



Climate Change and Women Health Vulnerabilities: Towards Mitigation and Response

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Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

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ABSTRACT

Climate change affects all genders in myriad ways and causes catastrophic health hazards. While no one is safe from this unfolding risks, women are already disadvantaged and become most affected by climate change. Poor air quality, contaminated water, food insecurity, spread of vector borne diseases, disruption of sanitation and rising temperature etc. have overwhelming negative health impacts on women, especially on the reproductive health. Furthermore, climate policies in India lack gender sensitivity because of low awareness making women health more vulnerable. With this backdrop, the current paper has identified key areas of vulnerability among females due to their biology and the existing socio-cultural factors. In addition to the existing issues women are less likely to have accessibility of the resources to enjoy their fundamental health rights. There fore the current paper discusses better strategies for mitigation and response to climate change with the active participation of women, families and the whole community. After looking at various findings the paper concludes the need of the gender sensitive approach in the process of mitigation and response.

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1. INTRODUCTION

According to an estimation of the World Food Programme (WFP), 10 to 20 percent of the world population will face the risks of hunger due to climate change impact by the year 2050 making women and children hugely affected. Climate change has the potential to affect the whole biological system over the planet including human health. As the issue of climate change is resulting into numerous risks for human society the vulnerable people especially women are becoming more prone towards the disastrous impacts. The Lancet Series (2016) mentioned that women are most affected under the changing climate and environmental factors and face maternal health issues such as risks of pregnancy, infections and vector borne diseases like malaria, zika, cholera and dengue etc. Women are more dependent on threatened natural resources. Their low accessibility towards financial resources, disaster information and decision making power undermine their ability to cope and recover from climate shocks. Due to lack of knowledge, mobility, and resources women, children, elders and disabled people become more vulnerable during the time of disasters and at the time of flood women and children face more difficulties Abdullah et al., [1] Amitay, [2]. Again, as it is stated by WHO (2014) that gender roles and norms of a given culture give rise to gender inequalities that results into unequal health status between men and women. Discussion on the gender discriminatory story of vulnerability reveals that the impacts of disasters are same but the uneven exposure and opportunities create differences in vulnerability among different sections of population [3-7]. One such example is Cultural expectations from women to wear saree or long dresses restrict their ability to escape from flood waters Dune, [8] Kamal, [9]. They are not trained with life-saving skills such as climbing trees, swimming unlike men during disasters. Study showed that during the 2004 Indian Ocean tsunami an average of 77% casualties happened among women because of their lack of swimming capability [10,11-15].

However, the existing literatures are few in numbers that cover all different kinds of problems faced by women during and after a climate change hazard. Currently, understanding the ways of mitigation and response towards the emerging health impacts of environment change

from gender perspective have been low prioritized compared to other aspects of climate change [16-18]. Therefore, it is crucial to bring these issues into consideration that will help to adapt required measures. With this background the current research paper is built upon the two objectives: first, to understand factors associated with the vulnerability of women health towards climate change, and secondly, to examine the ways of mitigation and response for the emerging hazards [19,20]. Throughout the paper key areas of vulnerability among women are discussed that include access to water and sanitation, gender based discrimination, infectious diseases, migration and pregnancy health issues [21-23].

Therefore, the significance of the paper lies in developing multi-dimensional understanding of the health adversities experienced by women during climate hazards. This paper will be important for further study because of its insights on understanding mitigation and response strategies from the gender lens by analyzing health vulnerabilities of women during climate hazards from various possible angles.

2. WOMEN'S VULNERABILITY TOWARDS CLIMATE CHANGE AND RESULTING IMPLICATIONS

Vulnerability towards climate change disasters can be defined as lack of anticipating, coping, resisting and recovering capacity of an individual or group (Madhuri, 2016). Needless to say, women are more disadvantaged population compared to their counterparts. There are fundamental causes of women's vulnerability towards climate change that can be economic, political, social, ecological, emotional and physical. Ecological causes make it difficult for women to move in search of food, fodder and water in the changing and degrading environmental condition. Physical vulnerability is caused by soreness, miscarriage, gynecological problems and physical impairment etc. The social factors that create discrimination in the allocation of household resources, such as food, education and access to healthcare make women more prone to the adverse impact of climate change. Health associated vulnerabilities of women are discussed under following headings.

Vulnerability relating to water and sanitation: Climate change has huge impact on the

availability of fresh water due to increased frequency of droughts, floods etc. Women have to bear the burden of water scarcity and contamination as they are primarily responsible for water management, particularly at the household level (UN Women Watch, 2009). This often results in compromised sanitation and hygiene due to scarcity and contamination of water source and also leads to health issues such as skin disease, dark spots, swollen limbs, skin lesion etc.

Vulnerability of displacement and migration:

It is caused by natural disasters results into unhealthy condition with poor sanitations, lack of water and many more directly affecting their health. Climate induced migration is speeding up in recent times due to unprecedented environmental happenings resulting into people including women and girls to escape their homes. Both Patel and Giri (2019) in their study in Odisha stated that women migrant construction workers have migrated to other places from the districts of Jagtsinghpur, Jajpur, Kendrapara, Ganjam which are highly prone to frequent cyclones and floods. Although migration brings remittances and improved standard of living but on the negative side it also increases the risk of exposure to disease, injury, and increase of work burden, risk of unsafe living condition etc.

Vulnerability of sexual and reproductive health:

Climate change directly and indirectly compromises women's need of sexual and reproductive health such as contraceptives, sanitation, and pregnancy services etc. Normally, women face problems regarding their reproductive health and this burden increases during the time of flood to a large extent. Still there is a belief that it is uncomfortable to discuss about reproductive health issues with outsiders even with the male doctors. Ochani et al., (2022) in their study of flood situation in Pakistan stated flood is the most frequent natural calamity that makes pregnant women more vulnerable towards psychological and pathological impacts. Similarly, Abdullah et al. [1] stated from their study in rural Bangladesh that during disasters health care providers are not available and skilled birth attendants become unavailable in the disaster area. It is risky and also difficult to carry a complicated delivery mother to a referral health center during disaster as communication is disrupted. Boat was the common mode of transportation of complicated delivery cases. Samal (2013) in his study of Odisha super

cyclone 1999 noted that along with other rehabilitation and relief services giving special care to pregnant women both in case of pre-natal and post-natal period was not possible. Women who stayed in the cyclone proof shelters warmed their newborns by using some available clothing and gunny bag materials.

Vulnerability relating to food and nutrition:

The health consequences of disproportionate allocation of food and nutrition and the nature of their domestic works such as fetching water, agricultural engagement and animal care etc. are again aggravated due to climate hazards. Similarly, women's biology makes them more prone towards many infections and diseases than men. Wheeler, et al. [24] stated diseases like malaria, dengue and zika are more harmful for pregnant women than non-pregnant women and also changing climate reduce availability of staple food and crop yield impacting nutrition of pregnant women.

Vulnerability during rehabilitation:

Extreme weather events destroy existing infrastructure such as road, transport, and hospital buildings. During natural disasters more pressure is put on service provision making reproductive and maternal health undermined. There are wide range of studies that commonly view that health care services for women are hindered by many reasons such as long distance of the health service, waiting time, inadequate drug supply, economic problem, religious and superstitious beliefs and also prohibitions by guardians. There are also delays in the decision making process by the community members due to their ignorance towards gender specific health needs. Supporting this view Madhuri (2016) in her study conducted on Bihar flood situation viewed that the role and responsibilities imposed on women due to prevailing gender norms are also effective during the relief and rehabilitation of disaster period and varies in terms of caste, and age also.

3. MITIGATION AND RESPONSE AGAINST VULNERABILITIES

Although women play leading role in helping their families and communities to survive even during climate change emergencies, they are hardly provided any leadership role in making and implementing climate actions. First, climate actions should be gender inclusive and gender sensitive to eradicate the worst impact of existing vulnerability. As it is mentioned by the United Nations Women Watch, (2009) mitigation and

adaptation of climate change efforts should be gender specific. There is an urgent need for collecting, analyzing, reporting gender responsive and sensitive researches in order to address the health impacts of climate change. As gender norms either enable or constrain adaptive capacities of both men and women the strategies need to take into consideration their different capability, power, resources, vulnerabilities and social resilience.

Second, health promoting strategies and campaigns should focus on educating masses about the health risks of climate change such as heat waves, water scarcity, and rising pollutions etc. in the line of more gender specific needs. Moreover, various health promoting strategies such as educating campaigns on climate change health risks, delaying first pregnancy, reducing maternal nutritional deficiency to curb anemia, Kamal, [9] awareness on sanitation, hygiene and reproductive health can be effective ways to mitigate disastrous effects of climate hazards on reproductive and maternal health.

Third, ensuring women's ability to cope with emerging climate issues depends upon the availability of health and wellbeing system, the accessibility and of their level of social networks. Here the role of the primary health care providers to address negative health outcomes associated with climate change can be instrumental. Again, there is a need of improving geographic and financial access for antenatal care with strengthened health care system as stated by Roos et al., [25]. A study conducted to understand impact of flood on women's reproductive health in Northern Bangladesh suggested that in order to avoid reproductive health complications reducing health care costs during disasters, ensuring good health service provision, including reproductive health service provisions into the policies and programs of disaster management are vital steps to follow.

Coming to another vital step of mitigation, many researches have suggested for separate accommodation facilities that should be arranged for pregnant and delivery women during floods and other natural disasters. The current study also recommends for reforestation and water conservation reservoirs in villages to avoid scarcity and these will be long run steps. One more vital aspect of the mitigation approach is mobilizing community health workers especially lady health workers to provide health guidance and prevention methods during climate change

hazards not just to the pregnant women but to their community, local people and traditional birth attendants and relatives who can share messages of safe pregnancy and delivery.

These solutions having gender sensitive approach can deliver economic benefits by improving resource utilization and standard of living also of all people including women. In a nutshell, it can be said that the various ways of mitigation and response include priority on gender sensitivity, promoting education, awareness and research on the effects of climate change on women health issues, prioritizing vulnerable communities, resource allocation, relief and rehabilitation, and strengthening health infrastructure particularly the primary healthcare system and role of communication and media that can be effective to deal with the emerging health adversities resulting from climate change. Again, adaptation to climate crisis is required everywhere but vulnerable people with low resources should be prioritized.

4. CONCLUSION

The biggest threat of climate change is visible on the health of humanity worldwide. As people differ in terms of their needs, perception, attitudes, and vulnerability towards the climate change integrated approach both at the global and local level to spread awareness regarding health impacts is necessary. Women being the primary users of many valuable natural resources can be involved in the mitigation programs and policies of climate change with their differentiated needs. For example, Sustainable Development Goals (SDGs) can be integrated fully with each other in order to promote good health, gender equality, better environment and economic development. As every human being including women has equal rights to enjoy good health and clean environment, this requires safe and healthy climate, conservation of biodiversity and ecosystem with access to information and economic resources in judicious ways. Addressing the climate change issues affecting health and wellbeing is fundamental for all genders including women to have healthy and prosperous life. There can be no climate justice without gender justice.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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