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Shedding light on humanitarian sanitation

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TRANSFORMATION TOWARDS SUSTAINABLE
AND RESILIENT WASH SERVICES

Shedding light on humanitarian sanitation

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PAPER 3073

Lighting should be provided for WASH facilities in Humanitarian contexts according to several standards. Evidence for this and the practical budget, operational and management responsibilities are less clear. A three-country research project looking at the impact of lighting on WASH use and Gender-Based Violence (GBV) required a multi-disciplinary approach, combining OXFAM's practical implementing expertise with WEDC's research-orientated approach. The research showed how much more is needed for safe sanitation than just building latrines. Lack of usage of latrines had implications for environmental health. A reason for not using latrines was due to fear of many things, including GBV. The location of the facility was a common concern, but simple lessons are not easy to distil as the context varies between settlements and changes rapidly overtime. The provision of lighting was welcomed by a wide range of stakeholders, but other factors still affect both GBV and WASH outcomes.

Background

Some of the few unavoidable reasons for going outside your home at night is to collect water or go to the toilet, assuming these facilities are not available inside the house. This activity can be unpleasant or even dangerous, with risks of tripping and falling in the dark, encounters with flies, snakes and scorpions, sexual harassment, sexual violence and physical attacks. These risks are worse for refugees and displaced people in camps, with difficult, unfamiliar, disrupted physical and social conditions. The fear of going outside in the dark can impact on the actual usage of water and sanitation facilities, even where coverage is good.

The Technical Working Group of the Humanitarian Innovation Fund (HIF) identified latrine lighting as being an issue. Initial work focused on technology, looking at innovative lighting systems such as the gravity light, but anecdotal reports of lighting having some adverse unforeseen results required a wider view of the issues. Cases of groups of men gathering to socialise outside women's toilets as these were some of the only places lit at night showed that providing latrine lighting could make access worse for some people. Not only is lighting needed at the toilets but also on the route to and from people's homes. It was realised that just providing latrine lights was not sufficient and the HIF commissioned some research to investigate the impact of lighting interventions, especially on issues relating to Gender Based Violence (GBV) as well as sanitation.

Reviewing available knowledge

Before embarking on field research, the team searched for literature on the topic. Whilst standard humanitarian publications (e.g. (The Sphere Project, 2011) and (Kennedy, 2016)) advocate "lighting" at a policy level, this was not supported by evidence or practical guidance on technological and management aspects. A series of international key informants mirrored this pattern, of a general wish for lighting but a lack of practical evidence of what works. There is some guidance for street lighting for low-income countries ((The Institution of Lighting Engineers, 1990) and (CIE, 2007)) but these pre-date the wide availability of cheap LED lights and solar power. They also focus on street lighting for vehicles rather than lampposts for pedestrians. People require lighting to shine horizontally to illuminate steps and the faces of other pedestrians, rather than the vertical lighting needed by car drivers. Other issues include glare and light pollution, as too much light can also be a problem.

The review also examined the relationship between lighting and crime (not just GBV). This provided a very mixed picture, with various studies showing both increases and decreases in crime. This literature on crime prevention discussed issues of lighting displacing crime to other (unlit) areas and some of the possible reasons for reductions in the (fear of) crime, such as increased numbers of people out at night and better visibility leading to recognition of other pedestrians. As GBV is very hard to measure, with significant underreporting, especially GBV against men, this project looked at people's fears as perceptions can have major impacts and these fears are easier to identify.

The influence of street lighting on crime and fear of crime – the case of Wandsworth

"There is a widely held belief that the improvement of street lighting will reduce both crime and fear of crime. Improved visibility, it is thought, will increase the possibilities for identification and apprehension of criminals and hence deter the perpetration of criminal acts, while also providing reassurance to those people who are fearful for personal safety in public places. However, there is little firm evidence to support these beliefs. …

No evidence could be found to support the hypothesis that improved street lighting reduces reported crime. Although some areas and some crime types did show reductions in night-time crime relative to the daylight control, the dominant overall pattern, … was of no significant change. A secondary part of the study assessed the attitudes and behaviour of residents and their experience of crime not reported to the police. …. The perceived safety of women walking alone after dark in the re-lit area was improved, but few other effects were statistically significant. No change in un-reported crime, harassment or travel behaviour could be detected. Nevertheless the reaction of residents to the re-lighting scheme was overwhelmingly favourable; it is without doubt a popular measure. … Although street lighting was welcomed by the public and provided reassurance to some people who were fearful in their use of public space, the area-wide introduction of new street lighting did not reduce reported crime."

(Atkins, Husain and Storey, 1991)

Planning the research

To inform guidance on lighting in camps for displaced people, a series of research projects have been undertaken. Studies have taken place in displacement camps in Iraq, Nigeria and Uganda to examine the impact of lighting on perceptions of safety around sanitation facilities and related usage rates, with an emphasis on the fear of GBV. An interdisciplinary study using mixed methods was carried out before and after a lighting intervention. This study consisted of:

- a series of key informant interviews with WASH, protection and logistics staff,
- a questionnaire for residents of each camp,
- a series of focus group discussions with residents, and
- observations of WASH facilities

Besides the "before" and "after" situations, the other main comparisons were between:

- "walking to" and "using" the latrine as GBV can occur on the way to the toilet as well as inside,
- usage in the day and at night,
- differences between bathing facilities and latrines, and
- a range of possible risks (such as tripping, vermin, harassment, physical and sexual violence).

Safety, protection and ethics were major concerns, so, children were not explicitly interviewed, and researchers could not observe the camps at night. The studies had to fit around the availability of national staff and operational requirements. Questions did not look at GBV report rates but people's perceptions of risk. Lighting interventions could be distributions of battery or solar torches or the installation of lampposts. [Note "lamppost" was used to distinguish the light from "streetlamps" designed for roads.]

A range of results

Unsurprisingly for a multidisciplinary project, the results were wide ranging and often context specific. In Iraq initial baseline data showed that one in four women were worried about sexual harassment and violence whilst using WASH facilities and more than half did not use the WASH facilities because they did not feel safe, with one in five of those resorting to open defecation. The quantitative survey for Uganda showed a 21% reduction in the number of women afraid to use latrines at night, which could be viewed as a major improvement (figures 1b and 2b). However, this correlation with the installation of lampposts may have been caused by other factors, such as people getting to know neighbours, a move from public to household latrines, removal of grass and bushes or hygiene education programmes.

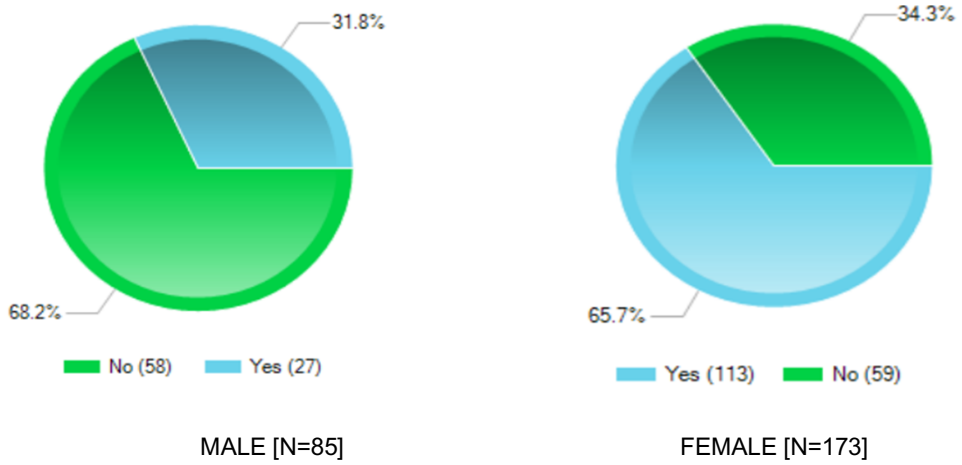


Figure 1a. Answer to "Do any of these risks prevent you from using the facilities during the DAY?". Baseline survey; Uganda

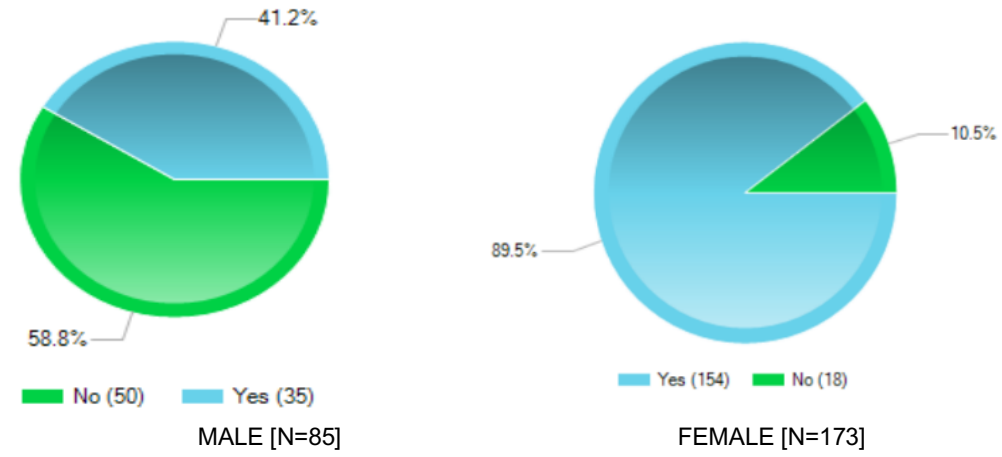


Figure 1b. Answer to "Do any of these risks prevent you from using the facilities during the NIGHT?". Baseline survey; Uganda

What this example shows however, was the extremely low usage rates of toilets in the Ugandan refugee settlements, especially at night. Hurriedly built, temporary communal toilets for men and women who previously may not have been used to using a latrine at all contributed to people resorting to other coping strategies, including using buckets and bowls in their shelter at night. These would be emptied nearby then

washed out at water points before being used for other purposes, such as laundry. When asked what they "feared", snakes were top of the list, but women also reported a range of issues, notably a concern of being "seen" going towards the toilet. This was a major issue in the Iraq case study, where gender separation is important culturally and being seen to use communal latrines directly led to incidents of domestic violence.

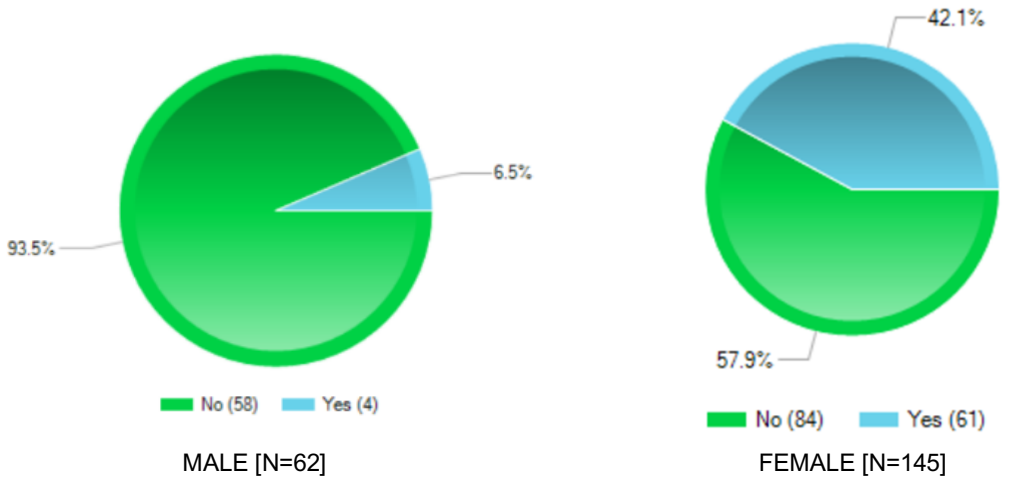


Figure 2a. Answer to "Do any of these risks prevent you from using the facilities during the DAY?". End line survey; Uganda

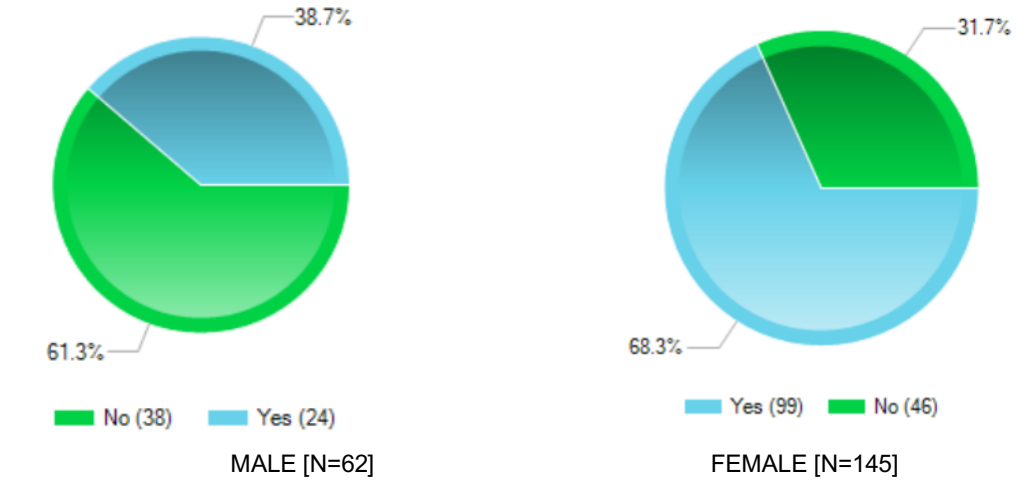


Figure 2b. Answer to "Do any of these risks prevent you from using the facilities during the NIGHT?". End line survey; Uganda

The Ugandan case study area was a low-density settlement with temporary communal latrines shared by around 10 households, so providing fixed lighting in and around over 200 facilities was not feasible. Instead, OXFAM and CARE installed lampposts at the 20 water tanks. Temporary trucking necessitated filling water tanks at about 500 m spacing. Poor roads delayed the trucks and this meant that these tanks often ran dry and were re-filled at night, forcing women to go out in the dark to collect water. Consultation across a wide group of stakeholders identified these tanks as suitable points for installing lighting.

The lighting intervention in Uganda was received very positively. Reports of crime, GBV (excluding domestic violence) and scorpion stings all fell to zero over the study period but again correlation cannot be

taken as causation as the socio-economic context was settling down six months after the arrival of the refugees. Police, settlement camp management and the medical providers all reported positive impacts on their work, especially when moving around the settlement at night. The Representative of the Office of the Prime Minister summed up the general feeling that the lights had "turned the 'bush' into home", giving the area a sense of settlement rather than wasteland. The wide range of stakeholders involved however also led to problems, with co-ordination in a rapidly changing environment proving difficult. Procurement of lampposts by both INGOs was led by the protection teams supported by logistics, but both groups lacked technical lighting expertise. Whilst it had been agreed to site lampposts at the water tanks, these were temporary and are being replaced by more permanent tap stands and laundry facilities in different locations.

Implications for GBV

A woman being seen using a public latrine alone was an active catalyst for GBV in some conservative societies, making the location decisions of the sanitation provider part of the problem, so there are. clear links between WASH and GBV Going to the toilet at night time is one of the most dangerous things you can do as a woman in a camp at night and GBV actors need to work closely with WASH actors to mitigate and monitor these risks. A lack of consultation with women about the design of WASH facilities in relation to safety contributed to fears of GBV. Protection staff need to positively engage with their WASH colleagues to fill this gap.



Photograph 1. An installed lamppost

Implications for lighting

The project focused on lighting but there is not much advice on the positioning and installation of lampposts in camps. The affordability of solar powered LED lamps makes this more of an option, especially where no mains power is available. Post installation observations and interviews provided initial insights. Whilst lamps are readily available, they do need to be installed correctly, with solar panels aligned correctly to the sun. Many panels were facing the wrong way and at too steep an angle. Batteries need to be secured to prevent theft. Single direction streetlamps were used, which can reduce light pollution to adjacent homes, but provide a focused bright light rather than less intense illumination over a wider area. Lack of flexibility meant that the direction or location could not be adjusted to suit changing needs. Lampposts are ideal for isolated facilities but lighting near buildings is cheaper if the panel and lamp are fixed to the structure rather than a separate pole.

In all countries, women felt safer if they had torches, but men generally had more access to torches than women, so household dynamics need to be considered when distributing torches. In Nigeria, where torches were distributed following the first day of data collection, fear of sexual harassment at night time on the way to the WASH facilities dropped from 34% of people saying they were very worried about this, to 8%.

Implications for sanitation

As an interdisciplinary project some of the lessons learn overlap, requiring liaison to ensure mutually beneficial outcomes. A key message from a GBV perspective to the WASH sector is that if women's fears are not considered, then the impact of WASH interventions can be severely constrained. Low sanitation usage rates, especially at night, resulted in open defecation or the use of household buckets, with immediate impacts on environmental health. Lighting, street layout, water points and sanitation are all factors that influence people's perceptions of safety. For example, in Uganda, the number of snake bites were low (two bites leading to one death) but this was the major fear given for avoiding the communal toilets.

"Evidence that fear of crime is out of proportion to risk has caused researchers to examine a range of cues within the environment which arouse anxiety irrespective of actual risk. It is useful for the purpose of subsequent discussion to identify the pivotal environmental cues that signal to pedestrians they are in danger of being victimised." (Painter, 1996)

Thus, for snakes, clear paths free of grass and shrubs is a solution. For GBV the picture is more complex, as underreporting is significant and cultural constraints can reduce discussion of this sensitive issue. However, there are some simple actions, such as making bathing areas more private, not just screened by a thin plastic sheet. For public or communal toilets women do not want facilities just to be separate (adjacent to each

other, perhaps sharing a wall) but want these toilets and bathing areas to be physically separated (by several metres) with distinct pathways so it is obvious if men are loitering in the wrong place. Combined bathing and toilet facilities were also requested. Trips, slips and snakebites incurred on the way to the toilet are again partly the responsibility of the sanitation provider.

Based on the initial results, OXFAM quickly developed and distributed a simple checklist for field staff, focusing on user consultation, tips on positioning the facility and design issues not related to directly to technical disposal of faeces (such as the superstructure and doors). In Uganda the sanitation strategy was for households to each construct their own household latrine, which would alleviate many of the problems, but progress was very slow (for many complex reasons), the temporary facilities were filling up and not lasting long enough, so an alternative strategy was needed.



Photograph 2. Waiting for the water truck

Moving forward

There are still many questions that need to be answered, such as the use of handheld torches, lighting specifications, the impact of location of toilets and the issues around a fear of "being seen" going to the toilet, but a core principle is to ensure that WASH provision treats people with dignity and does not endanger lives.

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