Beyond menstrual hygiene: addressing vaginal bleeding throughout the life course in low and middle-income countries

Marni Sommer,1 Penelope A Phillips-Howard,2 Therese Mahon,3 Sasha Zients,1 Meredith Jones,1 Bethany A Caruso4

ABSTRACT

Girls and women experience numerous types of vaginal bleeding. These include healthy reproductive processes, such as menstruation and bleeding after childbirth, but also bleeding related to health conditions, such as fibroids or cancer. In most societies, the management of menstruation is handled covertly, something girls are often instructed about at menarche. The management of other vaginal bleeding is often similarly discreet, although behaviours are not well documented. In many societies, cultural taboos frequently hinder open discussion around vaginal bleeding, restricting information and early access to healthcare. Additionally, the limited availability of clean, accessible water and sanitation facilities in many low and middle-income countries augments the challenges girls and women face in conducting daily activities while managing vaginal bleeding, including participating in school or work, going to the market or fetching water. This paper aims to highlight the key vaginal bleeding experiences throughout a woman's life course and the intersection of these bleeding experiences with their access to adequate water and sanitation facilities, information and education sources, and supplies. The aim is to address the silence around girls and women's vaginal bleeding and their related social, physical and clinical management needs across the life course; and highlight critical gaps that require attention in research, practice and policy around this neglected topic of health and gender equality.

INTRODUCTION

Attention to women and girls' health risks and outcomes beyond the reproductive years is increasing,1 2 with life course approaches emphasising that health is dynamic and cumulative, and influenced by genetic, biological, behavioural, social and economic contexts.3 This paper assesses the range of vaginal bleeding episodes ('episodes' herein used to represent episodic vaginal bleeding, including both menstrual and due to other causes) that girls and women may experience during the life course, and their associated needs for information, supplies water and sanitation. Based on the recent, growing knowledge base of the challenges women and girls in low and middle-income countries (LMIC) face during menstruation due to these needs being largely unmet,4 5 this paper hypothesises that the evidence to date represents the ‘tip of an iceberg.’ A life course approach is required, one that looks at vaginal bleeding including and beyond menstruation, to comprehensively address the critical needs of girls and women for information, supplies, water and sanitation in LMICs.
Throughout the life course, girls and women experience numerous episodes of vaginal bleeding, many of which remain hidden due to misinformation, fear, embarrassment, shame and taboo. This features the more widely known bleeding experience of monthly menstruation, as well as other less discussed bleeding episodes, including those related to pregnancy, childbirth and postpartum, miscarriage, cancers and endometriosis (see table 1). To navigate these experiences, girls and women require factual and supportive information that enables them to differentiate between healthy and abnormal bleeding, to understand and take care of their bodies or those of dependents who may require assisted care, and to seek health advice appropriately. To manage vaginal bleeding hygienically and with dignity requires adequate (clean, safe, private, affordable and accessible at any time) water, sanitation and hygiene (WASH) facilities, and supplies (ie, soap, sanitary products, basins). Basic essentials required to manage menstrual needs have only recently been characterised (see box 1). The ways in which women and girls manage these bleeding experiences can vary greatly depending on factors associated with the bleeding itself, their particular life course trajectory (age, agency, previous life experiences) and the broader physical and social environments in which they operate. For women living in LMICs, support and WASH services are particularly lacking.

Definition of adequate menstrual hygiene management

Women and adolescent girls are using a clean menstrual management material to absorb or collect menstrual blood, that can be changed in privacy as often as necessary for the duration of a menstrual period, using soap and water for washing the body as required, and having access to facilities to dispose of used menstrual management materials. They understand the basic facts linked to the menstrual cycle and how to manage it with dignity and without discomfort or fear.

The types of bleeding experienced over the life course

There are numerous types of vaginal bleeding experienced by girls and women. Some are part of a healthy reproductive cycle over the life course, and others are linked to specific disease conditions. The majority of girls and women will experience monthly menstruation. Given the declining age of puberty (and menarche) and decreasing fertility rates in many parts of the world, the number of years during which a girl or woman will experience monthly menstrual bleeding has expanded along with the number of episodes. If the average girl reaches menarche around age 12, and the average age of menopause is 51–52 years old, that is over 40 years of monthly bleeding (480 months, estimated 2400 menstrual-related bleeding days for average cycle length of 28 days), with exceptions for disrupted menstruation due to stress, travel, nutrition, pregnancy and breast feeding (although many pregnancies include spotting). A proportion of those will experience some form of menorrhagia or abnormal bleeding, which can include spotting throughout the month, episodes of very heavy and painful bleeding or months with no bleeding. Women are likely to experience episodes of bleeding for 4–6 weeks after a miscarriage and 4 weeks postpartum. This has particular significance for those in LMIC with high fertility rates (ie, multiple pregnancies and/or miscarriages). In addition, it is estimated that 5%–15% of women of reproductive age globally have abnormal uterine bleeding. Episodes of vaginal bleeding may occur prior to menarche, and may occur during perimenopause and may occur postmenopause due to illness conditions.

Although minimal prevalence data exist across LMIC, there are likely to be significant numbers of women who experience vaginal bleeding related to reproductive health conditions, such as fibroids or endometriosis. One study from Nigeria suggested that 29% of women of reproductive age have fibroids. Both conditions can mean extremely heavy irregular bleeding along with discomfort. A cross-sectional internet study among 21,476 women in eight high and middle-income countries found that 33% of women with fibroids experienced bleeding between periods compared with 14% of women without, and significantly greater proportions of women with fibroids reported heavy menstrual bleeding, prolonged menstrual bleeding, and more frequent and irregular menses as compared with their counterparts. In Senegal and Mali, 52 and 51 (per 100,000) of disability-adjusted life years are estimated for uterine fibroids. The causes of both uterine fibroids and endometriosis are unknown.

As life expectancies increase, women across LMIC are more likely to experience uterine or cervical cancers, both of which cause vaginal bleeding. Cervical cancer, caused by certain strains of human papilloma virus (HPV), is the most common form of cancer currently reported among women in sub-Saharan Africa, with 34,000 out of 100,000 diagnosed each year (and limited screening suggests underdiagnoses). HPV is spread through vaginal, anal and oral sex, meaning that previous life events influence risk.

These issues suggest significant implications for the girls, women and caregivers who may struggle to manage illness-related vaginal bleeding for themselves or their dependents. All vaginal bleeding episodes potentially cause subjective experiences of fear, discomfort and anxiety. Physically, frequent or prolonged bleeds add to girls and women’s risk of anaemia, particularly for those who are nutritionally compromised, or having comorbidities such as HIV. Concomitant weakness, fatigue and other symptoms may affect their ability to complete the heavy burden of chores, a challenge compounded by insufficient access to safe, private and clean WASH facilities, and mechanisms for disposal of bloody absorbent materials, or private spaces for washing and drying reusable soiled materials, as well as a lack of adequate information and support.
Table 1  Types of bleeding episodes experienced from menarche to menopause

<table>
<thead>
<tr>
<th>Type of Bleeding Episode</th>
<th>Age Range</th>
<th>Normal Amount of Blood</th>
<th>Definition/Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervical cancer</td>
<td>Any age, median age is 49</td>
<td>Heavy, irregular, painful or spotting</td>
<td>Cancer in the cells of the cervix, can be related to the human papilloma virus; bleeding is often unrelated to menses</td>
</tr>
<tr>
<td>Endometriosis</td>
<td>Most cases diagnosed between 25 and 35 years of age</td>
<td>'Normal' amount of blood</td>
<td>A condition resulting from the appearance of endometrial tissue outside the uterus; heavy MP, irregular MP, painful MP or spotting, abdominal cramping, constipation of nausea</td>
</tr>
<tr>
<td>Menstrual bleeding</td>
<td>Usually between 8 and 16 years</td>
<td>'Normal' length of time</td>
<td>Definition/symptoms</td>
</tr>
<tr>
<td>Miscarriage</td>
<td>From age of menarche to menopause (ages ~8–60)</td>
<td>Abnormally heavy bleeding; MP lasts longer than 7 days or is too frequent (less than 21 days between periods), spotting or bleeding between MP or during pregnancy</td>
<td>Process of discharging blood and other materials from uterine lining monthly, can be accompanied by cramps, irritability/heightened emotions, tender breasts</td>
</tr>
<tr>
<td>Menorrhagia</td>
<td>From age of menarche to menopause (ages ~8–60)</td>
<td>60–90 ml or more</td>
<td>Menstruation can be heavy, irregular, painful or spotting; bleeding likely to occur during MP; varies</td>
</tr>
<tr>
<td>Menarche</td>
<td>From age of menarche to menopause (ages ~8–60)</td>
<td>2–7 days is normal; cycles are often irregular for 1–2 years</td>
<td>Definition/symptoms</td>
</tr>
<tr>
<td>Perimenopause/ menopause</td>
<td>Usually mid-40s to early 60s; average age 51–62</td>
<td>Average blood loss is 30–40 ml, with 90% of women &lt;80 ml</td>
<td>Time before and during the end of menstruation in the life cycle; absence of MP, spotting, heavy or irregular MP, hot flashes/nights sweats, vaginal dryness</td>
</tr>
<tr>
<td>Postpartum haemorrhage</td>
<td>Menarche to menopause (ages ~8–60)</td>
<td>Excessive vaginal bleeding Up to 6 weeks postpartum</td>
<td>Excessive bleeding after childbirth; vaginal bleeding, fast heart rate, low blood pressure</td>
</tr>
<tr>
<td>Sexually transmitted infections</td>
<td>Any age if sexually active</td>
<td>Heavy, spotting</td>
<td>Diseases passed on through sexual contact (i.e., chlamydia, gonorrhoea, pelvic inflammatory disease, endometriosis)</td>
</tr>
<tr>
<td>Uterine fibroids</td>
<td>Can occur by age 20, usually between 35 and 54</td>
<td>Menstruation can be heavy, irregular, painful or spotting</td>
<td>Non-cancerous growths in uterus that can develop during childbearing years; heavy MP, prolonged MP, pelvic pressure, frequent/discomfort urination</td>
</tr>
<tr>
<td>Uterine polyps</td>
<td>Rare before 20, can occur after menopause</td>
<td>Lighter spotting</td>
<td>Usually non-cancerous growths attached to inner wall of uterus; irregular or excessive bleeding after menopause can occur</td>
</tr>
</tbody>
</table>
The challenges of managing vaginal bleeding in low-resource contexts

Although girls and women living in high-income countries may struggle to understand the nature and length of their menstrual cycle, most will have access to information resources and support (ie, internet, clinics, libraries) to confirm their bleeding is healthy or if clinical care is needed. Nearly all girls and women have access to private, clean, safe toilets with water and disposal at home, school, work and in public places, and a range of sanitary products so they are able to manage regular or unexpected/irregular bleeding and differing blood flows with dignity, privacy and comfort. This may not be the case for homeless or hard to reach girls and women in high-income countries, or those who are otherwise disadvantaged in relation to their access to credible information and adequate WASH facilities, such as prisoners and migrant workers.

Although there exists almost no literature on management of other episodes of vaginal bleeding in LMIC, there is growing evidence on the menstruation-related barriers facing adolescent girls and female teachers in school environments. These include the inadequate provision of guidance and support, supplies and WASH facilities in schools. Girls across LMIC are frequently not informed about menarche prior to their first bleeding episode, and studies have highlighted the misconceptions and shame surrounding menstruation in many societies, and the fear and anxiety many girls experience at menarche and when menstruating at school. Even when menarche’s arrival is celebrated, girls are taught to hide and manage menstruation discreetly, with some findings illustrating a wider misunderstanding among women and adults in society. Studies are being conducted currently to assess if the provision of improved menstrual hygiene management information and supplies impacts girls’ educational, psychosocial, sexual and reproductive health outcomes.

The importance of water, sanitation, hygiene and supplies for bleeding management in low-income contexts

Sanitation facilities provide a potential private space for managing bleeding including washing, changing and disposal. Yet, over 2.4 billion people living around the world do not have access to improved sanitation. And, on any given day, more than 800 million girls and women between the ages of 15 and 49 are menstruating, suggesting that a significant number of women and girls likely do not have access to a place to manage both light and heavy episodes of bleeding. Moreover, this number is an underestimate given that women do menstruate before age 15 and after age 49 and it does not include women and girls who are experiencing non-menstruation-related bleeding. Non-menstrual types of vaginal bleeding may impact very young girls and women of advanced age who may need supplies and facilities that are more appropriate for their size and needs, but that may be unavailable. Further, even where facilities exist, some girls and women may avoid managing vaginal bleeding in toilets, if they consider them too dirty, unsafe or lacking necessary supplies. For example, in Niger, only 44% of women, and in Kaduna State, Nigeria, only 37% of women report having everything they need to manage their menstruation.

There also exists a gap in empirical evidence on the impact of inadequate WASH in the workplace for girls and women experiencing vaginal bleeding, and on the violence-related challenges facing those using communal (and even household) WASH facilities when using outside toilets at night, or going for open defecation. Heavy blood flow is particularly difficult to manage where leaking (ie, blood staining the clothes) breaches the taboo of secrecy causing shame, and where inadequate facilities and supplies for bleeding management may disproportionately hinder engaging in daily activities of living.

In some contexts, there may be cultural practices restricting access to water or comfortable environments to manage vaginal bleeding, such as in Nepal where menstruating and postpartum girls and women are confined to sleeping in a cowshed or hut. In some cultures, menstruating girls and women are prohibited from touching water sources or using sanitation facilities given the association of menstruation with impurity. This may have implications for the ability to hygienically manage other vaginal bleeding.

There is also growing attention to the challenges displaced menstruating girls and women face, including those in transit, highlighting the need for increased attention to menstrual management in humanitarian response contexts. This includes, for example, the improved provision of supplies, information and WASH facilities with disposal systems, along with addressing other vaginal bleeding needs (ie, pads in health clinics). Displaced girls and women are often living in crowded conditions, with numerous family members or strangers crowded into shelters, and sharing WASH facilities that may lack locks and water. The hygiene kits handed out to households (ie, clothes or sanitary pads, underwear, buckets) may not adequately account for the numbers of menstruating girls and women in a given household, or for episodes of vaginal bleeding beyond menstruation.

In focusing on the intersectionality of bleeding episodes and WASH, it is important to highlight the need for facilities to wash or bathe, which are not always the same spaces in which girls and women can best manage bleeding-related materials. It is also important to include disposal facilities, so that women and girls do not face stress from blood-stained materials being seen by others.

Education and awareness of healthy and abnormal bleeding in LMICs

The structural realities of girls and women’s lives in many LMICs create a gap in information through, for example, minimum media exposure to health messages, the lack of accessible health clinics that are focused on reproductive...
ongoing secrecy around vaginal bleeding

100

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More specifically, recent studies in India highlighted

the ‘sanitation-related psychosocial stress’ girls and

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episodes of vaginal bleeding beyond menstruation

are not noted, menstruation-related behaviours were

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and illnesses, girls and women may struggle to access

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bodies and to receive treatment for their conditions,

and to openly discuss an increased need for hygienic

toilet facilities and supplies.

Ongoing secrecy around vaginal bleeding

Though international development priorities have, to

some extent, targeted adolescence and reproductive

health related to childbearing, there is a marked

silence around vaginal bleeding that girls and women

experience over 40–50 years of the life course. This

silence hinders attention to the significant informa-

tion, and WASH-related needs that they face to manage

bleeding, and may hinder the seeking out of healthcare

as needed.

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CONCLUSION

There is a significant empirical gap in the evidence on

episodes of vaginal bleeding and the related information

and management needs of girls and women in LMIC.

Along with better understanding of the information,

supplies and WASH-related challenges that girls and

women encounter in different cultural, economic

and geographical contexts, there is a need to develop

appropriate evidence-based policy and programming

to meet their needs. Individuals’ experience of health

throughout the life course depends on the resources

available in the places inhabited, and the agency they

are able to exercise given physical and social opportuni-

ties and constraints. A first step is breaking the silence

around the topic of vaginal bleeding, from the global

to the local level, so that girls and women are able to

seek out the healthcare and management required with

confidence and support.

Key recommendations for addressing support for

women and girls in LMIC around vaginal bleeding in

the future include the following: (1) a need to system-

atically evaluate the empirical evidence on vaginal

bleeding to understand the extent to which women and

girls are impacted and the gaps that need to be addressed

with further research; (2) a need to develop global and

national policy and strategic plans with guidelines to

address these needs and develop relevant programming

in LMIC, ranging from health promotion to improved

availability of WASH infrastructure and supplies; (3) a

need to conduct research with girls and women who

experience vaginal bleeding unrelated to menstruation

to understand their needs and how these needs may

align with or differ from those at menstruation; (4) a

need to ensure efforts to strengthen health systems and

health worker capacity to improve women’s health as

part of the post-2015 agenda actively address vaginal

bleeding, which may be a symptom of greater health

problems; (5) a need to expand ‘awareness campaigns’

for bleeding-related signs and symptoms of disease in

LMIC; and (6) a need to engage new actors, including

encouraging sanitary hygiene manufacturers to include

easy to read information on difference between normal

and abnormal bleeding, and when to seek care.

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