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**ENSURING AVAILABILITY AND SUSTAINABLE MANAGEMENT
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**Finding hidden knowledge in WASH: effective methods for
exploring the needs of perimenopausal women in Ghana**

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As increased urbanisation brings the challenges of providing sustainable and equitable WASH provision for all, a globally ageing population will bring more women in low-income countries passing through the perimenopause, the transition to menopause, with various hidden WASH needs. A lack of knowledge upon these needs also means that effective methods to work with perimenopausal women are not well established. Drawing on field experiences from Accra and Kumasi in Ghana, this paper reflects upon the methodological lessons learned in researching the WASH needs of perimenopausal women in two low income communities. An effective methodology to explore perimenopausal women's WASH needs encourages participation and engagement with the topic through use of appropriate tools, and effective community mobilisation. A collaboration of different people in a team, group reflection and adaptation of tools which consider practical aspects and local cultural values are needed to understand such needs.

Introduction

Meeting the WASH needs of a growing urban population remains a significant global challenge, as highlighted through the Sustainable Development Goals. Goal 6 aims 'to ensure the availability and sustainable management of water and sanitation for all' (United Nations Development Program, 2016). An equitable provision of WASH therefore indicates that all individuals must be included, including those who are socially excluded, or have hidden needs. To facilitate social inclusion of all, effective methods of engagement to understand various needs of various groups are needed.

By 2050, 2.5 billion people will live in urban areas globally, and, 56% of Africa's population will be urban (United Nations, 2014), making the need for sustainable water and sanitation provision ever more relevant. With a globally ageing population, Hill (1996) predicts that by 2030, 1.2 billion women will reach the menopause, passing through the perimenopause, 76% of whom will be living in a low income country (World Health Organisation (WHO), 1996)

The perimenopause is defined by the WHO as a period which 'includes the time immediately prior to the menopause (when the endocrinological (or hormonal), biological and clinical features of the menopause commence) and the first year after menopause' (Utian, 1999: 284). Bhakta *et al* (2014) highlight the lack of literature on the WASH needs of perimenopausal women, calling for a phenomenological review approach to reveal their tacit, or hidden WASH needs. A phenomenological review uses phenomenology, 'the study of phenomena, of things or events in the everyday world' (Becker, 1992:7). This paper presents methodological lessons from doctoral research which is being conducted in Ghana on the WASH needs of perimenopausal women. It summarises the standard methodological approaches used to work with taboo topics, using this to situate the methodologies selected in this study and the practical issues faced and lessons learned from them.

Standard methodological approaches

Research in the WASH sector has previously involved applying methodologies which help to explore topics which are under-researched or taboo. The Participatory Hygiene and Transformation (PHAST) approach

seeks to empower people to improve their lives through participatory methods. PHAST encourages individuals who may have difficulties in expressing their views, such as women, to participate in groups irrespective of their background (WHO, 1998). Participatory Rural Appraisal (PRA) empowers those who are weak and places the 'first last' using techniques such as mapping (Chambers, 1997). Gendered approaches have emphasised the need for meetings on water and sanitation issues to be held at a time convenient to women which fits around their domestic duties (Sultana, 2009), whilst disaggregated data sets help to evaluate the impact of WASH policy on women as well as men (Seager, 2009). Behaviour trials, proactive facilitation, structured observation and smaller focus group discussions, enable effective implementation of hygiene promotion (UNICEF and LSHTM, 1999). Focus group discussions also facilitate research with individuals who are reluctant to talk about their experiences (Barbour, 2007). Role play drama, pocket chart voting, accessibility audits and safety mapping help to explore violence, gender and WASH (House *et al.*, 2014). Suitable methods needed to be trialled and adapted to explore the WASH needs of perimenopausal women, as the topic is under-researched and may not be easily discussed.

Understandings of menopause and menstruation in Ghana

In Ghana, whilst the WASH needs of perimenopausal women are not researched, earlier studies briefly explore the beliefs surrounding the menopause. The cessation of menstruation marked the start of a new era in women's lives, and was perceived as pregnancy and so women would visit a shrine in the hope of having children (Field, 1960). The menopause gave women freedom to take part in rituals, visit ancestral shrines and reside in men's houses (Nukunya, 1969). After the menopause, women could perform intimate roles such as midwifery and bathing corpses, and become Mamprusi and Dagomba chiefs (Oppong, 1974).

In the mainly patriarchal Ghanaian society, issues that are considered relating primarily to women are not generally discussed in the public domain. Menstruation and related matters are considered to be related to women and therefore not a matter for public discussion. Although some subjects in the basic school curriculum address reproductive health generally, students usually consider such subjects as relevant for examination and are usually not applied to life. The curricula do not deal with menopause or related matters. There is anecdotal evidence indicating that the onset of menarche in some settings comes as a shock to young girls as they have virtually no knowledge except the discussion with their peers which is usually inadequate. WASH needs that may arise as a result of menopause remain unknown and hardly understood by girls and women before they actually experience them.

Again, menstruation is considered private even among women. Thus the individual challenges that arise out of the menstrual experience are usually not subjects for public discussion. There are also some taboos associated with menstruation in some cultures. These taboos indicate that women are unclean during their menses and are not to cook, cross the threshold into a house, take part in social activities involving men or they must keep away from men among others. These taboos result in women keeping their experiences to themselves as the period of menstruation is considered a time when they are unclean. The experiences they go through during the perimenopausal period are also kept to themselves, resulting in a culture of silence where menstruation, menopause and related matters are concerned.

Case studies

This study was conducted in Kotei, Kumasi and La, Accra. Kotei is a dormitory town in the Oforikrom sub-metropolitan area of Kumasi. La is a community in Greater Accra. These communities were selected to provide insight into differences between urban and rural areas, as La is urban and Kotei is peri-urban but has rural features within it. Both communities have inadequate, inaccessible and unaffordable provision of household WASH facilities and services. La falls under the La Dade-Kotopon Municipal Assembly (LaDMA) district. 31.9% of the population in LaDMA had pipe-borne drinking water inside the dwelling in 2010, whilst 24% relied on sachet water and 9.2% use a public tap or standpipe. 44.4% of LaDMA residents used a public toilet (Ghana Statistical Service, 2014). The Ghana Water Company Ltd does not serve Kotei through their water supply network. In 2012, 86% of residents in Kotei relied on water purchased from on-sellers or boreholes at a high price or drawn from hand dug wells. In most parts of Kotei, 47% of residents used the three public toilets in the community. 35% of household facilities were WCs, whilst 18% were pit latrines (Leathes, 2012).

Methodological lessons from the study

Working as a team

The data collection process involved a team of four individuals in the field: the researcher, the research assistant, the community animator, and a support worker. The research was possible only as a result of this team working together, as each individual had a different contribution to the process. The researcher led the research, providing background theoretical knowledge on understandings of perimenopause and possible areas of exploration in the context of WASH, briefing the team and carrying out administration tasks. The research assistant and community animator were an existing research team who work on WASH projects in Ghana and were recruited for the study. The community animator mobilised the communities, providing community entry to the researcher. The research assistant provided translation throughout the process, and identified effective ways to translate terms such as perimenopause, which are not often discussed, to participants. A support worker provided practical support to the researcher as she has Cerebral Palsy, which affects her mobility, ability to do practical tasks such as hand writing field notes and speech.

As little was known about appropriate methods to investigate the WASH needs of perimenopausal women, a continual team dialogue was maintained. The team met after each data collection session to reflect together on the methodology, assessing which elements worked and did not work. This was necessary to incorporate changes based upon feedback from the community members to the community animator on methodological issues. These included effectively training participants for participatory photography, and reciprocity issues, notably the inappropriateness of giving sanitary pads to perimenopausal women as they are used to traditional menstrual hygiene management techniques. These discussions sensitised the researcher to the community, to mitigate the effects of an external perspective on the research process.

Community mobilisation process

The community mobilisation process was guided by the sample selection criteria. Participants needed to be experiencing or had previously experienced the perimenopause at the time of recruitment. All participants needed to live in Kotei or La, as these communities were well known to the animator, and live close to the area selected for the mapping exercise. The selection criteria ensured that participants were not eliminated over the research period. Though many of the individuals approached for the research did not decline participation, uncertainty over what situation the participant will be in at the time of the research, and the option for women to withdraw from the study informed the decision to build a backup sample of participants to fall upon if the need arose for a replacement participant. Making several visits to participants' homes days before the individual interview and the mapping exercises was crucial to mitigate against this issue and for the research to be successful.

The recruitment process involved inquiring about interviewees' menopausal status. Households known to have women aged between 40-75 years were randomly selected during transect walks in the communities. Participants were approached and informed of pending research activities. The research objectives and the potential contribution to knowledge were shared with potential participants, and enquiries were made upon their health background. Participants needed to be willing to contribute to the research, and consent to participate in the interview, participatory photography and mapping exercise. Thirty participants were recruited in each community including a backup sample, as during the recruitment period some of the participants could not confirm their availability due to domestic and community responsibilities at the time planned for the research activities. Data collection needed to fit around traditional community responsibilities for participants. Women needed to assist in birth ceremonies, funerals and marital rites, often at short notice due to their age range and status as older women. In La, whilst participant selection targeted both perimenopausal and menopausal women who had passed through the perimenopause, all of the participants were menopausal and some interviewees pulled out for community duties. As participants were recruited one month before data collection, upcoming community activities were unknown to them leading to several visits to confirm the final sample and replace participants who had dropped out at short notice.

Adaptation of the methods

A lack of literature and research upon the WASH needs of perimenopausal women meant that little was also known about appropriate methodologies to reveal this secret knowledge. The methods adopted needed to firstly check that the provision of WASH is a real issue for perimenopausal women in La and Kotei. An assessment of which methods did or did not work was needed, to employ and adapt

methodologies which facilitated the exploration of certain lines of enquiry according to the issues being raised. These adaptations were grounded within factors such as practical issues in employing the methodology and taboos and beliefs in the local context which surround the menopause. Thus, an exploratory approach was adopted. As Stebbins (2008) explains, exploratory research is a form of intentional data collection which is systematic and broad ranging, which aims to maximise the ability to understand social life. Exploratory research requires a degree of open-mindedness and flexibility in methods used to search for and to locate data. Once the data is found, it is possible to use the observations made and to integrate the data into grounded theory, situating the focus of the study (Stebbins, 2008).

Three methodologies which place perimenopausal and menopausal women at the centre of the research were used: oral history interviews, participatory mapping, and PhotoVoice. The subsequent sections discuss the practical issues faced in each method in trying to uncover the hidden WASH needs of perimenopausal women and the lessons learned from them.

Oral history interviews

A feminist oral history approach was used for the interview process. Oral history is ‘the act of recording the speech of people with something interesting to say then analysing their memories of the past’ (Abrams, 2010: 1). This interviewer records the narrative of an interviewee, or narrator, to form a verbal document which is understood as the oral history (Oral History Association, 2014). Oral history is associated closely with biographical research, which seeks ‘to provide a diverse methodological and interpretive way to enable individual accounts of life experiences within contemporary cultural and structural settings’ (Batty, 2009: 110). Feminist oral history is based in the notion that women’s histories and voices which reflect their lives have been ignored by traditional sources. Oral history is regarded as an effective means to validate the lives of women, to contest wider political, social and economic definitions and discourses which obscure them (Sangster, 1994). This method was adopted following Bhakta *et al’s* (2014) call for a phenomenological review approach to understanding the tacit WASH needs of perimenopausal women. This approach seeks to reveal ‘phenomena’, or knowledge known by women upon WASH needs during perimenopause, but not other people who are not experiencing or have not previously experienced the perimenopause through interviewing and enabling women to create a narrative of their WASH experiences that are not otherwise recorded. The interviews aimed to explore the everyday WASH experiences of women which helped women to deal with the perimenopause as a life stage, rather than as a health issue. Some practical lessons were learned by adopting this approach.

Effective scheduling and timing of the interviews were important. Interviews needed to be at mid-morning to ensure that women’s household duties were not disrupted. Interviews could be too long, as women would tire and lose concentration. Two strategies were implemented to overcome this. A pre-interview questionnaire identified: name, age, community, ethnic group, the symptoms of the perimenopause being experienced and the water and sanitation status of the women. The research assistant completed this in the local language to save time with translation. Visual flash cards depicting symptoms enabled participants to point at the card to identify their symptoms more easily and aided translation and understanding, to be then marked on the questionnaire. Secondly a set of cards with different interview questions on each card was used. Interview questions for each potential symptom were placed onto separate coloured cards, enabling a selection of the relevant cards needed in the interview according to the symptoms noted on the questionnaire. This allowed a detailed narrative of the WASH issues of most importance to women. From an oral history perspective, women could spend longer discussing discreet WASH issues which affected them most daily such as use of bathing facilities and latrines, and menstrual hygiene management (MHM). The translator read the questions to speed up the interview process.

Participatory mapping

Mapping techniques can be most accurate when those who are conventionally left out are included. Including minority groups in participatory mapping can help to ‘get things right’ (Chambers, 1997:145). This research focussed on including perimenopausal and menopausal women alone in the mapping exercise, rather than in a mixed group with other individuals who may have different WASH needs. In turn, the discussions had an in-depth focus on issues directly affecting these individuals during the perimenopause, enabling their voices to be heard without being overridden by others.

The mapping process was the only method requiring women to share their WASH experiences in a group. It sought to assess the WASH issues being faced by perimenopausal women in a broader community context beyond the home, in terms of infrastructural aspects such as water sources and

drainage, as well as natural factors which may affect these needs. Discussions with two groups of up to six women in each community identified their secret needs in the community context, relating them to features and places known to them. This identified broader WASH issues faced across the community, but were particularly prominent for perimenopausal women as they dealt with their own individual needs.

Group mapping processes highlighted taboos to consider when developing methodologies to investigate perimenopausal women's WASH needs, and that these can vary between ethnicities and geographical regions. For instance, a group of menopausal Twi women in Kotei were unwilling to discuss menstruation issues, particularly heavy bleeding which is a symptom of perimenopause, in front of each other. In contrast, the Ga women of La openly discussed menstruation and associated issues such as MHM in a group, and identified these issues in relation to existing WASH infrastructure on a map.

Time keeping was an issue during the pilot, as women lost energy and interest in the exercise. Originally the women drew a sketch map from scratch, which was very time consuming. This was overcome by using pre-printed A0 Google maps of each community, upon which the women could identify features to label and discuss. The research team took photographs of the women's own homes, bath houses, toilets, and community features, and created colour coded 'stickers' using the photographs for each individual to place onto the map. This sped up the process so that women would not tire, and enabled them to recognise and locate these features easily.

Participatory photography – PhotoVoice

PhotoVoice builds upon the principles of PRA (Chambers 1997). It seeks to ensure that marginalised groups are fully involved in decision making, resulting in long term change to participants. Photographs taken by the participants can be used to understand their everyday lives from their own perspectives. PhotoVoice raises awareness of particular issues directly affecting individuals, partly why this method was integrated to record the individual WASH needs of perimenopausal women (Blackman and Fairey, 2014).

PhotoVoice enabled perimenopausal and menopausal women to show the 'secret' WASH issues they face but may not share with others through using images. The original intention to use disposable cameras was difficult due to challenges in training women to use them. Using mobile phone cameras and transmission of images through applications such as WhatsApp and Viber was considered, but was not possible as women did not have mobile phones and due to ethical concerns. These issues were overcome through using a digital camera. Training women to use a 'point and shoot' digital camera provided freedom to illustrate the WASH issues which mattered to them, without the constraints of a disposable film camera which has a limited number of photographs. Women could take images of WASH needs which are often mundane and private, or 'known unknowns' as they are known by perimenopausal and menopausal women but not by others, from their own perspective. Photographs enabled women to narrate their WASH needs and issues faced during the perimenopause in the context of daily lives, rather than treating the perimenopause as a 'health' matter. The images provided a visual stimulus for later discussion with the research team, enabling women to narrate the needs shown in the photos, such as difficulties with squatting in latrines.

Some challenges were faced using a digital camera. Most participants had not previously used a camera. Some women lacked confidence to use the camera and to take pictures from their own viewpoint alone, resorting to asking their relatives who were able to use the camera to take the photographs for them instead. This may have limited the issues being illustrated if some of them were particularly difficult to share. The camera settings were inadvertently changed by some women and so video clips rather than photographs were captured. However, this did allow WASH activities to be captured in action. Screenshots of the clips were taken for analysis.

Conclusion

Focus groups, pocket chart voting and the PHAST approach have been used to research taboo topics or work with under-researched groups in WASH. Yet when working with particular groups who have hidden WASH needs, such as perimenopausal women, developing an effective methodology which can reveal these needs requires exploring and trialling methods which enable women to share their tacit experiences.

Oral history interviews, PhotoVoice and participatory mapping place perimenopausal women at the centre of the research, but need to be practically suited to this cohort. Key considerations include scheduling data collection around traditional duties, adapting tools for data collection to be efficient and sensitivities to particular taboos and availability of and potential use of technology. Perimenopausal women can only be recruited in low-income communities to engage in these methods using a thorough community mobilisation

process. Conducting research on the WASH needs of perimenopausal women requires a collaborative approach with reflections from an academic and a practical, local perspective.

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