

Research Article

Importance of Psychological Well-being after disasters in Bangladesh: A Narrative Review

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Abstract—This narrative review focuses on Bangladesh, offers a conceptual framework for comprehending the significance of psychological well-being in the aftermath of both man-made and natural disasters. The study finds significant issues, such as the effects of man-made crises like the Rana Plaza disaster which was collapsed and the Rohingya refugee crisis, and natural catastrophes like floods and storms, on mental health by reviewing the qualitative literature that already exists. It looks at the psychological outcome from disasters, such as PTSD, despair, and anxiety, which make it difficult to rehabilitate and impede functioning. The importance of protective factors and coping methods is emphasized, illustrating how these tools improve people's capacity to handle stressful circumstances. The analysis underscores the significance of community-based psychological health initiatives and the necessity of culturally competent mental health interventions, especially for vulnerable populations like children. The research emphasizes how important it is to boost mental health infrastructure, lessen stigma, and use technology like telemedicine to increase access to psychological health care in Bangladesh. In order to create extensive resilience and encourage thorough recovery in Bangladesh, the assessment ultimately recommends increased government focus, international cooperation, and the inclusion of mental health into more complete disaster recovery programs.

Keywords— Bangladesh, psychological well-being, trauma, natural disasters, man-made disasters, international cooperation, public health

1. Introduction

Psychological wellness becomes an extremely significant concern specially in a nation like Bangladesh which is prone to natural and man-made disasters. Cyclones, floods, and industrial tragedies are common in South Asian countries, including Bangladesh. These disasters present serious problems that go much beyond the immediate aftermath. Communities are impacted by these disasters on many levels, and treating the psychological toll is essential to rehabilitation and resilience-building [1]. In addition to financial losses and physical injuries, disaster recovery frequently involves excruciating psychological pain. Bangladesh's distinctive combination of man-made and unforeseen disasters emphasizes the need for a more thorough comprehension of the effects on people's mental health. As evidenced by the survivors of the Rana Plaza tragedy, who still struggle with serious physical and mental health issues, and the Rohingya refugees, who have deep psychological scars from fleeing mass murder in their homeland. Disasters have severe and prolonged psychological effects. Bangladesh's intricate social, cultural, and economic landscape poses difficulties that require a tailored, culturally aware approach to mental health

treatment. By evaluating the present level of psychological well-being in Bangladesh and offering recommendations, this study aims to add to the discussion regarding disaster resilience. It emphasizes the critical role mental health plays in the comprehensive recovery of the nation's disaster-affected citizens and communities. In Bangladesh, addressing psychological wellbeing in post-disaster situations requires a multifaceted strategy that incorporates both short-term and long-term therapies. Helping impacted people cope with intense stress requires immediate trauma care, such as crisis counseling and psychological first aid. To manage chronic illnesses including anxiety, depression, and post-traumatic stress disorder (PTSD), which frequently continue long after the initial disaster, long-term strategies must also be established. For example, refugees from the Rohingya crisis and survivors of industrial disasters like Rana Plaza endure similar neurological issues for years. There is an increasing awareness of the need for community-based mental health programs that integrate regional practices and belief systems to effectively support mental well-being in these situations, where the psychological toll extends beyond the immediate physical impacts and calls for ongoing, easily accessible, and culturally sensitive mental health support. In these cases, the

psychological toll goes beyond the immediate physical impacts and requires sustained mental health support that is accessible and culturally sensitive is a growing recognition of the need for community-based mental health programs that incorporate local customs and belief systems to effectively support mental well-being [2].

1.1 The Phenomena of Natural Disasters

This study examines the psychological, social, and cultural effects of displacement caused by riverbank erosion in Bangladesh's floodplains. Although the social and economic impacts of riverine risks have been well documented, the psychological aspects have received less attention. Results show a significant subculture around disasters because riverbank erosion is a persistent concern. Remarkably, socioeconomic deprivation is more closely associated with displaced people's misery than actual displacement. The study highlights the influence of indigenous belief systems on how people perceive and adjust to expected catastrophes in Bangladesh and underscores the need to include social, cultural, and psychological settings in hazard analysis and mitigation studies [3]. Similar to research on Alzheimer's disease, which stresses the need for addressing cognitive and emotional well-being through a holistic approach [4], this study also emphasizes the significance of specialized mental health treatments that take into account the unique psychological requirements of communities affected by disasters.

Additionally, the psychological effects of natural catastrophes focus on Bangladeshi families with children aged one to eight. Qualitative field data show that families are resilient in overcoming the psychological and practical difficulties caused by great natural forces, even when losing everything. Children who have experienced trauma often experience anxiety long after the crisis has passed. Problems with mental and physical health are emphasized, along with difficulties with schooling and basic supplies. Asserting the need for community-based coping mechanisms and specialized therapies to support children's and families' psychological well-being, it highlights the significance of catastrophe mitigation efforts [5]. Telemedicine and other digital health technology can help close the gap and guarantee that prompt psychiatric care is available to even the most remote areas. Bangladesh can improve long-term resilience and better prepare its people to handle future calamities by filling in these deficiencies in the mental health infrastructure [2].

1.2 The Phenomena of Man-Made Disasters

Bangladesh experiences man-made disasters mostly driven by increasing urbanization, environmental degradation, and inadequate infrastructure. Widespread industrialization's pressures not only endanger ecosystems but also seriously jeopardize public health by causing pollution. As evidenced by previous industrial disasters, the country's generally inadequate construction standards increase the danger of dreadful structure collapses. Furthermore, deforestation and improper land use practices amplify the effects of natural catastrophes like floods and cyclones, increasing their destructiveness. Inadequate waste management exacerbates

environmental threats in highly populated metropolitan areas especially capital city Dhaka, making the environment and people more susceptible to disasters. Bangladesh needs comprehensive policies that support sustainable development, enhance infrastructure, and involve communities in efforts to create resilience to reduce these risks. In Bangladesh, one of the most endangered countries in South Asia, these kinds of strategies are essential to addressing the growing problems brought on by man-made disasters. This article examines the critical function occupational therapists (OTs) performed in the wake of the Rana Plaza tragedy in Bangladesh on April 24, 2013. The collapse of the nine-story structure resulted in nearly 2,000 injuries and 1,125 fatalities, necessitating substantial rehabilitation operations conducted by the Centre for the Rehabilitation of the Paralyzed (CRP). Most survivors had a difficult time readjusting to life in the workforce and frequently experienced symptoms of Post-Traumatic Stress Disorder (PTSD). OTs played a key role in providing thorough rehabilitation, assisting with community reintegration, and evaluating survivors' functional abilities. With the goal to promote general well-being and assist in PTSD recovery, their programs integrated physical and psychological therapy and placed an emphasis on hobbies, self-care, and job training [6].

The report also reveals the long-term mental and physical disorders suffered by victims of the Rana Plaza catastrophe. After conducting in-depth interviews with 17 survivors, the research indicates long-lasting effects by analyzing pre-event, event, and post-event aspects using Haddon's matrix. These survivors nevertheless experience psychological problems including trauma, despair, and anxiety in addition to physical ailments like amputations and bone fractures. The paper highlights inadequate remuneration, restricted healthcare access, and barriers to re-employment in the garment business. Apart from highlighting the continuous difficulties encountered by the survivors, the research advocates for persistent worldwide endeavours to guarantee their welfare and avert analogous calamities in Bangladesh's ready-made garment sector [7].

2. Related Work

Bangladesh is frequently hit by natural disasters like cyclones and floods, as well as man-made crises such as industrial accidents. The psychological toll these events take on the population is profound and cannot be ignored. With the unique challenges faced by communities in Bangladesh, understanding the mental health impacts of such disasters is essential. This review explores the psychological effects of these crises, focusing on the specific challenges within the country. By analyzing theoretical frameworks, empirical studies, and available interventions, the paper highlights the crucial role mental health plays in recovery efforts. The insights gathered here aim to guide the development of effective programs and inspire further research in this vital area.

As noted in [7], marginalized persons are often the most vulnerable and least resilient during disasters, and their mental health is not well studied. Despite growing awareness

of mental health conditions like anxiety and post-traumatic stress disorder (PTSD) that precede catastrophic events, subject populations often have exacerbated psychological, physical, and financial concerns. The research emphasizes resilience's significance in mitigating the impact of disasters, as it is characterized by the ability to adjust and function in challenging situations.

In [3] observes the psychological ramifications of displacement brought on by riverbank erosion in Bangladesh's floodplains, where its impacts on society and the economy have been well documented. The psychological effects, though, are frequently disregarded. Socioeconomic hardship is found to have a greater impact on the suffering of displaced people than the act of relocation itself, as demonstrated by Hutton's research. Because these factors have a significant impact on how people view and respond to natural catastrophes, the study emphasizes the significance of integrating indigenous belief systems and cultural settings into disaster management tactics. Hutton advocates for a more comprehensive strategy that incorporates psychological, social, and cultural factors into attempts to mitigate disasters and promote recovery.

In [8] examined the complex interaction among climate change, mental health, and extreme weather events. The authors draw attention to the unequal distribution of mental health hazards that follow natural catastrophes in their analysis of the 2016 Fort McMurray wildfire in Alberta, Canada. Pre-existing mental health issues, gender, and socioeconomic position are some of the variables that affect these risks. In order to lessen the detrimental causes of disasters on mental health [8]. support increased governmental collaboration, community resilience initiatives, and strategic planning. The study emphasizes the need to address the long-term psychological consequences of climate change on future generations and the necessity of integrating mental health services into larger efforts to mitigate climate change.

[5] investigate the psychological health of Bangladeshi families and children affected by natural disasters, focusing on the long-term effects of trauma on these individuals. According to their qualitative research, children who experience a flood or other traumatic event often suffer from ongoing anxiety and emotional distress. The study highlights the importance of disaster mitigation strategies that address the psychological needs of both children and their families, advocating for specialized therapeutic interventions and community-based coping mechanisms. This research underscores the profound impact disasters have on both the corporal and psychological health of vulnerable groups, particularly children, and stresses the need for targeted mental health care during the recovery and rehabilitation process following a disaster.

By examining women's mental health outcomes according to their marital status and job category, [9]underscores the ways in which social determinants, such as job duties and financial standing, influence their psychological wellness. By

examining mental health issues in relation to social support networks and job stress, this study highlights the vital role that resilience and coping strategies play, particularly for marginalized populations.

These reviews emphasize the need for wide-ranging psychological health interventions that consider cultural settings, resilience, and socioeconomic conditions. They also emphasize the variety of psychological challenges that Bangladesh's tragedies provide. Targeted mental health care is crucial for addressing these issues and fostering long-term rehabilitation and community resilience.

3. Method

With an emphasis on Bangladesh, this study uses a secondary data analysis approach to examine the importance of psychological well-being in the aftermath of disasters. The research utilizes pre-existing qualitative data gathered from reliable sources, including government publications, reports from humanitarian organizations, newspapers, and scholarly journals. Data collection was conducted over the promising years, providing a thorough understanding of Bangladesh's changing psychological challenges resulting from disasters. The qualitative research design comprises content analysis and thematic synthesis of pre-existing narratives, case studies, and expert opinions. The study will identify and critically examine key themes of resilience, coping strategies, and psychological well-being after disasters. With this method, the experiences of people and communities impacted by disasters in Bangladesh can be carefully examined, illuminating the cultural and contextual elements that influence people's psychological reactions.

In this research, ethical considerations are crucial. The principles of informed consent, confidentiality, and veneration for the rights in addition to dignity of the data in the innovative studies have all been followed in acquiring the data used [10]. The secondary data analysis approach is a timely and cost-effective tactic that uses existing data to offer insightful information about the mental health of Bangladeshi disaster survivors. To ensure a more thorough and culturally aware approach to disaster management in the area, this research aims to inform policy and intervention strategies that support resilience and mental health in the wake of disasters. A systematic investigation of narratives, case studies, and expert opinions is made more accessible by applying content analysis and thematic synthesis methodologies, yielding valuable insights into catastrophe resilience's psychological aspects. In addition to maximizing the use of pre-existing data, this methodological approach offers a nuanced understanding of Bangladesh's psychological well-being landscape. It sheds light on the complex interactions between cultural and contextual factors that influence how people react to disasters as individuals and as communities.

4. Results and Discussion

Results

The findings of this narrative review demonstrate the substantial psychological toll that disasters both natural and

man-made have on individuals and communities in Bangladesh. Various mental health challenges, such as Post-Traumatic Stress Disorder (PTSD), anxiety, depression, and emotional distress, were found to be prevalent, particularly among vulnerable populations, including children, adolescents, and survivors of industrial accidents [11]

Psychological Effects of Natural Disasters

Table 1: Catastrophic Mental Health Outcomes from Higher Temperatures

Mental Health Issues	Percentage
Higher probability of an anxiety disorder	21%
Higher likelihood of both depression and an anxiety disorder simultaneously	24%

Table 2: Mental Health Outcomes Due to Flooding

Mental Health Issues	Percentage
Depression	31%
Anxiety	69%
The presence of both conditions	87%

Natural disasters, such as floods and cyclones, have a extreme and enduring effect on psychological health. The review of current literature shows that even minor temperature variations, like a 1°C increase, can lead to a 21% rise in anxiety and a 24% increase in the co-occurrence of anxiety and depression [12]. Additionally, the psychological consequences of flooding were significant, with anxiety increasing by 69%, depression by 31%, and the likelihood of both conditions occurring together rising by 87% (Table 1, Table 2) [13].

Psychological Impact of Man-Made Disasters

Man-made tragedies, such as Rana Plaza incident, also take a severe psychological toll. Surveys among survivors indicate that 48.5% continue to suffer from psychological trauma, while only 20.5% have fully recovered from the mental health impacts [7]. Similarly, the Rohingya refugee crisis reveals alarming mental health statistics, with 88.7% of refugees showing signs of depression and 61.2% diagnosed with PTSD (Table 3, Table 4) [14].

Table 3: the data shows the ActionAid Survey on Rana Plaza survivors

Rana Plaza Survivors	Ratio
Psychological trauma	48.5%
Mental condition is relatively stable	31%
Recovered fully	20.5%

Table 4: Mental health issues of the Rohingya

Mental Health Issue	Percentage
Depression	88.7%
Emotional Distress	84%
Post-Traumatic Stress Disorder	61.2%

The effectiveness of programs for community-based mental health

The review also highlights the effectiveness of community-based mental health programs in Bangladesh. These

initiatives have been successful in providing safe spaces for individuals to discuss their emotions and experiences, thus promoting long-term emotional resilience and recovery. Expanding such programs, particularly in rural areas, could offer critical support in fostering mental health resilience after disasters [11].

Discussion

The results emphasize the significant psychological effects of natural and man-made disasters in Bangladesh, highlighting the urgent need to prioritize mental health as a part of disaster response and recovery strategies. Natural disasters, such as floods and cyclones, have been shown to trigger considerable mental health challenges, particularly anxiety, depression, and PTSD. These findings align with global research, which shows that climate-related disasters can have long-lasting psychological impacts, especially on vulnerable populations [15]. The data on temperature and flooding further emphasize that even small environmental changes can lead to widespread mental health consequences, underscoring the need to integrate mental health into climate change policies [12].

Man-made disasters, such as the Rana Plaza tragedy, present equally severe mental health impacts. Many survivors continue to experience psychological trauma years after the event, which underscores the importance of long-term mental health support in disaster recovery efforts [7]. The Rohingya refugee crisis, with its widespread impact on mental health, also demonstrates the need for tailored mental health care for displaced populations who have experienced extreme trauma [14].

Community-based mental health programs have proven effective in addressing these challenges. Survivors frequently endure chronic trauma, necessitating specialized psychological treatments that take into account their unique situation and socioeconomic background [16]. By providing culturally sensitive and locally tailored support systems, these programs foster emotional resilience and promote recovery. However, access to mental health services remains limited in rural areas, highlighting the need for expansion. The use of telemedicine and digital health technologies could help bridge this gap and provide greater access to care in underserved regions [11].

The results of this review underline the necessity for comprehensive mental health policies that address both natural and man-made disasters in Bangladesh. Expanding community-based programs, improving mental health infrastructure, and integrating technology into mental health care systems are critical steps in promoting resilience and ensuring long-term recovery for disaster-affected populations.

5. Conclusion and Future Scope

This narrative review emphasizes how crucial it is to treat psychological health in Bangladesh after both man-made and natural disasters. The nation's recurrent exposure to these tragedies presents serious problems for mental health, especially for susceptible groups like children, refugees, and survivors of industrial accidents. In order to support healing

and resilience in impacted communities, mental health care must be provided in a thorough and culturally aware manner. The report highlights the need of improving mental health services, particularly in remote locations, and lowering the stigma associated with mental health problems.

The findings of this narrative review emphasize the critical need to address psychological health in Bangladesh, particularly in the wake of both natural and man-made disasters. Bangladesh's frequent exposure to these events has severe implications for mental health, particularly for vulnerable groups such as children, refugees, and survivors of industrial accidents. Effective mental health care must be both comprehensive and culturally sensitive to support the healing and resilience of affected communities. The importance of improving mental health services in remote areas is evident, as well as the need to reduce the stigma surrounding mental health issues, which often hinders individuals from seeking the help they need. While significant progress is being made, major gaps remain in the infrastructure, resources, and policy support necessary to provide the required mental health care. The widespread stigma surrounding mental health, particularly in rural regions, poses an additional barrier, making it even more challenging to deliver the necessary services. A multi-faceted approach is essential, one that includes increased funding, new legislation, and public awareness campaigns aimed at reducing the stigma associated with mental health care. In addition to addressing current challenges, future research should focus on the integration of technology, such as telemedicine and mobile health apps, to improve access to mental health services, particularly in remote areas. Cross-border collaboration and enhanced international cooperation are also vital to creating a robust and comprehensive mental health response system for those impacted by disasters. By strengthening mental health infrastructure, combating stigma, and tailoring mental health interventions to fit Bangladesh's unique cultural context, there is significant potential for improving the nation's disaster response and long-term recovery strategies. Future studies should also investigate the efficacy of expanding community-based mental health programs, which have been shown to foster emotional resilience. Moreover, since children and adolescents are especially vulnerable to the long-term psychological repercussions of disasters, more attention needs to be paid to their cerebral health requirements. Research on the creation of ethnically relevant treatments and psychological health intermediations that are adapted to Bangladesh's particular social and cultural norms must go on. Additionally, the use of digital technologies and international partnerships will play an increasingly vital role in addressing gaps in mental health care access, with a focus on building long-term resilience in disaster-prone communities.

Data Availability

Each element of information cited in this review comes from scholarly research and widely accessible literature. Readers are advised to consult the cited sources in the manuscript for more details.

Study Limitations

Writing this study on psychological well-being in Bangladesh following disasters presented several challenges. One of the main difficulties was the lack of readily available and reliable sources on the country's mental health policy, infrastructure, and post-disaster treatment approaches. Information gaps made it challenging to gather up-to-date and accurate data, particularly in understanding how mental health is addressed in the aftermath of both natural and man-made calamities. Cultural nuances and variations in mental health perspectives also required careful consideration to ensure a nuanced and traditionally sensitive analysis. Unfortunately, there is still a lack of comprehensive research on the mental health impacts of man-made disasters, such as the Rana Plaza tragedy, which further limited the scope of the study. This lack of research made it difficult to draw conclusive findings and provide fully informed recommendations. Another difficulty was the quickly changing technological environment in mental health treatment. Although telemedicine and other digital tools have a lot of potential to increase access to psychological health treatment, privacy and ethical issues need to be carefully considered. Although promising, integrating these technological developments into mental health services in Bangladesh calls for further study and cautious deliberation. Finally, working closely with regional mental health organizations and specialists became crucial in overcoming these limitations and gaining a deeper understanding of the complex mental health challenges faced by disaster-affected communities in Bangladesh. Despite these obstacles, this study offers valuable insights and highlights the need for further research in this critical area.

Conflict of Interest

Regarding this manuscript's publication, the authors declare that they have no conflicts of interest.

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Authors' Contributions

Farhana Khandoker: Created the methodology for the study, analyzed the data, wrote the first draft of the manuscript, and made important changes to improve its intellectual substance.

Jalal Uddin: Contributed to the final version's permission for submission, gave critical feedback on the manuscript's structure and content, and served as general supervision and direction throughout the project.

Tazveen Fariha: Reviewed and edited the document to make sure it was coherent and clear, and helped to approve the submission of the finished version.

Shahida Sultana Shumi: To help polish and approve the completed paper for submission, I also reviewed and proofread the document.

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Farhana Khandoker pursuing PhD in Public Health at the University of Nevada, Las Vegas (UNLV), with a research focus on digital health literacy, mental health among older adults, workplace wellness programs, and the role of social networks in health behaviors. She holds a Master of Emergency Management and Homeland Security from Arkansas Tech University. Farhana has served as a Graduate Assistant at Arkansas Tech University, where she supported students with disabilities and contributed to research efforts. Currently, she is a Graduate Assistant in Financial Aid and Scholarships at UNLV. She also holds an MBA in Human Resource Management from the University of Asia Pacific, Bangladesh, and brings valuable administrative experience from her work at the Honorary Consulate of the Czech Republic in Bangladesh. Her diverse expertise reflects a strong dedication to advancing public health and wellness.

Jalal Uddin is a Master of Public Health student in the Social and Behavioral Health Department at the University of Nevada, Las Vegas (UNLV). Having graduated from Bangladesh with a Bachelor of Science in Physiotherapy, Jalal's research interests include racial and gender minority issues as well as neurological disorders in older persons, including Parkinson's disease and Alzheimer's disease. Driven by a desire to lessen health inequalities, Jalal actively participates as a Graduate Research Assistant, skilled in SAS and SPSS data analysis. Among his projects include survey methodology design and partnerships with groups such as the American Public Health Association and the Alzheimer's Association.

Tazveen Fariha is an emerging researcher with a Master of Public Health from the University of Creative Technology from Bangladesh, and upcoming pursuit of a PhD in Public Health at the University of Nevada Las Vegas (UNLV) starting Fall 2024. She currently contributes to the improvement of nursing education at Chattogram International Nursing College as an Academic Coordinator, where she is in charge of faculty supervision and course planning. Tazveen's dedication to furthering healthcare education and research is demonstrated by her recent conference presentations and publications in nursing journals, which center on mental health among nursing students and empathy in nursing practice.

Shahida Sultana Shumi is a researcher specializing in Physical Therapy, holding a Bachelor's degree from Saic College of Medical Science and Technology in Bangladesh. Her internship at the Center for Rehabilitation of the Paralyzed in Dhaka gave her invaluable expertise. Her studies concentrate on problems with pregnant women's musculoskeletal and reproductive health. Shahida has a wealth of real-world experience as a physical therapist in addition to her research endeavours, especially in treating patients with neurological illnesses, pediatric conditions, and sports injuries. Her varied experience demonstrates her dedication to improving healthcare via clinical practice and research.