

Advancing Resilience in the Face of Adversity: A Psychosocial Exploration of Chimanimani's Experience With Cyclone Idai and COVID-19

Journal of Asian and African Studies

1–16

© The Author(s) 2024



Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/00219096241284387

journals.sagepub.com/home/jas**Memory Matsikure Cheure** 

Department of Psychology, Nelson Mandela University, South Africa

Magnolia Ngcobo-Sithole 

Department of Psychology, Nelson Mandela University, South Africa

Abstract

This study explores the psychosocial impact of Cyclone Idai and COVID-19 on vulnerable communities in Chimanimani, Zimbabwe. We aimed to investigate the experiences and perceptions of community members, identify factors influencing resilience, and inform strategies for advancing resilience. Findings reveal a complex interplay of factors affecting resilience, including trauma, economic instability, and social dynamics. We argue for a contextualized approach to promoting resilience, incorporating community-based initiatives, economic empowerment, and policy support. Through Bronfenbrenner's ecological theory, the research appraises adversity resilience understanding, highlighting the need for contextualized, theoretically informed strategies considering the interplay between micro, meso, exo, macro, and chrono levels.

Keywords

Advancing, resilience, adversity, psychosocial exploration, Chimanimani's experience, Cyclone Idai, COVID-19

Introduction

Chimanimani, a district in eastern Zimbabwe, offers a critical case study for understanding the psychosocial effects of consecutive disasters. With a high prevalence of vulnerability among its population, Chimanimani faced the devastating impact of Cyclone Idai in 2019, followed by the COVID-19 pandemic. This study sought to investigate the psychosocial effects of these consecutive disasters on vulnerable communities in Chimanimani. By exploring the experiences and perceptions of community members, we seek to identify factors influencing resilience and inform

Corresponding author:

Memory Matsikure Cheure, Department of Psychology, Nelson Mandela University, Port Elizabeth 6001, South Africa.

Email: s225521431@mandela.ac.za

strategies for advancing resilience in the face of adversity and inform evidence-based interventions. This study contributes to the literature on vulnerable communities and crises, highlighting the significance of contextualized strategies for advancing resilience.

Owing to their location, the communities of Chimanimani will always be vulnerable to similar disasters. Just a year after the natural tragedy, the COVID-19 pandemic struck, causing widespread disruption to the nation's socioeconomic structure and further deaths. The COVID-19 pandemic had a devastating impact on Zimbabwe, yet Chimanimani was one of the most impacted considering the district was still recovering from cyclone Idai disaster. The confluence of elevated mortality rates and global reports of COVID-19-related fatalities served as a poignant reminder for Chimanimani residents of the devastating impact of Cyclone Idai, as the socioeconomic challenges precipitated by the pandemic bore a striking resemblance to those experienced in the aftermath of the natural disaster (Chingombe and Musarandega, 2021). This convergence of traumatic events likely exacerbated the psychological distress and vulnerability of the community, necessitating a comprehensive understanding of the complex interplay between disaster-related trauma, mental health, and resilience.

According to reports from the World Health Organization (WHO, 2022) and the Zimbabwe Ministry of Health and Child Care (Ministry of Health and Child Care Zimbabwe (MoHCC), 2022), Zimbabwe experienced a considerable number of COVID-19 cases and fatalities. Hence, Chimanimani district's vulnerable population, including low-income families, women, and children, were disproportionately affected by the pandemic, with many further experiencing loss of income, food insecurity, and limited access to healthcare services (UNICEF, 2023). The severity of the pandemic in Chimanimani makes it an important case study for understanding the impact of crises on mental health and resilience, particularly in resource-constrained settings.

While previous studies on COVID-19 pandemic have focused on specific groups such as women fishers (Nhiwatiwa and Matanzima, 2023), older adults (Mutambara et al., 2023), girls in marginalized communities (Matsikure et al., 2022), and resilience among sex workers (Nyabeze et al., 2021), our research is exploring the broader topic of mental health and resilience in consecutive disasters in the general population and therefore, addressing a gap in the existing literature on cumulative disasters in Zimbabwe, particularly in resource-constrained settings.

Theoretical framework

The study is embedded in Bronfenbrenner's (1979) ecological systems theory. The ecological systems theory views individuals and communities as part of interconnected systems, influencing and influenced by their environment. Hence, Bronfenbrenner's ecological systems theory explains human development and behavior within multiple levels of environmental influence. The theory consists of five nested systems: *microsystem* consisting of the immediate environment such as family, school, community; *mesosystem* involving interactions between microsystems for example, family-school relationships; *exosystem* which encompasses external environments indirectly influencing development, such as parent's workplace; *macrosystem* including cultural, societal, and political context; and *chronosystem* comprising temporal aspects, for instance, developmental changes over time.

Nyabeze et al. (2021) highlights the importance of recognizing that adversities can have a multifaceted impact, affecting various levels and systems simultaneously. This understanding emphasizes the need for preparedness and resilience at individual, community, and societal levels to mitigate the effects of adversity.

By acknowledging the potential for adversities to affect multiple systems and levels, we can better prepare and develop strategies to adapt, respond, and recover from challenges. This

preparedness can involve building resilience in individuals, communities, and societies, fostering a capacity to withstand and rebound from adversity.

In the context of our research, the ecological system theory can help understand how vulnerable communities in Chimanimani district interact with their social, economic, and cultural environment, shaping their experiences and resilience. At microsystem level, vulnerable communities in Chimanimani district, their experiences, and interactions. Then mesosystem concerns interactions between community members, local organizations, and authorities. Exosystem involves external factors like government policies, economic conditions, and global events (such as COVID-19). Macrosystem considers cultural, societal, and political context of Zimbabwe and the district and chronosystem the impact of historical events, such as cyclone Idai and ongoing challenges on community resilience.

Therefore, Bronfenbrenner's Ecological Systems Theory is highly relevant as a theoretical framework for this research article. The theory's focus on the interconnectedness of multiple environmental systems and their influence on individual and community development aligns well with the research overall aim. By applying Bronfenbrenner's ecological systems theory, authors could analyze the impact of COVID-19 and floods on vulnerable communities in Chimanimani district within a holistic framework, examine the interplay between individual, community, and environmental factors influencing resilience; and identify potential targets for intervention and policy development to enhance community resilience. The theory's broad scope and interdisciplinary approach make it an excellent fit for this research study, which explores the complex interactions between environmental, social, and economic factors in the context of crisis and resilience. Consequently, the theory's five levels (micro, meso, exo, macro, and chrono) can be applied to analyze the different systems influencing resilience, from individual (micro) to societal (macro) and historical (chrono) factors. By analyzing these systems and their interactions, one can better understand the complex factors influencing the resilience of vulnerable communities in Chimanimani district.

Study context

Recent years have seen a number of natural disasters strike Zimbabwe, including droughts, illnesses, floods, and the novel COVID-19. Just 1 year before COVID-19 was publicly proclaimed to be a global pandemic, Chimanimani was devastated by the climate calamity Cyclone Idai in March 2019. That natural calamity, which left a terrible trail of damage in terms of infrastructure and human life, mostly hit the two Zimbabwean districts of Chimanimani and Chipinge in Manicaland Province (Chari and Novukela, 2023). Cyclone Idai devastated people's lives and means of subsistence due to flooding brought on by the storm, culminating in an ecological and humanitarian disaster. Consequently, by 19 March 2019, 102 people had died, over 200 had been injured, and approximately 250 were reported missing (UN-OCHA, 2019). Communities in Chimanimani district suffered greatly as a result of Cyclone Idai (Manatsa et al., 2020).

In comparison to other cyclone-affected areas, these repercussions have included a disproportionately high mortality toll, population displacement, short- and long-term loss of livelihoods, and accommodations (Nhamo and Chikodzi, 2021). In addition, Chapungu (2020) noted that Cyclone Idai's enormous destruction and displacement demonstrated how vulnerable individuals and communities are to disasters associated with climate change. Moreover, cyclone Idai significantly interfered with the social functioning of human groups, particularly in the eastern part of the Chimanimani district (World Bank, 2019). Cyclones are one of the most frequent and destructive natural disasters, accounting for approximately half of all natural disaster fatalities and such hazards are expected to occur more frequently and with greater intensity due to climate change (Rana and Routray, 2018).

In addition, on 30 March 2020, a countrywide lockdown was imposed in accordance with the Zimbabwean government's gazetting of Statutory Instrument 83 of 2020 on Public Health (COVID-19 Prevention, Containment and Treatment) countrywide Lockdown Order, 2020 (Chingombe and Musarandega, 2021). Strict lockdown measures were imposed, which triggered cyclone Idai experiences in Zimbabwe's Chimanimani District communities. Therefore, livelihoods of the people in Chimanimani district were significantly affected by both COVID-19 and Cyclone Idai.

Vulnerability and disasters

There are numerous study contexts in which vulnerability is considered (Ciurean et al., 2013; Emrich and Cutter, 2011; Kasi and Saha, 2019). Though its origins are in geography and natural hazards study, the idea is now widely applied in climate change, adaptation, development, and resilience (Mthembu and Hlophe, 2020). Despite the fact that the term is used in various research scenarios, there is no consensus on the meaning of vulnerability (Bongo et al., 2013; Chapungu, 2020; Torani et al., 2019). Nevertheless, vulnerability is most commonly linked to poverty, yet it can also occur when someone feels helpless, alone, and insecure when confronted with danger, shock, or stress. The concept is best described as a person's or a group's decreased ability to foresee, manage, withstand, and recover from the effects of a natural or man-made hazard (Terna, 2021). Therefore, it is a dynamic and relative term. Moreover, vulnerability is caused by a multitude of circumstances. Factors leading to vulnerability include eligibility considerations include but are not limited to gender disparity, fast population growth, poverty and hunger, poor health, unstable and dangerous locations, lack of access to information and technology, and lack of resources and services (Philip & Rayhan, 2006). It is also crucial to note that the type and class of vulnerability affects the nature and importance of these components differently. Hence, assessing psychosocial condition of vulnerable communities post crises is critical for advancing their resilience.

Research indicates that communities affected by natural disasters have greater prevalence of anxiety, major depressive disorder, acute stress disorder, post-traumatic stress disorder (PTSD), and physical health difficulties, among other issues (Goldman and Galea, 2014; Kwong et al., 2021; Rettie and Daniels, 2021). According to Ustyol et al. (2023), it is important to keep in mind that most disaster survivors experience some form of aftereffects rather than developing new mental health or drug use issues. In addition, research conducted across multiple demographic categories and nations has verified that disasters and pandemics tend to trigger increased psychological distress, manifesting as heightened anxiety, depression, loneliness, and PTSD (Chen et al., 2021). Thus, survivors of crises may endure psychological anguish, problematic anger, health concerns, and a loss of resources including optimism, self-efficacy, social support, and perceived control.

Disasters have an impact on entire communities, not only on individuals. There is an effect on people's psychological and social dimensions in addition to the physical destruction of infrastructure and structures (Polcarová and Pupíková, 2022). Consequently, in response to the rising frequency of disasters during the past century, the United Nations (UN) has released strategic documents that emphasize lowering risks, lessening their effects, and increasing resilience and adaptation for communities. Our research contributes to this imperious by investigating the experiences and perceptions of community members, identifying factors influencing resilience, and informing strategies for advancing resilience, ultimately aiming to enhance the capacity of communities to withstand and recover from disasters.

Significance of interventions

A plan of action for people, the planet, and prosperity is the United Nations 2030 Agenda for Sustainable Development (UN, 2015). Goal 3 of the Sustainable Development Agenda, universal health coverage, intends to provide fair access to healthcare services for all people. Both the 2030 Agenda and sustainable development depend on good health. According to SDG 3.4, by 2030, preventive and treatment efforts should reduce premature death from non-communicable diseases by one-third while also fostering mental health and wellbeing (UN, 2015). The following three facets of health: physical, mental, and social, are interconnected; therefore, gains in physical health will also have an impact on mental health and vice versa. Examples include the link between depression and a higher likelihood of not seeking treatment or taking medication, as well as the relationship between substance addiction and liver cancer. Mental health and psychosocial wellbeing are important for individual and community resilience in the face of adversity.

Numerous studies have demonstrated that psychological interventions support people facing adversity in achieving successful results (Morina et al., 2017; Norris et al., 2008; Uekawa et al., 2016). Studies specifically show the effectiveness of implementing strategies that foster resilience through psychosocial programs in humanitarian contexts when people are coping with adversity brought on by natural disasters, pandemics, and conflict (Hobfoll and De Jong, 2014). Although resilience was formerly assumed to be a psychological feature, it has more recently been understood to be a dynamic developmental process that requires using both internal and external resources to overcome adversity and reach positive outcomes (Giordano et al., 2021). Subsequently, social and physical environments that provide resources in meaningful ways for humans to access and use, together with protective relationships, encourage these processes.

Numerous studies demonstrate the effectiveness of community-oriented strategies in reducing vulnerability and improving resilience especially concerning preparation. Interventions should be contextually and culturally relevant (Fogarty et al., 2018). If interventions aimed at improving the health of vulnerable groups are exported from one environment to another without being appropriately tailored to the risks faced by those populations or culturally and contextually appropriate, their efficacy may be diminished (Lyon and Koerner, 2016). Furthermore, prior studies have shown that resilience therapies can be especially successful at preventing psychopathology, including pandemic fatigue, because vulnerable groups generally experience more stressful events (Al-Rashid et al., 2021). This is the case due to the fact that affected communities typically respond to disasters first, and when they do so effectively and efficiently, they have a greater chance of minimizing effects (Chorpita et al., 2011). Building on this foundation, our research seeks to further elucidate the complex interplay between community resilience and disaster response, with a focus on identifying key factors that facilitate or hinder resilience in the face of adversity, and informing evidence-based strategies to enhance the capacity of vulnerable communities to cope with and recover from disasters.

Methodology

This qualitative investigation employed a phenomenological approach to examine the experiences and perceptions of community members in Chimanamani. A purposive sampling strategy was utilized to select a total of 27 participants for focus group and in-depth interviews. The sampling technique ensured the selection of participants with relevant experiences and knowledge related to the phenomenon under investigation. Semi-structured interview and focus group discussion guides directed the data collection process. The study included seven key informants, employed by government ministries and departments, who participated in individual interviews, and 20 community

residents who participated in focus group discussions across five wards. Participants were aged between 33 and 56 years and had experienced Cyclone Idai. Each focus group comprised four participants, and interviews lasted approximately 40–45 minutes. Ethical approval was obtained from the institutional review board, and informed consent was secured from all participants. Thematic analysis was employed to analyze the data, revealing patterns and themes through coding and categorization (Braun & Clarke, 2020). Ethical considerations were upheld, and confidentiality ensured. Due to the sensitive nature of the study, participants who exhibited distress or emotional distress received crisis intervention and counseling services from registered psychologists.

Results

This study employed qualitative data triangulation to synthesize findings from focus groups and individual interviews. The analysis revealed the following three primary themes: psychological experiences, encompassing the emotional and mental health impacts of traumatic events; social indicators of psychological distress, including observable signs and symptoms of mental health issues; and resilience-enhancing strategies, which encompass coping mechanisms and support systems. Notably, some participants reported secondary trauma, having witnessed others' experiences, while others shared personal accounts of their own experiences, providing a rich and nuanced understanding of the research context. The findings reveal a complex interplay of factors affecting resilience in Chimanimani highlighting the interconnected nature of psychological distress, economic struggles, and social dynamics in the context of disaster resilience.

Psychological experiences

Participants reported various psychological conditions, including trauma-stressor-related conditions, anxiety disorders, sleep-wake disorders, and substance use and addictive disorders. Quotes from participants reveal the impact of cyclone Idai and COVID-19 on their psychological well-being, including feelings of helplessness, hopelessness, and isolation.

The following narratives, from participant testimonies, highlight the intense psychological distress associated with these issues, thus revealing the depth of their psychological consequences:

I feel like I'm living in a nightmare, and I can't wake up. (Focus group D, participant 2)

I've lost interest in activities I used to enjoy, and I feel like I'm just going through the motions. (Focus group C, participant 1)

A woman who lost her family in Cyclone Idai now avoids activities she once enjoyed, like playing netball, and refuses to participate in discussions about the disaster. (Individual interview, participant 3)

I lost my son, the breadwinner, in Cyclone Idai. He was swept away while trying to cross a stream, and his body was never recovered. I'm haunted by nightmares and the inability to bury him, which sometimes makes me consider taking my own life. (Focus Group A, participant 3)

The participant quotations feature a variety of emotional struggles and psychological distress stemming from their experiences with Cyclone Idai and the COVID-19 pandemic. Notably, participants reported symptoms of anhedonia, characterized by a diminished capacity to derive pleasure from previously enjoyed activities, suggestive of a loss of purpose and meaning. Avoidance behaviors were also evident, as participants deliberately eschewed situations reminiscent of the traumatic event, such as discussions about Cyclone Idai. Furthermore, participants described experiencing

apathy, helplessness, and hopelessness, indicative of feelings of disconnection, powerlessness, and despair. Social isolation was also prevalent, with participants reporting feelings of loneliness and disconnection from others. In addition, participants exhibited symptoms of traumatic grief, marked by intense emotional pain, yearning for deceased loved ones, and intrusive thoughts and nightmares. Suicidal ideation was also reported, reflecting overwhelming emotional pain and contemplation of self-harm.

These symptoms are indicative of Adjustment Disorder, PTSD, and Traumatic Grief. The participants' experiences highlight the profound impact of Cyclone Idai and the COVID-19 pandemic on their mental health and wellbeing.

Participants' quotations further illustrate the profound impact of Cyclone Idai and the pandemic on the mental health and wellbeing of the community members as shown below:

Our community is still traumatized by Cyclone Idai. We fear the rain season, and even a recent windy storm startled us. I kept my grandson from school that morning, fearing a repeat of the past. (Focus group E, participant 1)

I survived Cyclone Idai by climbing a tree with my son and others. My son still avoids my workplace, and I lost a brother to Covid-19, which brought back traumatic memories. (Individual Interview, participant 2)

I haven't had a peaceful night's sleep since the disaster. I wake up thinking about my late husband and wish he was here to help me with our children. (Focus Group discussion D, participant 4)

Narrations from participants further reveal persistent fear and anxiety. The community is traumatized, and the sound of wind or rain triggers fear, causing individuals to take precautions like preventing children from going to school. Furthermore, PTSD symptoms indicated in the survivor's account of climbing a tree to escape the cyclone and spending the night there, and their child's avoidance of the workplace, indicates intrusive memories and avoidance behaviors. Compounded trauma revealed from a narration by a participant who lost a brother due to COVID-19 retriggered the trauma experienced during Cyclone Idai, highlighting the cumulative effect of traumatic events. All insomnia and rumination experienced by a participant who constantly wakes up at night, thinking about their lost loved one, indicating difficulty in finding peace and closure.

These experiences demonstrate the long-lasting effects of traumatic events on individuals and communities, emphasizing the need for ongoing support and mental health services to address the lingering impacts of Cyclone Idai and the pandemic.

Social indicators for psychological problems

Participants identified social indicators that exacerbate psychological problems, including lack of support systems, poverty, and unemployment. The quotations by participants highlight a concerning issue in the community, the increasing use of drugs and substances among youths, particularly during the COVID-19 pandemic as shown below:

Substance and drug use is increasing among youths in our community, especially during the Covid-19 pandemic when they had idle time. They're using various substances like *kozodo*, marijuana, and *broncleer*, and it's becoming normalized. (Individual interview, participant 6)

Youths in our community are hosting parties in forests to exchange drugs and substances, including girls who are actively involved. They're stealing from their homes to fund their drug habit, and it's consuming their lives. (Individual interview, participant 4)

Participants reported a surge in drug and substance use among youths, encompassing both in school and out of school individuals. The COVID-19 pandemic appears to have exacerbated this issue, as youths turned to substance use as a coping mechanism for the lack of activities and boredom. Furthermore, the normalization and enthralling use of drugs and substance among young people have become increasingly prevalent, with some individuals resorting to theft to fund their habits. A variety of substances are being used, including *kozodo*, marijuana, *broncleer*, *ganja cakes*, and *mutoriro*. Secret parties in forests, where drugs and substances are exchanged, have also been reported, with girls actively participating and even promoting the use of *ganja cakes*.

This indicates a growing drug and substance abuse problem among youths in the community, fueled by factors like boredom, peer pressure, and the desire for escapism. The situation requires urgent attention and intervention to prevent long-term harm to the young people and the community as a whole.

Participants' accounts also highlight several concerns related to gender-based violence (GBV), child abuse, and mental wellbeing in the community as indicated from the following statements:

GBV cases are high, mainly domestic violence between couples, exacerbated by poverty and Covid-19 lockdowns, affecting women's and children's mental wellbeing. (Individual interview, participant 1)

A neighbor's son is threatening his elderly mother, claiming inheritance rights after his father and brothers died in the cyclone, causing her significant distress. (Focus group B, participant 3)

Cyclone Idai led to child-headed families, exposing children to abuse, early marriages, and substance use, negatively impacting their mental wellbeing. (Individual interview, participant 5)

Girls in our community are engaging in intergenerational relationships with older men for financial support due to poverty, often with miners, foreign workers, or married men. (Focus group E, participant 4)

These relationships lead to STIs, HIV, unintended pregnancies, and teenage motherhood, negatively impacting the girls' psychological wellbeing. (Individual interview, participant 5)

Participants reported that the cyclone Idai disaster and the COVID-19 pandemic have exacerbated GBV cases, particularly domestic violence, due to economic instability and stress. Orphaned children are vulnerable to abuse, and some are forced into early marriages or substance use denoting child abuse and neglect. Mental health concerns evidenced by the trauma of losing loved ones, homes, and livelihoods has led to anxiety, depression, and PTSD. Poverty and economic instability also indicated as worsened by the cyclone and pandemic, leading to desperation and harmful coping mechanisms like intergenerational relationships. Participants feel isolated and unsupported, leading to prolonged suffering and distress indicating lack of psychosocial support. Forced marriages and HIV/sexually transmitted infections (STI) risks compounded by the fact that young girls are forced into marriages or engage in transactional sex, increasing their vulnerability to HIV/STIs. Community breakdown revealed in narrations showing that traditional support systems have been disrupted, leaving vulnerable individuals without a safety net.

These issues are interconnected and exacerbated by the compounding effects of Cyclone Idai and the pandemic. Addressing these challenges requires a comprehensive approach that includes economic empowerment, mental health support, child protection, and community rebuilding. Hence, the issues demonstrate the complex and interconnected nature of trauma, stress, and coping mechanisms in the community. The quotations emphasize the need for comprehensive support systems addressing GBV, child protection, mental health, and economic empowerment to foster resilience and wellbeing.

Approaches toward advancing resilience

Participants suggested approaches to advance resilience, including community-based interventions, psychological support, and economic empowerment. The participants' quotes highlight the need for mental health support, recreational facilities, and educational programs in the community as indicated in excerpts below:

The crisis has affected mental wellbeing, leading to a need for mental health services, but lack of local facilities forces people to travel to Mutare for treatment. (Focus group A, participant 3)

We need recreational facilities, support groups, and mindful activities like sports and hobbies to reduce stress and thoughts of lost loved ones and property. (Focus group A, participant 1)

A youth center with a library and various activities would help young people focus on positive things and develop skills. (Focus group D, participant 2)

Mental health experts are needed to provide crisis counseling, education, and support to individuals and families affected by the disaster. (Individual interview, participant 3)

Local officials should be trained to offer psychological first aid services to reduce the risk of severe mental disorders in communities. (Individual interview, participant 2)

Education on drug abuse, gender-based violence, and child abuse is crucial for promoting resilience in vulnerable communities. (Individual interview, participant 1)

Men in this community need education on gender-based violence, equal opportunities, and mental health to stop abusing their wives and hindering their economic empowerment. (Focus group B, participant 1)

The above participant extracts reveal a clear articulation of specific needs and recommendations. These include the establishment of comprehensive mental health facilities staffed by specialists and equipped with necessary medication. In addition, participants emphasized the importance of recreational facilities that promote sports and socialization, as well as youth centers that offer libraries, skill training, and age-appropriate education. Furthermore, crisis counseling and psychological first aid services were identified as essential components of support. Participants also highlighted the need for community networking and support systems, as well as targeted educational programs focused on mental health, gender-based violence, and substance abuse prevention. Finally, awareness campaigns aimed at promoting resilience and addressing harmful behaviors were deemed crucial.

These suggestions demonstrate a clear understanding of the community's needs and a desire for holistic support. Addressing these requests could lead to improved mental wellbeing, social cohesion, and overall resilience in the community.

The following quotations reveal the participants' views:

Online mental health services would be beneficial for our community, especially for those affected by cyclone Idai and COVID-19. (Focus Group C participant 3)

Online mental health services would improve care, reduce costs, and delay in accessing services, especially for those exposed to traumatic events. (Group C, participant 4)

Our local clinic's safe center lacks resources like beds, food, and sanitary ware, making it difficult to support victims of gender-based violence. (Individual interview, participant 5)

A safe center is urgently needed in our community to protect women and girls fleeing gender-based violence, as current options put them and others at risk. (Individual, participant 3)

Community resources and social networks should be mobilized to foster trust and improve resilience among community members. (Individual interview, participant 4)

Building stronger houses and reviving traditional leaders' fields (Zunde raMambo) would help vulnerable families to access food during droughts and natural disasters. (Focus group A, participant 2)

The participant quotations stress several critical needs in the aftermath of traumatic events such as Cyclone Idai and COVID-19. First, the provision of online mental health services is essential to enhance access to care and support. In addition, the establishment of safe centers equipped with essential resources, including beds, food, clothing, and sanitary facilities, is crucial for supporting victims of GBV. Re-establishing a safe center within the community would provide a secure environment for GBV victims, fostering a sense of safety and security. Furthermore, community resource mobilization is vital for building trust, reciprocity, and collective action, thereby enhancing resilience. Infrastructure development, such as constructing disaster-resilient houses, would provide protection against natural disasters. Finally, reviving traditional leaders' fields (Zunde raMambo) would ensure food security for vulnerable households, including child-headed families, the elderly, and poverty-stricken families.

These suggestions demonstrate a desire for innovative, community-driven solutions that address mental health, GBV, and economic resilience. By leveraging online platforms, community resources, and traditional leadership, the community can build a more sustainable and supportive environment for its members.

Discussion

This study's findings accentuate the complex interplay of factors influencing resilience in Chimanmani. The results highlight the need for a nuanced understanding of disaster resilience, considering the unique challenges and strengths of vulnerable communities. The research highlights the importance of integrating psychological, economic, and social support services, acknowledging the critical role of community solidarity and cultural heritage in coping with adversity.

The study's findings inform evidence-based strategies for advancing resilience in the face of consecutive disasters. The current study's findings suggest that exposure to crises such as Cyclone Idai and COVID-19 has led to an increase in psychological problems, including trauma-stressor-related conditions, anxiety disorders, sleep-wake disorders, and substance and addictive disorders. However, contrary to these findings, previous research has shown that the majority of disaster survivors exhibit resilience and do not develop new mental health issues or substance use disorders post-disaster (Czeisler et al., 2020; Kwong et al., 2021). Notably, the present study's findings highlight the alarming trend of self-destructive behavior among survivors, underscoring the urgent need to prioritize access to adequate mental health treatment and care. This emphasizes the importance of providing timely and effective interventions to mitigate the risk of long-term psychological consequences among vulnerable populations.

This study's findings highlight the significance of living circumstances in shaping the psychological wellbeing of disaster survivors. Specifically, adverse social conditions, including GBV, family dysfunction, child abuse, poverty, and lack of recreational facilities, exert a deleterious impact on individuals' and communities' psychological wellbeing. Consistent with these findings, Lowe et al.'s (2020) investigation into the experiences of low-income survivors of Hurricane

Katrina revealed that accumulated stress and mental health issues are disproportionately prevalent among economically disadvantaged and marginalized populations, highlighting the critical role of socioeconomic factors in mental health outcomes.

A study by Nhiwatiwa and Matanzima (2023) revealed that the COVID-19 pandemic exacerbated existing vulnerabilities, particularly for women, who bore the brunt of the crisis, highlighting the need for gender-sensitive interventions and policies to address the disproportionate impacts on vulnerable groups. This finding highlights the importance of considering the specific needs and vulnerabilities of marginalized groups, such as women, in disaster risk reduction and response efforts, which aligns with the current research findings on advancing resilience in vulnerable communities.

These study research findings underscore the imperative of mental health services and psychosocial support activities in fostering resilience among vulnerable communities confronted with adversity. Psychosocial support plays a crucial role in enabling individuals to cope with stress and address issues more effectively, and its absence can have deleterious consequences, particularly among children and youth. As noted by Morina et al. (2017), the lack of psychosocial support can lead to detrimental outcomes, including low self-esteem, poor physical health, substance use and addiction, self-harm, and even suicidal behavior. Therefore, the provision of psychosocial support is essential for promoting resilience and mitigating the risk of adverse mental health consequences in vulnerable populations.

Nyabeze et al.'s (2021) research findings appear to align with our research findings, emphasizing the importance of building resilience since both studies highlight the need to strengthen community resilience in the face of adversity. In addition, addressing vulnerability as evidenced Nyabeze et al.'s (2021) findings which complement our research by emphasizing the importance of addressing the needs of vulnerable populations. Also, advocating for proactive strategies by both studies suggest that such as investing in community development and education, are crucial for advancing resilience and reducing vulnerability. The alignment of these findings reinforces the importance of a multifaceted approach to building resilience and reducing vulnerability among individuals and communities.

This study's findings highlight the significance of psychosocial education as a vital approach to addressing existing psychological problems in Chimanmani, consistent with Jones (2013) who emphasized that awareness education is the cornerstone of disaster preparedness, response, and recovery, providing accessible, accurate, and trustworthy information. Psychosocial education aims to raise awareness of unhealthy relationships and maladaptive behaviors in individuals, families, and communities, thereby reducing mental health problems. Specifically, education on the impact of maladaptive behaviors such as substance use, GBV, and child abuse can mitigate psychological trauma, which can result from repeated traumatic experiences, accidents, natural disasters, or assaults (Viola et al., 2011). By promoting awareness, individuals can comprehend the effects of these dynamics and seek positive changes in their relationships, ultimately fostering a supportive environment that enhances psychological wellbeing and resilience, as emphasized by Kasi and Saha (2019).

A key finding from this research highlights the importance of crisis counseling assistance and training, which aligns with the observations of Federal Emergency Management Agency and Substance Abuse and Mental Health Services Administration (FEMA and SAMHSA, 2021). They noted that crisis counseling services are typically provided by individuals who reside in the same communities they serve, having established trust and rapport with the community prior to the disaster. This emphasizes the value of local, community-based crisis counseling interventions, which can leverage existing relationships and trust to provide effective support and promote resilience in the aftermath of a disaster.

This study's findings also highlight telepsychology as a vital approach, consistent with the World Health Organization's (2021) recommendation that countries prioritize equitable access to telehealth services, including online psychological support, to reach disadvantaged populations and high-risk individuals.

Furthermore, the study identifies psychological first aid as an approach to enhance resilience, although its effectiveness has been questioned by previous research. Fox et al. (2012) noted that while psychological first aid provided by non-mental health experts may be considered evidence-informed, there is insufficient scientific evidence to support its use as an intervention. Moreover, Hermosilla et al. (2023) highlighted methodological limitations in the existing body of research, including inconsistent intervention components and inadequate evaluation methods, which hinder the assessment of psychological first aid's overall effectiveness.

This study's findings suggest that empowering community members through social capital-building initiatives, such as sustainable cooperative projects, infrastructure development (e.g. stronger houses and community structures), and revitalization of traditional leadership-controlled fields (Zunde ra Mambo), can significantly enhance the resilience of vulnerable communities. This concurs with Aloudat and Christensen's (2012) research, which emphasizes the importance of investing in vulnerable populations in emerging nations to promote economic growth, reliable infrastructure, cash accumulation, and effective disaster planning and response. The disparity in resilience and recovery between wealthier and lower income communities, as seen in the aftermath of Hurricane Katrina (Glandon et al., 2008), underscores the critical role of resource availability in disaster preparedness, evacuation, and recovery. By prioritizing investments in vulnerable communities, we can promote more equitable disaster resilience and recovery outcomes.

Based on this study's findings, it appears that achieving SDGs and investing in community development, education, and higher living standards is crucial for fostering resilience in vulnerable communities, as seen in the context of Chimanimani. The Sendai Disaster Risk Reduction Framework 2015–2030 (UN, 2015), provides a proactive strategy for reducing vulnerability and strengthening community resilience, which aligns with this study's thrust for advancing resilience in vulnerable communities. Specifically, the study highlighted the importance of capacitating community members through social capital-building initiatives, building stronger houses and community structures, and reviving traditional leadership-controlled fields (Zunde raMambo).

These findings complement the Sendai Framework's emphasis on community empowerment and resilience building. By achieving SDGs and investing in community development, education, and higher living standards, communities can better prevent, respond to, and eradicate disasters, ultimately reducing vulnerability and strengthening resilience.

The discussion effectively applies Bronfenbrenner's Ecological Systems Theory to illuminate the complex interplay of factors influencing resilience in Chimanimani. The findings highlight how the microsystem, mesosystem, exosystem, macrosystem, and chronosystem interact to shape the resilience of vulnerable communities. The authors adeptly demonstrate how the theory's various levels help explain the findings, including the critical role of community solidarity and cultural heritage in coping with adversity (microsystem), the importance of integrating psychological, economic, and social support services (mesosystem), and the impact of socioeconomic factors on mental health outcomes (exosystem). The discussion also effectively synthesizes the findings with existing literature, emphasizing the need for a multifaceted approach to building resilience and reducing vulnerability. By engaging with Bronfenbrenner's theory, the authors provide a comprehensive understanding of the complex factors influencing resilience in vulnerable communities, ultimately informing proactive strategies for advancing resilience and reducing vulnerability. The discussion accentuates the significance of considering the specific needs and vulnerabilities of

marginalized groups, such as women, in disaster risk reduction and response efforts, and the importance of prioritizing investments in vulnerable communities to promote more equitable disaster resilience and recovery outcomes.

Limitations and future research

This study acknowledges limitations inherent to its qualitative methodology, which relies on participants' subjective experiences and perspectives. To enhance trustworthiness and mitigate potential biases, methodological triangulation was employed through the combination of focus groups and individual interviews. However, the study's generalizability may be limited by its focus on a single rural district, Chimanimani, which may not be representative of urban or other contexts. While this research explored the psychosocial aspects of resilience, future studies should aim to develop context-specific models that consider the multifaceted experiences and needs of vulnerable communities, including aspects beyond psychosocial factors that influence resilience.

Conclusion

In conclusion, this research highlights the significance of theoretically informed and contextually sensitive strategies for advancing resilience in vulnerable communities, through the lens of Bronfenbrenner's Ecological Systems Theory. Our findings highlight the complex interplay of factors that shape resilience in the face of adversity. At the microsystem level, community solidarity and cultural heritage play a critical role in coping with challenges. The mesosystem, comprising social connections and support services, also significantly influences resilience. However, the availability of these support services and resources is influenced by factors at the exosystem level, including economic conditions and access to resources. Furthermore, the macrosystem, encompassing government policies and disaster response frameworks, also affects resilience. Notably, mitigating the impact of chronosystem factors, such as historical events like Cyclone Idai and challenges like COVID-19, is crucial in building resilience. By applying Bronfenbrenner's theory, we draw attention to how the interplay between these ecological levels shapes the resilience of vulnerable communities. Our study demonstrates how a multi-systemic approach, addressing individual, microsystem, mesosystem, exosystem, macrosystem, and chronosystem factors, is essential for equipping communities with resilience competencies aligned with their mental health and social needs. This research contributes to the existing literature by addressing a significant knowledge gap regarding the psychological consequences of cumulative adversity exposure on vulnerable communities. Our findings have significant implications for stakeholders, emphasizing the need for evidence-based interventions and programs that foster resilience among vulnerable communities, through a holistic and contextually sensitive approach grounded in Bronfenbrenner's Ecological Systems Theory.

Acknowledgements

The authors would like to express profound gratitude to the ministry of public works and local government, the ministry of women affairs small and medium enterprises, the communities of Chimanimani and the officials working with the respective communities for making the data collection process for the current research possible.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iDs

Memory Matsikure Cheure  <https://orcid.org/0000-0002-3136-2456>

Magnolia Ngcobo-Sithole  <https://orcid.org/0000-0002-0765-829X>

References

- Aloudat T and Christensen L (2012) Psycho-social recovery. In: Wisner B, Gaillard JC and Kelman I (eds). *The Routledge Handbook of Hazards and Disasters Risk Reduction*. Abingdon: Routledge, pp. 559–576.
- Al-Rashid MA, Goh HC, Harumain YAS, et al. (2021) Psychosocial barriers of public transport use and social exclusion among older adults: empirical evidence from Lahore, Pakistan. *International Journal of Environmental Research and Public Health* 18(1): 185.
- Bongo PP, Chipangura P, Sithole M, et al. (2013) A rights-based analysis of disaster risk reduction framework in Zimbabwe and its implications for policy and practice. *Jambá: Journal of Disaster Risk Studies* 5(2): 1–11.
- Braun V and Clarke V (2020) One size fits all? what counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology* 18(3): 328–352.
- Bronfenbrenner U (1979) *The Ecology of Human Development*. Harvard University Press.
- Chapungu L (2020) *Mitigating the Impact of Cyclone Disasters: Lessons from Cyclone Idai*. Africa Portal. Available at: <https://www.researchgate.net/publication/341702330/Cmd+V>
- Chari F and Novukela C (2023) The influence of information and communication technologies on disaster relief operations: a case of Cyclone Idai in Zimbabwe. *Journal of Humanitarian Logistics and Supply Chain Management* 13(4): 399–409.
- Chen Y, Liu Y, Zhang Y, Zheng L and Zhou T (2021) The effect of fear of the COVID-19 on depression among Chinese outbound students studying online in China amid the COVID-19 pandemic period: the role of resilience and social support. *Frontiers in Psychology* 12(750011): 1–11.
- Chingombe W and Musarandega H (2021) From the Cyclone Idai disaster to the COVID-19 pandemic: an account of inadvertent social capital enhancement in Eastern Chimanimani, Zimbabwe. *Journal of Disaster Risk Studies* 13(1): a1068.
- Chorpita BF, Bernstein A and Daleiden EL (2011) Empirically guided coordination of multiple evidence-based treatments: an illustration of relevance mapping in children's mental health services. *Journal of Consulting and Clinical Psychology* 79: 470–480.
- Ciurean RL, Schröter D and Glade T (2013) Conceptual frameworks of vulnerability assessments for natural disasters reduction. In: Tiefenbacher JP (ed.), *Approaches to Disaster Management – Examining the Implications of Hazards, Emergencies and Disasters*. London: IntechOpen Limited, pp.1–32.
- Czeisler MÉ, Lane RI, Petrosky E, et al. (2020) Mental health, substance use, and suicidal ideation during the COVID-19 pandemic - United States, June 24–30, 2020. *MMWR. Morbidity and Mortality Weekly Report* 69(32): 1049–1057.
- Emrich CT and Cutter SL (2011) Social vulnerability to climate sensitive hazards in the southern United States. *Weather, Climate, and Society* 3(3): 193–208.
- Federal Emergency Management Agency and Substance Abuse and Mental Health Services Administration (2021) FEMA crisis counseling assistance and training program guidance: CCP application toolkit, version 5.2. Available at: <https://www.samhsa.gov/sites/default/files/dtac/ccptoolkit/fema-ccp-guidance.pdf> (accessed 27 January 2024).
- Fogarty W, Lovell M, Langenberg J, et al. (2018) *Deficit Discourse and Strengths Based Approaches: Changing the Narrative of Aboriginal and Torres Strait Islander Health and Wellbeing*. Melbourne, VIC, Australia: The Lowitja Institute.
- Fox JH, Burkle FM, Jr Bass J, et al. (2012) The effectiveness of psychological first aid as a disaster intervention tool: research analysis of peer-reviewed literature from 1990–2010. *Disaster Medicine and Public Health Preparedness* 6(3): 247–252.
- Giordano F, Cipolla A and Ungar M (2021) Tutor of resilience: a model of psychosocial care following adversity. *Frontiers in Psychiatry* 12: 559154.
- Glandon DM, Muller J and Almedom AM (2008) Resilience in post-Katrina New Orleans, Louisiana: a preliminary study. *African Health Sciences* 8: 21–27.

- Goldmann E and Galea S (2014) Mental health consequences of disasters. *Annual Review Public Health* 35: 169–83.
- Hermosilla S, Forthal S, Sadowska K, et al. (2023) We need to build the evidence: a systematic review of Psychological First Aid on mental health and well-being. *Journal of Traumatic Stress* 36(1): 5–16.
- Hobfoll SE and De Jong JT (2014) The course and limitations of natural recovery from trauma: the centrality of threats to attachment and safety and their reinstatement. In: Zoellner LA and Feeny NC (eds) *Facilitating Resilience and Recovery Following Traumatic Events*. New York: Guilford Press.
- Jones M (2013) Measuring community resilience: implications for development aid. In: New Security Beat. Available at: <https://www.newsecuritybeat.org/2013/05/measuring-community-resilience-implications-development-aid/> (accessed 15 January 2024).
- Kasi E and Saha A (2019) Vulnerability and vulnerable groups of people. In: Romaniuk S, Thapa M and Marton P (eds), *The Palgrave Encyclopedia of Global Security Studies*. Cham: Palgrave Macmillan, pp.1–7.
- Kwong AS, Pearson RM, Adams MJ, et al. (2021) Mental health before and during the COVID-19 pandemic in two longitudinal UK population cohorts. *British Journal of Psychiatry* 218(6): 334–343.
- Lowe SR, Raker EJ, Arcaya MC, et al. (2020) A life-course model of trauma exposure and mental health among low-income survivors of Hurricane Katrina. *Journal of Traumatic Stress* 33(6): 950–961.
- Lyon AR and Koerner K (2016) User-centered design for psychosocial intervention development and implementation. *Clinical Psychology: Science and Practice* 23: 180–200.
- Manatsa D, Chatiza K, Mushore TD, et al. (2020) Building Resilience to Natural Disasters in Populated African Mountain Ecosystems. Case of Cyclone Idai, Chimanmani, Zimbabwe. TSURO Trust. Available at: <https://www.researchgate.net/publication/344310845> (accessed 2 February 2024).
- Matsikure M, Sifelani I, Songo S, et al. (2022) Psychological and social impact of the corona virus disease on girls in a marginalised Odzi community in Zimbabwe. *The Dyke Journal* 16(1): 1–19.
- Ministry of Health and Child Care Zimbabwe (2022) *Zimbabwe Coronavirus / COVID-19 Update*. MoHCC. Available at: <https://www.pindula.co.zw/tag/ministry-of-health-and-child-care-mohcc/> (accessed 5 January 2024).
- Morina N, Malek M, Nickerson A, et al. (2017) Psychological interventions for post-traumatic stress disorder and depression in young survivors of mass violence in low- and middle-income countries: meta-analysis. *British Journal of Psychiatry* 210: 247–254.
- Mthemba A and Hlophle S (2020) Building resilience to climate change in vulnerable communities: a case study of uMkhanyakude district municipality. *Town and Regional Planning* 77: 42–56.
- Mutambara J, Benza S, Khombo S, et al. (2023) COVID-19 and older adults in Zimbabwe: a study of the challenges faced by the older adults in Gweru and Mutare. *The Hong Kong Journal of Social Work* 57(1–2): 1–30.
- Nhamo G and Chikodzi D (2021) The catastrophic impact of tropical Cyclone Idai in Southern Africa. In: Nhamo G and Chikodzi D (eds), *Cyclones in Southern Africa*. Cham: Springer, pp.3–29.
- Nhiwatiwa T and Matanzima J (2023) The Covid-19 pandemic: limited water access and the precarity of women fishers at Lake Kariba, Zimbabwe. *Journal of Asian and African Studies* 58(5): 623–646.
- Norris FH, Stevens SP, Pfefferbaum B, et al. (2008) Community resilience as a metaphor, theory, set of capabilities, and strategy for disaster readiness. *American Journal of Community Psychology* 41: 127–150.
- Nyabeze K, Ngonidzashe T, Chikoko W, et al. (2021) The resilience of female sex workers in the wake of COVID-19 in Zimbabwe. *Journal of Asian and African Studies* 57(3): 514–528.
- Philip D and Rayhan I (2006) Vulnerability and poverty: what are the causes and how are they related? *Semantic Scholar*. Available at: <https://api.semanticscholar.org/CorpusID:16215427> (accessed 15 January 2024).
- Polcarová E and Pupíková J (2022) Analysis of socially vulnerable communities and factors affecting their safety and resilience in disaster risk reduction. *Sustainability* 14(18): 11380.
- Rana IA and Routray JK (2018) Multidimensional model for vulnerability assessment of urban flooding: an empirical study in Pakistan. *International Journal of Disaster Risk Science* 9(3): 1–18.
- Rettie H and Daniels J (2021) Coping and tolerance of uncertainty: predictors and mediators of mental health during the COVID-19 pandemic. *American Psychologist* 76(3): 427–437.

- Terna IP (2021) Vulnerability: types, causes, and coping mechanisms. *International Journal of Science and Management Studies (IJSMS)* 4(3): 187–194.
- Torani S, Majd PM, Maroufi SS, et al. (2019) The importance of education on disasters and emergencies: a review article. *Journal of Education Health Promotion* 8(1): 1–7.
- Uekawa K, Higgins WB, Golenbock S, et al. (2016) Psychometric properties of disaster event reaction items from the crisis counseling individual/family encounter log. *Disaster Medicine and Public Health Preparedness* 10(6): 822–831.
- UN (2015) *United Nations International Strategy for Disaster Reduction. Sendai Framework for Disaster Risk Reduction 2015–2030*. New York: United Nations.
- UNICEF (2023) UNICEF Zimbabwe Annual Report. *UNICEF*. Available at: <https://www.unicef.org/zimbabwe/media/9961/file/UNICEF%20Zimbabwe%20Annual%20Report%202023> (accessed 23 January 2024).
- UN-OCHA (2019) Flash Appeal: Revised following Cyclone Idai, March 2019. OCHA. Available at: <https://reliefweb.int/report/zimbabwe/2019-zimbabwe-flash-appeal-january-june-2019-revised-following-cyclone-idai-march>. (accessed 15 January 2024).
- Ustyol A, Sajjad S, Safian F, et al. (2023) A systematic review of alcohol consumption and disorders in relation to disasters. *Annals of Clinical Psychiatry* 35(1): 40–60.
- Viola LF, Nunes PV, Yassuda MS, et al. (2011) Effects of a multidisciplinary cognitive rehabilitation program for patients with mild Alzheimer's disease. *Clinics (Sao Paulo)* 66(8): 1395–400.
- World Bank (2019) Ending poverty, investing in opportunity. Available at: <https://documents.worldbank.org/en/publication/documents/reports/documentdetail/156691570147766895/The-World-Bank-Annual-Report-2019-Ending-Poverty-Investing-in-Opportunity> (accessed 6 January 2024).
- World Health Organization (2021) Promoting mental health preparedness and response for public health emergencies. Available at: [https://apps.who.int/gb/ebwha/pdf_files/EB148/B148\(3\)-en.pdf](https://apps.who.int/gb/ebwha/pdf_files/EB148/B148(3)-en.pdf) (accessed 14 February 2024).
- World Health Organization (2022) Annual report of the WHO country office in Zimbabwe. WHO. Available at: <https://www.afro.who.int/countries/zimbabwe/publication/annual-report-who-country-office-zimbabwe-2022> (accessed 3 February 2024).

Author biographies

Memory Matsikure Cheure is a community psychologist and a PhD student in the department of psychology, Nelson Mandela University, with special research interests in positive psychology, communities, societies, inclusivity and contemporary issues.

Prof. Magnolia Ngcobo-Sithole is a clinical psychologist and supervisor who contributes to knowledge creation through the mentoring and supervision of honours, master's and PhD students' research projects. She also has a leadership role as the head of psychology department, Nelson Mandela University.