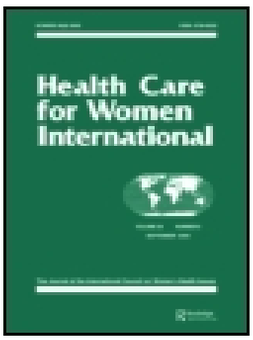

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WASH and gender in health care facilities: The uncharted territory

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ABSTRACT

Health care facilities in low- and middle-income countries are high-risk settings, and face special challenges to achieving sustainable water, sanitation, and hygiene (WASH) services. Our applied interdisciplinary research conducted in India and Uganda analyzed six dimensions of WASH services in selected health care facilities, including menstrual hygiene management.

To be effective, WASH monitoring strategies in health care facilities must include gender sensitive measures. We present a novel strategy, showing that applied gender sensitive multitool assessments are highly productive in assessments of WASH services and facilities from user and provider perspectives. We discuss its potential for applications at scale and as an area of future research.

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The topic of WASH in health care facilities in low- and middle-income countries has gone unnoticed for a long time. WASH facilities in health care facilities in developing countries largely fail to provide universal and gender-sensitive services. Researchers revealed that an estimated 38% of health care facilities in 54 assessed low- and middle-income countries lack access to an improved water supply within 500 meters of their premises (UNICEF/WHO, 2015). Lack of sanitation is encountered in 19% of health care facilities and 35% do not have water and soap for handwashing. 15% of all patients develop an infection during their stay in a health care facility (UNICEF/WHO, 2015). As many as two out of five patients in low- and middle-income countries develop an infection during a health care facility stay. The authors assume that many of these infections can be related to the lack of hygiene, hand hygiene in particular and to inadequate water supply and sanitation (UNICEF/WHO, 2015).

Poor WASH service provision disproportionally affects women and girls due to biological and cultural factors. Inadequate or poorly administered WASH services may increase women's burden of work and lead to negative health impacts, e.g., increases in maternal mortality rates and reproductive health problems (Fewtrell

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et al., 2005; Murray & Lopez, 1996; Prüss-Üstün, Bos, Gore, & Bartram, 2008). In addition, women are confronted with gender-specific social norms, i.e., taboos, which often hinder proper hygienic habits during menstruation and, therefore, not only affect their health, but also challenge their dignity. Within the realm of WASH, menstrual hygiene and women's specific requirements regarding sanitary facilities have been identified as one of the most neglected issues (Mahon & Fernandes, 2010; WSSCC, 2014). Although there is an increasing awareness of the problem (Brocklehurst & Bartram, 2010; Kirk & Sommer, 2006), further action and implementation are often hindered because of the sensitive nature of the issue. Gender concerns are rarely addressed; one reason for this is because societal barriers often restrict women's involvement in decisions regarding sanitation and hygiene-related projects (COHRE, WaterAid, SDC and UN-HABITAT, 2008).

Vulnerable groups, such as disabled persons, elderly people, small children and pregnant women, face particular challenges accessing adequate WASH facilities. Researchers have shown that improved access to safe water and sanitation are clearly associated with decreased maternal mortality (Ali, Fikree, Rahbar, & Mahmud, 2006; Benova, Cumming, & Campbell, 2014; Cairncross, Hunt, Boisson, Bostoen, & Curtis, 2010; Short & Smet, 2012; WHO, 2013a). And gender equality and availability of water and sanitation were identified as the two most important determinants of maternal health (Hunt & Bueno de Mesquita, 2010).

Whereas most researchers have focused on gender and WASH at the household level, no investigators to date have examined the nexus of gender and WASH in health care facility settings specifically. Moreover, there is a lack of evidence about the WASH infrastructure in public health care facilities in low-income countries generally. While it is clear that the situation in these settings is insufficient, there is hardly any detailed and gender-disaggregated data on the issue. Specifically there is a lack of solid evidence about existing shortcomings, about the needs of different user groups and about the possible negative impacts of poor infrastructure on the health situation on the ground (Cheng, Schuster-Wallace, Watt, Newbold, & Mente, 2012). This is all the more important as water and sanitation access in health care facilities is proposed as one of the indicators for measuring progress in the post-2015 Sustainable Development Goals, the Agenda 2030.

We, therefore, seek to address the gender gap in needs-based sanitation research by examining socio-cultural, hygiene and sanitation issues during menstruation and childbirth among women. Our aim is to contribute to the evidence base for technically appropriate and socially acceptable WASH solutions for both women and men, by addressing the following research questions: What are the shortcomings of existing WASH facilities in health centres? And, what needs of specific user groups with regards to WASH infrastructure have to be met in order to achieve "genderised" sanitation?

Methods

We tested the questions stated above in health care facilities in India and Uganda for a country comparative study. In each country, we selected a district and a subdistrict health care facility in two different districts. In India, we selected the districts Osmanabad and Beed in the state of Maharashtra. These districts have rural characteristics and face long periods of drought in summer (Swedish Agency for Growth Policy, 2013). In Uganda, we selected the rural districts of Buikwe and Kayunga, which also face the absence of water supply during the dry season, when rainwater harvesting is not possible (Zikusooka, Kwesiga, Lagony, & Abewe, 2014).

To be selected, the health care facility needed to fulfil the following criteria: there had to be enough men and women present during any given day to conduct a Gender Action Learning System (GALS) workshop, a maternal ward, inpatient facilities, and the health care facility had to be government run.

We assessed the selected health care facilities for the different aspects of WASH and specifically looked at six dimensions: hygiene and health, security and safety, privacy, accessibility, comfort, and menstrual hygiene management.

We identified the following user groups beforehand and integrated them into the study: Outpatients, inpatients, attendants, medical staff, cleaning personnel, managers and administrators, and both female and male in all groups. We put special focus on vulnerable groups, such as menstruating woman, pregnant women, and women in childbed.

We selected three methods for the assessment of WASH in health care facilities and its users' perceptions in order to triangulate the data. These methods are: the GALS method, Semi-Structured Interviews, and an infrastructure spot-check, which are all described in more detail below. We used the GALS method and the Semi-Structured Interviews to assess the WASH user and WASH provider perspective, as well as WASH services in general. We applied the infrastructure spot-check to compare user perceptions to the available WASH infrastructure in the health care facilities, by assessing the WASH hardware.

GALS is a focus group discussion method, originally used for gender justice in relation to livelihood improvement (Mayoux, 2010). GALS promotes the collection of gender-disaggregated data and gender mixed plenary discussions, as well as the identification of sensitive topics. The two core elements of GALS are the "Gender diamond" and the "Action trees." These integrate a gender perspective by separating female and male groups and through having gender mixed plenum discussions. The purpose of this first step, the "Gender diamond" exercise, is to identify the challenges faced by the participants in connection with their experiences on a given certain topic (e.g., WASH issues in the presented case). The goal of the second step, the male and female "Action trees," is to identify the causes, or roots of the tree, of the named problems, which are the trunk of the tree, from the "Gender diamond." The branches and fruits of the tree identify the possible solutions to address

the named problems and to solve them. The "Action trees" are the final products of the GALS exercise and comprise the basis for an action plan (Kohler, 2013).

We adapted GALS to the realm of gender and sanitation in health care facility settings and conducted it with inpatients and their attendants, capturing their specific experiences, needs and priorities in connection with WASH services in the four selected health care facilities. In each of the two Indian hospitals, the local research team conducted one GALS with a total number of 50 participants, 28 female, and 22 male. In each of the two Ugandan hospitals, the local research team undertook two GALS, with a total number of 40 participants, 20 female, and 20 male. The time to conduct a GALS varied from four to six h per session.

For each of the six identified user groups, we developed a different type of question guide, addressing WASH aspects, as well as topics around menstrual hygiene management, pregnancy and childbed. In each of the four hospitals, the local research team conducted 18 Semi-Structured Interviews, leading to a total of 72 Semi-Structured Interviews for both countries. The length of time to conduct a Semi-Structured Interview varied from 30 to 60 min. For nonstaff user groups, the local research team conducted Semi-Structured Interviews with males and females for gender comparisons.

The local teams wrote down the answers on the spot and the audio was also recorded. Where English was not the spoken language, the teams translated the interviews from the local language to English. We analyzed the qualitative data collected in the interviews using the Atlas.ti 7 software.

In order to assess the WASH infrastructure and services in the selected health care facilities, we conducted an infrastructure spot-check. This was done for two reasons: first, to triangulate the user perception data collected with the GALS and the Semi- Structured Interviews and second, to develop and test a novel and more adequate set of indicators for the WASH infrastructure and services in the health care facilities.

The tools developed by other agencies to assess service provision in health care facilities and their WASH related questions and indicators were identified by us, namely the service availability and readiness assessment by WHO (2013b), the Service Provision Assessment by USAID (2012), and the Service Delivery Indicators by the World Bank (2016), as well as the WASH in health care facility core indicators (WHO, 2016). Furthermore, we analyzed the identified assessment tools with regards to the assessment of WASH infrastructure and services in the health care facilities. We undertook field visits in India and Uganda in order to check if these indicators are suited to reproduce reality. Out of this desk-based assessment, we created a technical assessment, which was field tested by the local teams at the four selected health care facilities in India and Uganda. In a second phase, the assessment was calibrated by further testing it in 19 health care facilities in Kavrepalanchok District of Nepal. While in India and Uganda, printed versions of the assessments were used and filled out by the local facilitators, while a mobile phone-based assessment using KoboToolbox was used for Nepal.

Results

The findings from the three assessment tools GALS, Semi-Structure Interview, and infrastructure spot-check are summarized below.

Based on results from the "Gender diamond" exercise in the GALS workshops the two health care facilities in India, the inpatients and attendants indicated that they feel unsafe in the toilets and bathrooms, that soap is not available, that the hospital environment is unclean (i.e., open defecation) and that menstrual hygiene management is problematic as there are no buckets for the disposal of sanitary items, and no place for changing, washing and drying reusable sanitary materials. Proposed solutions from the "Action tree" of the male participants were to recruit more cleaning staff and to provide awareness training for patients and their attendants. The female participants claimed that the provision of information, education, communication around menstrual hygiene management, and menstruation was important.

The results from Uganda showed that inpatients and attendants suffered from the dirtiness of the sanitary facilities and the lack of water, and from the missing hand washing facilities and nonexisting lights. Menstrual hygiene management matters were also found to be challenging, as in India. The male participants proposed demanding self-involvement in cleaning, fundraising from patients and other stakeholders, a suggestion box for complaints and for sensitization on menstrual hygiene management. The female participants suggested having the toilets emptied, integrating ventilation, providing more public toilets to evade the bottlenecks in toilet usage in the hospitals, and providing containers for menstrual hygiene management material disposal.

The GALS results from both countries indicated that the most important issues for the patients and attendants were the lack and dysfunctional state of sanitary facilities and the lack of sensitization on hygienic behavior.

The Semi-Structure Interview results were as follows: gender specifics around menstrual hygiene management, addressing aspects of comfort, support, products, and needs (all the results cannot be listed here due to space considerations). Further, beliefs, myths, restrictions, and taboos around menstruation in general and in the setting of health care facilities, as well as answers about support for immobile female patients, are also presented here.

In both countries, none of the menstruating respondents felt comfortable during their hospital stay, indicating that more needs to be done to support those women, namely an upgrading of the facility's infrastructure and services, the provision of menstrual hygiene management material and medical support against bodily discomforts. The perception of support for menstrual hygiene management matters differs between two different groups of respondents: patients experiencing menstruation during their stay in the hospital felt the need for increased support, whereas medical staff members as providers thought they do enough already.

Inappropriate disposal of menstrual hygiene products, i.e., dumping into toilets and throwing them out of windows, creates a lot of discomfort among all the user groups in all of the selected hospitals. Although in many locations there are waste bins provided that are reachable, they are not used. We believe that this stems from cultural beliefs on menstrual blood about witchcraft (Uganda) and conceptions of impureness and purity (India).

Especially in India, different spheres of the home seem to be loaded with different types of restrictions and rules for menstruating women on where to stay and sleep, what and who to (not) touch and what food products to prepare and consume. The strongest mentioned restriction is linked with religious beliefs and forbids menstruating females from worshipping God and going into temples. The findings from Uganda showed that there are less beliefs, myths, and restrictions around menstruation than in India. Knowledge of menstrual matters, however, differs between women and men in both countries. Many male respondents stated not knowing much about women experiencing menstruation or were shy or embarrassed to talk about those matters.

It was quoted from individuals of different groups that the hospitals offer immobile patients during pregnancy and childbirth quite a range of assistance in using toilets and in bathing. Not only midwifes and nurses are involved hereby, also strong support from the attendants is necessary and requested. Their roles as care givers seem to go without saying because of their responsibility for family members.

The results from the infrastructure spot-check validated the user perceptions assessed with GALS and the Semi-Structured Interviews. A review of the assessment tools for service provision in health care facilities of other agencies and their WASH related questions showed that WASH remains a neglected topic and that the indicators used are outdated. The Service Availability and Readiness Assessment by WHO covers questions on the water source, the type of toilet and solid waste management, including infectious and sharp waste, as well as hygiene.

The correspondent questions on water and sanitation are based on the Millennium Development Goals for households. The Service Provision Assessment by USAID and the Service Delivery Indicators by the World Bank are both partly based on the Service Availability and Readiness Assessment and include the same questions. We identified the three main shortcomings of these assessments as being: there is no gender disaggregated and specific data, the complexity of WASH in health care facilities is not adequately assessed and attendants are not recognised as a user group.

Analysis

GALS is used to gather qualitative data. Apart from its gender sensitivity, it is an effective method when it comes to the discussion of topics that are unusual, sensitive or taboo, as shown when addressing sanitary habits or topics around

menstrual hygiene management among women and men in a hospital setting. As shown from the results derived from its use with heterogeneous groups of patients and attendants, it facilitates the involvement of persons with different personalities, skills, and knowledge and supports social exchange among the participants. Personal experiences are validated and the sense of awareness-raising around existing needs is created, such as the need for sensitization on menstrual hygiene management as a main outcome for both countries, among men and women alike.

GALS focus lies not only on the encountered challenges themselves, but on the problem-solving strategies raised by the respondents that can be used as an action plan for further steps in the planning, design, and implementation of better WASH infrastructure in health care facilities.

The results from the Semi-Structured Interviews showed that, although asked the same set of questions, the perceptions of challenges and needs in given hospital settings differ among the different user groups. The Semi-Structured Interview is a qualitative method and is useful to explore particular themes and responses in detail. This is shown in the reasons given behind the incorrect disposal of sanitary materials, which are also linked to cultural beliefs about menstrual blood.

The two-way dialogue between the interviewee and the respondent in the Semi-Structured Interviews allows for sensitive topics like menstruation to be addressed, which, especially in India, pervades many aspects of the lives of men and women. Although the female and male interviewees were given assurance by the interviewers, gender gaps in their knowledge and the lack of communication about menstruation matters leaves the topic an unpleasant mystery for many.

The Semi-Structure Interviews confirmed the data of the two other assessment tools (GALS and infrastructure spot-check). It disclosed that the attendants are also involved in taking care of the sanitary needs of immobile female patients, once more pointing to their important roles as care givers. The assessment tools of other agencies do not include indicators to measure gender specific needs and data is not collected with disaggregation for gender, while our assessments do. Most notably, a measurement for menstrual hygiene management is missing in these assessment tools, e.g., a private place with running water and a waste bin.

Moreover, the complexity of WASH infrastructure in health care facilities is also not reflected in the other assessment tools. Often, more than one sanitation system and a variety of water sources are in service in the same health care facility, varying according to the time of day, seasonal conditions and the composition of user groups. In addition, these tools do not address the issues that are part of our infrastructure spot-check assessment: water availability, water quality, water quantity, sanitation by gender, sanitation for people with reduced mobility, sanitation gray-water and stormwater, and handwashing. Furthermore, current WASH indicators are measured in a binary form only in their assessments, i.e., either there is an improved sanitary facility or there is not, instead of a laddered approach, where incremental improvements would be possible and would be measured.

The infrastructure requirements of the attendants are also neglected in the other assessment tools. Attendants are visitors who fulfil the role of patient care-takers, due to the fact that the over-stretched medical staff are not able to handle basic services for all patients. Attendants provide WASH services, such as drinking water provision and cooking, as well as help during defecation and medical procedures.

Discussion

The Agenda 2030 Goals, which aim for safely managed universal coverage in WASH everywhere, with special attention to the needs of women and girls, set out ambitious targets for improving WASH in health care facilities. These facilities are "high risk" settings and pose special challenges to the achievement of the WASH goals, and also to meeting the universal health goal SDG3. This research complements previous studies and reviews of WASH in health care facilities in low-resource settings and underlines the low rate of service coverage found (GLAAS, 2014; UNICEF/WHO, 2015). Our findings provide evidence of needs-based, gender-sensitive, and technically appropriate solutions to improving WASH in health care facilities. Specifically, this entails the following five recommendations:

The inclusion of attendants as a user group when planning for WASH services in health care facilities. The role of attendants as users and providers of WASH services can be examined by counting them in the health care facilities and including them as regular WASH service users. However, more research needs to be conducted to determine their exact role, responsibilities, and status in various health care facility settings.

The collection of gender specific and gender-disaggregated data through appropriate monitoring tools and methods. For facilities providing inpatient services, the capturing of gender-disaggregated data on WASH services can be conducted by ward assessments, as wards are usually gender-segregated.

The need to take into account the complexity of WASH services in health care facilities both from a WASH user and a WASH provider perspective. This means moving beyond a merely infrastructure focused assessment towards a holistic service evaluation. For example, even an improved water source will not provide any service if it is unavailable throughout the year, be it due to the lack of proper operation and maintenance or seasonal challenges. By developing questions asked on WASH that deal with more than one perspective, a more accurate picture of the on-the-ground situation can be drawn.

The selection of appropriate methods for data collection. Each of the three data gathering tools, infrastructure spot-check, GALS, and Semi-Structured Interviews have their specific strengths and limitations. Acknowledging greater costs and additional time for data collection and analysis, the presented qualitative tools provide added value, offering greater benefits to be realized over the long term, i.e., better functioning, more equitable health care facilities. Novel tools like GALS are qualitative and dynamic and adaptable for different uses and topics, and are ideal

for starting action at a grass roots level. It would be worthwhile to further explore how GALS could be integrated into existing Project Cycle Management tools used by development actors and national ministries.

The need for improved policies and strategies on WASH in health care facilities, as existing policies on water and sanitation are weak and heavily centralised. Existing strategies and national standards neglect operation and maintenance (O&M) of facilities, menstrual hygiene management facilities and key social aspects, such as awareness raising, communication, sensitisation, and education on a regular basis between different users, providers and the management of existing facilities, and the involvement of communities.

Given the Agenda 2030 Goals, we conclude that it is pivotal to prioritise WASH infrastructure in health care facilities in order to provide robust services, especially for the underserved and the most vulnerable.

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References

Ali, T., Fikree, F., Rahbar, M., & Mahmud, S. (2006). Frequency and determinants of vaginal infection in postpartum period: A cross-sectional survey from low socioeconomic settlements, Karachi, Pakistan. *Journal of the Pakistan Medical Association*, *56*, 99–103.

Benova, L., Cumming, O., & Campbell, O. (2014). Systematic review and meta-analysis: Association between water and sanitation environment and maternal mortality. *Tropical Medicine and International Health*, *19*(4), 368–387. doi:10.1111/tmi.12275

Brocklehurst, J., & Bartram, C. (2010). Swimming upstream: Why sanitation, hygiene and water are so important to mothers and their daughters. *Bulletin of the World Health Organization*, *88*, 482–484. doi:10.2471/BLT.10.080077

Cairncross, S., Hunt, C., Boisson, S., Bostoen, K., & Curtis, V. (2010). Water, sanitation and hygiene for the prevention of diarrhoea. *International Journal of Epidemiology*, *39*, 1. doi:10.1093/ije/dyq035

Cheng, J. J., Schuster-Wallace, C. J., Watt, S., Newbold, B. K., & Mente, A. (2012). An ecological quantification of the relationships between water, sanitation and infant, child, and maternal mortality. *Environmental Health*, *11*(4).

COHRE, WaterAid, SDC, & UN-HABITAT. (2008). *Sanitation: A human rights imperative*. Geneva: COHRE.

Fewtrell, L., Kaufmann, R., Kay, D., Enanoria, W., Haller, L., & Colford, J. (2005). Water, sanitation, and hygiene interventions to reduce diarrhoea in less developed countries: A systematic

review and meta-analysis. *The Lancet Infectious Diseases*, *5*, 42–52. doi:10.1016/S1473-3099(04)01253-8

GLAAS. (2014). *UN-water global analysis and assessment of sanitation and drinking-water report. Investing in water and sanitation: Increasing access, reducing inequalities*. Geneva: World Health Organization, UN-Water.

Hunt, P., & Bueno de Mesquita, J. (2010). Reducing maternal mortality – The contribution of the right to the highest attainable standard of health. Colchester, Essex: University of Essex Human Rights Centre.

Kirk, J., & Sommer, M. (2006). Menstruation and body awareness: Linking girls' health with girls' education. *Special on gender and health* (pp. 1–22). Amsterdam, The Netherlands: Royal Tropical Institute (KIT).

Kohler, P. (2013). Intimate Needs – Public Effects. *Assessing methods to elicit delicate topics in development research and practice*, ICFG, University of Bern, Switzerland.

Mahon, T., & Fernandes, M. (2010). Menstrual hygiene in South Asia: A neglected issue for WASH (water, sanitation and hygiene) programmes. *Gender & Development*, *18*(1), 99–113. doi:10.1080/13552071003600083

Mayoux, L. (2010). *Tree of diamond dreams. Visioning and committing to action on gender justice. Manual for field-testing and local adaptation. GALS stage 1*. The Hague, The Netherlands: Oxfam Novib (WEMAN Programme).

Murray, C. H., & Lopez, A. (1996). *The global burden of disease: A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in I990 and projected to 2020. School of public health on behalf of the world health organization and the World Bank*. Cambridge: Harvard University Press.

Prüss-Üstün, A., Bos, R., Gore, F., & Bartram, J. (2008). *Safer water, better health – Costs, benefits and sustainability of interventions to protect and promote health*. Geneva, Switzerland: WHO.

Shordt, K., & Smet, E. (2012). *Getting it right – Improving maternal health through water, sanitation & hygiene*. The Netherlands: Simavi.

Swedish Agency for Growth Policy. (2013). *Analysis India's healthcare system – Overview and quality improvements*. Stockholm, Sweden: Swedish Agency for Growth Policy.

UNICEF/WHO. (2015). *Water, sanitation and hygiene in health care facilities: Status in low and middle income countries and way forward*. Geneva, Switzerland: WHO.

USAID. (2012). *Service Provision Assessment (SPA)*. Retrieved from http://dhsprogram.com/

WHO. (2016). WASH in health care facilities core indicators. Retrieved from http://www.washin.org/fileadmin/user_upload/documents/WASH-in–Core-Questions-FINAL-August-2016.pdf

WHO. (2013a). Water Sanitation and Health (WSH): Health through safe health care: Safe water, basic sanitation and waste management in health-care settings. Retrieved from http://www.who.int/water_sanitation_health/mdg3/en/

WHO. (2013b). *Service Availability and Readiness Assessment (SARA)*. Retrieved from http://www.who.int/healthinfo/systems/sara_reference_manual/en/

World Bank. (2016). *Service Delivery Indicators (SDI)*. Retrieved from http://www.sdindicators.org/

WSSCC. (2014). *WASH POST-2015: Proposed targets and indicators for drinking-water, sanitation and hygiene*. Geneva, Switzerland: WSSCC.

Zikusooka, C. M., Kwesiga, B., Lagony, S., & Abewe, C. (2014). *Universal Health Coverage Assessment Uganda, Global Network for Health Equity (GNHE)*. International Development Research Centre (IDRC) Ottawa, Canada.