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Impacts of Climate-induced Disasters on Mental Health of Women and Children in Pakistan: A Review

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Original Article

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Keywords

Climate; Disaster; Pakistan;
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Abstract

The paper is qualitative in nature and is based on review of available literature regarding impacts of climate-induced disasters on women and children in Pakistani society. The paper aims to explore the impacts of such disasters on mental health of women and children as they are most exposed to such sudden situation on account of their weak physical strength, less coping capability and having less resources to protect themselves from damages caused by such hazards. The study summarizes that during disasters in Pakistan, women are affected badly as they are at risk of being abducted, raped and sexually exploited. Furthermore, those women who lost their shelter, parents, husband and children develop symptom of grief, stress and other severe mental diseases. Similarly, children who lost home environment, parents, siblings, school and toys whom they loved are at increased risk of developing mental illness. The study recommends that during disasters and in post disaster period, the women and children in particular needs special care in the form of early intervention through counselling and rehabilitation services. Women should be kept in intuitional care while for child protection programs should be initiated which should manly focus on children who are displaced and are residing in temporary camps.

Introduction

Pakistan is prone to natural disasters due to its geographical location with variation in temperature and rain fall across the country (Asian Development Bank, 2017). The country has passed through changing weather patterns which includes changes in precipitation, increase in intensity and frequency of tropical tornadoes, melting of glaciers, increase in sea level, cloud burst and severe droughts (Government of Pakistan, 2021). In the coastal areas of Baluchistan and Sindh, impacts of climate change are evident in the form of heavy rains and increased tropical storms. In addition, the plain areas of Punjab and Sindh faces prolonged and frequent floods, heat waves which affects socio-economic development in both the provinces (NDMA, 2024). According to Global Climate Index, Pakistan is placed as the 5th most vulnerable state to hazards as a result of climatic changes. This depicts that in near future the country may face severe weather conditions just like floods in 2022 which inflicted financial loss of 3.3 trillion PKR (US\$15.2 billion). Natural disaster like floods as a result of heavy rains and cloud burst has become regular and every year it inflicts

heavy damages to Pakistani exchequer. Therefore, it is crucial to acknowledge the importance of climate-resilient settlement planning and to incorporate the dimension of climate change in development projects (UN-Habitat Pakistan, 2023).

In Pakistan these hazards when combined with susceptibilities in the form of poverty and marginalization make people more exposed to these disasters (Mustafa, 2011). These marginalized groups include children, women and people with special needs and refugees. In addition, these vulnerabilities further widen the gap between the poor and those who have resources (Ashraf, et al., 2024). Besides from lack of financial resources, 2022 flood badly impacted the human development efforts in the country. In addition, the floods have badly affected health and education sector (Nanditha, et al., 2023). Moreover, 1.2 million families with children between six and eleven years will not be able to attend school while girl's education will be more affected. This will badly affect learning skills and performance of students as school closure badly affects mental health children and are at increased risk of abuse (Government of Pakistan, 2022).

Disasters put negative impacts on mental health of women, children and persons with special needs as they are dependent on other people. In such situations, early intervention in the form of counselling, treatment and rehabilitation is of utmost importance. Unfortunately, mental health services are not part of disaster management planning in Pakistan (Policy Brief, 2023).

Methodology

The paper is qualitative in nature and is based on the review of available literature. Books, research papers, published reports and online material was reviewed. The paper examines the impacts of climate-induced disasters on women in children in contemporary Pakistani society.

1. Impacts of Disasters on Women's mental health

In Pakistan, women are more affected by climate changes in rural areas of Pakistan as compared to men (Hayat 2019). Women's suffering has increased due to decrease in agriculture productivity as a result of environmental changes (WFP 2018). Those people who are living in mountainous areas and are reliant on natural resources are becoming more exposed to environment induced disasters (Kunbher and Alam, 2017). While in coastal areas of Sindh, economic opportunities for women are decreasing as result of impacts of climate change on fish related incomes. The dependence of women on men is also one of the cause of their vulnerability in Pakistan (Khan, Parveen and Hussain, 2021).

In Pakistan at the time of food shortage, dry season, and floods women are expected to go hungry (Asian Development Bank, 2013). The same is true for expected women and for those who feed their children who are faced with unavailability of food causing malnourishment due to climate change. Women also depends on climate-sensitive natural resources for subsistence as they are connected with agriculture and allied activities (IFRC, 2021). Women also suffer the most because of their lack of access to resources, education and aid and less disaster preparedness (Haider & Sultana, 2022).

Although few studies have been conducted so far regarding impacts of disaster on women's mental health, one study conducted on 130 respondents conclude that women in flood affected areas of Pakistan have post-traumatic stress disorder (Aman, Khan, & Abbas, 2025). Another study conducted on female adolescents living in flood affected areas of Muzaffargarh, Pakistan, many of them had major depressive disorder due to homelessness and food insecurity (Islamic Relief, 2024).

Due to severe floods, people left their houses, lands and other belongings which caused severe mental health issues (Cianconi, Betrò & Janiri, 2020). A research study conducted in 2022 concludes that there are signs and symptoms of depression, anxiety, insomnia and lack of ability to pass through this trauma. Research study published in 2022 regarding impacts climate induced

disasters on mental health in Ghizer District, Gilgit-Baltistan areas of Pakistan demonstrates that the adjacent populations experiencing signs of depression, sleeplessness, and inability to process their trauma (Yousuf, Mehmood, Aquil, Rija, Rahmat, & Malikzai, 2023).

Climate change's impacts on women's health is enormous especially during pregnancy where nutrition and maternal health needs special attention for developing foetus and infant (Franco-Orozco and Franco-Orozco 2018). Moreover, pregnant women passes through bodily changes that make it hard to thermo-regulate (Campbell, Holl, Marwah, Fraser, & Craig, 2025). When there is lack of heat balance heat shock causes release of proteins creating biological and physiological reaction with major impacts on maternal and perinatal health and in the neonatal time. Furthermore, due to such changes the risk of prolong labour and pre-mature birth increase (Campbell, Holl, Marwah, Fraser, & Craig, 2025). Markedly, women and girls in post disaster period especially those from lower socio-economic strata are at higher risk of sexual, physical abuse and domestic violence (International Federation of the Red Cross and Red Crescent, 2007). According to United Nation's Population Fund 640,000 young girls are the verge of gender bases violence and child marriage (Khayyam, 2020).

2. Impacts of Disasters on Children's mental health

Climate change is a main global issue and vulnerable people are suffering from its effects but children are more at risk due to its impacts. UNICEF's Children's Climate Risk Index reveals that 1 billion children are at 'extremely high risk' of the impacts of climate change (UNICEF, 2021). In the near future, climate change will further create problems for children like malaria, malnutrition, diarrhea and acute respiratory illness. During the last few years, natural disasters has badly affected the education, health and infrastructure and further added to the problems faced by children (Yousuf, et al., 2023). Furthermore, children in 3rd world countries are more prone due to lack of resources and facilities. In Pakistan, children constitute up to 45 percent of the total population are at the brink of climate-induced problems like lack of proper nutrition, mental derangements due to displacement and separation of family members due to death (Ali, Rahman, Sarwar, & Abbas, 2025). In addition, extreme weather conditions also affect the availability of proper food to both mother and children (Bhadra, 2022).

Climate change and disasters pose a serious threat to children's health due to scarcity of food and drought that affects their thinking abilities (Soomro, Zhou, & Charan, 2024). Climate change's impacts on health consists of short term and long-term impacts. In addition, migration due to climate change further causes mental health problems. There is ample evidence showing the detrimental effects of climate change on children's health and wellbeing (Hellden et al., 2021). Children born into poverty, who already face systemic racism and inequities, are particularly affected by ecological changes. Direct exposure to severe events can negatively impact children's behavior, mental health, development, executive function, academic performance, and decision-making due to their physical immaturity and reliance on parental support (Akram, & Mushtaq, 2024). Additionally, changes in social and environmental factors affect development and health. Unpredictable events like floods, droughts, and storms impact outdoor activities, leading to mental distress, conflict, negative emotions, malnourishment, and a declining quality of life, which is particularly significant for children who rely on nature as a developmental resource (Bowers et al., 2021).

Indirect effects of climate change also result from media exposure, social interactions, or educational resources. A significant number of participants in a recent international study reported concerns about environmental changes affecting their daily lives, leading to increased youth-led climate strikes (Han & Ahn, 2020). Scientists and academics have supported these movements, recognizing the potential of youth to resolve this global issue (Warren, 2019).

In Bangladesh, it was found that after flood, 2-9 years old girls belonging to affected families were facing defecation (Bhamani, et al, 2012). Likewise, percentage of students showing harsh behavior has increased from zero to 10 percent (Durkin, Khan, Davidson, Zaman, & Stein, 1993). Similarly, 95% of children were directly affected by severe floods caused by Hurricane Floyd showed mild signs of PTSD after six months of the event (Russoniello, et al., 2002).

Climate-induced displacement affect child's mental health as was noted in 2010 floods in Pakistan. Almost 70 percent of affected children has severe or moderate mental derangements due to floods in the area. Their mental health issues can be attributed to the reaction of their parents to the floods (Save the Children, 2011). This is in line with the findings from the survey conducted by IOM on health of migrants in Pakistan which states that mental stress was the main problem faced by migrants (IOM, 2015).

The internally displaced persons who got shifted to safer places also suffer from impacts of damaged or demolished houses and livelihood. It is confirmed that IDPs and migrants are more exposed to mental health issues especially children (Shah and Wadoo, 2009).

Research study regarding behavior problems and mental health of children affected by flood -2022 in Pakistan reveals that children whose houses were damaged by floods and were living in tents were facing behavioral problems. In addition, female children showed symptoms of Post-Traumatic Stress Disorder (PTSD) (Ali, Rahman, Sarwar, & Abbas, 2024). Moreover, primary school children affected by flood are at highest risk of developing behavior and mental health problems. Research studies confirm that natural disasters have badly affected the mental health of children causing symptoms of fear self-blame, loss of interest in studies and other related activities (Yousafzai, 2022).

In recent floods of August 2025, the people in Lahore left their homes and shifted to temporary relief camps established school buildings. In those schools there was lack of basic facilities like clean drinking water, toilet, and privacy and due to unhygienic conditions. As a result, the parents and their children have developed skin rashes and fever. In addition, a mother mentioned that my children cry for their toys and other belongings but everything was swept away in the floods (Sheikh, 2025).

Conclusion

Pakistan is vulnerable to natural disasters which include floods, earthquake, tsunami, cloud burst and land sliding. Pakistan has faced heavy losses to human lives as well properties as a result of cloud burst in August 2025. This devastation has further added to the problems of vulnerable section of population especially women, children, disable and sick persons. In Pakistan women lack access to health due to which the pregnant and for those who feed their children are faced with so many problems especially in flood affected areas where proper food is not available. Due to these issues, the pregnant women and her child was more at risk because maternal health and nutrition are vital to the developing foetus and infant. They are totally dependent on men for fulfillment of all sort of needs which make them more prone to health-related issues.

In addition, women are also suffering from mental illness as result of displacement to safer areas. The study summarizes that women affected by floods showed signs of various mental derangement which includes depression, anxiety, sleep disorder and inability to cope with traumas. Girls who lost their parents or family members in post disaster period are at risk of physical, sexual and domestic violence due to which they suffer from mental illness. In addition, the women in displaced families feel more insecure, faced with domestic violence, abuse and harassment

Children who are at the most fragile age cannot cope with them impacts of disasters whether it is natural or man-made on account of their low strength, age and dependency on family members. In Pakistan those children who lost their family members are faced with big challenges because of

lack of support from specialized government institutions. They are at increased risk of being exploited sexually, physically and morally.

In disasters the family is usually shifted to safer places which create problems of adjustment in the new environment. Furthermore, home sickness, lack of parental support, loss of toys, school books, school environment and worries about future makes them depressed. In such situations the professional social workers can better perform by organizing group activities especially for children who lost their family members. In this way the children can be protected from developing emotional and psychological disorders. During the last few years, various disasters have badly impacted the people but the response from government authorities especially NDMA, PDMA and authorities at district and tehsil level has been very poor. They lack basic equipment like motor boats, lifesaving jacket, heavy machinery and trained staff. This unpreparedness makes the people especially those who lack resources are more exposed to such hazards in the form of floods, famines, earthquakes, conflicts and road accidents. Less the preparedness, more will be devastations as a result of disasters both natural and manmade.

Recommendations

On the basis of findings, it is suggested that government line departments, INGOs, NGOs and general public should prepare themselves for mitigation of impacts of disasters. This will help in minimizing the losses both men and material. For this purpose, close coordination between government departments, NGO, donor organizations and people is of utmost importance.

As Pakistan is exposed to all types of disasters, therefore disaster preparedness should be always on top agenda of the government to minimize the losses from natural and man-made disasters. The government should impose complete ban on deforestation and should allow control use of natural resources for protecting natural elements which are necessary for climate protection.

Awareness campaigns, seminars, walks should be organized through all types of media sources to educate the people about their roles and responsibilities in protection of environment. In this connection, the religious leaders/pesh imam of mosques can play an effective role in awareness raising regarding impacts of de-forestation and climate change.

The members of local bodies i.e. nazim and counsellors of village council can also help in communicating the message to the general community. In addition, village committees should be formed at muhallah and village level for keeping a watch on hill side areas and should guide the people regarding control use of natural resources. The village committees should impose strict penalties on cutting of trees from hillside areas and uncontrolled grazing.

Women and children who are part of weaker section of population needs special attention at the time of disasters. The people need education and training regarding disaster management especially regarding protection of children and women during the disaster. In this way the damages both to men and material and be minimized up to a maximum level.

Counselling and guidance programs should be initiated at the earliest especially for those women and children who have lost their family members due to disaster. Social Workers, psychologists and counsellor can play an important role in this regard. Professional social workers should know how to deal with people especially women and children in traumatic situation.

Medical aid during emergencies should consist of therapeutics counselling for early treatment of those who suffer from mental derangement. Professional social workers can play a better role in handling such patients.

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