An increasing proportion of the world’s women will pass through the transition to menopause, or perimenopause, as the global population ages. Drawing on the experiences of perimenopausal women in Ghana, this paper highlights bathing as a hidden but important need which has been neglected by the WASH sector. Data gathered in two urban communities through participative methodologies reveal that increased bathing is a vital hygiene practice to manage various perimenopausal symptoms. Bathing experiences of perimenopausal women in Ghana are shaped by symptoms of ageing, and infrastructural, economic, social and environmental factors. Setting the bathing needs of perimenopausal women in the context of socio-cultural perspectives of bathing, this paper calls for an increased examination of bathing in the WASH sector, with an emphasis upon providing user friendly infrastructure through a gender-sensitive approach.

Introduction
Perimenopausal (PM) women’s WASH needs are relatively unknown. According to the WHO, the perimenopause ‘includes the time immediately prior to the menopause […] and the first year after menopause’ (Utian, 1999: 284). A globally ageing population brings the hidden needs of perimenopausal women into sharper focus for the WASH sector. The perimenopause occurs on average between the age of 47 and 51 over four years (Loue and Sajatovic, 2008). It can be estimated 3.6% (UN, 2015) of the 663 million people without access to improved water supply and the 2.4 billion without improved sanitation are perimenopausal women within the age bracket of 45 to 54 (UNICEF and WHO, 2015). The WASH needs of PM women is hidden knowledge, as they are not recorded widely in written literature, but are known by women who are experiencing or have experienced the perimenopause (Bhakta et al, 2014; Bhakta et al, 2016). Drawing upon research conducted in urban Ghana, this paper highlights the importance of bathing as a hidden but important need for PM women, and the factors which impact upon their bathing experiences.

Case studies and methodology
Data was collected in the peri-urban community of Kotei, Kumasi and the urban community of La, Accra, in Ghana. Both case study areas have inadequate provision of household water and sanitation facilities.

In Kotei, 47% of residents in the main areas of the community relied on three community public toilets according to the latest data from 2012. Of the households which had on-site toilet facilities, 35% of these were WCs and 18% were pit latrines (Leathes, 2012). Before pipe-borne water was introduced, Kotei relied on five spring water sources in the outskirts of the older parts of the town. Kotei still uses some of these springs, along with a covered polytank rainwater collected in an underground concrete tank in the newer residential areas and in an open container (Awuah et al, 2014). La is in the La Dade-Kotopon Municipal Assembly (LaDMA) district of Accra. At the last census in 2010, 44.4% of residents in LaDMA were recorded to be using a public toilet. Whilst 31.9% of LaDMA residents have on-site pipe-borne drinking water in the dwelling, 24% of the population drink sachet water, and 9.2% collect drinking water from a public tap or standpipe (Ghana Statistical Service, 2014).
As the WASH needs of PM women are hidden (Bhakta et al, 2014; Bhakta et al, 2016), appropriate methods of data collection were needed. A feminist approach was used to design the methodology. Feminist research involves women as active participants in research, to socially construct knowledge, social change and empowerment (O’Neill, 1996). Women’s voices are silenced in male-dominated traditional scientific methodologies (Chafetz, 1998; Brisolara, 2014), therefore feminist research is conducted with women rather than on women. To conduct the research with perimenopausal and menopausal women, participatory methods, which place the first last (Chambers, 1997) were used to gather data. Feminist oral history, which seeks to validate the lives of women through their narratives, and to challenge economic, political and social discourses which obscure their experiences (Sangster, 1994), was used by conducting semi-structured interviews. These interviews revealed hidden and subjective WASH experiences during perimenopause. Participatory mapping and PhotoVoice, or participatory photography which focussed upon identifying perimenopausal women’s infrastructural WASH needs in a community context, complemented the narratives given by women.

Data was collected with PM women going through the perimenopause and women who had been through the perimenopause and were therefore menopausal. Seventeen oral history interviews were conducted with women across the two communities, nine in Kotei and eight in La. Participatory mapping was conducted with two groups of between five and six women in each community. Whilst women were open to discussing the majority of their issues in a group mapping session, a group of Twi women in Kotei were reluctant to discuss perimenopausal menstruation in front of each other due to local taboos. Investigation of menstruation-related issues was reserved for the privately held oral history interviews with the women from this group, where they were more open to discussion. Three women in Kotei and two women in La participated in a PhotoVoice exercise, each over three full days using a ‘point and shoot’ digital camera to capture WASH activities being conducted and WASH-related infrastructural issues faced, mostly in private, in relation to meeting perimenopausal needs. These data were supplemented with field observations of water and sanitation infrastructure in each community. A thematic analysis of the data was conducted using NVivo, a qualitative data analysis computer software. Analysis of factors which affected perimenopausal women’s WASH needs was guided by the Sustainable Livelihoods Framework which assesses personal, economic, environmental, infrastructural and social factors (DFID, 1999).

Ethical approval was gained from Loughborough University and Kwame Nkumrah University of Science and Technology in Kumasi. Informed verbal consent and the right to withdraw were maintained through all stages of research. To protect confidentiality, pseudonyms were used in the reporting of findings, and photographs were removed from the camera after each individual had used it for the PhotoVoice exercise. Women were asked not to take photographs of others without consent. Community entry was gained after written approval from La Dade-Kotopon Municipal Assembly (local authority for La), and Kumasi Metropolitan Authority (local authority for Kotei). The chiefs for each community, who also gave written consent for the study to take place in the communities, also gave approval through conducting a local traditional ceremony, involving an offering of Schnapps, to facilitate community entry. Local customs were respected by wearing local clothing and national holidays were observed. Reciprocity was met through giving packages of toiletries, including items such as soap, a toothbrush and toothpaste. Data was stored on a password protected computer, to be destroyed five years after completion.

**Bathing during the perimenopause**

Whilst bathing is ignored more broadly in the WASH sector, evidenced by a lack of WASH-related literature on the topic, it is particularly important for women going through the perimenopause. Hormonal changes during perimenopause lead to particular symptoms which can cause women to feel unclean, and therefore, to bathe more frequently than they typically would prior to entering perimenopause, and more often than other individuals who are not perimenopausal. PM symptoms which lead to more bathing include: heavier blood flow during menstrual periods (Duckitt, 2010), irregular menstrual periods (Dudley et al, 1998), urinary incontinence (Sampselle et al, 2002), hot flushes, which are heat sensations that last for two to three minutes, starting in the chest and spreading to the neck and face (Steams et al, 2002), and day and night sweats (Archer et al, 2011). These symptoms are unpredictable and occur at any time. PM women ideally need to deal with these symptoms through bathing, both day and night.
Factors affecting bathing for perimenopausal women

Perimenopausal women bathe to deal with their symptoms in bathhouses within their compounds, private spaces in which they are hidden away from others. This research in Ghana has identified various hidden factors that can require more frequent bathing and affect bathing experiences for PM women. These factors, relating to the Sustainable Livelihoods Framework, which aids understandings of the livelihoods of the poor, (DFID, 1999), are:

- Personal, relating to individual experiences of and feelings about perimenopausal and associated ageing-related symptoms
- Infrastructural, concerning water and sanitation infrastructure and related services
- Social, in that relations to other people affect bathing during the perimenopause
- Economic, due to costs incurred directly as a result of needing to bathe more frequently
- Environmental, in relation to aspects of the natural environment.

Personal factors

Individual experiences of PM symptoms and those related to ageing influence the reasons why and the ways in which women bathe. Heavy menstrual periods proved difficult to manage through conventional menstrual hygiene management techniques such as cloths and pads alone. Hygiene management for women experiencing heavy bleeding involved more frequent bathing to cleanse blood which would leak through cloths and pads and flow down their legs, causing embarrassment. Bathing was also necessary for women experiencing urinary incontinence to eradicate the smell. Day and night sweats and hot flushes made the need for regular bathing more important for cleansing and cooling the body.

Joint pain is a symptom of ageing which occurs commonly amongst perimenopausal and menopausal women, due to a decline in oestrogen which acts as a natural anti-inflammatory and maintains healthy joints (Briggs and Kovac, 2015). Bathing became more challenging during the perimenopause for women in this study as a result of joint pain. Adaptations were required in order to reduce pain experienced during bathing, through using a stool or a chair to sit on.

Infrastructural factors

Managing the symptoms of the perimenopause through bathing was affected by issues with the design of infrastructure. The need to bring a stool into the mainly external, compound-based bathhouses indicates that the facility was not inclusive for the needs of perimenopausal women, according to the principle of inclusive design for ease of use without undue effort for as many people as possible (Jones and Reed, 2005). Bathhouses in Kotei and La were predominantly not connected to wastewater drainage. This was a source of embarrassment to women who were carrying and disposing of bathwater stained with blood into uncovered drains in the street. Carrying the weight of water for washing as well as bathing from their homes to the main street could be physically challenging for women with joint pain (photograph 1).

Photograph 1. Disposal of bath water

Source: Amita Bhakta
Infrastructural challenges arose as a result of wider service provision issues in Ghana. Ghana’s persistent energy crisis, colloquially known as ‘dumsor’, meaning on and off (Bayor and Yelyang, 2015), has led to intermittent power supply, compromising sustained and constant access to piped water. This was problematic for PM women. Ready access to bathing water to deal with unpredictable and irregular symptoms (e.g. heavy bleeding during periods, urinary incontinence and day and night sweats) was often challenging due to the power crisis. Frequent bathing necessitated some women to store water for bathing in jerry cans when there was a power supply, in the knowledge that water may not be available to them when needed to deal with perimenopausal symptoms.

Social factors
The relationship of PM and menopausal women with other people (social factors), affected their bathing experiences. Difficulties in carrying water due to ageing issues such as joint pain led to an increased dependency for some women on their family for parts of the bathing process. Women reported needing to ask their daughters and grandchildren to fetch water and to dispose of water for them after they had bathed. In some cases, family members would chose to collect water for household use in their own time, meaning it would not be available to them when needed, but it is difficult to disaggregate the different uses of this water. Women felt it was unsafe to use outdoor bathhouses during the night as they felt more exposed to risks of being attacked. Towels were therefore used by women to wipe themselves down indoors during the night after experiencing night sweats or hot flushes, instead of bathing.

Environmental factors
Environmental factors, particularly seasonal changes, influenced bathing for perimenopausal women. Warmer weather during the hotter dry season caused day and night sweats and hot flushes to be experienced at a higher intensity, causing more frequent bathing than in the cooler rainy season. Women in Kotei and La reported that bathing more frequently in order to deal with perimenopausal symptoms was more challenging during the rainy season, as most of their bathhouses were located outdoors in the compound and were without a roof.

Economic factors
Increased bathing during the perimenopause led women to spend more money to meet their bathing needs. Bathing requires large volumes of water, which were collected in large basins from community standpipes. Increased amounts of charcoal were also required for women to heat water for bathing. High unemployment rates among PM and menopausal women in this study caused women to worry about these extra costs.

Locating bathing as a WASH need: from culture to infrastructure
Little discussion on bathing can be found within the WASH sector, and it remains to be relatively neglected among WASH practitioners. Bathing has however been examined through a socio-cultural lens from a global North perspective. Shove (2003:108) discusses how bathing is comprised of three dimensions: sanitation and social order, denoting ‘membership of civilised society’; hydrotherapy and gentility, associated with a high social status; and comfort, convenience and commodification, to maintain a good appearance and image. Using bathrooms for bathing once symbolised civilisation, and bathing was a way for people to be accepted in society (Pickerill, 2015). The emergence of bathing infrastructure has been shaped by culture and the enjoyment of bathing as a social and communal activity, more than the development of technology. Bathing in Britain was also traditionally a mixed gender activity where men and women would bathe communally in public baths (Worsley, 2011), which later became a private activity (Busch, 1999). In recent years in countries such as Britain, showering has become more common than taking baths due to speed and convenience (Hand et al, 2005).

This research has identified bathing as an important WASH need for PM women. The bathing needs of these women in the global South need to be examined within an infrastructural as well as the socio-cultural perspective (that has been previously applied in the global North), but according to a local context. Water supply and sanitation in the global North is more readily available for bathing to satisfy individual demands of cleanliness, comfort, convenience and health (Shove, 2009). Experiences of bathing among PM women in Ghana however, highlight that whilst the demand for bathing is linked to perimenopausal symptoms experienced by women in both the global North and the global South, availability and design of water supply and sanitation infrastructure are often inadequate in the global South. Sensitivity to cultural attitudes such as local taboos around menstruation, issues of personal safety, PM health and women’s income require greater consideration in relation to the design and provision of bathing facilities and related infrastructure.
Indeed, Fisher (2006) explains that meeting the WASH needs of women overall should enable their privacy and dignity, improved health, wellbeing, social status and better income generation and economic status. This paper has shown how paying greater attention in WASH to bathing for women could contribute to these benefits.

**Conclusion**

Paying attention to a growing population of perimenopausal women in an ageing society highlights bathing as an under-explored priority in WASH, despite an exploration of bathing outside the WASH sector from a socio-cultural perspective in the global North. Bathing is an important need for women who are experiencing various irregular and unpredictable perimenopausal symptoms. PM women therefore require access to greater volumes of water and user friendly bathing infrastructure on a more frequent basis. This access can be affected by irregular water supply and poor infrastructural design which fails to cater for women’s bodily needs. Social attitudes to the perimenopause and related issues, women’s relations with other people, environmental factors and access to finance play a role in the bathing experiences of PM women. A greater focus upon bathing more widely in WASH which move beyond cultural perspectives of bathing could lead to improvements in bathing related infrastructure, better health and wellbeing, dignity and privacy and better economic status for society overall.

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