Executive Summary

'Disasters Can't Happen Here. Lord Jagannath Will Save Us': Women's Barriers to Early Warning Systems in Odisha, India

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Background

Odisha, a coastal state in eastern India, frequently faces natural disasters due to its tropical geoclimatic conditions. Over the past two decades, Odisha has endured ten of the most severe cyclones among India's coastal states. Following the devastating Super Cyclone of 1999, disaster management systems, including the Early Warning System (EWS), were significantly strengthened to reduce risks. Despite these efforts, challenges persist, particularly among vulnerable communities, including women.

Research highlights that women are among the most vulnerable groups in disasters. However, women are not a homogenous group, and vulnerability varies across socio-economic and cultural contexts. This study examines women's experiences with accessing early warning messages during and after Cyclone Fani, an extremely severe storm that struck Odisha's Puri district on May 3, 2019.

Puri, revered as the abode of Lord Jagannath, holds deep cultural and religious significance for the people of Odisha, transcending caste, gender, and community divisions. Preliminary findings suggest that cultural and religious beliefs, combined with social and economic challenges, influence risk perception and access to early warning messages in vulnerable communities.

The study aims to **identify barriers faced by women from diverse socio-economic groups in accessing EWS and to assess how these barriers affect disaster preparedness.**

Methodology

The study employed an exploratory research design with qualitative and quantitative methods to collect data from women community members and stakeholders involved in early warning dissemination and disaster preparedness. Data were gathered in two phases: after Cyclone Fani (August–December 2019) and in 2024 (January–June). Non-probability sampling was used to recruit participants from seven blocks in Puri district, focusing on women who experienced Cyclone Fani.

The sample comprised 384 respondents, including 211 women surveyed at the household level and 173 stakeholders. Stakeholders included community volunteers (Aapda Mitra), ASHAs, Anganwadi workers, ODRAF members, NGO staff, and local representatives. Data collection methods involved in-depth interviews (IDIs), focus group discussions (FGDs), and key informant interviews (KIIs) conducted with a semi-structured interview schedule.

Data were analyzed thematically through an intersectionality framework, complemented by a force field analysis to assess barriers and facilitators to women's access to early warning messages.

Key Findings

Access and Awareness

While 90% of respondents received early warnings, marginalized women—particularly those with disabilities or from remote areas—often lacked timely access. Television emerged as the most common source of information, with 40% of respondents citing

it as their primary source. This was followed by neighbors (16.93%), public address systems (13.75%), and newspapers (10%).

Risk Perception

Many women underestimated Cyclone Fani's severity due to past experiences with low-impact warnings, fostering scepticism about future alerts. This was compounded by deep-rooted beliefs in Lord Jagannath's divine protection, which created a false sense of security. A fatalistic outlook, viewing disasters as acts of destiny, further reduced the urgency to take preventive measures, especially among marginalized groups with limited access to accurate risk information.

Barriers to Ealy Action

- **Structural:** Language barriers, particularly for women from marginalized communities, limited their ability to fully understand early warning messages. Geographic isolation further compounded this issue, as women in remote villages often lacked access to critical communication infrastructure like mobile phones, televisions, and public address systems, making timely receipt of warnings inconsistent.

- **Behavioral:** Low risk perception, shaped by past experiences with minimal cyclone impacts and cultural beliefs, led to widespread skepticism about the severity of warnings. This skepticism affected the urgency with which many women approached disaster preparedness.

- **Intersectional Vulnerabilities:** Women facing multiple layers of disadvantage, such as those with disabilities, those from lower socio-economic classes, and Dalit women, encountered unique and compounded barriers. These intersecting challenges limited their ability to access early warnings and take protective actions, underscoring the systemic inequalities that hindered disaster preparedness.

Facilitators of EW Access and Early Action

Community health workers like ASHA and Anganwadi workers, along with Aapda Mitra volunteers, played key roles in disseminating warnings, mobilizing evacuations, and supporting vulnerable groups. Their local knowledge and proactive engagement built trust and improved preparedness. Decentralized disaster management enabled faster, tailored responses, enhancing the effectiveness of ground-level interventions.

Preparedness Actions

Women actively undertook preparatory measures tied to their livelihoods, such as storing agricultural produce, protecting fishing equipment, and safeguarding valuables like documents and jewelry. Many also secured homes, unleashed livestock, and ensured access to food and water. However, they often relied on male family members for public-sphere actions like evacuations.

Implications and Recommendations

An effective EWS must explicitly address the gendered dimensions of vulnerability and access, integrating women's perspectives into disaster management processes. Inclusivity and an intersectional approach are essential to extend the reach of risk information and meet the diverse needs of all community members.

- **Behaviorally Informed EWS:** Develop community-centric systems that address behavioral drivers of inaction, such as trust deficits and cultural beliefs, through targeted risk communication.

- **Inclusive Strategies:** Tailor EWS to address the unique needs of marginalized women, incorporating local languages, culturally resonant messaging, and accessible formats.

- **Community-Based Engagement:** Strengthen grassroots capacity by training volunteers with local knowledge and leveraging traditional communication methods alongside modern technologies.

- **Intersectionality-Informed Policy:** Incorporate intersectional vulnerabilities into disaster management frameworks to ensure no one is left behind.

- **Corporate Partnerships:** Mobilize corporate social responsibility (CSR) initiatives to fund and expand EWS infrastructure and outreach.

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