World Academy of Science, Engineering and Technology
International Journal of Medical and Health Sciences
Vol:17, No:07, 2023

The Systematic Impact of Climatic Disasters on the Maternal Health in Pakistan

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Abstract : Extreme weather phenomena increased by 46% between 2007 and 2017 and have become more intense with the rise in global average temperatures. This increased intensity of climate variations often induces humanitarian crises and particularly affects vulnerable populations in low- and middle-income countries (LMICs). Expectant and lactating mothers are among the most vulnerable groups. Pakistan ranks 10th among the most affected countries by climate disasters. In 2022, monsoon floods submerged a third of the country, causing the loss of 1,500 lives. Approximately 650,000 expectant and lactating mothers faced systematic stress from climatic disasters. Our study used participatory methods to investigate the systematic impact of climatic disasters on maternal health. In March 2023, we conducted six Group Model Building (GMB) workshops with healthcare workers, fathers, and mothers separately in two of the most affected areas in Pakistan. This study was approved by the Islamic Relief Research Review Board. GMB workshops consist of three sessions. In the first session, participants discussed the factors that impact maternal health. After identifying the factors, they discussed the connections among them and explored the system structures that collectively impact maternal health. Based on the discussion, a causal loop diagram (CLD) was created. Finally, participants discussed action ideas that could improve the system to enhance maternal health. Based on our discussions and the causal loop diagram, we identified interconnected factors at the family, community, and policy levels. Mothers and children are directly impacted by three interrelated factors: food insecurity, unstable housing, and lack of income. These factors create a reinforcing cycle that negatively affects both mothers and newborns. After the flood, many mothers were unable to produce sufficient breastmilk due to their health status. Without breastmilk and sufficient food for complementary feeding, babies tend to get sick in damp and unhygienic environments resulting from temporary or unstable housing. When parents take care of sick children, they miss out on income-generating opportunities. At the community level, the lack of access to clean water and sanitation (WASH) and maternal healthcare further worsens the situation. Structural failures such as a lack of safety nets and programs associated with flood preparedness make families increasingly vulnerable with each disaster. Several families reported that they had not fully recovered from a flood that occurred ten years ago, and this latest disaster destroyed their lives again. Although over twenty non-profit organizations are working in these villages, few of them provide sustainable support. Therefore, participants called for systemic changes in response to the increasing frequency of climate disasters. The study reveals the systematic vulnerabilities of mothers and children after climatic disasters. The most vulnerable populations are often affected the most by climate change. Collaborative efforts are required to improve water and forest management, strengthen public infrastructure, increase access to WASH, and gradually build climate-resilient communities. Governments, non-governmental organizations, and the community should work together to develop and implement effective strategies to prevent, mitigate, and adapt to climate change and its impacts.

Keywords : climatic disasters, maternal health, Pakistan, systematic impact, flood, disaster relief.
Conference Title : ICMCH 2023 : International Conference on Maternal and Child Health
Conference Location : Rome, Italy
Conference Dates : July 17-18, 2023