets to block and marine pollution. Greener alternatives such as re-usable pads and menstrual cups are the only way forward if we are serious about sustainable menstrual products.

3.2.3. Major challenges faced by organisations and possible solutions to these problems

The complexity of the subject matter inevitably results in many obstacles but only the top 5 that emerged from the data will be discussed. We live in a world where everything costs money, and it is therefore not surprising that funding and resources emerged as a major obstacle. Lack of resources were often cited as a reason why questionnaires could not be completed. Playing devil's advocate, the need for NGOs existence and activities may be questioned, but inequality and poverty have been contentious issues for centuries without any real progress to eradicate either. If anything, the growing gap between the haves and have nots as well as deep pocketed governments with struggling citizens worldwide are emphasised by the well-known George Orwell quote "All animals are equal, but some animals are more equal than others". Misinformation remains a major problem and not only in terms of people dealing with menstruation but also in terms of donors. In the continued efforts to address this problem, NGOs will remain

a crucial part of the social machinery and funding by donors, indispensable. Many still do not understand the importance of menstruation or its wider impact. To convince donors and governments to part with funds for this cause, it is proposed that solid research data must be gathered and with concerted advocacy used to remove menstruation from the ingrained secrecy and shame and contextualise it as part of the larger social-economic discourse. Awareness and open discussion on social media have already opened the door as has a few daring advertising campaigns but serious time and effort will be required to normalise menstruation not only as a biological function but one that requires attention to ensure the well-being of half the world's population. It is further proposed that fundraising efforts be focused on communities where most are close to the problem while social media has certainly opened the door to this with crowd funding now almost a normal part of life. This approach was supported by other research findings showing that NGOs who relied on community funding had a lower probability of financial distress than those relying on donor grants (Silva and Burger 2015).

The recurring nature of menstruation necessitates a solution that stops period poverty every month. The continued supply of disposable pads with its gargantuan environmental footprint is not sustainable economically or environmentally. To reduce period poverty whilst keeping this in mind, re-usable pads and menstrual cups offer a welcome solution. Many NGOs are involved in the re-usable pad industry on community level and as much as these social enterprises uplift women while providing pads to those in need, quality issues, and equipment breakdown should be anticipated and addressed to prevent squandering of funds on sewing machine "ornaments" strewn across the world while the need persists. The drying of re-usable pads was less of a problem in primary than secondary research as women seems to have come up with novel solutions to this issue. Where it was found problematic was in societies where taboo and stigma are still rampant or where weather conditions pose a problem to proper drying. More research is required to clarify the real need. The solution to all the above seems to be menstrual cups. They are environmentally friendly, has a potential lifespan of over 10 years and only requires a little water to rinse each time it is emptied. But it is not a silver bullet and still present several obstacles. The classification of cups as medical equipment restricts imports and distribution and will only be overcome with policy amendments. Proper cup training requires capable trainers and reports vary concerning the pace of uptake. Some report lightning-fast uptake especially under the poorest of the poor whilst others report slow uptake not only among users but also among NGOs. Culture, taboos, and stigma like touching of genitals and menstrual blood all play an important role and should be considered when introducing cups to the uninitiated. In areas where virginity is an obstacle to insertable menstrual products, education of society is required to elucidate the fact that only sexual intercourse can affect virginity, in writer's view itself an archaic idea that perpetuates inequality with the notion of women as valuable possessions. The proposal favours menstrual cups but in areas where concerted educational efforts are not able to open users to menstrual cup use, re-usable pads are more sustainable than disposable pads and tampons.

Misinformation and ignorance abound and are unfortunately not restricted to the forgotten parts of Africa. Society both in HICs and LICs, educated or not seem to be affected by misinformation and ignorance on the subject. No wonder education is considered a prominent obstacle and in the words of Nelson Mandela "the most powerful weapon which you can use to change the world". And a weapon is certainly what is required considering the global scope of the problem. Education is certainly required at grassroots level but what is surprising is the call for education of leadership, especially those of NGOs, on the importance of menstruation. Without full support by all role players efforts will always lack the required impact. Something that needs to be addressed is the implementation of school curricula. There is no point in fighting the good fight to get curricula in schools if teachers are too embarrassed to present it to students. Specific educational programmes and workshops focusing on teachers are required to remove the unease, but it also goes to the broader social education that is required to get people to talk freely and intelligently about the subject. This should take place within cultural boundaries and though cultural sensitivity is important it should not become a barrier to action but rather lead to a nuanced approach in different geographical areas. Education is not a once off affair and should be repeated and approached from different angles to have maximum impact. The information explosion and widespread use of social media has changed the way people learn and communicate. Educational opportunities are no longer constrained by time and space and even in times like the present where a pandemic limits movement and personal contact, education can continue. Education on the environmental impact of menstrual products is crucial to enable women to make informed choices about product use and disposal. Of utmost importance is assuring girls are kept in school. Menstruation should not become a barrier to proper education that may open the door to a worthwhile future. Provision of period products, education and breaking down stigma and taboo all play an important role.

It is not surprising that policy emerged as a prominent obstacle given its central role in mitigating public health issues and advancing health equity. Public health policy should aim to achieve public health goals, but these often get side-lined by misinformation, prioritisation, and political self-interest. Misinformation is at the heart of many obstacles in the MHM field and often acts as a barrier to political will to change policy. The lack of honest open dialogue in the public arena hinders policy development and implementation that will ensure MHM needs are met at all levels of society by all that require it, and this is only attainable by implementing community-based health education campaigns and policy. Apart from awareness and education the best available research evidence is required to initiate policy and produce policy language that is clear and detailed enough to prevent different interpretations. Providing a solid evidence base of the impact of MHM on the broader social, economic, and public health issues of society will promote MHM at policy level. Policy is only effective if implemented and this requires long term partnerships and coalitions between all stakeholders across all involved sectors. A whole of community-based approach that is consistently monitored and evaluated to measure effectiveness is crucial. Organisations active in MHM seem willing

to assist with policy development but what is lacking is impetus on community and government level. The appropriate policies, if consistently implemented will improve public health by reducing identified obstacles such as finances through government budgets, period poverty through free period products and scrapping of tax on period products, education through mandated inclusion in school curricula, hygiene through safe and private school and public bathrooms, awareness drives to reduce stigma and taboo and standards and legislation to reduce the impact of period products on the environment.

Stigma is an obstacle that presents considerably more problems and requires more finesse. Not only is the secrecy; stigma and taboo surrounding menstruation deeply rooted in the social structure, but it is also part of culture in many instances. This explains why efforts to reduce period poverty and hygiene have often been prioritised above stigma and taboo to prevent stepping on toes while still making a difference to those that need it most. Through the looking glass the endless list of wild and wonderful restrictions and beliefs imposed whilst menstruating seem all but crazy. They include not touching water or food, not making mayonnaise or whipped cream as it will curdle, washing pads before disposal to prevent ghosts from haunting you, hiding used pads so that men would not be able to put a curse on you and get rich, not being allowed in the home or around people and refraining from sexual intercourse during period as it will kill the partner. Out there as it may seem, many cultures believe strongly in these myths and it requires sensitivity and respect to address these issues. The only way to bust these myths are through continued awareness and education. As they are widespread in LICs and HICs alike, research is required to ascertain what interventions would influence social norms across cultures to improve menstrual health globally. Other than period poverty, stigma is the main reason girls refuse to change pads at regular intervals at work or at school. This may lead to all kinds of health problems including infections and infertility. Exclusion, fear, and judgement have a decidedly negative effect on school and work attendance but also on mental health. When women are repeatedly told that they are dirty, a threat to society and they live in fear because of something completely out of their control it takes its toll. Knowledge and awareness are the only ways out and Nepal is an example where awareness and education has led to the outlaw of the practice of Chhaupadi and a decline in the number of households where it is practiced. Once again social media is a helpful tool to get the information out there, but breaking taboo is not just sharing information, it requires a change across society as women are often not allowed to decide on these issues by themselves; suggesting addressing stigma by building public awareness through critical education or public dialogue, a participatory process is needed to bring about a transformation of social values in society.

The expressed need for partnerships reminds us that no man is an island. All organisations whether big, small, working in single or multi-country settings rely on partnerships. Partnerships may take many forms and may assist with funding, logistics, bureaucracy, overcoming language and cultural barriers, distribution, education, or programme rollout. As noted previously funding is a crucial part of MHM work and without financial partners the work will not get done. Data in fact revealed philanthropic organisations that exist for the sole purpose of funding MHM endeavours. The geographical complexity of the MHM arena requires collaboration between organisations and local partners to get past red tape, introduction to the right people in government and assistance with understanding the local culture and language. There are a multitude of organisations active in the MHM field some with menstruation as a primary focus while it formed part of a suite of offerings by larger organisations. What became apparent after data analysis is the need for a multi-sectoral collaborative approach between organisations. A holistic approach between all sectors working together in open networks would prevent duplication of efforts and enable smaller organisations to have a bigger impact. The misconception that small organisations will leech of larger ones is not necessarily true as data revealed one specific instance where a small organisation who already did the footwork was able to provide educational resources and training to one of the world's largest organisations. Efforts like the cup coalition are moving in this direction but what writer is proposing is a complete collaborative database where the details of every organisations active in the field is listed. An MHM "exchange" iwhere organisations can identify potential partners according to country and area of activity and where financial/resource offerings and needs may be posted to assist in streamlined service delivery and reduced duplication. Depending on the sophistication of the site it could include research findings and a monitoring and evaluation tool of success and failure in a specific area to adjust efforts before wasting time and money to deliver a robust response to the MHM crisis. Expecting this level of cooperation is perhaps a bit ambitious but it could project a united stand that will further awareness and promote the importance of MHM globally.

3.3. Conclusion

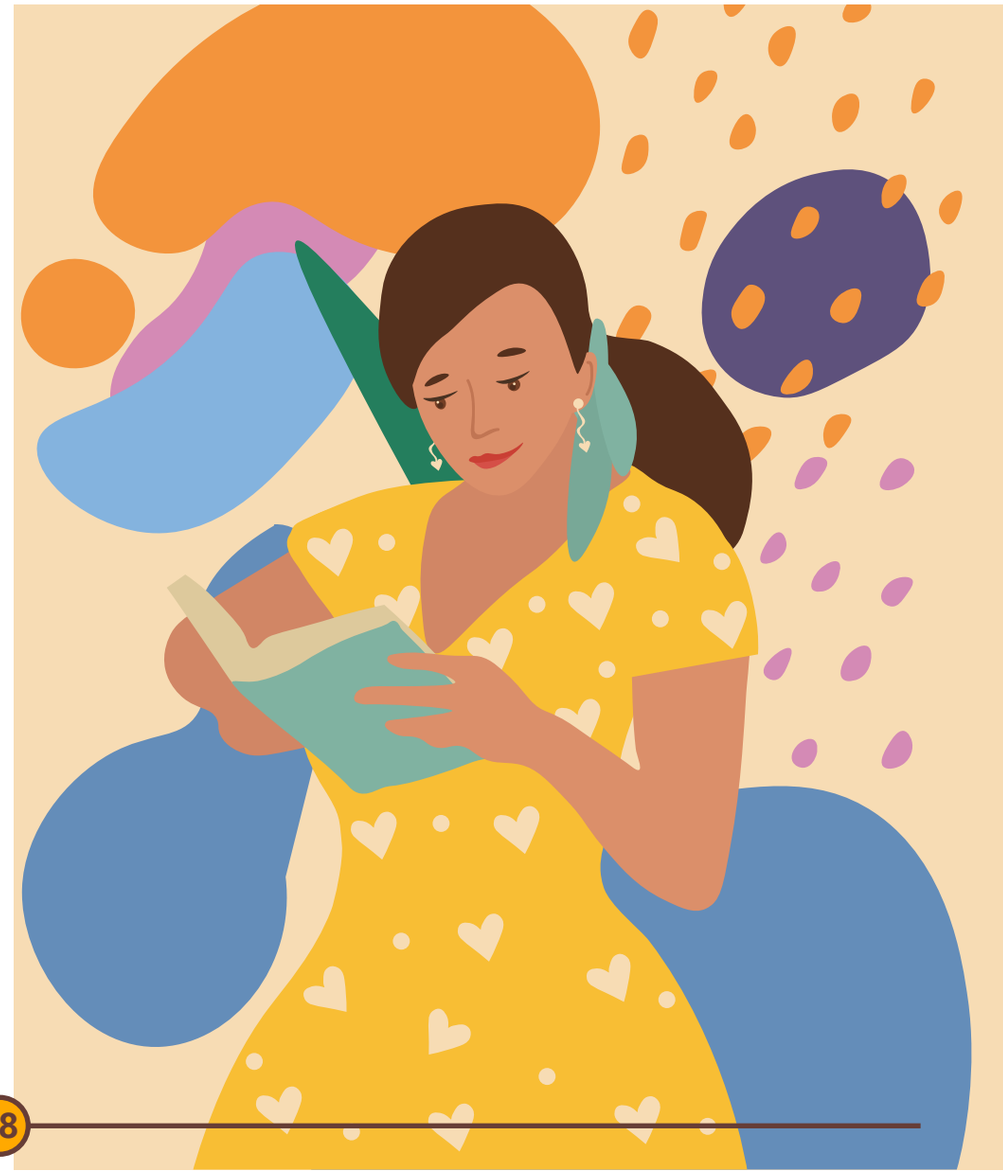
Menstruation affects half the world's population amounting to approximately 2 billion people globally dealing with it monthly. It is a normal female biological function, yet it has attracted unwarranted fear and stigma with patriarchy and misinformation relegating it to secrecy and shame. Over the ages this positioned menstruation as part of the social order. The impact of menstruation has long been underestimated and the slow climb to public health status had its roots in the education of girls to close the gender gap in the mid-2000s. It emerged as a key issue, influencing public health initially in relation to gender, sexual and reproductive health and later in WASH and education. It has gained traction since, with an increase in literature and efforts over the past ten years. Increased awareness created larger funding opportunities. This allowed more research to not only identify but also address menstrual issues of shame and taboo that impact health, basic education, and productivity. Despite strides made since the early days, MHM as a public health issue remains complex with multiple issues remaining. Without equality, women will never make decisions concerning their health and well-being. Insights into their private lives often reflect little input into access to private ablutions or menstrual products and on a public level, similar

exclusion from decision making in MHM programmes and policy. Every person who menstruates requires adequate and safe menstrual products. The wider impact of period poverty on the economic, educational, social, and political arenas of public health extends beyond the management of vaginal bleeding. It is also demonstrated when women are absent from work or school because of pain or the fear of menstrual leaks.

Proper menstrual hygiene requires access to safe and private bathroom facilities to change and wash, hands and menstrual products. Despite increased efforts to include menstrual needs in WASH programmes there is consensus that it will require time, education and political will to dispel taboos that deny women access to water and proper disposal facilities. No one should feel ashamed or be subjected to exclusion because of their period. The deeply entrenched socio-cultural nature of stigma and taboo make it more difficult to deal with as criticism is often perceived as a cultural attack. Education plays a crucial role to properly inform every male and female regarding the facts and importance of dealing with menstruation. Periods should not cause absenteeism or deny young women the opportunity of an education, jeopardising their future. Mounting evidence of the link between unhygienic menstrual practises and infections and infertility as well as the overlooked mental anguish associated with period poverty, stigma and taboo highlight the importance of physical and mental health when dealing with menstruation. Menstrual products are central to proper MHM but should be sustainable while being comfortable and acceptable to the user. Alleviation of the need for products must take place with an appreciation of the potential damage to the environment when developing, distributing, and disposing of menstrual products.

While there were certainly isolated victories such as the scrapping of taxes on menstrual products, data shows that obstacles on a global level have not changed considerably over the past five years. Literature, questionnaires, and interviews alike reported challenges faced because of funding, menstrual education, policy, stigma, and inadequate partnerships. Funding shortages result from the scope of the MHM area but also from misinformation as to the impact of MHM on society. Menstrual education is required to inform both male and female of the correct facts surrounding the biology and impact of menstruation and in so doing open discussion to break down stigma and taboo. Education is a driver of economic prosperity and as such menstruation should not be used as an excuse to deny girls an education. Well-written and consistently implemented policy is required but still lacking to advance the MHM agenda and requires strong and well-informed leadership and collaboration across all sectors. Only increased awareness, education, and open discussion on the subject will break down entrenched stigma and taboo and improve equity. In working to achieve the lofty goal of normalising menstruation, partnerships remain a challenge. Co-operation and collaboration are crucial to strengthen efforts and conserve already constrained resources.

The popularity and increased availability of free or low-cost Wi-Fi, even in remote areas of LICs, renders social media an indispensable tool to address the challenges. The proposed solutions to the identified obstacles are all rooted in awareness and open discussion. Firstly, inform governments and society on the impact and importance of menstruation and normalise the subject through continued discussion utilising social media campaigns and crowd funding to make it more appealing to attract donors. Secondly, utilise social media and the internet to advance menstrual education of all sexes and include and implement age-appropriate menstrual education into school curricula whilst normalising the subject through awareness campaigns and community-based interventions aimed specifically at teachers and other educators in involved in the field of youth education and training. Then increase advocacy, education, and Community-Based Participatory Action Research to break down stigma and open government and society to develop and implement policy. Finally, develop a database where open network collaboration can forge partnerships to strengthen efforts, streamline resource allocation and reduce duplication.



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