

Ethical issues arising in research into health and climate change

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Pecha Kucha presentation

Climatic disaster and women's vulnerability: a case study on menstrual hygiene management of internally displaced women in the Sundarban Regions of India

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Brief description of context

As per the IPCC report, climatic vulnerability poses an existential threat to low-lying coastal regions, particularly deltas marked as high-risk areas due to rising sea levels. Climate change has triggered a severe environmental crisis in the coastal belt of India. The low-lying delta area of Sundarban is a well-known disaster prone area due to the large number of natural calamities that have occurred there in the last two decades. In the recent past, storm surge and tidal floods have wreaked havoc in the Sundarban region. Storm-surge floods caused by cyclone Sidr in 2007, Aila in 2009, Giri in 2010, Phailin in 2013, Hudhud in 2014, Fani and Bulbul in 2019, Amphan in 2020, and most recently Yaas in 2021 resulted in a massive loss of livelihoods. The severity of climate-related disasters has made coastal and riverine households particularly vulnerable, contributing to the loss of land, livelihoods and displacement of people. The health impacts of climate change resulting from these disasters are severe, particularly infectious diseases. Women in the Sundarbans are particularly vulnerable to the health impacts of climate change. In particular women's menstrual health faces significant challenges associated with lack of access to menstrual products.

Health research in the context of climate change with implications for public health raises challenging ethical issues. This study explores ethical issues among internally displaced women during natural disasters in the Sundarbans region. Ethical challenges in health research are magnified in this context. Research during natural disaster in the Sundarbans, particularly among internally displaced women, raises concerns about consent, power imbalances, and the risk of exploitation. Moreover, the urgency of disaster response can lead to ethical compromises, especially regarding participant safety and wellbeing. These ethical concerns become even more complex when considering the long-term impacts of climate change on health, such as rising sea levels, worsening food insecurity, and the collapse of local economies, which disproportionately affect women.

This qualitative case study was conducted on the Sagar Island in the Sundarbans region which is a highly disaster prone and environmentally vulnerable area. It examines the menstrual hygiene management of internally displaced women. Field work was conducted from 1st June to 31st August 2023. We adopted purposive sampling to select two villages in Sagar Island in the Sundarban region, where most of the people are displaced from Ghoramara Island due to natural disasters. The locations were selected on the basis of frequent occurrences of flood, cyclone and sea level rising.

Qualitative data was collected via in depth interviews using unstructured questionnaires among 20 young adult women from Bamkinagar and Ganga Sagar villages who experienced menstruation in the relief camp during the floods and cyclones. The qualitative interviews were conducted to assess the experience of menstruation by young adult women during the period of the natural disaster who stayed in a relief camp for between one week and one month. The interviews were conducted in a private, confidential space. The interviews lasted one hour.

Discussion of ethical issues

Ethical issues encountered by Sundarban region investigators included:

- a) minimizing risks and promoting benefits to participants
- b) obtaining valid informed consent
- c) working with vulnerable participants
- d) protecting participant confidentiality
- e) dealing with legal implications of research, and
- f) obtaining expeditious review from the institutional review board (IRB), community groups, and other committees.

To ensure that ethical issues are handled properly, it is important for investigators to work closely with IRBs during the development and implementation of research and to consult with groups representing the community. Menstruation is a taboo for our society and many women are reluctant to talk to outsiders. Respondents were reluctant to talk about menstrual hygiene management. Before conducting the survey, many women refused to fill in the consent form because these were private issues that comprising participant confidentiality.

Women in the Sundarbans are particularly vulnerable to the effects of natural disasters. This compounds existing health burdens, particularly in relation to menstrual health and hygiene. This study sought to maintain confidentiality as menstruation is societal taboo. Most of the women in the study were from below the poverty line. Most shared one room with more than four family members. Women could not speak openly about menstruation due to the presence of male family members which may risk issues of participant confidentiality and misreporting of the data.

This research revealed that some women opt for reusable materials like old cloths instead of disposable menstrual products such as pads or tampons due to unaffordability. This preference arises from uncertainties about the logistics of using disposable products, such as concerns about changing them, disposing of used materials, and finding suitable places to wash and dry reusable materials.

There was a lack of convenient water sources in most latrines and washrooms, contributing to the difficulties women in these refugee camps faced maintaining menstrual hygiene. This study highlighted the crucial need for menstruating women to have access to private spaces for changing menstrual products, particularly during emergency situations. Further, this study explored that women sometimes used wet cloths due to shortage space for drying the reusable cloths. Thus, privacy plays a vital role in ensuring that menstruation is managed with dignity, hygiene, and safety. The study also highlighted that inadequate menstrual hygiene management caused reproductive tract infections such as itching and rashes at vagina during and just after menstruation throughout the disaster.

Conclusion and recommendations

Menstrual hygiene plays a crucial role in preserving women's reproductive health, and maintaining proper menstrual hygiene management (MHM) becomes especially critical during disaster situations. While much of the existing literature predominantly focuses on general MHM during disaster events, our study stands apart by specifically examining the menstrual hygiene practices of displaced women in vulnerable regions of India, particularly the Sundarbans, during disaster events. Unlike broader studies that may focus on urban or less geographically isolated populations, our research highlights the compounded challenges faced by women in disaster-prone, rural areas—where displacement, limited resources, and poor infrastructure create additional barriers

to menstrual health. By focusing on internally displaced women, we explore how climate-induced displacement intensifies these challenges and the role that community-level support and emergency relief efforts play in addressing them. The results of our study underscore the ethical imperative of addressing MHM for displaced women in disaster-prone areas, where equitable access to water, sanitation, and hygiene (WASH) facilities is often severely lacking. The findings reveal that due to the unaffordability of sanitary pads, many women resort to using old pieces of cloth, a practice that increases the risk of reproductive bacterial infections and, ultimately, infertility. These health risks raise significant ethical concerns about the long-term neglect of women's reproductive health in climate-impacted regions. From an ethical standpoint, it is critical to ensure that women maintain their dignity during disasters, including access to private spaces for menstrual management. However, the lack of these basic provisions in relief camps often forces women into undignified and unsafe practices due to the disaster. Although, there is some risk of misreporting or under-reporting of data due to some women declining to sign the consent form due to cultural sensitivities. For those women who did consent, there were challenges due to the lack of private space that could compromise participant confidentiality at the time of collecting data. The state has a responsibility to ensure that disaster response frameworks include awareness programs to destigmatize menstruation and guarantee access to essential MHM resources, such as sanitary products and adequate WASH facilities. Our study highlights the importance of incorporating gender-specific interventions in disaster preparedness and relief strategies, raising ethical questions about who gets prioritized during resource distribution in climate disaster zones. These findings point to the need for ethical frameworks that account for the disproportionate vulnerabilities of displaced women, emphasizing that menstrual hygiene is not just a health issue but a matter of dignity and human rights. Ensuring equitable access to MHM in disaster scenarios is an ethical obligation for policymakers and researchers alike, as it intersects with the broader challenge of climate justice.