

Extreme Weather and Gender-Based Violence: Understanding Risks for Women and Girls

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Abstract

This study examines how extreme weather events intensify gender based-violence (GBV) against women and girls and identifies the mechanisms through which this exacerbation occurs. Drawing on an integrated theoretical framework combining ecofeminism, social learning theory, and intersectionality-vulnerability perspectives, the research addresses three objectives: assessing whether extreme weather events heighten GBV, identifying the factors driving this increase, and proposing policy responses. The study employs a systematic review and thematic analysis of literature identified through PubMed, Scopus, and Web of Science. Of 2,103 records screened, 39 studies met the inclusion criteria, capturing diverse extreme weather events, including floods, droughts, heatwaves, and wildfires and multiple forms of GBV, such as intimate partner, domestic, and sexual violence. Qualitative studies were deductively analyzed using theory-informed themes, while quantitative studies were narratively synthesized within the same analytical framework. Across the reviewed literature, 95% of studies reported a positive association between extreme weather events and increased GBV. Key drivers included infrastructure loss, displacement, resource scarcity, mental health stressors, and the reinforcement of harmful gender norms. The findings demonstrate that climate-related GBV is not an isolated consequence of disaster but a systemic outcome shaped by entrenched patriarchal structures. By integrating multi-layered theory with policy-oriented analysis, this study exposes a critical gap in current climate and public health responses. It advances actionable recommendations, including gender-responsive monitoring systems, the integration of GBV indicators into nationally determined contributions (NDCs), and targeted climate financing mechanisms to mitigate violence in disagree affected contexts.

Keywords: Gender Based Violence, Extreme Weather Conditions, Risks, Women, Girls.

Introduction

Climate change is increasingly recognized not only as an environmental crisis but also as a profound social and public health challenge. The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as alterations in climate attributable directly or indirectly to human activity that modify the global atmosphere beyond natural variability (UNFCCC, 1992). A central manifestation of this process is global warming, driven primarily by anthropogenic greenhouse gas emissions (IPCC, 2014). According to the IPCC Sixth Assessment Report, rising global temperatures are associated with more frequent and intense extreme weather events, including floods, droughts, heatwaves, cyclones, and storms (IPCC, 2021).

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Extreme weather events defined by the IPCC as climate events that are rare in a particular place and season, have far reaching consequences beyond immediate physical destruction. Increasingly, scholars and policymakers have drawn attention to their role in exacerbating pre-existing social inequalities, particularly gender-based violence (GBV). The United Nations General Assembly defines GBV as any act resulting in, or likely to result in, physical, sexual, or psychological harm to women, whether occurring in public or private spheres (UN General Assembly, 1993). This study adopts these definitions to examine how extreme weather events interact with existing gendered vulnerabilities to intensity violence against women and girls.

Emerging evidence suggests that climate-related disasters do not directly cause GBV, rather they create conditions such as displacement, resource scarcity, livelihood loss, and social instability that heighten the risk of violence. These dynamics have serious implications for public health and economic stability. Survivors of GBV in disaster settings often experience compounded physical injuries, mental health challenges, and reproductive health harms, while communities face increased healthcare burdens and slower post disaster economic recovery (WHO, 2021; World Bank, 2022). Despite growing recognition of these links, the mechanisms through which extreme weather events exacerbate GBV remain insufficiently theorized and systematically analysed.

This study addresses this gap by examining whether and how extreme weather events exacerbate GBV against women and girls, and by identifying the key factors driving this relationship. It employs an integrated theoretical framework drawing on ecofeminism, social learning theory, vulnerability theory, and intersectionality to capture the multi-layered ecological, social, and structural dynamics at play. While previous research has documented associations between climate disasters and GBV, fewer studies have systematically unpacked the underlying mechanisms or translated findings into actionable policy guidance.

To address these gaps, this study pursues three objectives: (1) to assess whether extreme weather events exacerbate GBV; (2) to analyze the ecological socio-cultural, and structural factors shaping this exacerbation; and (3) to develop policy-relevant recommendations aimed at mitigating GBV during and after climate-related disasters. Methodologically, the study combines a systematic review with thematic analysis to synthesize existing evidence and identify recurring patterns across diverse contexts.

By integrating multiple theoretical perspectives and foregrounding policy relevance, this research contributes to a more nuanced understanding of GBV in climate-affected settings and provides a foundation for more effective, gender-responsive disaster and climate adaptation strategies.

Literature Review

Existing research consistently demonstrates that extreme weather events exacerbate gender-based violence (GBV) against women, minorities, and children by intensifying pre-existing social and economic inequalities. Climate-related disasters frequently result in displacement, forced migration, infrastructure damage, and prolonged stays in relief camps, all of which create conditions that heighten women's vulnerability to violence. Following the 2010 Haiti earthquake, for example, women were forced to trade sexual favors for aid because male-dominated committees controlled distribution (Horton, 2012). Similarly, the lack of privacy in relief camps has been linked to increased sexual violence during activities such as dressing, bathing, and sleeping (Caridade et al., 2022).

Displacement further compounds these risks by disrupting family and community structures that often provide informal protection. A joint study by Centre for International Climate and Environmental Research (CICERO), United Nations Environment Program (UNEP), and the

International Centre for Integrated Mountain Development (ICIMOD) documented a significant rise in the trafficking of women and girls in South Asia following climate-related displacement, particularly in Nepal (Caridade et al., 2022). Displaced women and girls are frequently “doubly victimised” due to both gender and displacement statuses, with increased exposure to sexual, psychological, and physical violence (Caridade et al., 2022). For instance, without the presence of male relatives, women often have to travel long distances to gather necessities like water, exposing them to further GBV.

Extreme weather events also exacerbate existing gender inequalities by undermining livelihoods and economic security. Following Hurricane Katrina, women experienced a sharp decline in income, with women’s income ratios falling from 81.6% in 2005 to 61.9% in 2006, alongside a increased reports of intimate partner violence (Willinger, 2008, as cited in Le Masson et al., 2016). Harville et al. (2011) similarly identified heightened use of violent conflict resolution among women after the disaster, highlighting how resource scarcity and economic stress intensify GBV risks.

Socio-cultural norms rooted in patriarchy further shape how GBV manifests during climate crises. In Ethiopia, food distribution practices prioritized men and young children over women, leading to malnutrition and health problems that constrained women's ability to work and recover (CARE Ethiopia, 2016, as cited in Le Masson et al., 2016). In many patriarchal societies, early marriages often emerge as a coping mechanism in response to climate-induced stress. In Malawi, for example, food insecurity has been linked to increased rates of child marriages (Caridade et al., 2022). Le Masson et al. (2016) similarly document rising school dropouts and early marriages across India, Bangladesh, Sri Lanka, and Zimbabwe, where girls are married to reduce household burden or secure dowries (Otzelberger, 2014), as cited in Le Masson et al. (2016). While early marriage may offer limited economic or social protection in some contexts, it exposes girls to heightened risk of early pregnancy, intimate partner violence (IPV) and long term health consequences. Moreover unmarried or widowed women often face even greater vulnerability, including severe social stigma and violence, such as widow burning in South Asia (Solotaroff & Pande, 2014).

Despite a growing body of literature documenting the association between climate disasters and GBV, much of the existing research remains descriptive or focuses on single mechanisms in isolation. Few studies systematically integrate ecological, socio-cultural, and structural drivers using a multi-theoretical framework, and fewer still translate empirical insights into policy-relevant interventions. This study addresses these gaps by synthesizing evidence across diverse contexts and applying an integrated theoretical framework to examine how and why extreme weather events exacerbate GBV against women and girls.

Theoretical Framework

This study adopts an integrated theoretical framework combining ecofeminism, social learning theory, intersectionality, and the vulnerability framework to analyze the mechanisms through which extreme weather events intensify gender based violence (GBV).

Ecofeminism, introduced by Françoise d'Eaubonne in 1974, connects the oppression of women with the exploitation of the environment arguing that both are rooted in patriarchal power structures. By challenging dualisms such as male/female and culture/nature, ecofeminism highlights how environmental degradation and gender inequality reinforce each other. In the context of climate hazards, this perspective clarifies why women’s needs are frequently overlooked and how disaster conditions reproduce and exacerbate pre-existing gendered vulnerabilities.

Social learning theory, particularly the work of Bandura (1977) and Akers (1973), explains how behaviors and norms including those that condone or normalize GBV, are learned, reinforced, and reproduced within social environments. Applied to extreme weather events, this framework helps interpret how crisis heighten the acceptance of violence, weaken reporting mechanisms, and strength hierarchical gender roles. It provides a psychological lens for understanding why GBV often escalates during and after climate disasters.

Intersectionality (Crenshaw, 1989) and the vulnerability framework (Turner, 2016; Reilly et al., 2022) jointly illustrate how social location and structural conditions shape women's exposure to violence. Intersectionality (Crenshaw, 1989) emphasizes that gender interacts with race, class, age, disability, migration status and other identities to produce uneven risks, while the vulnerability framework (e.g., Turner, 2016; Reilly et al., 2022) highlights how political, economic, and social inequalities affect individual's capacity to anticipate, cope with, and recover from disasters. Combined, these perspectives explain why climate hazards disproportionately harm certain groups of women and girls and why GBV manifests differently across contexts.

By integrating these theoretical approaches, this study moves beyond descriptive accounts of climate-related GBV and offers a framework capable of capturing its multi-layered drivers and policy implications.

Methodology

The study uses a mixed-methods approach, combining a systematic review with thematic analysis to answer the question: What factors contribute to the escalation of gender-based violence (GBV) against women and girls during and after extreme weather events? A systematic review enables the inclusion of a large sample ($n > 30$) across diverse contexts, strengthening validity and allowing the identification of recurring drivers of GBV. Unlike meta-analysis, which requires methodological homogeneity, this design incorporates both quantitative and qualitative studies, capturing statistical trends as well as contextual experiences.

Research Strategy and Study Selection

This analysis uses articles from Web of Science, Scopus, and PubMed. No publication data limit were applied, but all publications had to be in English. Search terms covered climate change, extreme weather, gender-based violence, women, and girls. After removing duplicates and assessing titles and abstracts, only open-access primary research involving human participants were included. Because the study focuses on women and girls, articles centered on GBV against males or transgender individuals were excluded. All forms of GBV against women were eligible. Only studies examining climate-related extreme weather events (e.g., floods, hurricanes, droughts) were included; non-climate disasters such as earthquakes were excluded.

Data Extraction and Quality Assessment

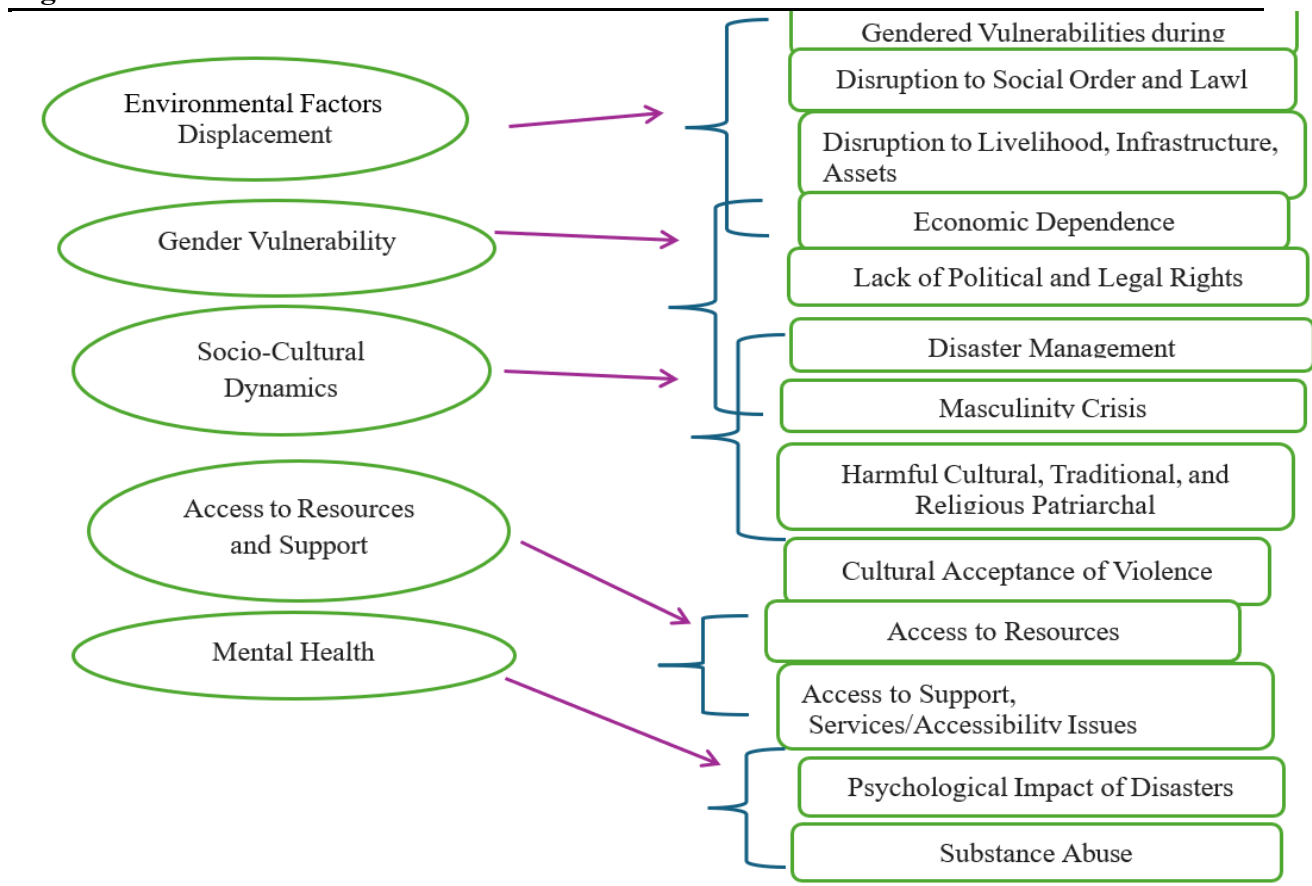
Data extraction ensured transparency, reproducibility, and study quality. Extracted information included: authorship, publication year, study title, design, location and time, study population characteristics, study aim, forms of GBV and extreme weather examined, identified perpetrators, and all quantitative and qualitative findings. Study quality was assessed using the Newcastle-Ottawa Scale for quantitative studies and the CASP Qualitative checklist for qualitative research. Mixed-methods studies were appraised using both tools.

Data Analysis

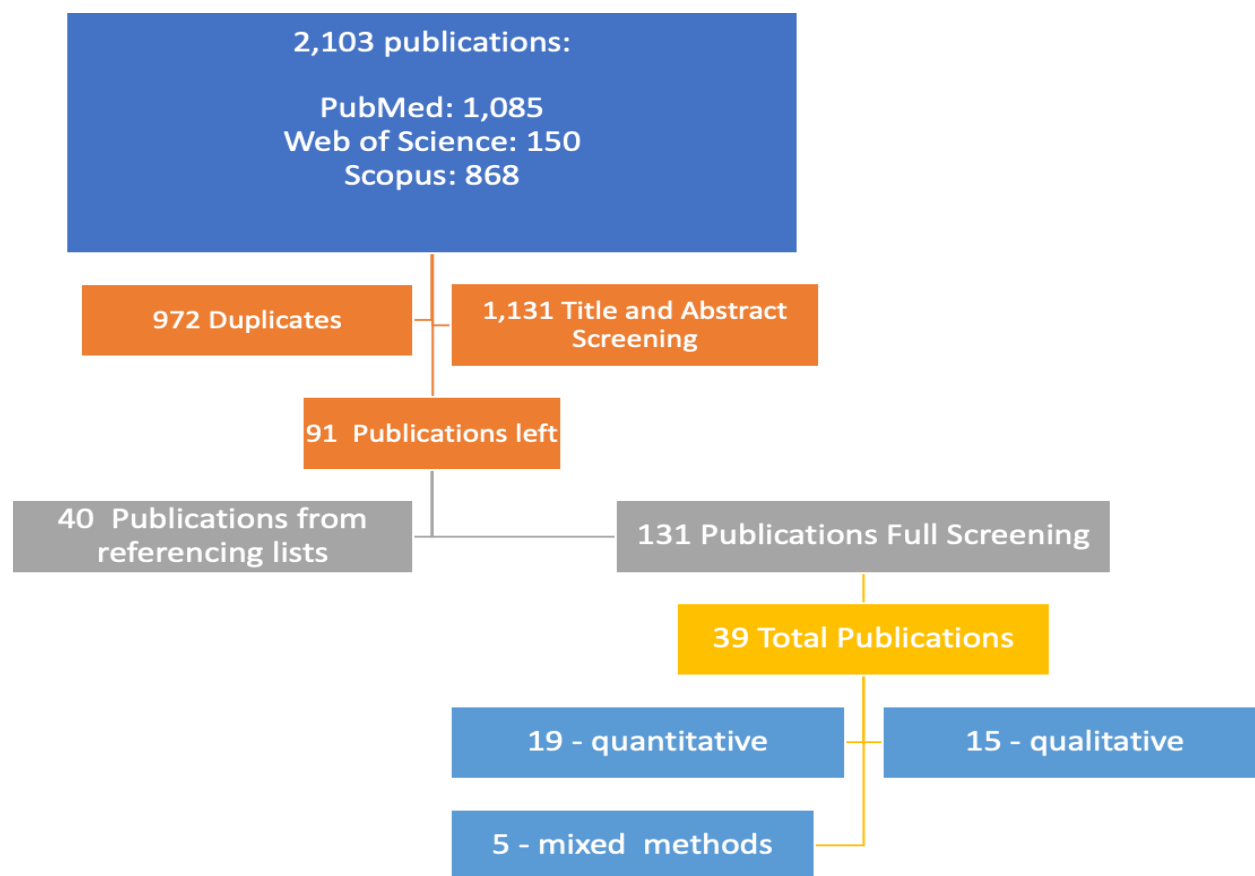
qualitative studies were examined using deductive thematic analysis informed by the study's theoretical frameworks and recurrent patterns from previous literature. Quantitative findings were descriptively summarized and mapped onto the same thematic codes to identify cross-study convergence. The breakdown of the themes can be found in figure 1.

Results

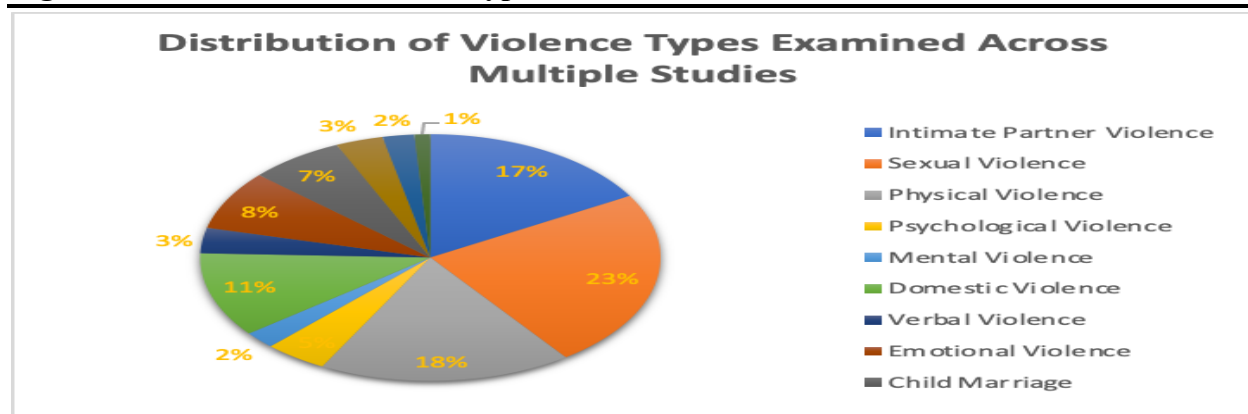
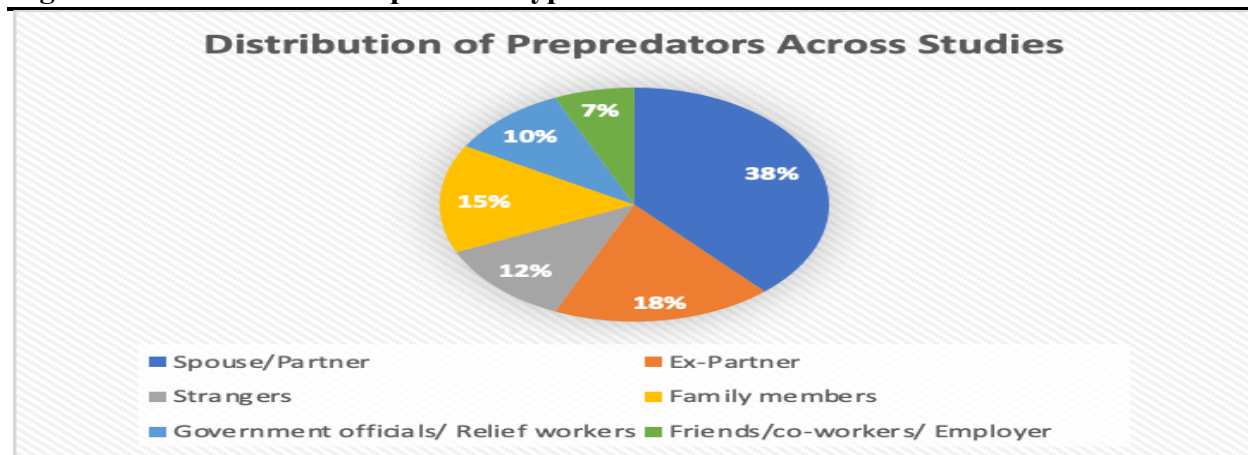
Figure 1: Dimensions of studies



A total of 2,103 publications were identified through the database search. After removing duplicates, 1,131 unique studies were finalized. These studies were then screened based on their titles and abstracts, resulting 91 eligible articles. An additional 40 studies were identified through reference list scanning (figure 2), resulting in 131 full-text articles reviewed, of which 39 met the inclusion criteria. The quantitative studies employed cross-sectional and ecological study designs, while the qualitative studies employed diverse approaches such as ethnographic observations, focus groups, interviews, content analysis, storyboarding, and surveys. A summary of study characteristics is available from the author upon request.

Figure 2: Summary characteristics of articles

The studies span a wide geographic range, from the western United States to southern Bangladesh, with a detailed regional distribution available on request. Although only three studies were conducted in Africa, they collectively covered between 17 to 19 African countries, offering a continent-wide overview rather than country specific insights. The study years ranged from 1989 to 2021, and participants were primarily women aged 15 to 49, reflecting the demographic most frequently examined in GBV research. The wide temporal and geographic spread suggests that the association between extreme weather events and violence is not confined to specific regions but emerges across diverse social and environmental contexts. Extreme weather events examined included floods, droughts, hurricanes, tsunamis, wildfires, heatwaves, and snowstorms, as show in figure 3. Violence types ranged from intimate partner violence (IPV) and domestic violence to sexual violence, human trafficking, child marriage, and female genital mutilation (FGM), with their distribution shown in figure 4.

Figure 3: Breakdown of Violence Types Covered in the Studies**Figure 4: Breakdown of Perpetrator Types Covered in the Studies**

A review of 12 studies on hurricanes consistently found a positive correlation between extreme weather events and increased violence.

Quality Assessment

Quantitative studies were appraised using the Newcastle-Ottawa Scale. Of the 24 studies, 13 were rated good, 8 fair, and 3 poor. Stronger studies featured robust designs, validated outcome measures, and appropriate confounder control. Lower-quality studies commonly relied on self-report, lacked sample size justification, or presented limited comparison groups. Qualitative studies were assessed using the CASP checklist. Most of the 20 studies met at least seven of the nine criteria, demonstrating clear aims, coherent design, and rigorous data collection. Lower-quality studies provided limited reflexivity or insufficient analytical depth. Due to the scarcity of research in this field, no studies were excluded based solely on quality.

Extreme Weather Events and GBV

Across all events, 95% of studies reported that extreme weather events exacerbated some form of GBV during or following the event.

1) Floods (13 studies):

Twelve studies found positive association between flood exposure and increased violence. For example, counties in Kenya experiencing severe flooding were 60% more likely to report IPV (OR = 1.60, 95% CI: 1.35-1.89). Only one study found no significant association.

2) Hurricanes/Cyclones (12 studies):

All studies reported increases in GBV. Following Hurricane Katrina, physical victimization rose from 33.6% to 45.2%, and psychological victimization doubled. Several studies linked cyclones to spikes in child marriage, with some regions reporting 80% of girls married early in the aftermath.

3) Droughts (10 studies)

Nine of ten studies reported increased violence. Drought-affected regions in Uganda, Zimbabwe, and Mozambique reported 25%, 38%, and 91% higher IPV, respectively. One study identified an inverse association between rainfall variability and IPV onset.

4) Tsunamis (5 studies):

All studies documented substantial increases in GBV. In one study, 80% of women reported increased domestic violence post-tsunami.

5) Wildfires (4 studies):

All studies found increases in domestic and intimate partner violence, even among couples with no prior history of aggression.

6) Snowstorms (1 study):

reported domestic violence cases doubled following the event, with many first time disclosures.

7) Heatwaves (2 studies):

Both studies identified strong associations: one found that longer heatwaves increased the likelihood of child marriage by 17%, while another found a 40% rise in IPV after three days of extreme heat.

Thematic Analysis

A Thematic analysis, following Braun & Clarke (2021) was conducted to determine the presence of predefined themes established in the methodology. This approach allowed the review to move beyond simply documenting whether the extreme weather event exacerbate gender-based violence (GBV) and instead identify underlying mechanisms that shape this relationship. Understanding these mechanisms is crucial for developing targeted interventions. A detailed thematic coding matrix for all included studies is available from the author upon reasonable request.

Environmental Factors

Three sub themes emerged:

- Damage to infrastructure and livelihoods (89%): The most prevalent factor, cutting across nearly all disaster types. Loss of homes, income, crops, and mobility increased women's exposure to violence.
- Displacement and relief camps (74%): Particularly prominent in floods, hurricanes and tsunamis. Overcrowding, limited privacy, and inadequate oversight heightened risks of sexual violence and trafficking.
- Breakdown of social order (51%): More common in qualitative studies and events causing widespread chaos (floods, hurricanes, tsunamis). Linked primarily to sexual violence, physical assault, and trafficking.

2. Gender Vulnerability

- Existing gender inequalities (87%): Economic dependency, limited education, and unequal labor opportunities consistently heightened GBV risk.
- Political/legal marginalization (33%): Most evident in south asian contexts and qualitative work. Lack of ownership rights or legal protections increased domestic and sexual violence.
- Limited involvement in disaster governance (44%): Exclusion from planning and response processes reduced women's agency and increased exposure to violence.

3. Sociocultural Dynamics

- Harmful cultural/traditional practices (94%): The most prevalent theme, associated with child marriage, FGM, IPV, and domestic violence.
- Acceptance of violence and victim blaming (92%): Spanned all disaster types and contexts.
- Masculinity crises (66%): Linked to increased IPV and domestic violence, especially where men experienced economic or social role disruption. Least evident in heatwave studies.

4. Access to Resources

- limited access to essential resources (94%): Shortages of healthcare, menstrual supplies, maternity care, and basic necessities consistently heightened GBV risk.
- limited access to information or support systems (66%): Particularly relevant for sexual and physical violence; less so for forms rooted in cultural norms (e.g., FGM, child marriage).

5. Mental Health and Coping

- Mental health stressors (79%): Associated with increased IPV, domestic violence, and physical abuse. Less relevant for culturally entrenched forms of violence.
- Harmful coping strategies (alcohol/substance use) (48%): Strongly linked to IPV and domestic violence, especially in disasters with prolonged socioeconomic impacts.

Discussion

The aim of this study was to examine how extreme weather events influence gender-based violence (GBV) against women and girls and identify the ecological, socio-cultural, and structural factors that intensify this violence. Across 95% of the included studies, extreme weather events were associated with increased GBV, including intimate partner violence (IPV), sexual violence, emotional abuse, domestic violence, and child marriage. The perpetrators identified included spouses, family members, strangers, friends, government officials, and ex-partners. Although climate events do not cause GBV directly, they create conditions such as displacement, resource scarcity, and social instability that heighten risk. These findings align with existing reviews, including Van Daalen et al. (2022) and Ngcamu (2018), which similarly highlight the amplification of GBV during climate disasters.

Ecological Drivers of GBV

The thematic analysis identified infrastructure damage as a primary ecological driver appearing in 89% of the studies. Damage to homes, assets, and livelihoods frequently led to displacement, which was noted in 74% of cases. While full social breakdown was less common, it appeared in 54% of studies, particularly those examining floods and tsunamis. Drawing on ecofeminism, these findings illuminate how environmental degradation mirrors and intensifies gendered power inequalities. Infrastructure damage does not directly cause GBV; however, it produces conditions of instability, dependency, and overcrowding, especially in relief camps, that heighten vulnerability.

Women reliant on agriculture were shown to face heightened risks due to loss of income, food

insecurity, and increased emotional stress. These burdens often contributed to mental health challenges and, in some contexts, triggered a masculinity crisis, as men struggled to fulfill provider roles. Ecofeminist theory helps explain this dynamic: patriarchal systems that degrade the environment also reinforce gender hierarchies, exacerbating GBV during crises.

Recourse Scarcity and Displacement

Limited access to essential resources further intensified risks for displaced women. Relief camps were frequently characterized by scarcity, dependence on humanitarian aid, and inadequate safety measures, all of which contributed to increase vulnerability. This aligns with vulnerability theory, which emphasizes how structural inequalities heighten exposure to harm during disasters.

Socio-Cultural Drivers and Patriarchal Practices

Socio-cultural dynamics were among the most significant contributors, appearing in 94% of studies. Harmful cultural, traditional, and religious patriarchal practices reinforced patriarchal systems that both constrain women's autonomy and place them at elevated risk during extreme weather events. Ecofeminism underscores how crisis intensity gendered expectations: women are often expected to sacrifice their own well-being for others. Examples include women eating last and consequently experiencing malnutrition (Sweetman & Pearson, 2010; Elson, 2012), or restrictions preventing them from leaving their homes during floods (Madhuri, 2016).

Disasters also triggered harmful coping mechanisms such as child marriages, which families used to reduce financial strain, thereby exposing girls to sexual violence and IPV. Practices like female genital mutilation (FGM) were upheld to maintain perceived social acceptability and marriageability (Esho et al., 2021).

Masculinity Crisis and Identity Threats

The theme of masculinity crisis emerged across multiple contexts. Although less prominent in short-term events like heatwaves, it was significant in prolonged disasters where men experienced challenges to their breadwinner identities. This often resulted in increased IPV, physical violence, and sexual violence as some men attempted to reassert control. Extreme cases included severe physical assaults, such as a man severely injuring his wife with a shovel, while another saw a husband publicly harassing his wife with a broken bottle (Fisher, 2010). This form of masculinity crisis was particularly pronounced in countries with entrenched patriarchal norms and practices of physical chastisement as male "correction" (Epstein et al., 2020, p. 5). This finding aligns with Le Masson et al. (2016), who discussed how anxiety and loss of identity due to reluctance to engage in traditional roles can lead men to substance abuse.

Mental Health Stressors and Coping Mechanisms

Mental health stressors appeared in 77% of studies and coping strategies in 63%. Extreme weather events commonly resulted in trauma, bereavement, displacement, and economic hardship, all of which amplified mental health challenges. Ecofeminism helps explain how women's caregiving responsibilities intensify in crisis, contributing to higher rates of depression, anxiety, and PTSD. Economic dependency, identified in 87% of studies, further constrained women's ability to leave abusive relationships or access support.

Under-explored Factors: Representation and Governance

Issues such as women's limited political participation, lack of legal representation, and exclusion

from disaster management processes were less frequently discussed. Through an economist lens, these inequalities further marginalize women during crises. Intersectionality and vulnerability theory highlight that experience of GBV are shaped by overlapping identities such as socioeconomic status, disability, age, and religion. Neglecting these dimensions risk oversimplifying women's experiences. This aligns with existing literature, such as Warrior (2021), who highlights how gender discussions often overlook other identity layers, and Reily et al. (2022), who argue that discriminatory groups are usually treated as homogeneous in their suffering. To avoid essentialism and false universalism, it is essential to use intersectionality and vulnerability frameworks when drafting policies.

Policy Recommendations

Based on the thematic analysis and existing literature, the following policy recommendations address gender-based violence (GBV) in the context of extreme weather events.

Strengthen Gender Responsive Data Collection And Monitoring

Governments and humanitarian agencies should adopt tools such as the Gender-Sensitive Vulnerability Assessments Framework and Gender-Responsive Risk Mapping to improve disaster preparedness and response. The assessment framework should integrate quantitative surveys with qualitative methods, including focus groups and interviews to capture intersecting vulnerabilities related to age, gender, socioeconomic class, and disability. Unlike traditional models, such as those used by the IUCN that focus primarily on binary gender differences, this framework enables real-time analytics to guide targeted interventions, including accessible shelters for persons with disabilities, specialized services for older populations, and tailored communication strategies.

Gender-Responsive Risk Mapping further enhances preparedness by integrating gender-specific data such as locations of women's shelters, health facilities, into disaster risk profiles. This approach helps identify areas where women and girls face disproportionate risk and informs resource allocation and evacuation planning. For example, Oxfam's gender-sensitive risk maps in Vietnam enabled more effective emergency interventions. To optimize these tools, governments should develop interactive, real time maps; utilize mobile platforms for community-level reporting; and employ geospatial software such as ArcGIS or QGIS. Additional measures include integrating real time data through APIs, enabling offline data collection, and establishing local reporting hubs staffed by trained volunteers.

Integrate Gender and Gbv Indicators Into NDCS And Disaster Governance Frameworks

Countries should integrate gender-based violence (GBV) indicators and gender-responsive metrics into their Nationally Determined Contributions (NDCs) under the Paris agreement and align these commitments with national disaster risk reduction and climate adaption policies. Although the Gender Action Plan (GAP) recognizes gender considerations, it lacks implementation mechanisms and measurable indicators. NDCs should therefore include time-bound targets for women's participation in green jobs, dedicated climate finance for women-led initiatives, and equitable access to climate-related training and technology. To ensure effective implementation, gender-sensitive frameworks must be mainstreamed across national, regional, and local levels of disaster governance. Local authorities should be trained to conduct gender-responsive risk assessments and integrate the needs of women, older persons, and people with disabilities into emergency planning. Partnerships with UN women, local NGOs and community organizations can support capacity-building for health workers and local leaders, as well as the establishment of community-based

monitoring systems.

Addressing Socio-Cultural Barriers and Prevent GBV in Crisis Settings

Addressing socio-cultural drivers is essential to preventing GBV during climate related crises. Policies should ensure separate and secure relief spaces for women, accessible legal services, and targeted support systems. Culturally sensitive education campaigns, engaging men, boys, and local women's groups, are critical for shifting harmful norms and preventing GBV. These campaigns should employ locally appropriate messaging and use multiple communication platforms, such as radio and community networks. Prioritizing women's leadership in disaster risk reduction and ensuring their representation in decision-making structures are essential for inclusive outcomes.

Strengthen Gender Responsive Climate Financing Mechanisms

To enhance the effectiveness of gender-responsive climate action, gaps in existing funding mechanisms must be addressed. Building on the progress of current climate finance mechanisms, a dedicated fund or sub fund should be established within frameworks such as the Green Climate Fund (GCF) specifically for GBV prevention and resilience-building for women and girls. Donor countries and development banks should earmark a fixed percentage of climate finance for gender-focused initiatives.

Transparent accountability mechanisms such as gender disaggregated data requirements and routine public reporting should accompany these financing reforms. Long term livelihood programs, including renewable energy initiatives and climate resilient agricultural projects, must receive consistent funding. Additionally, resources should be allocated to gender responsive social protection systems, including cash transfer, micro finance, and insurance products tailored to women in high risk areas. Collaboration among governments, NGOs, the private sector and international organizations is essential to scale and sustain these efforts.

Conclusion

This study demonstrates that extreme weather events significantly exacerbate gender based violence (GBV) and that specific forms of violence are shaped by ecological, socio-cultural, and structural factors. Using ecofeminism, intersectionality, vulnerability theory, and social learning theory allowed for a deeper understanding of how harmful gender norms livelihood disruptions, displacement, and limited resource access interact to heighten women's and girls' vulnerability during climate disasters.

However, the study's reliance on secondary literature means conclusions are shaped by the uneven quality and limited scope of existing research. A lack of comprehensive and updated data also results in systematic reviews repeatedly drawing from the same pool of studies, narrowing analytical diversity. Despite these constraints, the multi layered theoretical approach and policy recommendations contribute valuable insights into addressing GBV in climate affected contexts.

Future Research Recommendations

Future research should address the persistent data gaps by generating high quality, primary evidence across diverse regions and climate events. Longitudinal studies are particularly needed to capture how GBV evolves before, during, and after extreme weather events. Research should also examine how harmful traditions, patriarchal norms, and masculinity crises interact with environmental stressors to drive violence, areas that remain under-explored but crucial for designing effective interventions. Finally, studies must move beyond documenting vulnerability and focus on evaluating which gender

responsive policies, community strategies, and early-warning mechanisms successfully prevent GBV during climate crisis.

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