

Exploring the Gendered Effects of Climate Change: The 2022 Floods and Their Impact on Women's Health and Social Norms in Swat Valley, Pakistan

Topic:

Pakistan is currently in the midst of a climate emergency. During the summer of 2022, floods ravaged the country, submerging over one-third of it in water.¹ These floods impacted 33 million people, including an estimated 4.6 million adolescents and youth, 5.1 million women of which 410,846 were pregnant.² The impacts of these floods are far reaching with estimates suggesting the destruction of approximately 9.4 million acres of agricultural land and loss of 1.2 million livestock.³ Water has failed to recede in many areas with stagnant water leading to surges of vector-borne diseases such as dengue.³ Furthermore, over 30 million people continue to be displaced across Pakistan.⁴

The 2022 floods primarily affected the provinces of Sindh, Balochistan, and Khyber Pakhtunkhwa.³ Underlying the increased flooding was a combination of high monsoon rains, particularly in Sindh and Balochistan, and extreme heat waves leading to high glacial run off primarily in Khyber Pakhtunkhwa. Swat Valley in Khyber Pakhtunkhwa was particularly affected, with extensive flooding and infrastructure damage due to its unique geography in between mountain ridges, and the flooding of the Swat river. Pakistan houses 7,200 glaciers, the largest number of glaciers globally outside of the polar regions.⁵ With climate change leading to temperature increases, experts fear that glacial melt related floods will worsen.

Global evidence demonstrates that vulnerability to climate change is closely linked to poverty and gender, with women and the poor experiencing increased vulnerability.⁶ Power relations and inequitable social and cultural norms can cause women to experience increased vulnerability to the impacts of disasters.⁷ Further, women's limited access, control and ownership of resources can reduce their ability to respond to climate-induced emergencies.⁷ The increased vulnerability that women experience has led to an emphasis on gender mainstreaming in climate adaptation strategies. The Intergovernmental Panel on Climate Change has emphasized the importance of a gender-inclusive environment, enhancing gender equality in decision making processes, and increased awareness of gender-related issues and concerns as part of their gender mainstreaming process.⁸

A small but growing body of evidence has demonstrated the gendered impacts of climate change on women's wellbeing including increased experiences of gender-based violence (GBV) and gendered division of labour.⁹⁻¹² Early evidence suggests that 2022 floods has had gendered impacts in Khyber Pakhtunkhwa, Pakistan. Many displaced adolescent girls and women were unable to maintain purdah norms (segregation norms that limit women's mobility and presence in front of nonfamilial men) in camp and open air settings which has cultural implications for their reputation.¹³ For example, women's shelters in Swat (Khyber Pakhtunkhwa) have seen a rise in adolescent girls disowned by their families under suspicions of extramarital relations with young men while displaced.¹³ Many displaced girls and women have reported increased instances of gender-based violence including forced and early marriages.¹³ Moreover, as women return to their homes, increased property damage has resulted in many being denied their inheritance and property ownership rights by male relatives in a context where the legal system is largely inaccessible to women, especially those who are marginalized or socially disenfranchised.¹³ Talibanization, militancy and violent extremism in the Swat Valley during the period of 2007-2010 has also led to an increased number of widows who experience increased vulnerability.

Early evidence on the humanitarian response to the 2022 floods in Swat Valley has demonstrated that many essential needs of women were neglected including the lack of provision of sexual and reproductive health services. Moreover, that the distribution of goods including food and non-food items were not gender sensitive and exposed many women and adolescent girls to GBV.⁸ Government agencies have also failed to conduct any needs assessments of women affected by the floods in the Swat Valley. Furthermore, adolescent girls and women who were engaged in informal labour and revenue generating activities such as kitchen gardening, poultry and livestock forming, and embroidery have not received any economic compensation.⁸

There is a current pressing need to understand the gendered impacts of the floods and humanitarian response on Our study focused on understanding the gendered impacts of the floods in Swat Valley in Khyber Pakhtunkhwa Province, Pakistan on women's wellbeing, and gender norms and roles. Through understanding the complex pathways through which climate change induced disasters may impact the lives of women, our work aims to ensure humanitarian response to future disasters and climate mitigation policies and strategies are responsive to women's needs, and do not exacerbate inequities.

Methodology

Our study is informed by a participatory community-based research study in three villages in the Swat Valley, Khyber Pakhtunkhwa, Pakistan. The Swat Valley has experienced extensive flooding, infrastructure damage, and subsequent gendered impacts. Furthermore, it has been the historical site of strict enforcement of gender restrictions under the control of the Tehreek-i-Taliban Pakistan (TTP). With the increasing presence of the TTP within that region, the site offers a unique opportunity to explore the interplay of insecurity, disaster, and gender. Data collection is completed in one field site, and ongoing in the other field sites.

Our theoretical frame is informed by necropolitics. Necropolitics developed by Achille Mbembe (2003) suggests that various destructive weapons of power are deployed to regulate who lives and who dies.¹⁴ Necropolitics also dictates the use of power to subject individuals to the status of 'living dead', illuminating divisions between social segments. Mbembe's Necropolitics builds Foucault's theory of biopower¹⁵: mechanisms of power that are focused on the regulation of human life. Our study considers necropolitical mechanisms of xenophobia, casteism, classism and sexism in the context of the 2022 floods in Pakistan, with attention to the indirect effects of a climate-change induced extreme weather event, and the humanitarian response that followed. In doing so, our study considers a 'climate necropolitic'^{16 17}: a timely exploration given the disproportionate and increasing effects of climate change on populations that contributed the least to global warming.

Our study utilized several innovative data collection strategies including transect walks with community elders and key stakeholders to understand their relationship with the land, water, and access to essential services (6 to 8 in each field site).¹⁸ During these walks, the conversations focused on how the topography has been affected by the floods and its impacts. Mobility norms limit women's access to public spaces, so transect walks were with only male respondents. We also conducted interviews with representatives from humanitarian response agencies to understand the services delivered (6 to 8 in each field site). Lastly, we conducted three focus group discussions (FGDs) over two to three days in each field site. Each workshop will include 6-8 individuals. Workshops included life history narratives which involved narrating life experiences. Participants were asked to individually draw, write and/or speak about life events.¹⁹ Respondents also undertook group object narrative wherein they were asked to bring an item that related to their experiences during the flood. These items were photographed and the group undertook a ranking exercise to determine which best represented their collective experiences. Together these participatory activities allowed for a rich exploration about the gendered experiences of an environmental crises and human response, while providing a degree of agency to discuss what participants feel is important and to interpret their life stories, and capture nuanced and holistic perspectives of risk and agency.^{20 21}

Data analysis is currently ongoing. The research team has transcribed recordings in Pakhto using Roman text and these transcripts have been translated into English. These will be analyzed alongside visual data from the transect walks and workshops. Our analysis employs latent content analysis guided by the research objectives.

Preliminary findings

Preliminary findings indicate that the 2022 floods had multifaceted effects on women's lives and gender roles, influenced by a range of intersecting socio-economic and cultural factors. The impacts of the floods can be categorized into three main areas: productive work, reproductive work, and community work.

In terms of productive work, women primarily engaged in informal economies, such as sewing garments for sale. The floods destroyed their equipment, and humanitarian assistance did not compensate for these losses, leading to a significant disruption in women's income and financial independence. Additionally, many families lost dowry items intended for their daughters' weddings, with their financial insecurity hindering their ability to repurchase these essential items. This loss underscores the intersection of economic and cultural dimensions of gendered vulnerabilities.

With respect to reproductive work, the floods intensified domestic labor demands on women. The destruction of infrastructure such as household wells increased the challenges associated with collecting water, a task often shouldered by women. Moreover, gendered eating practices within households wherein women traditionally eat last meant that women experienced heightened food insecurity. The scarcity of food items led to situations where women received insufficient food, as items were finished by the time it was their turn to eat. These gendered patterns of resource distribution highlight how the floods increased women's vulnerability. Access to health and social services was severely disrupted by the floods, with particular implications for women. Although the construction of pulley systems to cross rivers aimed to improve accessibility, these did not address the constraints imposed by *purdah* (gender segregation) norms, which prevented women from crossing the river with non-familial men. Consequently, many women experienced interruptions in contraceptive use.

In the sphere of community work, women demonstrated resilience and solidarity by providing essential resources such as bedding, cooked meals, clothing, and sanitary clothes to others. Many women also hosted displaced families from their villages in the immediate aftermath of the floods. This communal support illustrates the ways communities respond collectively to address climate-change related disasters.

Together, these preliminary findings highlight the complex interplay of gender, socio-economic status, and cultural norms in shaping the experiences of women during and after the floods.

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