Behind closed doors: the hidden needs of perimenopausal women in Ghana

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Introduction

Women going through the perimenopause are unnoticed by society, but deserve attention in geographies of reproduction. The perimenopause includes "the period immediately before the menopause (when the endocrinological, biological and clinical features of approaching menopause commence) [up until the] first year after menopause" (Utian 1999: 284). The menopause marks the permanent cessation of menstruation, when a woman has not menstruated for twelve months. In reproductive geographies, social aspects of reproduction are the focus of most of the literature.

The perimenopause is an individual experience that is not shared with others, nor is it visible to geographers (DeLeyser and Shaw, 2013). Women's experiences of the perimenopause are experienced in isolation as though each woman is in a 'bubble' on her own. Feminist oral history methodologies, adopted in this research, seek to burst these isolated bubbles and validate women's individual perceptions and experiences of the perimenopause.

Drawing upon narratives of women, this chapter is about the water, sanitation and hygiene (WASH) needs of women during the perimenopause. Based upon doctoral research conducted in Accra and Kumasi, Ghana, this chapter looks at the everyday hidden geographies of the perimenopause through women's use of water and sanitation during this particular reproductive stage. Using a feminist approach, this research employed oral history interviews, participatory photography and

participatory mapping, complemented with data from observations. The research objectives were focussed around three main questions: 1) What are the hygiene needs of perimenopausal women? 2) What are the water and sanitation needs of perimenopausal women? 3) How are these needs of perimenopausal women affected by human, natural, financial, social and physical factors? This chapter goes further to ask, what are the gendered and spatial aspects of the perimenopause as demonstrated through WASH? Gender-water geographies are well-discussed, as illustrated in the special issue of *Gender, Place and Culture*. In this issue, Harris (2009) calls for gender and water theorists to pay greater attention to the effects of neoliberalisation in water governance. Sultana (2009) draws upon fieldwork on arsenic in water to explore how types of water and ideological constructs of masculine and feminine affect people's relation to water, and how ecological and social factors interact to reinforce inequity in relation to gender and water. Alhers and Zwarteveen (2009) draw upon agricultural water use to challenge the neoliberalisation of water through a feminist perspective. This chapter expands these debates to explore gender-water relations, specifically exploring women's relation to water through hygiene during the perimenopause. . By examining how limited water and sanitation infrastructure in patriarchal Ghana dictates perimenopausal women's movements through space, this chapter builds upon discussion by Laws (1993) who explored how patriarchal social structures limit women's spatial mobility,Over the past decade, there has been an increasing focus on menstrual hygiene management (MHM) in the WASH sector. This work has predominantly focused on the hygiene needs of adolescent schoolgirls experiencing their first menstrual period or menarche, marking the start of the reproductive life stage (for instance Crofts and Fisher 2012; Sommer 2011; Kidney *et al* 2013; Jewitt and Ryley 2014).

Perimenopausal women, who are aged between 47 and 51 on average (Loue and Sajatovic 2008), account for an estimated 3.6% (UN 2015) of the 2.4 billion people who lack access to improved sanitation and the 663 million people without improved drinking water (UNICEF and WHO 2015). However, age is only an approximate indicator of perimenopause, as the age at which symptoms are experienced by women can vary.

This chapter explores the hidden geographies of perimenopausal women as demonstrated through WASH use in Ghana. The country has made progress in the provision of an improved water supply to over 90% of the population by 2015 but sanitation provision lags behind, with less than 60% of Ghanaians having access to safe management of excreta, and solid and liquid waste (WHO/UNICEF 2017). The level of “adequate” provision means that basic needs might be met, but any additional needs of perimenopausal women may still not be met.

Women in Africa are conventionally associated with particular spaces such as the kitchen (Robson 2006) or water collection points (Fisher 2006). Women are not typically associated with latrines and bathrooms, and their WASH needs—particularly during perimenopause—are spatially, temporally and physically hidden. Hygiene-related activities such as toileting or bathing are conducted secretly and in private. Knowledge about practices such as menstrual hygiene materials used are not shared amongst women due to . Existing discourse on gender mainstreaming in sanitation provision is consistent with a neglect of women’s needs across the life course, and especially the perimenopause. Hygiene is vital to the everyday geographies of the perimenopause as performed within different sanitation spaces, regardless of the degree of sanitation provision made.

The Perimenopause

Biological understandings

The perimenopause is understood biologically through physical changes in the body, marking the transition from the reproductive to the non-reproductive stage (Utian 1999). The perimenopause is often referred to as ‘the change of life’ or the ‘Change’ as the female body ages and begins to lose its fertility (Torpy *et al* 2003; Greer 1991). Perimenopausal women experience a wide range of physical symptoms, including hot flushes (Steams *et al* 2002), day and night sweats (Prior 2005), urinary incontinence (Sampselle *et al* 2002), heavy bleeding during periods (Duckitt 2010), irregular periods (Torpy *et al* 2003), vaginal dryness and dry skin (Avis *et al* 2009).

Cultural understandings of the perimenopause

Some reproductive geographies are explicitly evident and visible to others. Pregnancy, a visible stage of reproduction, is discussed in this book through choice of birth centres (Hazen) and home births (Whitson) or the lived experiences of pregnant graduate students at university (Merkle). Unlike pregnancy, the majority of symptoms of perimenopause are not 'visible' to the outsider, and are therefore not commonly discussed. Women have to self-identify as perimenopausal, as there is ambiguity over these symptoms and variation in the age at which they are experienced. Women may be reluctant to accept the perimenopause as it marks the end of reproduction and loss of the ability to have children. Acknowledgement that a woman is perimenopausal is not guaranteed, and they may not overtly identify as such, particularly in the early stages when they are still menstruating, albeit irregularly. Not only are symptoms not obvious, they may be actively hidden.

The perimenopause in the Global North

The 'hiddenness' of the perimenopause as a reproductive stage of life is discussed in literature on cultural perspectives from the Global North. When women go through the 'Change' (Greer 1991), the end of reproductive years is marked privately, without any public rite of passage. Often it is difficult for a woman to talk to other women about her experiences, and so women have to deal with their changes alone, 'behind closed doors' and secretively. Whilst Greer writes as a feminist from the Global North, the limited knowledge about women's perimenopausal experiences in the Global South suggests that women also find it challenging to discuss the perimenopause in low-income countries.

Scholars have provided their own perspectives on what the menopause means. For Greer (1991), the menopause can be seen to mark the death of the

womb and the ovaries, thus, part of a woman is believed to die. The perimenopause is seen as a time for stock-taking and a time to be fully aware of what is going on, confronting the problem of ageing (Greer 1991). The menopause is often characterised by feelings of loss: of menstruation, childbearing, youth and in turn, womanliness (Mackie 1997). Thus, menopausal women often finds themselves ignored by their partners as sexual beings; the loss of their femininity leaves them invisible (Greer 1991). Invisibility of older women in film and fiction, which often give preference to younger women, contributes to silences surrounding menopause in wider society (Rogers 1997; Greer 1991). As DeLeyser and Shaw (2013, 504) summarise, “menopause is stigmatised for those who experience it first hand: women”. These factors collectively contribute to the limited exploration of menopause as a reproductive geography (DeLeyser and Shaw 2013). The limited geographical discourse stipulates that ageing bodies are coded according to what they can or cannot do (Laws 1995). Jones *et al* (1997) state that the menopause is a marker of when women are “too old” to become mothers. This literature does not go beyond the internal, individual bodily experiences of the menopause and does not relate the menopause to society, space, place, and the environment.

The perimenopause in Africa

The cultural beliefs surrounding the perimenopause and menopause vary significantly between different African countries, with the menopause viewed both positively and negatively according to different cultures. Africans consider the menopause itself, including the cessation of periods and symptoms such as sweats and flushes as part of the ageing process for women (Wambua, 1997). In Nigeria, the Hausa women see the menopause as a marker of freedom, for they are no

longer restricted in Hausa culture to remain within the boundaries of the homestead, as they have been from the day of marriage. Yet, the menopause also signals that a woman is no longer recognised as sexually active , marked by the prohibition of coitus from this point onwards (Johnson 1982). For the Wikidum women of Cameroon, the menopause brings sexual freedom, providing the opportunity for extra-marital relations without the risk of pregnancy. In Cameroon, tribes such as the Bamilikes see the menopausal woman as being as wise as a man and hence her position rises to that of a leader in society but for the Diis women of the Adamoua plateau, the inability to bear children is likened to being a man and menopausal women attract sympathy (Wambua 1995). Menopause itself is associated with ill health in some cultures, which argue that menstruation is part of the cleansing process that keeps women healthy (Wambua 1997).

Understandings of the menopause: The Ghanaian perspective

Issues that relate primarily to women are not widely talked about in Ghanaian society. Attitudes and beliefs about matters relating to menstruation and the menopause mean that these topics are taboos and not publicly discussed. The silences which surround menstruation are demonstrated through the limitations placed upon women: being forbidden from entering a house, cooking, associating with men, and participating in social activities, as menstruating women are considered unclean (Bhakta et al 2016).

The term “elder” is a mark of respect. In Ghana, women are considered to be “elders” by the age of 50-52, around the time of menopause. Women during perimenopause can be considered “elderly”, although according to local customs, a

person becomes elderly once they are the oldest family member, regardless of their age (Lartey, personal communication).

Records of Ghanaian beliefs in the past about the menopause are found in a few studies dating from over 50 years ago. The cessation of menstruation marked a new stage in a woman's life (Field 1960); women are now free to reside with men, participate in rituals from which they were prohibited whilst menstruating, and visit ancestral shrines (Nukunya 1969). The loss of fertility denoted women as being asexual, unable to fulfil what is regarded as their primary task: childbearing (Field 1960). This was particularly poignant in a patriarchal setting where men had a desire for many children, and the cessation of menstrual periods could initially be mistaken for pregnancy (Belcher 1974). Recent studies link hot flushes, night sweats, insomnia, anxiety, irritability, mood swings and short-term memory problems to witchcraft (Adinkrah 2017). Prevalence of these beliefs promotes a culture of silence about the menopause (Bhakta et al 2016).

Women and water

WASH is not just the provision of infrastructure; current debates focus also on equity and inclusion within service provision. Equity recognises how individuals differ from each other and identifies the support and resources required for them to realise their rights to WASH. Inclusion seeks to ensure that all, including the disadvantaged, discriminated against and marginalised, have access to services and that they have an active engagement in wider processes relating to these rights (Gosling 2010).

Women's experiences of the perimenopause, as well as other life stages, can be revealed through the study of the physical, spatial, and temporal elements of WASH use. To ensure equality for all women at reproductive health stages in a

WASH context, the needs of perimenopausal women have to be assessed, in keeping with the SDG agenda to “leave no-one behind” (UN 2016b; WSSCC 2015).

Women going through the perimenopause will have different experiences of their built environment compared with women of other age groups and with men. They have specific needs in relation to bathing, laundry, (menstrual) hygiene, solid waste management and sanitation, which become acute when these basic services are not readily available, especially at night. However, these women may be uncomfortable discussing these needs as the perimenopause is generally socially taboo. As the symptoms of perimenopause are not “visible” to the outsider, perimenopausal women may be overlooked. Women may also be unwilling to share their views with the (often male) providers of these services.

Hidden knowledge

Defining hidden knowledge: The Johari Window

“Hidden knowledge” is that which is known or held by particular individuals or groups, but is not shared with other people or recorded in writing. Hidden knowledge can be modelled by a simple matrix, the Johari Window (figure 1) (Shenton 2007) that consists of four panes for the forms of knowledge: “public”, “blind”, “hidden” and “unknown” (Luft 1961):

	Known to self	Unknown to self
Known to others	Public, or open knowledge	Blind knowledge
Unknown to others	**Hidden knowledge**	Unknown knowledge

Figure 1: The Johari Window

(1) “Public” or “open” knowledge is known by yourself and by others. Whether a water supply system is working or not is public knowledge, obvious to all.

(2) “Blind” knowledge is known to others but not to yourself. A water engineer may be aware of the benefits of sanitation, but the community may not know these benefits.

(3) “Hidden” knowledge is known by yourself, but not revealed to others. The WASH needs of perimenopausal women are hidden knowledge because women who are perimenopausal or menopausal are aware of their own personal issues, but others (including other perimenopausal women) are not.

(4) “Unknown” knowledge is not known by yourself or others. The best way to dispose of used sanitary pads in a low-income context is unknown to the women

using them. The WASH professionals also do not know the best methods and may not even be aware that appropriate disposal is an issue.

WASH needs of perimenopausal women as hidden knowledge

The perimenopause marks the end of women's fertility and is experienced individually by women alone (Greer 1991). Cultural taboos and private hygiene practices mean that knowledge of the perimenopause is physically hidden in space. Further, unlike puberty or pregnancy, there are usually no visible, physical markers on the body of the perimenopause which enable others to identify it, nor does the perimenopause leave a trail in public space. Perimenopausal experiences are perhaps more akin to the "geology" than the "geography" of reproduction and require a bit more digging, relying on the elements that rise above the surface to indicate what is happening underneath. WASH practices during the perimenopause, such as additional bathing or laundry, are undertaken by women, but each may perform them individually, in private, making these practices "hidden knowledge", in terms of both actual service provision and in the literature. Women seldom speak about their perimenopausal experiences with each other or with outsiders (DeLeyser and Shaw 2013), limiting the social understanding of the perimenopause in wider society. Menstrual hygiene management for adolescent girls has received greater attention relating to WASH through MHM than the experiences of perimenopausal women. Exploring these experiences requires perimenopausal women's bubbles to be burst and this requires the effective participation of those who experience perimenopause.

In the absence of explicit human interaction during perimenopause (unlike conception, pregnancy, birth and breastfeeding), experiences of perimenopause can be explored indirectly through women's interactions with the built environment,

focussing upon how hygiene needs arising due to perimenopause are met (or not met) through WASH infrastructure use. Exploring the WASH needs of perimenopausal women reveals women's individual knowledges about the built and natural environment and reflects their particular interpretation of their surroundings (Braun 2002).

Academic perspective: A lack of literature

A systematic literature search in 2013 produced little literature linking WASH and perimenopause. Fifty-nine search term combinations included: "menopause", "perimenopause", "older women", "ageing", "water supply", "water and sanitation", "hot flushes", "menstruation", and "bleeding". Various combinations of these terms, including those of relevance to perimenopause were used to search specialist WASH collections such as the Water, Engineering and Development Centre (WEDC) Knowledge Base and IRC WASH (see table 1). Both collections relate to WASH, such as water supply, MHM, solid waste and faecal sludge management. Conventional databases were also searched: Science Direct, Zetoc, Google Scholar, Medline, ProQuest, Web of Knowledge, and Geobase and Compendex (see table 2).

Search terms	**WEDC Knowledge Base**	**IRC WASH Database**
Menstrual hygiene management	25 retrieved 25 relevant	5526 retrieved 34 relevant

Perimenopause AND change of life	0 retrieved 0 relevant	0 retrieved 0 relevant
Ageing AND bleeding AND menstruation	0 retrieved 0 relevant	23 retrieved 0 relevant
Ageing AND perimenopause	0 retrieved 0 relevant	927 retrieved 0 relevant

Table 1: Sample results of literature search from specialist WASH collections

Search term	**Science Direct**	**Zetoc**

Menstrual hygiene management	1817 retrieved 12 relevant	22 retrieved 18 relevant
Perimenopause AND change of life AND sanitation	9 retrieved 0 relevant	0 retrieved 0 relevant
Ageing AND sanitation AND bleeding AND menstruation AND developing countries	18 retrieved 0 relevant	0 retrieved 0 relevant
Ageing AND perimenopause AND developing countries AND water supply	31 retrieved 2 relevant	0 retrieved 0 relevant

Table 2. Sample results of literature search of non-WASH specific databases

The limited literature on low-income countries focuses on perimenopausal symptoms, including, for example, India (Bairy *et al* 2009), Pakistan (Wasti *et al* 1993), Bolivia (Castelo-Branco *et al 2005*), Thailand (Chompootweep *et al* 1993), Brazil (da Silva and d'Andretta Tanaka 2013), Egypt (Gadalla *et al* 1986), and Zimbabwe (Moore 1981). The literature focussing on Africa indicates cultural perceptions (Wambua 1997) that may reinforce the hiddenness of WASH experiences of perimenopausal women. More common symptoms of perimenopause, such as hot flushes and night sweats, are recognised widely as

signs of natural ageing, but not as markers of the perimenopause (Wambua 1997). The lack of any significant body of literature on this topic means the needs of perimenopausal women were/are still hidden.

Methodology and case study

Overall, the literature on the menopause in Ghana focuses predominantly on medical and cultural understandings rather than WASH experiences. More in-depth study required participative methods adapted to cater for the taboos and sensitivities around the perimenopause and the menstruation in Ghana. Chambers (1997) calls for development professionals to "put the first last", and to empower individuals who are weak. Participatory research explicitly focuses on working with marginalised individuals who may be "vulnerable" (Kindon *et al* 2007). In this case, women may not appear to be or see themselves as "weak", "marginal" or "vulnerable" but the topic (if not the individuals) is socially excluded. In seeking to understand the needs of perimenopausal women through WASH, this study followed a participatory approach, applying "a democratic commitment to break the monopoly on who holds knowledge and for whom social research should be undertaken" (Fine 2008, 215).

Feminist research

Feminist research principles informed the methodology; research should be *with* women rather than *on* women.

> Feminist research is about the development and construction of knowledge founded upon the relationship between women's everyday experience, academic knowledge, political power and social action. This methodological approach facilitates the *central involvement of the women, who are active participants in the social construction of knowledge, empowerment and social change.* (O'Neill 1996, 131, authors' emphasis)

Hidden knowledge as a concept is not discussed in the realm of geography. Examining the needs of perimenopausal women explores hidden knowledge that is not recorded in the literature. The geographies of reproduction can note lessons from researching the needs of perimenopausal women. Feminist methods, which are participative and place the research focus on the experiences of women (Stanley and Wise 1993), can effectively reveal women's hidden reproductive geographies. Oral history narratives of WASH use give voices to perimenopausal women's intimate experiences of their environment. Participatory mapping (figure 2) provides a spatial analysis of perimenopausal women's issues with community-based infrastructure and services, and perimenopausal women taking photographs brings a visual element to a hidden experience. Collectively, these methods enable built environment professionals to gain an understanding of perimenopausal women's infrastructural needs, which is needed to improve service provision.

Figure 2: Mapping perimenopausal women's needs through group discussion in Kotei (Photo: Amita Bhakta)

Case study and data collection

Data was collected in two low-income communities: La, Accra (an urban setting), and Kotei, Kumasi (a peri-urban setting). La and Kotei both have limited WASH services. La lies within the La Dade-Kotopon Municipal Assembly (LaDMA) district of Accra, on the coast. Ghana's 2010 Census recorded that 44% of the broader LaDMA district population used public toilets, 24% drank sachet water (the local equivalent of bottled water in small sealed plastic bags), 31% had piped drinking water and 9% collected drinking water from a standpipe (Ghana Statistical Service 2014). La has the highest population density in LaDMA with 120 people per square kilometre. LaDMA was estimated to have a population of 333,817 in 2013. Infrastructural services are overstretched in high-density compound housing in the low-income township of La (LaDMA 2013). Water sources originally consisted of

springs, but now tend to be a piped metered community-based connection, which is billed each month. Seventy per centof those interviewed in La use one of two shared toilet blocks: one has nine toilets and no doors, and the second is the largest with 48 toilets, able to serve almost the whole of La.

Kotei is an ex-rural community which has become part of the city of Kumasi in the Ashanti region. With an old and a new town, Kotei sits adjacent to the Kwame Nkumrah University of Science and Technology campus (Awuah *et al* 2014). Almost half (47%) of residents in the main parts of Kotei rely upon three public toilets; 35% percent of household latrines are WCs and 18% are pit latrines (Leathes 2012). The main river source was the river Daakye, which still flows but it is not used today. Kotei residents still use some springs , which were the main source of water prior to the introduction of pipe-borne water supply in 1978 (Awuah *et al* 2014), along with a communal water storage tank and a rainwater harvesting system. Despite this , it was observed that the predominant drinking water for both settings was sachet water.

The women in this study were either unemployed and looking for work, retired or self-employed in low-income, marginal work such as petty trading. Across the two communities, fourteen oral history interviews, four participatory mapping sessions and five participatory photography exercises were conducted, exploring different aspects of women's needs. Oral history interviews identified the intimate hygiene practices undertaken to cope with perimenopause, the daily patterns and (ir)regularities of these hygiene practices, and the more public issues faced with WASH infrastructure. The narratives were complemented with visual data from the photography and spatial data from the mapping sessions, which brought to light women's issues with community-based WASH infrastructure.

Hidden needs of perimenopausal women: What goes on behind closed doors?

Hygiene is the “practice of keeping oneself and one’s surroundings clean, especially in order to prevent illness or the spread of disease” (Boot and Cairncross 1993, 6). It stems from the Greek term *hygienios*, which refers to health or being healthful (Reed and Bevan 2014). The hygiene practices of perimenopausal women typically occur in household bathrooms where available, compound-based bath houses (several homes are built around a common courtyard or compound) and, predominantly, in public latrines. In Ghana, these hygiene practices are affected by inadequate access to WASH services. The studies showed women have three particular hidden hygiene needs that have been present throughout their adult life, but change dramatically as they enter perimenopause: menstrual hygiene management (MHM), bathing and laundry. This section presents some preliminary findings on this, with scope for deeper exploration in the future into the geographies of the perimenopause, through WASH and beyond.

Menstrual hygiene management

The inclusion of MHM under WASH facilities is recent(House *et al* 2014). Perhaps due to its highly gendered and private nature, this aspect of sanitary behaviour has not been included with other aspects of sanitation, such as handwashing and excreta disposal. Irregularities in the menstrual cycle and heavy bleeding in menstrual periods for perimenopausal women affects their MHM needs and techniques, medical intervention and access to infrastructure.

MHM Techniques

Heavy menstrual periods, marking the entry to perimenopause, require MHM techniques that are different to those used during the reproductive years. In Ghana, access to commercial menstrual hygiene products (e.g., sanitary pads and tampons) is mainly restricted to women with high incomes. Less wealthy women rely on traditional techniques (e.g., rag cloths, cotton wool) perhaps combined with cheaper commercial products (often low absorbency sanitary pads), if they can afford them and they are available, to manage heavy menstrual flow. One older woman, who went through perimenopause at a time when commercial sanitary products were not widely available, explained her use of cotton wool and cloth combined:

> *I put the cotton on the cloth in order not to soil the cloth and when I'm going to take my bath I dispose of just the cotton whiles the cloth remains unsoiled* (Audrey[1], La, aged 70)

In some cases, women resorted to using very high absorbency products such as diapers:

> *It started flowing very heavily, and that was not how it was when it started, when it gets full; we were using diapers at the time and I change, then it full again until the fifth day when it will reduce.* (Audrey, La, aged 70)

Fears of leaking and staining from techniques used prior to perimenopause led to the use of a combination of traditional and commercial materials:

> *Yes it [bleeding] changed a lot, using the pad wasn't even enough, I had to support with pieces of cloth, and it flows in big clots…. I had it do that to help*

[1] All names have been changed to protect the identities of the women

soak up the blood…. I use both because of heavy bleeding, else the pad alone would have been okay (Abla, Kotei, aged 50)

Heavy blood flow during the perimenopause required medical intervention in some circumstances, with women going to hospital for treatment. Appropriate commercial pads were bought for one woman by her daughter in an emergency, after arrival at the hospital due to a particularly heavy period:

What I used from the house was so much soiled up so we threw it away then afterwards I started using the pad (Bertha, La, aged 60)

Access to infrastructure

Solid waste disposal

MHM during the perimenopause raised concerns about the disposal of menstrual hygiene materials. Multiple family-occupied compounds are the predominant housing style in La and Kotei, which is typical of many communities in Ghana (Gough and Yankson 2009). Lack of space in which to construct household toilets within compound housing necessitated the use of public, shared, pay-per-use community toilets for MHM. Public toilets (figures 3 and 4) lack incinerators or other means to discreetly dispose of the secret waste of heavily soiled cloths and pads, which women were embarrassed about others seeing:

I keep it on me till I get back (home) so that I can properly wrap it in a poly bag and dispose it. (Abla, Kotei, aged 50,)

Figure 3

Figure 4

Figure 3 and Figure 4: Public pit latrine without disposal facilities for menstrual hygiene materials (Photos: Abla, PhotoVoice participant, Kotei)

Solid waste management services at a community level were inadequate and, at times, lacking in both Kotei and La. Most women in Kotei used a community dumpsite, so carried their stained menstrual materials to it (figure 5). Waste collection services were provided at a household level in La, so women could dispose of menstrual materials at home. Women raised concerns about the affordability of waste collection, which came into sharper focus when hiding heavily soiled materials during the perimenopause.

Figure 5: Community dump site, Kotei (Photo: Kate Simpson)

Access to latrines

Latrine design is important for effective MHM. Heavy menstrual flow led women to use the latrines with extra care:

> *Any time after visiting the toilet, I end up staining the slab or the floor with blood and I usually feel bad thinking about another person coming to see that….I try to cover the blood stains with something, either a tissue, or wash it away with water…* (Abla, Kotei, aged 50)

Bathing

Infrastructure and bathing during perimenopause

The WASH sector is largely oblivious of the bathing needs of individuals (both men and women), with sparse discussion about suitable bathing infrastructure (Bhakta *et al* 2017), despite the "WASH" acronym suggesting "washing" is the focus. Instead the majority of discussions in WASH revolve around water supply and sanitation infrastructure provision. Discussions on hygiene practice have largely focussed upon topics such as handwashing, MHM, hygiene promotion, faecal sludge management and drinking water supply. Bathing has been explored from socio-cultural perspectives in the Global North (Pickerill 2015), but the WASH sector has not explored individual bathing needs in low-income countries to enable effective infrastructure provision (Bhakta *et al* 2017).Bathing is particularly important during the perimenopause. Women bathe more frequently than they typically would prior to entering perimenopause, increasing their demand for water. Unpredictable symptoms, which can occur at any time (heavy blood flow, hot flushes, urine leaks and sweating) are often dealt with through bathing.

> *When I am menstruating, I bath three times a day.* (Abla, Kotei, aged 50)

Bathing during perimenopause highlighted infrastructural issues faced by women. Women experiencing heavy flow during periods had particular need of appropriate infrastructure in order to bathe. Travelling beyond the local community was difficult for these women as a result:

> *I had no issue (at home) because my bathroom is just here, but I get worried when travelling and menstruating. I do think about access to bathing area outside home.* (Abla, Kotei, aged 50)

The perimenopause therefore restricted women's movements due to dependency upon bathing infrastructure. Women preferred to stay at home where they were certain of bathing facilites. The bathhouse within the home was the best available solution to privately wash away blood, keeping it hidden from view. Despite access to bathing facilities in the home, lack of supportive infrastructure through piped water supply and drainage made bathing a physical challenge. Poor design or absence of infrastructure presented social challenges for women as experiences that they wished to remain hidden in private would be exposed in public spaces against their will, in a setting where menstruation is taboo. The bath houses used by some women in La and Kotei were in some cases disconnected from any form of drainage, with wastewater disposal in the open street of a densely populated community. Discussions revealed that this was particularly embarrassing for women who were experiencing heavy menstrual flow, as they did not wish others to see wastewater in the street, stained red with blood, and splashed upon their feet.

Perimenopausal symptoms also required women to bathe at irregular times:

> *I sweat at night sometimes and when that happens I clean myself with a wet towel and, at certain time, I enter the bathhouse to pour water on myself* (Mansa, Kotei, aged 57)

This was difficult due to the irregular water supply. Constant water supply is compromised as a result of Ghana's power supply crisis, colloquially known as "dumsor", or on and off (Bayor and Yelyang 2015). Times of "lights off" made bathing to deal with irregular symptoms challenging. Storage of water for later bathing use when there was no piped supply became important.

These experiences illustrate the need for researchers and WASH practitioners to pay attention to bathing. Geographical and social discourses provide insight into cultural perspectives of bathing in the global North, which view bathing as a means to be accepted in society (Pickerill 2015). Bathing is seen as providing three benefits. Sanitation and social order denotes membership of civil society. Hydrotherapy and gentility marks high social status. Comfort, cleanliness and commodification address concerns of image and appearance (Shove 2003). The clear needs of perimenopausal women suggest the practical aspects of bathing, especially in low-income locations, also require attention.

Laundry

Laundry is another aspect of WASH that is rarely mentioned. Different symptoms of the perimenopause lead to an increase in laundry. Women change their clothing more frequently as clothes and bed sheets became stained and soiled due to sweating and menstrual blood flow:

> *Experiencing nights and day sweats means you will change your clothes often so that increased my laundry…I change twice or three times in a day.* (Mansa, aged 57, Kotei)

> *Sometimes when I go to sleep and wake up in the morning I realize my bedspread is soiled with blood. That makes me wash all the time.* (Abla, aged 50, Kotei,)

Physical infrastructure services for washing clothes in La and Kotei are generally inadequate. Laundering is part of women's daily domestic duties, but symptoms of the perimenopause impede the ability of women to wash their clothes. Women hand-washed clothes, using a bowl of water and soap, whichbecame more challenging due to joint pains during perimenopause and beyond. Women needed to adapt by finding comfortable positions to sit in to make this less painful.

Heavy menstrual bleeding impacted laundry processes. Group discussions with women in participatory mapping sessions identified that women set aside separate underwear for when they were menstruating heavily. Blood stains on underwear and menstrual cloths were a source of embarrassment, even when laundering, and women were wary, hiding blood stains from the sight of others:

> *What we do is that we wash the cloth so the foam comes on top of the water to cover up the blood.* (Felicia, aged 69, La)

Menstrual blood is socially taboo in male-dominated Ghanaian society. Women are considered unclean during their menses and may not take part in social activities and, notably, must stay away from men (Bhakta *et al* 2016). Laundry conventionally takes place in compounds where other people, including men, are in the vicinity. Laundry during the perimenopause was more heavily soiled due to the heavier menstrual flow than during conventional menstruation. Whilst the laundering was done where it could be seen, women used the physical bubbles of the soapy water to conceal the stains within their metaphorical bubbles in which they experience the

perimenopause. Water acts as a physical barrier to hide and cleanse away increased menstrual blood.

Hidden reproductive geographies: Learning from the WASH needs of perimenopausal women

This chapter has demonstrated perimenopausal experiences can be indirectly understood through observing women's practical interactions with the built environment. Women cannot easily describe their experiences of the perimenopause to others, but we can read their use of WASH infrastructure to convey their tacit messages about the perimenopause. Yet, WASH practices during perimenopause are conducted in spaces such as latrines that are not visible to others. The hidden geographies of perimenopause lie buried in private spaces, although these are at times within public settings, particularly in countries such as Ghana. The practices also have a temporal aspect, with some activities taking place at night, when public WASH services may be inaccessible. The repeated 24 hour cycle of night sweats and other symptoms is a significant factor in the narrative of women's experiences, in contrast to the longer, more linear pattern of narratives about birth.

As women's bodies become unpredictable and ever changing, so too do their MHM practices**.** With the onset of very heavy menstruation, women deal with multiple hygiene management issues privately, often at night. Washing bodies and clothes stained with blood in turn stain the water. Inadequate sanitation infrastructure can expose the taboo, private symptoms of the perimenopause in a public space. Private concerns are exposed by ill-designed spaces such as public sanitation

facilities. Laundry, bathing, water supply and sanitation shape the physical and social experiences of women through the perimenopause.

Examining the experiences of perimenopausal women expands existing debates on gender-water geographies (Harris, 2009; Sultana, 2009; Alhers and Zwarteveen, 2009). By looking at the intimate hygiene needs of perimenopausal women, this chapter expands these debatesby drawing upon women's own needs for, and individual relations with water. This chapter reinforces Laws' (1993) argument that patriarchal structures determine women's spatial mobility, as perimenopausal women's movements are influenced by infrastructure built by male providers.

Summary

The study of the perimenopause has been absent from reproductive geographies. The experiences and needs of perimenopausal women are hidden, exemplified through an absence of literature, and are individually experienced by each woman who does not discuss her needs with others. The post 2015 development agenda, through the SDGs, highlights the importance of paying attention to women's sexual and reproductive health, however, the perimenopause remains absent from existing discussions on women's sexual health in development, geography and beyond.

Perimenopausal women's needs are hard to study directly but can be understood through a built environment perspective, specifically through the entry point of their experiences as users of WASH. Water and sanitation provision in countries such as Ghana is not ideal, but exploring perimenopausal women's specific WASH needs reveals insights into the geographies of perimenopause as a reproductive life stage. In turn, the breadth of exploring the geographies of

reproduction is expanded from the start of the reproductive cycle, reflected in geographies of birth and breastfeeding, to the end, perimenopause.

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