

Digital Citizenship through the Use of Crowdsourced Data: Mapping Sexual Violence in Public Spaces

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Abstract

This chapter examines how crowdsourced data of women's experiences of sexual violence in public spaces can aid the search for local solutions by engaging communities and institutional service providers, such as the police. The data provide a basis for creating a space for dialog based on insights gained from understanding the patterns and trends that are location-based, and they are great tools for enhancing digital citizenship. The chapter further illustrates the potential willingness of communities and local authorities to participate in solutions and describes the importance of storytelling and digital citizenship in this context. The chapter highlights the work done by non-profit Red Dot Foundation, in India together with partners in Kenya and Nepal. The chapter concludes by asserting that crowdmapping is a multifaceted tool, which makes women aware of potentially dangerous locales. Crowdmapping empowers women to report incidents that help keep others safe, and provide a source of data to advise on best practices for avoiding street harassment and assault in public spaces. This chapter supports the Global Framework for Media and Information Literacy Cities (MIL cities) by demonstrating how the Safecity website and mobile application tools support the creative dissemination of knowledge, media literacy, and empowerment of women and girls to enhance place-based community safety.

Keywords: gender equality; safety; public space; harassment; groping; crowdsourced data; digital citizenship.

Gender-based violence is a global pandemic. UN Women estimates that 1 in 3 women around the world experience some form of sexual violence at least once in their lifetime. Yet, 80 percent of women and girls choose not to talk about it for several reasons including socio-cultural restrictions, fear of dealing with the police, and the lengthy judicial process for justice. In patriarchal societies like India, these statistics peak higher than the global average, thereby, affecting the quality of life of women and girls, limiting their choices, restricting their movements, and imposing rules and regulations that their male counterparts do not necessarily have to deal with.

A 2013 survey of 2000 women and 1000 men in New Delhi by the International Center for Research on Women (ICRW) found that 95% of women and girls living in the city feel unsafe from sexual violations in public spaces (Gaynair 2013). In December, 2012, a horrific gang rape took place in a bus in Delhi, the capital city of India. This incident was extremely brutal, resulting in the death of the young victim and leading to a huge and unprecedented public outcry. Another young woman also brutally gang-raped in 2013 died. 90% of the 2000 women and girls surveyed by ICRW reported experiencing sexual violations in public spaces —everything from groping, stalking, and sexual assault to comments and catcalls (ibid). Over 60% of the women and girls surveyed divulged experiences of violations in the last 6 months prior to the research and 65% reported being very fearful to go out at night; the findings were echoed by a 2016 survey of 1387 women and men in New Delhi, which found that the fears and perceived threats articulated by women correlated very strongly to actual reports of harassment and abuse (Madan and Nalla 2016).

In December, 2012, I launched *Safecity*: a platform that enables reporting personal experiences of sexual violence in public spaces in India anonymously. The aim was to encourage women and girls to speak up about such crimes, seek out assistance, and bridge the gap between the official statistics and daily reality. Since its inception, we have collected over 13,500 personal stories of sexual violence in India, Kenya, Nepal, and other countries and engaged over 750,000 citizens to educate and advocate about this issue. We did several pilots in local communities with grassroots partner organizations to test if the crowdsourced data could be used to mobilize communities and engage them to demand accountability from institutional stakeholders like the police, municipal authorities, and others.

This paper explains our methodology while engaging communities, and finding innovative solutions, thus, reclaiming their agency to become active citizens of a democracy.

Collaborative mapping and community engagement became new trends in the development discourse that allow local communities to become part of the power structure and influence what is mapped as well as what/who is on the map. The involvement of geographic information systems as tools for collaborative mapping allows new ways of economic and societal development. The mapping of uncharted

areas allows local communities to improve their economic situation in the region and literally put the communities on the map (Panek and Netek, 2019).

Most importantly, in each section below, it will be shown that the Safecity tool supports UNESCO's Global Framework for Media and Information Literacy Cities and the United Nations Sustainable Development Goals in many aspects of the tool's design. This includes supporting efforts to make cities inclusive, safe, and resilient; achieve empowerment for women and girls; and provide access to justice.

Use of Crowdsourced Data

Ushahidi was first developed in Kenya to map reports of violence after the elections of 2008. Its name translates to "testimony" from Swahili, and its mission is to help people voice out and those who serve them to listen and respond better. This was so effective that many organizations started using its platform to map all kinds of issues. In 2010, HarassMap Egypt started crowdmapping sexual violence on the streets of Cairo and other cities in Egypt.

I first heard of HarassMap Egypt in December 2012 while attending a program by the Swedish Institute for Indian leaders on Corporate Social Responsibility and Sustainability in business. At the time, I was exploring themes for a personal project that would help women achieve their potential. I found the concept of crowdmapping interesting, but did not consider it important to immediately replicate in India. However, within few days of returning from the program, a young woman named Jyoti Singh was brutally gang-raped on a bus in Delhi; She eventually died of injuries. This incident shocked everyone in India and around the world. It lifted the lid on the conversations around sexual violence and, for the first time, women and girls shared their stories openly. As I observed all these events, I was reminded of my own experiences of sexual violence in public spaces - being groped on a train in Mumbai as a thirteen-year-old, witnessing men masturbating on public buses, and being physically accosted during Holi⁴ and other Indian celebrations severally.

I realized that though most women had stories to share, they definitely did not make official complaints; this resulted in data gap. Through further observations, I was shocked to find that there were very few statistics that could adequately highlight the problem of sexual violence in public spaces in India. This motivated me to launch Safecity together with a few friends. Our goal was to encourage women and girls

4 Holi is an Indian festival to celebrate the beginning of spring. It is celebrated with water and color which is thrown at people.

break the silence around such crimes by reporting anonymously. Visualizing this data as location-based trends would enable us to find dominant trends and patterns. This new data set would help identify factors that cause a location to become the comfort zone of perpetrators and help us identify strategies for resolution. Additionally, with digital literacy through women and girls' use of the Safecity tool, their participation has identified unsafe areas in their communities, which helped make cities safer while giving them individual and collective voices about community safety.

Engaging Communities

One of our first pilots was in a small suburb in Mumbai where we partnered with an organization that wanted to mobilize communities around an issue. We convinced them to take up public safety and then we conducted several hundred interviews with residents in a small block of ten streets. There were different kinds of crimes that were taking place, but the dominant one was “chain snatching” or petty robbery. Armed with this data, we invited the residents to brainstorm solutions. The residents decided to equip themselves with knowledge on their legal rights, how to make a “right to information” application, and self-defense techniques.

The next step was to test it out in a completely different community. So, we partnered with a local gender resource center in Delhi being overseen by Plan International India for over three months. We organized multiple trainings, awareness workshops, and an extensive mapping exercise in an urban village of Lal Kuan. Respective stakeholders such as local police, the municipal corporation, school authorities, grassroots NGOs, community collectives etc., were engaged to improve the living conditions of the community and reduce the cases of sexual harassment during the space of three months. The community as a whole, especially women, became aware of sexual rights and laws and started to report these issues via Safecity and to local authorities.

The final data set showed that there were four hot spots, one of them was near a tea stall where men would loiter while having tea and intimidate women and girls who pass by. These “male only” spaces with constant male gaze were quite intimidating to women and girls. In a culture where it is difficult to challenge a male figure for inappropriate behavior, many women and girls preferred taking longer routes or avoiding these hot spots while a few girls even dropped out of school (It was definitely easier to adjust one's daily routine.)

We brainstormed ideas in the community and decided to host an art workshop with the Fearless Collective. The women and girls painted “staring eyes” on the walls

along with subtle messages that loosely translated in English to “Look with your heart and not with your eyes,” “we won’t be intimidated by your gaze,” “we will break our silence,” etc. This activity was hugely liberating for them, especially since many of the women were illiterate who for the first time expressed their deepest feelings. The wall mural was very effective in conveying the message; the loitering and staring actually reduced.

Resulting from this, multiple public toilets were re-opened, nonfunctional street lights were repaired, and the entire community was encouraged to come together to fight this issue. This is an example of supporting MIL principles by improving technological penetration and increasing integration in places “where some information is not conveyed by media nor exists in digital format.”

Subsequently, organizations implored us to use our platform in Kenya and Nepal to crowdsource data from their communities and use it to effectively engage various authorities ranging from religious leaders to transportation authorities.

Engaging Authorities

For a long time, quantifying sexual violence has been nearly impossible especially in places where resources to conduct expensive surveys or lengthy studies are unavailable. But more recently, the unique power of crowdsourcing—the sharing of information by a large group of people via mobile phones, apps, and social media—has emerged as an effective way that allows people share their experiences and helps researchers collect data drawing attention to this long-simmering problem plaguing women and girls.

Through crowdsourced data, we have been able to engage various authorities on preventive measures of sexual violence.

When presented with the crowdsourced data by the numerous neighborhoods we have worked in, the police accept the data with very little resistance, change their beat patrol timings, and increase vigilance based on the patterns of crime. The police chief in Bandra got his counterparts in the municipal corporation to fix the street lighting and also endorsed the whistle protocol which boosted the confidence of the community. Finally, the elected representative of the area who was not involved came up with a budget for women’s safety and was willing to provide funds for CCTV cameras. These would be deterrent to the robbers who were targeting vulnerable women of their jewelry. These developments were hugely encouraging from my first attempt of using crowdsourcing, thereby encouraging my believe in the potency of crowdsourced data.

In Kenya, our partner Jane Anyango, Executive Director of Polycom Development project, was able to connect with religious leaders to look at the data from a hot spot near a mosque (The One, 2015). Afterwards, the Imam started preaching in his sermons and advocating with young men about sexual violence. This was extremely effective in bringing about change in the community.

In Nepal, our partner, Samjhana Phuyal, was able to use the crowdmapped stories to convince transportation authorities to provide them with “women only” bus licenses as the data proved that the mini buses in Kathmandu were overcrowded and women were being groped.

Currently, in India, we formally send dashboards of city level data to the police in Mumbai, Delhi, and Goa while we have the Bangalore and Pune police accessing our website for trends and patterns.

We also presented our data to the railway authorities in Mumbai on our observations from the crowdsourced data set and a series of audits we conducted at key railway stations (Singh, 2018). Our findings showed that most women commuters were vulnerable to sexual harassment but there was little confidence in the formal reporting system including the helplines. Most women were also ignorant about their rights and the formal redressal process of making a complaint.

In this digital age, we can use maps to our advantage - to know the lay of the land, familiarize ourselves with routes and alternate routes, as well as locate important places like police stations, hospitals, subway and train stations, and bus stops. Visually plotting maps with information on safety is another way to remain updated on local happenings. For example, the locals always know which area of a city is unsafe even during the day and what areas are to be avoided at night. Locals in New Zealand, one of the safest countries in the world, do not walk on the streets past 10 pm. We were able to support another goal of the MIL Cities project while using these tools and working with authorities successfully: by building bridges between citizens’ use of data and local government authorities’ actions to support mutual safety goals.

Storytelling and Digital Citizenship

Storytelling is important in unveiling this issue of sexual violence. Most women and girls do not understand that the entire spectrum of abuse ranges from nonverbal forms of staring and leering to verbal abuse like cat calling, commenting, and sexual invites to physical forms of groping, touching, exposing one’s genitals, and masturbating to sexual assault and rape. Women and girls remain constantly vulnerable to nonverbal and verbal forms of abuse, but they trivialize it accepting

it as part of daily routine. This trivialization is harmful because in the long run, the perpetrator remains unchallenged, bystanders fail to intervene, and the victims tend to accept this abuse. The victims unconsciously limit their behavior, making themselves invisible by dressing in oversized clothing, making their physical appearances smaller, or changing their routines, limiting their presence in public spaces to only daylight hours, taking more expensive means of transportation and more. Over time, this impacts their ability to live a quality and meaningful life as they might not have access to the same opportunities as their male counterparts.

Women and girls are generally unaware of what constitutes sexual violence. In an awareness workshop on sexual violence we held at a university in Mumbai, my co-facilitator and I asked the 40 young female law students for a show of hands if they had **never** experienced any form of sexual violence and many of them raised their hands. Once we went over the definitions and forms of sexual violence, we asked for a show of hands again and not a single hand up went up.

It is through storytelling that we can build solidarity through resonance; it is important to facilitate forms of storytelling that support digital citizenship. A digital citizen implies a person who has the knowledge and skills to effectively use digital technologies to communicate with others, participate in society, and create and consume digital content (Digital Technologies Hub, Education Services Australia). Digital citizenship is about confident and positive engagement with digital technologies. Providing a mapping tool for women and girls enables them to use their skills in society and use their digital stories in ways that help their community.

It is estimated that women in Delhi are willing to spend an additional INR 18,800 (\$290) to follow a safer route compared to their male counterparts (Borker 2017) while another study estimates that some New York women could be paying as much as \$1,200 extra every year to move safely around the city (Lampen 2018). Lack of safety in public spaces could be a reason for the declining number of women in the labor force in India (Dhillon 2018). Hence, allowing these women to create the safe route through mapping is an important part of empowering them to change their own experiences as it also significantly influences public space activity, includes both old and young citizens, and impacts transportation safety in new ways, which are all goals of MIL Cities.

Conclusion

Oscar Newman, in his book *Design Guidelines for Creating Defensible Space* explains that “Defensible space therefore is a socio-physical phenomenon. Both society and physical elements are parts of a successful defensible space.”

The theory argues that an area is safer when people feel a sense of ownership and responsibility for that piece of a community. Newman asserts that “the criminal is isolated because his turf is removed”: when each space in an area is owned and cared for by a responsible party. If an intruder can sense a watchful community, they will feel less secure committing a crime. The idea here is that crime and delinquency can be controlled and mitigated through environmental design.

Sexual violence is a global pandemic that needs immediate redress. In the context of the space in which it takes place, sexual violence carries corollary implications for individuals and communities. When women lose access to public spaces because of sexual violence in public transport or poor lighting, they lose opportunities and civic rights.

By understanding that gender-based violence in public spaces does not happen in isolation but as many factors contributing to it, we can foster a holistic solution that has more women willing to be outside the home late at night. Sexual violence constitutes challenges that requires primary attention and resolution to increase the supportive potential of any environment to drive other development.

Thus, Safecity has armed us with crowdsourced data that helps us “measure” sexual violence and provides the most powerful way for everyday citizens to localize, visualize, and aggregate data in a way that authorities cannot ignore. For crowdsourcing to succeed in this battle against sexual violence, everyone—citizens, civil society, and government—must play their part, which without doubt, will eradicate this pandemic.

Lastly, the five laws of MIL are actively supported through the Safecity’s tool design and practices: It provides a method for critical civic engagement, supplies ability to access and create knowledge (location of incidents), makes the truth of sexual assault transparent, fosters knowledge and understanding about community hotspots, and incorporates the experiences of community residents, especially those who never spoke up about their incidence of sexual assault in the past.

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