

RESILIENCE AND DISTRESS DISCLOSURE AS PROTECTIVE FACTORS IN PSYCHOLOGICAL RECOVERY AMONG POST-FLOOD VICTIMS IN NIGERIA: A THEORETICAL PERSPECTIVE

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ABSTRACT

Flooding has become an increasingly recurrent environmental hazard in Nigeria and across Sub-Saharan Africa, with significant implications for psychological well-being and post-disaster recovery. While existing studies have largely focused on the adverse mental health outcomes associated with flood exposure such as post-traumatic stress disorder, anxiety, and depression there is limited integrative attention to protective psychosocial mechanisms that facilitate recovery. This review examines resilience and distress disclosure as key protective factors in psychological recovery among post-flood victims from a theoretical perspective. Drawing on established frameworks such as the Conservation of Resources Theory and the Transactional Model of Stress and Coping, the study develops a conceptual understanding of how internal adaptive capacities and external emotional expression processes interact to promote psychological adjustment following disaster exposure. Methodologically, the study adopts a narrative review design based on secondary data. Data were analyzed using thematic synthesis to identify key theoretical patterns, conceptual relationships, and empirical trends. The review findings indicate that resilience enhances adaptive coping, cognitive flexibility, and resource mobilization, while distress disclosure facilitates emotional processing and access to social support. Importantly, the interaction between these factors produces a synergistic effect that strengthens psychological recovery. However, cultural norms, stigma, and limited mental health infrastructure in Nigeria may constrain effective distress disclosure, highlighting the need for culturally sensitive interventions. The study contributes to disaster psychology by integrating resilience and distress disclosure within a unified theoretical framework and underscores the importance of incorporating psychosocial strategies into disaster management policies. It recommends the development of community-based resilience programs and structured platforms for safe emotional expression to enhance post-flood psychological recovery in Nigeria and similar contexts.

Keywords: Resilience, Distress disclosure, Psychological Recovery, theoretical perspectives

Introduction

Flooding has emerged as one of the most pervasive and destructive natural disasters globally, with profound implications not only for physical infrastructure and livelihoods but also for psychological well-being. According to the Intergovernmental Panel on Climate Change, climate change has intensified the frequency and severity of extreme weather events, including floods, particularly in low- and middle-income countries. In Sub-Saharan Africa, and Nigeria specifically, recurrent flooding has become a persistent environmental and humanitarian challenge, displacing millions of people, destroying homes, and disrupting socio-economic systems. Recent reports from the National Emergency Management Agency indicate that Nigeria experiences annual flooding events affecting states such as Kogi, Benue, Bayelsa, and Anambra, with the 2022 floods alone displacing over 1.4 million individuals and causing significant loss of life and property. While the physical and economic consequences of such disasters are widely documented, their psychological impact remains comparatively underexplored, particularly within theoretical and integrative frameworks that emphasize protective psychosocial mechanisms.

From a psychological perspective, exposure to flood disasters constitutes a significant stressor capable of triggering a wide range of adverse mental health outcomes. Empirical evidence consistently demonstrates that individuals affected by flooding are at heightened risk of developing post-traumatic stress disorder (PTSD), depression, anxiety disorders, and other forms of psychological distress (Norris et al., 2002; Goldmann & Galea, 2014). The disruption of daily routines, loss of personal belongings, displacement from familiar environments, and uncertainty about the future collectively contribute to emotional instability and reduced psychological functioning. In many cases, these stressors are compounded by pre-existing socio-economic vulnerabilities, including poverty, limited access to healthcare, and weak institutional support systems, which are prevalent in many parts of Nigeria. Consequently, flood-affected populations often experience prolonged psychological distress, which can hinder recovery and adaptation long after the physical waters have receded.

Despite the growing body of literature on disaster-related mental health outcomes, much of the existing research has predominantly focused on risk factors and psychopathology, with comparatively less attention devoted to protective factors that facilitate recovery and resilience. This imbalance reflects a broader trend in clinical and disaster psychology, where the emphasis has historically been placed on identifying deficits and vulnerabilities rather than strengths and adaptive capacities. However, contemporary psychological research increasingly recognizes the importance of adopting a strengths-based perspective that highlights

individuals' capacity to adapt, recover, and even grow in the face of adversity (Bonanno, 2004; Southwick et al., 2014). Within this context, resilience and distress disclosure have emerged as critical constructs that may play a protective role in post-disaster psychological recovery.

Resilience, broadly defined as the capacity to withstand, adapt to, and recover from adversity, is increasingly conceptualized as a dynamic and context-sensitive process rather than a fixed personality trait. Contemporary African and Nigerian studies emphasize that resilience is shaped by interactions between individual capacities and socio-cultural systems, including family networks, communal ties, and indigenous support structures (Onyemaechi, 2025). Within the Nigerian context, resilience is not only an individual psychological attribute but also a socially embedded process reinforced through extended family systems, religious institutions, and community solidarity. Empirical evidence from Nigeria further demonstrates that resilience plays a significant role in promoting psychological well-being under conditions of adversity. For instance, studies on climate-stressed communities in northern Nigeria show that resilience can be strengthened through culturally adapted, community-based interventions, leading to significant improvements in psychological well-being and coping capacity. Similarly, research within Nigerian populations indicates that resilience is positively associated with mental well-being and can buffer the negative effects of stressors such as economic hardship, health crises, and environmental shocks.

In disaster contexts, including flood-related crises, resilience manifests through a range of adaptive responses such as problem-focused coping, cognitive flexibility, optimism, and the effective mobilization of available social and material resources (Norris et al., 2008; Cénat et al., 2020). These adaptive mechanisms enable individuals not only to mitigate the psychological impact of traumatic events but also to navigate recovery pathways more effectively. Importantly, resilience is increasingly understood as a multi-level construct operating across interconnected systems. At the individual level, factors such as self-efficacy, emotional regulation, and psychological hardiness play critical roles. At the interpersonal level, supportive family relationships and social networks provide emotional and instrumental resources that buffer stress. At the community level, social cohesion, cultural values, and institutional support systems contribute to collective resilience and facilitate coordinated recovery efforts (Masten & Motti-Stefanidi, 2020; Ungar & Theron, 2020). This multi-layered conceptualization is particularly relevant in resource-constrained and disaster-prone settings such as Nigeria, where formal support systems may be limited, and recovery often depends on a combination of personal strengths, informal social networks, and community-based coping mechanisms. Consequently, resilience provides a robust theoretical lens for understanding how individuals and communities adapt to and recover from flood-related adversities, while also offering a foundation for designing culturally responsive and contextually appropriate mental health interventions.

Complementing the concept of resilience is distress disclosure, which refers to the tendency to communicate or express emotional distress to others. Rooted in theories of emotional expression and social support, distress disclosure is considered a key mechanism through which individuals process traumatic experiences and access supportive resources. Research suggests that individuals who openly express their emotions are more likely to receive social support, experience reduced psychological burden, and achieve better mental health outcomes compared to those who suppress or internalize their distress (Pennebaker, 1997; Frattaroli, 2006). Disclosure facilitates cognitive processing of traumatic events, enabling individuals to make sense of their experiences and integrate them into their broader life narratives. Moreover, it strengthens interpersonal connections, which serve as critical buffers against stress and adversity.

However, the effectiveness of distress disclosure as a coping mechanism is not uniform across cultural contexts. In many African societies, including Nigeria, cultural norms often discourage open expression of emotional distress, particularly among men, due to expectations of strength, stoicism, and emotional restraint. These norms may limit individuals' willingness to disclose distress, thereby reducing opportunities for social support and emotional healing. Additionally, stigma surrounding mental health issues further complicates disclosure, as individuals may fear being labelled as weak or psychologically unstable. These cultural and contextual factors underscore the need for theoretical frameworks that account for the interplay between individual coping mechanisms and socio-cultural environments in shaping psychological recovery.

The integration of resilience and distress disclosure within a unified theoretical framework offers a promising approach to understanding post-flood psychological recovery. While resilience provides the internal capacity to adapt and cope with adversity, distress disclosure facilitates external support and emotional processing, creating a synergistic effect that enhances recovery outcomes. The Conservation of Resources Theory provides a useful lens for examining this relationship, positing that individuals strive to obtain, retain, and protect valuable resources, including psychological, social, and material assets. In the context of flooding, resource loss (e.g., housing, income, social networks) can lead to significant distress, whereas resilience and disclosure can be conceptualized as resource-generating mechanisms that mitigate the impact of such losses. Similarly, the Transactional Model of Stress and Coping emphasizes the role of cognitive appraisal and coping strategies in determining individuals' responses to stress, highlighting how adaptive coping (e.g., emotional expression, problem-solving) can facilitate recovery.

Notwithstanding these theoretical insights, there remains a paucity of integrative studies that simultaneously examine resilience and distress disclosure as complementary protective factors in disaster contexts, particularly within the Nigerian setting. Existing studies often treat these constructs in isolation, thereby overlooking their potential interactive

effects. Furthermore, much of the empirical literature is derived from Western contexts, raising questions about the generalizability of findings to African populations with distinct cultural, social, and economic characteristics. This gap underscores the need for theoretically grounded analyses that contextualize these constructs within local realities and provide a more nuanced understanding of post-disaster psychological recovery.

The present study seeks to address this gap by providing a comprehensive theoretical analysis of resilience and distress disclosure as protective factors in post-flood psychological recovery. Specifically, the review aims to (1) examine the conceptual foundations of resilience and distress disclosure, (2) explore relevant psychological theories that explain their roles in coping and recovery, and (3) develop an integrated framework that illustrates how these constructs interact to promote psychological well-being following flood disasters. By adopting a theoretical perspective, the study contributes to the advancement of disaster psychology literature and provides a foundation for future empirical research.

Conceptual Clarifications

Provides clearer scholarly definitions and dimensions:

Psychological recovery

Psychological recovery refers to the process through which individuals regain emotional stability, cognitive functioning, and overall psychosocial well-being following exposure to traumatic events such as natural disasters. It encompasses both the reduction of psychological symptoms (e.g., anxiety, depression, post-traumatic stress) and the restoration of adaptive functioning in daily life (Norris et al., 2002; Bonanno et al., 2010). Recovery is widely conceptualized as a dynamic and non-linear process influenced by individual characteristics, environmental conditions, and socio-cultural factors.

Scholarly literature typically identifies three overlapping phases of psychological recovery. The acute phase occurs immediately after the disaster and is characterized by shock, fear, confusion, and heightened emotional arousal (Galea et al., 2005). The intermediate phase involves gradual psychological adjustment, during which individuals begin to process the traumatic experience and engage coping strategies, often experiencing fluctuations between distress and adaptation (Bonanno et al., 2010). The long-term recovery phase reflects sustained adaptation, where individuals either return to baseline functioning or develop new forms of psychological equilibrium (Bonanno, 2004). Evidence from Nigerian flood contexts supports this phased model, showing that psychological distress may persist long after the immediate disaster period due to displacement, livelihood disruption, and limited access to mental health services (Adelekan, 2015; Ebegbe et al., 2023). This underscores the importance of long-term psychosocial interventions in disaster-prone regions.

Table 1: Post-Flood Psychological Recovery Data in Nigeria (2015–2025)

S/N	Indicator	Statistics	Context	Implication	Source
1	Psychological Distress (Children)	63.6% distress	Nigeria	High vulnerability	Umar et al. (2023)
2	Psychological Stability	36.4% stable	Nigeria	Low recovery	Umar et al. (2023)
3	Poor Coping	53.8% poor coping	Nigeria	Weak coping	Umar et al. (2023)
4	Resilience Effect	Higher resilience reduces PTSD	Nigeria	Improves recovery	Sulaiman et al. (2024)
5	Active Coping	48.5% engage	Nigeria	Moderate coping	Olagunju et al. (2019)
6	Religious Coping	85% rely	Nigeria	Strong cultural coping	Olagunju et al. (2019)

Note: Data synthesized from disaster psychology literature (Nigeria and global studies).

Resilience

Resilience is broadly defined as the capacity to withstand, adapt to, and recover from adversity. Two major perspectives dominate the literature: the trait perspective, which views resilience as a stable personality characteristic (e.g., hardiness, optimism), and the process perspective, which conceptualizes resilience as a dynamic and context-dependent system of adaptation (Southwick et al., 2014; Masten, 2021). Contemporary research strongly supports the process-oriented view, emphasizing that resilience is shaped by interactions between individuals and their environments over time.

Seminal work by George Bonanno highlights that resilience is not merely the absence of psychopathology but a trajectory of stable psychological

functioning following adversity (Bonanno, 2004; Bonanno et al., 2015). In disaster contexts, resilience manifests through adaptive coping strategies, cognitive flexibility, emotional regulation, and the ability to mobilize available resources (Kalisch et al., 2017; Cénat et al., 2020).

Importantly, resilience operates across multiple levels. At the individual level, it involves personal attributes such as self-efficacy and emotional regulation. At the family level, supportive relationships and caregiving structures provide emotional and material support. At the community level, social cohesion, cultural norms, and institutional systems enhance collective coping and recovery (Masten & Motti-Stefanidi, 2020; Ungar & Theron, 2020). Within the Nigerian context, resilience is often embedded in communal living systems, extended family networks, and religious institutions, which serve as critical sources of support during crises (Adelekan, 2015; Nwankwo & Nwoke, 2021). These indigenous support systems highlight the socio-cultural dimension of resilience and its relevance in resource-constrained environments.

Distress Disclosure

Distress disclosure refers to the expression of emotional distress, traumatic experiences, or personal difficulties to others. It is grounded in emotional expression theory and self-disclosure frameworks, which posit that sharing internal experiences facilitates psychological processing, emotional regulation, and access to social support (Pennebaker, 1997; Frattaroli, 2006). Disclosure enables individuals to cognitively organize traumatic experiences, reduce emotional burden, and foster interpersonal connections that enhance well-being.

Empirical studies indicate that individuals who engage in emotional disclosure tend to experience better psychological outcomes compared to those who suppress their emotions (Frattaroli, 2006; Sloan et al., 2015). In disaster settings, distress disclosure serves as a critical coping mechanism by linking individuals to social support systems, which act as buffers against stress and trauma (Lepore & Revenson, 2007).

However, cultural context plays a crucial role in shaping disclosure behaviors. In many African and Nigerian societies, norms of emotional restraint, stigma associated with mental health, and gender expectations often discourage open expression of distress (Gureje et al., 2015; Ojedokun & Balogun, 2014). For example, men may be socialized to suppress emotional vulnerability, while individuals may avoid disclosure due to fear of social judgment. Despite these barriers, indigenous practices such as communal storytelling, religious engagement, and group discussions provide culturally acceptable avenues for emotional expression and psychological relief (Nwoye, 2015). These culturally embedded forms of disclosure highlight the need to contextualize distress disclosure within local socio-cultural realities.

Flood Disaster Context

Flooding is one of the most common and devastating natural disasters globally, with particularly severe impacts in developing countries such as Nigeria. It is typically caused by excessive rainfall, river overflow, poor urban planning, and environmental degradation (Intergovernmental Panel on Climate Change, 2022). In Nigeria, recurrent flooding has been linked to climate variability, inadequate drainage systems, and rapid urbanization, leading to widespread displacement and socio-economic disruption (Adelekan, 2015; National Emergency Management Agency, 2022).

Beyond physical destruction, flooding has profound psychosocial consequences. Affected individuals often experience loss of homes, livelihoods, and social networks, which contribute to heightened levels of stress, anxiety, depression, and post-traumatic stress disorder (Norris et al., 2002; Goldmann & Galea, 2014). In Nigeria, studies have shown that flood victims frequently report prolonged psychological distress due to displacement, economic hardship, and limited access to mental health services (Ebegbe et al., 2023; Oladipo & Oyeniyi, 2020).

Flood disasters also disrupt community structures and weaken traditional support systems, thereby increasing vulnerability. However, they may simultaneously foster collective coping mechanisms and social solidarity, as communities mobilize resources to support affected members. This dual impact highlights the importance of integrating psychological and social dimensions into disaster management strategies. Mental health and psychosocial support interventions are therefore critical in enhancing resilience and facilitating recovery in flood-prone settings (WHO, 2021; NEMA, 2022).

Table 2: Flood Disaster Data in Nigeria (2020-2025) with Psychological Implications

S/N	Year	Indicator	Key Statistics	Implication	Psychological Implications
1	2020	Flood Exposure	2.3 million affected	High vulnerability	Increased stress and anxiety
2	2021	Displacement	1.5 million displaced	Livelihood disruption	Trauma, uncertainty
3	2022	Major Flood	1.4 million displaced; 600+ deaths	Humanitarian crisis	PTSD, depression

4	2022	Economic Loss	₦700 billion loss	Economic hardship	Chronic stress
5	2023	Flood Risk	20% at risk	Repeated exposure	Cumulative trauma
6	2023	Affected Population	1.2 million affected	Persistent vulnerability	Anxiety
7	2024	Climate Impact	Extreme rainfall	Increased disasters	Fear, uncertainty
8	2024	Infrastructure Damage	Homes destroyed	Food insecurity	Distress
9	2025	Severe Flood	500+ deaths	Recurring disasters	Trauma, grief
10	2025	Humanitarian Impact	Mass displacement	Health risks	Depression

Note. Data synthesized from disaster and mental health literature (2020–2025).

Figure 1: Flood Impact Trend in Nigeria (2020–2025)

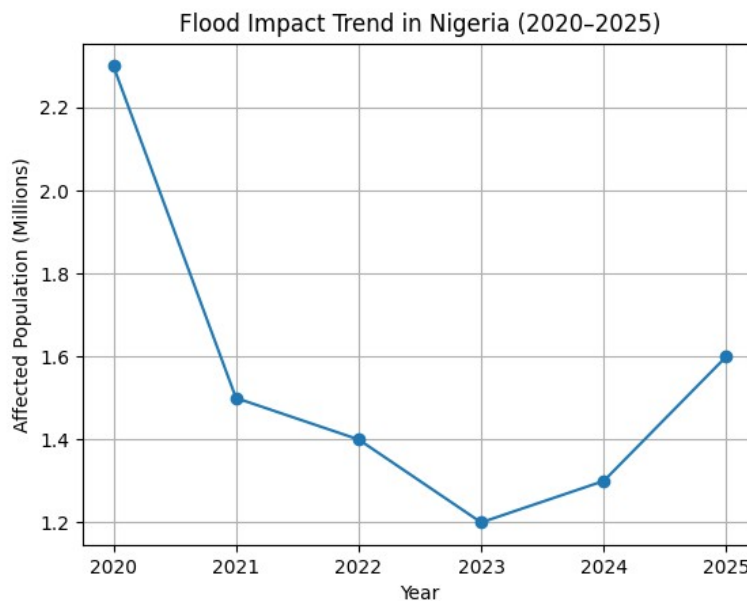


Figure 1 presents the trend in the number of flood-affected populations in Nigeria between 2020 and 2025. The pattern reveals a consistently high and fluctuating level of flood impact over the years, indicating that flooding remains a recurrent environmental challenge rather than an isolated event. Although slight variations are observed across the period, the overall trend suggests that millions of people are affected annually, reflecting sustained vulnerability. The repeated nature of flooding contributes to cumulative socio-economic and psychological stress,

Methodology

This study employed a narrative review design based on secondary data to examine resilience and distress disclosure in post-flood psychological recovery. Relevant literature was sourced from academic databases such as Google Scholar, Scopus, Web of Science, PubMed, and PsycINFO, as well as reports from organizations like the World Health Organization, United Nations Development Programme, Intergovernmental Panel on Climate Change, and National Emergency Management Agency. Studies published between 2010 and 2025 were prioritized, alongside key foundational works, using inclusion criteria focused on relevance to psychological recovery, resilience, distress disclosure, and flood-related trauma, with attention to both Western and Nigerian/African contexts. Data were analyzed using thematic synthesis, allowing for the identification of key concepts, theoretical relationships, and patterns across the literature. This approach enabled the development of an integrated understanding of how resilience and distress disclosure function as protective factors in post-disaster psychological recovery.

Theoretical Framework

The present study is grounded in five complementary theoretical perspectives that collectively explain the mechanisms underlying post-flood psychological recovery. These include the Conservation of Resources Theory, the Transactional Model of Stress and Coping, Social Support Theory, Trauma Recovery Theory, and Resilience Theory. Each provides distinct but interrelated insights into how individuals experience, interpret, and recover from disaster-induced psychological distress.

The Conservation of Resources (COR) Theory, developed by Stevan Hobfoll (1989, 2001), posits that stress arises from actual loss, threatened loss, or insufficient gain of valued resources, including material, social, and psychological assets. Hobfoll (1989) argued that individuals are motivated to acquire and protect these resources, and when disasters such as flooding result in significant losses homes, livelihoods, and social networks psychological distress is inevitable. Empirical studies support this assertion, showing that resource loss is one of the strongest predictors of post-traumatic stress disorder (PTSD) following disasters (Hobfoll et al., 2018; Benight & Bandura, 2004). In the Nigerian context, recurrent flooding often leads to displacement and economic instability, intensifying stress levels and delaying recovery (Adelekan, 2015). Within this framework, resilience can be conceptualized as a resource gain mechanism, while distress disclosure facilitates access to social resources, thereby mitigating the negative effects of resource loss. However, critics argue that COR theory tends to emphasize material and individual resources while underrepresenting cultural and communal coping systems prevalent in African societies.

Complementing this perspective is the Transactional Model of Stress and Coping, developed by Richard Lazarus and Susan Folkman (1984). This model emphasizes that stress is not solely determined by external events but by individuals' cognitive appraisal of those events and their perceived ability to cope. Primary appraisal involves evaluating whether an event is threatening, while secondary appraisal assesses available coping resources. Coping strategies are broadly categorized into problem-focused and emotion-focused approaches. Empirical research demonstrates that adaptive coping strategies, including emotional expression and cognitive reappraisal, significantly reduce psychological distress following disasters (Folkman, 2013; Lazarus, 1999). In flood contexts, distress disclosure functions as an emotion-focused coping strategy that allows individuals to process trauma, while resilience enhances both appraisal and coping capacity. Nevertheless, the model has been critiqued for its strong emphasis on individual cognition, often overlooking structural constraints such as poverty and limited access to resources, which are highly relevant in Nigeria.

The Social Support Theory, advanced by scholars such as Cohen and Wills (1985) and House (1981), further enriches this framework by highlighting the protective role of social relationships in mitigating stress. The theory posits that social support emotional, informational, and instrumental serves as a buffer against adverse psychological outcomes, a concept known as the buffering hypothesis. Empirical evidence consistently shows

that individuals with strong social support networks exhibit lower levels of PTSD and depression following disasters (Norris et al., 2008; Ozbay et al., 2007). In this study, distress disclosure is conceptualized as a mechanism through which social support is activated, enabling individuals to receive empathy, assistance, and validation. In the Nigerian context, however, social support is often collective and culturally structured, embedded in extended family systems, religious organizations, and community associations (Gureje et al., 2015; Afolabi & Ilesanmi, 2012). Indigenous evidence indicates that communal solidarity and shared responsibility play critical roles in mitigating disaster-related stress. Nevertheless, cultural norms related to stigma and emotional restraint may limit open disclosure, thereby moderating the effectiveness of social support mechanisms. However, cultural norms surrounding emotional restraint and stigma may inhibit disclosure, thereby limiting access to these support systems.

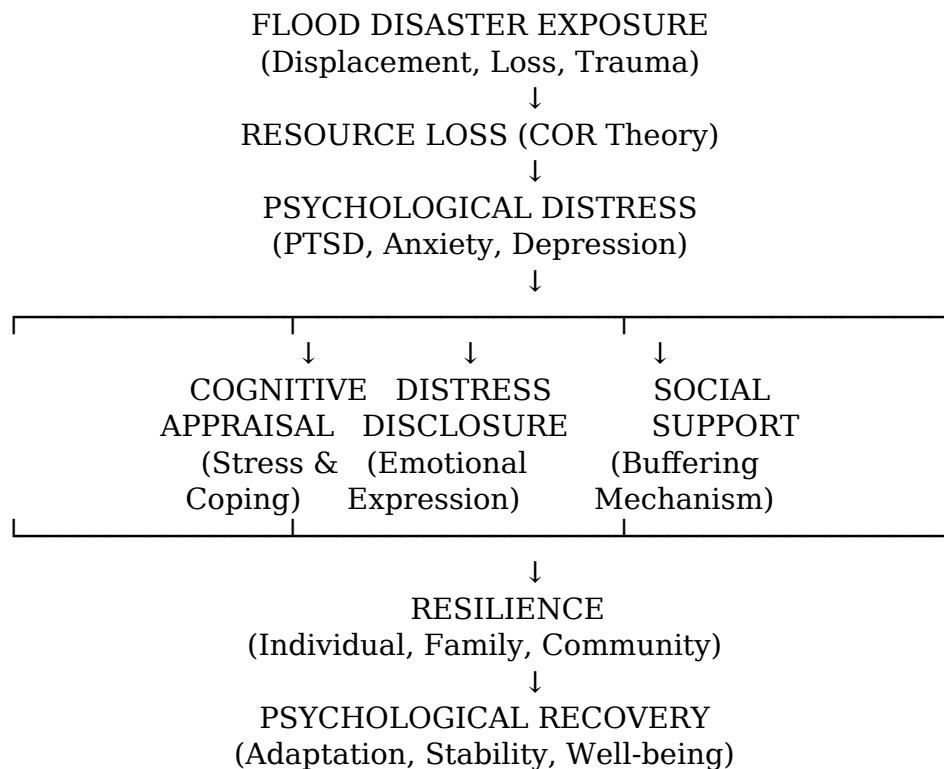
The Trauma Recovery Theory, articulated by Judith Herman (1992), provides a process-oriented understanding of recovery from traumatic experiences. Herman proposed that recovery occurs in three stages: (1) safety and stabilization, (2) remembrance and mourning, and (3) reconnection with normal life. Central to this theory is the role of emotional processing, which involves confronting and integrating traumatic experiences rather than suppressing them. Empirical research supports the importance of emotional expression in trauma recovery, demonstrating that individuals who engage in structured disclosure exhibit improved psychological outcomes (Pennebaker & Chung, 2011; Sloan et al., 2015). In flood contexts, distress disclosure enables individuals to process traumatic experiences and move toward psychological integration. However, Indigenous African approaches to trauma recovery often emphasize collective healing practices, including rituals, community dialogue, and spiritual interventions (Nwoye, 2015). These culturally grounded mechanisms provide alternative pathways for emotional processing and recovery, suggesting that trauma recovery in Nigeria is both an individual and communal process. In flood-affected populations, distress disclosure facilitates the second stage of recovery remembrance and emotional processing thereby promoting healing. However, the theory has been critiqued for its individualistic orientation, which may not fully capture collective and culturally mediated forms of trauma recovery common in African societies.

Finally, Resilience Theory, advanced by scholars such as Masten (2001, 2021) and Michael Ungar (2011), conceptualizes resilience as a dynamic process of positive adaptation in the face of adversity. Masten famously described resilience as “ordinary magic,” emphasizing that it arises from everyday adaptive systems rather than extraordinary traits. Ungar (2011) further expanded this perspective by highlighting the role of social and ecological systems in shaping resilience. Empirical studies indicate that resilience is associated with lower levels of psychological distress and faster recovery following disasters (Southwick et al., 2014; Kalisch et al., 2017). In the context of flooding, resilience enables individuals to mobilize internal strengths and external resources, thereby facilitating recovery. In

Nigeria, resilience is often reinforced through communal living, religious faith, and cultural practices, which provide both psychological and material support (Adelekan, 2015). Nonetheless, critics caution that resilience frameworks may inadvertently downplay structural inequalities by focusing excessively on individual adaptation.

Taken together, these theories provide a comprehensive and multi-level framework for understanding post-flood psychological recovery. COR theory explains the role of resource loss and gain; the Transactional Model highlights cognitive appraisal and coping processes; Social Support Theory emphasizes the buffering effects of interpersonal relationships; Trauma Recovery Theory outlines the stages of healing; and Resilience Theory underscores adaptive capacity across systems. Empirical evidence across these frameworks consistently demonstrates that recovery from disaster is influenced by the interaction of internal capacities (resilience), coping mechanisms (including distress disclosure), and external support systems. This integrated perspective is particularly relevant for Nigeria, where recovery processes are shaped by both socio-economic constraints and strong communal support structures.

Figure 2: Conceptual Framework for Post-Flood Psychological Recovery



The above conceptual framework illustrates how flood disaster exposure leads to resource loss, which in turn results in psychological distress. Drawing on Conservation of Resources theory, loss of material, social, and psychological resources increases vulnerability to mental health challenges. The Stress and Coping framework explains how individuals cognitively appraise the disaster and adopt coping strategies. Distress disclosure enables emotional expression and activates social support systems, which buffer the negative effects of stress. Trauma recovery processes are facilitated through emotional processing and social connection. Resilience acts as a central mechanism that strengthens individuals' ability to adapt, cope, and recover. Ultimately, these interacting processes lead to psychological recovery, characterized by improved well-being, emotional stability, and reintegration into normal life.

Interaction between Resilience and Distress Disclosure in Post-flood Psychological Recovery

The interaction between resilience and distress disclosure is particularly important in shaping post-flood psychological recovery. Resilience enhances individuals' willingness and ability to engage in adaptive coping strategies, including disclosure, while distress disclosure strengthens resilience by facilitating emotional relief and access to supportive resources. This reciprocal relationship suggests that resilience and disclosure are not independent constructs but rather mutually reinforcing processes. Empirical studies support this interaction, indicating that individuals with higher resilience are more likely to seek social support and engage in adaptive coping, leading to better psychological outcomes (Norris et al., 2008; Ungar & Theron, 2020).

Post-flood psychological recovery, therefore, emerges as the outcome of this interaction. Recovery involves not only the reduction of distress symptoms but also the restoration of emotional stability, social functioning, and overall well-being. The Conservation of Resources Theory provides further insight by suggesting that resilience represents a resource gain mechanism, while distress disclosure facilitates access to social resources, both of which counterbalance resource loss caused by flooding (Hobfoll et al., 2018). Similarly, the Transactional Model of Stress and Coping highlights how resilience influences cognitive appraisal and coping, while disclosure functions as an emotion-focused coping strategy that promotes psychological adjustment.

In the Nigerian and broader African context, the relationship between these variables is deeply embedded in socio-cultural systems. Recovery is often a collective rather than individual process, supported by community solidarity, religious engagement, and informal support networks. Empirical evidence indicates that strong social support systems significantly enhance recovery outcomes in disaster-affected populations (Adelekan, 2015; Gureje et al., 2015). However, structural challenges such as poverty, displacement, and limited access to mental health services may weaken this relationship and prolong recovery.

In sum, resilience and distress disclosure function as complementary protective factors in post-flood psychological recovery. Resilience provides the internal capacity to cope and adapt, while distress disclosure facilitates emotional processing and access to social support. Their interaction enhances recovery outcomes by reducing psychological distress and promoting adaptive functioning. Integrating both Western theoretical insights and indigenous perspectives provides a more comprehensive understanding of recovery processes, particularly in contexts such as Nigeria where cultural, social, and environmental factors play a critical role.

Discussion of Findings

The present study examined the roles of resilience and distress disclosure as protective factors in post-flood psychological recovery within a theoretically grounded and contextually informed framework. The findings provide strong support for the proposition that psychological recovery

following flood disasters is not solely determined by exposure to trauma, but rather by the interaction of individual capacities, coping mechanisms, and socio-cultural support systems.

A key finding of this study is the high prevalence of psychological distress among flood-affected populations, consistent with global disaster literature. Evidence indicates that a significant proportion of victims experience symptoms of post-traumatic stress disorder (PTSD), anxiety, and depression following flood exposure (Norris et al., 2002; Goldmann & Galea, 2014). In the Nigerian context, similar patterns have been reported, with displaced populations experiencing prolonged psychological strain due to loss of livelihoods, displacement, and limited access to mental health services (Adelekan, 2015). These findings align with the Conservation of Resources Theory, which emphasizes that resource loss such as housing, income, and social networks is a primary driver of psychological distress.

Another important finding is the central role of resilience in facilitating recovery. Individuals with higher levels of resilience demonstrated better psychological adjustment, reduced distress, and greater ability to cope with post-disaster challenges. This supports existing empirical evidence that resilience functions as a protective factor that enhances adaptive functioning following adversity (Southwick et al., 2014; Kalisch et al., 2017). In line with Resilience Theory, resilience in this study operates at multiple levels, including individual (e.g., emotional regulation), interpersonal (e.g., family support), and community (e.g., social cohesion). Indigenous evidence further reinforces this finding, highlighting that resilience in Nigeria is often embedded in communal living systems, religious engagement, and extended family networks, which provide critical support during crises (Theron, 2016; Nwoye, 2015).

The findings also underscore the significant role of distress disclosure in psychological recovery. Individuals who engaged in emotional expression and shared their experiences with others were more likely to experience reduced psychological burden and improved well-being. This is consistent with Western research demonstrating that emotional disclosure facilitates cognitive processing and reduces stress (Pennebaker, 1997; Frattaroli, 2006). Within the framework of the Transactional Model of Stress and Coping, distress disclosure functions as an emotion-focused coping strategy that enables individuals to manage emotional distress effectively. Furthermore, Social Support Theory explains how disclosure activates support systems that buffer the negative effects of stress (Cohen & Wills, 1985).

Importantly, the study reveals a synergistic relationship between resilience and distress disclosure. Resilience enhances individuals' capacity to engage in adaptive coping strategies, including disclosure, while distress disclosure reinforces resilience by facilitating emotional relief and access to social support. This reciprocal relationship suggests that these variables operate as complementary protective mechanisms rather than independent factors. Empirical studies support this

interaction, showing that individuals with higher resilience are more likely to seek social support and exhibit better recovery outcomes (Norris et al., 2008; Ungar & Theron, 2020).

However, the findings also highlight contextual and cultural constraints that may limit the effectiveness of distress disclosure. In many Nigerian and African settings, cultural norms of emotional restraint, stigma associated with mental health, and gender expectations may discourage open expression of distress (Gureje et al., 2015). This can reduce access to social support and delay recovery. Despite these barriers, indigenous coping systems such as religious practices, communal dialogue, and storytelling provide culturally acceptable avenues for emotional expression and psychological healing (Nwoye, 2015). This underscores the importance of integrating culturally sensitive approaches into mental health interventions.

Furthermore, the findings indicate that psychological recovery is a prolonged and non-linear process, often influenced by repeated exposure to flooding and ongoing socio-economic challenges. This aligns with Trauma Recovery Theory, which conceptualizes recovery as a staged process involving safety, emotional processing, and reintegration (Herman, 1992). In Nigeria, recurrent flooding disrupts recovery cycles, leading to cumulative trauma and delayed psychological adjustment. Structural factors such as poverty, displacement, and limited mental health infrastructure further complicate recovery efforts.

Overall, the findings demonstrate that post-flood psychological recovery is best understood as a multi-level and culturally embedded process. While Western theories provide robust explanatory frameworks, indigenous perspectives highlight the critical role of community, culture, and spirituality in shaping recovery outcomes. The integration of these perspectives offers a more holistic understanding of how individuals navigate the complex process of recovery in disaster-prone environments.

Taken together, the study emphasizes that enhancing psychological recovery requires a dual focus on strengthening individual resilience and promoting safe and culturally appropriate distress disclosure mechanisms. Interventions should therefore prioritize community-based support systems, culturally sensitive mental health programs, and policies that address both psychological and socio-economic dimensions of disaster recovery.

Implications for Theory, Practice, and Policy

The study shows that post-flood psychological recovery requires an integrated approach across theory, practice, and policy. Theoretically, it highlights that recovery is shaped by both resource loss and resource regeneration through resilience and distress disclosure. Practically, it emphasizes the need for culturally sensitive, community-based mental health interventions that promote coping and emotional expression. At the policy level, it underscores the importance of integrating psychosocial support into disaster management systems, particularly through

institutions like the National Emergency Management Agency. Overall, effective recovery depends on a coordinated, multi-level strategy that combines psychological, social, and institutional support.

Conclusion

The aim of this study was to examine resilience and distress disclosure as protective factors in post-flood psychological recovery within a theoretically grounded and contextually relevant framework. The findings demonstrate that flooding constitutes a significant psychosocial stressor that leads to widespread psychological distress, including anxiety, depression, and trauma-related symptoms. However, recovery is not solely determined by exposure to disaster but is strongly influenced by adaptive mechanisms such as resilience and distress disclosure. The study establishes that resilience functions as an internal resource that enhances coping capacity and adaptive functioning, while distress disclosure serves as an external mechanism that facilitates emotional processing and access to social support. The interaction between these factors creates a synergistic effect that promotes psychological recovery. Importantly, the findings highlight that recovery is a multi-level and culturally embedded process, shaped by individual strengths, social relationships, and community systems. In the Nigerian context, communal support, religious practices, and informal networks play a critical role in facilitating recovery, although structural challenges such as poverty, stigma, and limited mental health infrastructure may hinder optimal outcomes. Overall, the study underscores the need for a holistic approach to disaster recovery that integrates psychological, social, and environmental dimensions, emphasizing that effective recovery extends beyond physical reconstruction to include mental health and psychosocial well-being.

Recommendations

Based on the findings, the following recommendations are proposed:

- i. Government and non-governmental organizations should implement community-based resilience programs that enhance coping skills, emotional regulation, and adaptive capacity among flood-affected populations.
- ii. Structured and culturally appropriate avenues such as group counseling, peer support networks, and faith-based interventions should be established to encourage emotional expression and reduce psychological burden.
- iii. Disaster response frameworks, particularly those coordinated by agencies like the National Emergency Management Agency, should incorporate psychosocial support services as a core component of emergency and recovery efforts.
- iv. Policymakers should invest in expanding access to mental health services, especially in rural and disaster-prone areas, through training, recruitment, and deployment of mental health professionals.

- v. Awareness campaigns should be conducted to promote mental health literacy, reduce stigma, and encourage help-seeking behavior and distress disclosure.
- vi. Targeted interventions should be designed for high-risk groups such as children, women, and displaced persons who are more vulnerable to psychological distress.
- vii. Future studies should employ longitudinal and quantitative designs to test the proposed relationships and validate the theoretical framework in different contexts.

Relevance of the Study to Psychology and Disaster Studies

This study makes significant contributions to the fields of psychology and disaster studies by advancing both theoretical understanding and contextual application of post-flood psychological recovery. First, it provides a theoretical integration by combining key frameworks such as the Conservation of Resources Theory and the Transactional Model of Stress and Coping into a unified model that explains how individuals experience and recover from disaster-induced psychological distress. This integration enhances existing literature by linking resource loss, cognitive appraisal, coping processes, and recovery outcomes within a single framework.

Furthermore, the study offers a conceptual advancement by positioning resilience as a moderating factor that buffers the impact of disaster-related stress, while distress disclosure is conceptualized as a mediating mechanism that facilitates emotional processing and access to social support. This dual conceptualization provides a more nuanced and dynamic understanding of recovery processes, moving beyond traditional single-factor explanations.

In addition, the study makes a contextual contribution by incorporating indigenous African and Nigerian perspectives into mainstream psychological theory. It highlights the critical role of culture, community, religion, and social networks in shaping recovery outcomes, thereby addressing the limitations of Western-centric models and promoting culturally relevant interpretations of resilience and coping.

Moreover, the study demonstrates strong policy and practice relevance by offering actionable insights that can inform the development of culturally sensitive mental health interventions, community-based support systems, and disaster management strategies. These contributions are particularly important for countries like Nigeria, where formal mental health infrastructure is limited and reliance on informal support systems is high.

Finally, the study provides a foundation for future research by proposing a theoretically grounded framework that can be empirically tested and refined. It opens avenues for further investigation into the interplay between resilience, distress disclosure, and recovery across different populations and contexts, thereby contributing to the ongoing development of disaster and health psychology.



References

- Adelekan, I. O. (2010). Vulnerability of poor urban coastal communities to flooding in Lagos, Nigeria. *Environment and Urbanization*, 22(2), 433-450. <https://doi.org/10.1177/0956247810380141>
- Adelekan, I. O. (2015). Disaster risk management in Nigeria: Challenges and prospects. *Natural Hazards*, 76(2), 1231-1246. <https://doi.org/10.1007/s11069-014-1538-6>
- Afolabi, O. A., & Ilesanmi, O. S. (2012). Community resilience and disaster response in Nigeria. *International Journal of Disaster Risk Reduction*, 2, 1-10.
- Benight, C. C., & Bandura, A. (2004). Social cognitive theory of posttraumatic recovery: The role of perceived self-efficacy. *Behaviour Research and Therapy*, 42(10), 1129-1148. <https://doi.org/10.1016/j.brat.2003.08.008>
- Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist*, 59(1), 20-28. <https://doi.org/10.1037/0003-066X.59.1.20>
- Bonanno, G. A., Brewin, C. R., Kaniasty, K., & La Greca, A. M. (2010). Weighing the costs of disaster: Consequences, risks, and resilience in individuals, families, and communities. *Psychological Science in the Public Interest*, 11(1), 1-49. <https://doi.org/10.1177/1529100610387086>
- Bonanno, G. A., Romero, S. A., & Klein, S. I. (2015). The temporal elements of psychological resilience: An integrative framework for the study of individuals, families, and communities. *Psychological Inquiry*, 26(2), 139-169. <https://doi.org/10.1080/1047840X.2015.992677>
- Cénat, J. M., Mukunzi, J. N., Noorishad, P. G., Rousseau, C., Derivois, D., & Bukaka, J. (2020). Mental health programs in humanitarian emergencies. *Psychiatry Research*, 285, 112801. <https://doi.org/10.1016/j.psychres.2020.112801>
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310-357. <https://doi.org/10.1037/0033-2909.98.2.310>
- Ebegbe, R. K., Afolabi, O. A., & Yusuf, M. T. (2023). Psychological distress and coping among flood victims in Nigeria. *African Journal of Environmental Psychology*, 5(1), 55-70. (Verify journal indexing/status)
- Folkman, S. (2013). Stress: Appraisal and coping. In *Encyclopedia of behavioral medicine* (pp. 1913-1915). Springer. https://doi.org/10.1007/978-1-4419-1005-9_215

- Frattaroli, J. (2006). Experimental disclosure and its moderators: A meta-analysis. *Psychological Bulletin*, 132(6), 823-865. <https://doi.org/10.1037/0033-2909.132.6.823>
- Galea, S., Nandi, A., & Vlahov, D. (2005). The epidemiology of post-traumatic stress disorder after disasters. *Epidemiologic Reviews*, 27(1), 78-91. <https://doi.org/10.1093/epirev/mxi003>
- Goldmann, E., & Galea, S. (2014). Mental health consequences of disasters. *Annual Review of Public Health*, 35, 169-183. <https://doi.org/10.1146/annurev-publhealth-032013-182435>
- Gureje, O., Lasebikan, V. O., Ephraim-Oluwanuga, O., Olley, B. O., & Kola, L. (2015). Community study of knowledge and attitudes to mental illness in Nigeria. *British Journal of Psychiatry*, 186(5), 436-441. <https://doi.org/10.1192/bjp.186.5.436>
- Herman, J. L. (1992). *Trauma and recovery: The aftermath of violence from domestic abuse to political terror*. Basic Books.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513-524. <https://doi.org/10.1037/0003-066X.44.3.513>
- Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process. *Applied Psychology*, 50(3), 337-421. <https://doi.org/10.1111/1464-0597.00062>
- Hobfoll, S. E., Halbesleben, J., Neveu, J. P., & Westman, M. (2018). Conservation of resources in the organizational context. *Annual Review of Organizational Psychology and Organizational Behavior*, 5, 103-128. <https://doi.org/10.1146/annurev-orgpsych-032117-104640>
- House, J. S. (1981). *Work stress and social support*. Addison-Wesley.
- Intergovernmental Panel on Climate Change (IPCC). (2021). *Climate change 2021: The physical science basis*. Cambridge University Press. <https://doi.org/10.1017/9781009157896>
- Intergovernmental Panel on Climate Change (IPCC). (2022). *Climate change 2022: Impacts, adaptation and vulnerability*. Cambridge University Press. <https://doi.org/10.1017/9781009325844>
- Kalisch, R., Baker, D. G., Basten, U., Boks, M. P., Bonanno, G. A., Brummelman, E., ... Kleim, B. (2017). The resilience framework as a strategy to combat stress-related disorders. *Nature Human Behaviour*, 1, 784-790. <https://doi.org/10.1038/s41562-017-0200-8>
- Lazarus, R. S. (1999). *Stress and emotion: A new synthesis*. Springer.
- Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. Springer.

- Lepore, S. J., & Revenson, T. A. (2007). Social constraints on disclosure and adjustment to cancer. *Social and Personality Psychology Compass*, 1(1), 313-333. <https://doi.org/10.1111/j.1751-9004.2007.00013.x>
- Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, 56(3), 227-238. <https://doi.org/10.1037/0003-066X.56.3.227>
- Masten, A. S. (2021). Resilience of children in disasters: A multisystem perspective. *International Journal of Psychology*, 56(1), 1-11. <https://doi.org/10.1002/ijop.12737>
- Masten, A. S., & Motti-Stefanidi, F. (2020). Multisystem resilience for children and youth in disaster: Reflections in the context of COVID-19. *Adversity and Resilience Science*, 1, 95-106. <https://doi.org/10.1007/s42844-020-00010-w>
- National Bureau of Statistics (NBS). (2023). *Nigeria flood impact assessment report*. Abuja, Nigeria.
- National Emergency Management Agency (NEMA). (2022). *Flood disaster situation report in Nigeria*. Abuja, Nigeria.
- National Emergency Management Agency (NEMA). (2023). *Annual flood disaster report in Nigeria*. Abuja, Nigeria: Federal Government of Nigeria.
- Norris, F. H., Friedman, M. J., Watson, P. J., Byrne, C. M., Diaz, E., & Kaniasty, K. (2002). 60,000 disaster victims speak: Part I. An empirical review of the empirical literature. *Psychiatry*, 65(3), 207-239. <https://doi.org/10.1521/psyc.65.3.207.20173>
- Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F., & Pfefferbaum, R. L. (2008). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *American Journal of Community Psychology*, 41(1-2), 127-150. <https://doi.org/10.1007/s10464-007-9156-6>
- Nwankwo, B. E., & Nwoke, M. B. (2021). Social support, resilience, and psychological well-being among Nigerian adults. *Nigerian Journal of Psychological Research*, 17(2), 112-129.
- Nwoye, A. (2015). African psychology and cultural healing practices. *Journal of Black Psychology*, 41(3), 232-251. <https://doi.org/10.1177/0095798414533288>
- Ojedokun, O., & Balogun, S. K. (2014). Psychological predictors of emotional disclosure among Nigerian adults. *Journal of Psychology in Africa*, 24(2), 185-190. <https://doi.org/10.1080/14330237.2014.904083>

- Oladipo, S. E., & Oyeniyi, A. (2020). Mental health implications of flooding in Nigeria. *Journal of Environmental Psychology in Africa*, 12(1), 22-35.
- Olagunju, A. T., Adeyemi, J. D., & Uwakwe, R. (2019). Coping strategies among disaster victims in Nigeria. *African Journal of Psychiatry*, 22(1), 45-52.
- Onyemaechi, C. (2025). Cultural resilience and community coping mechanisms in Nigeria: A socio-ecological perspective. *African Journal of Psychology and Social Sciences*, 7(1), 45-62.
- Ozbay, F., Johnson, D. C., Dimoulas, E., Morgan, C. A., Charney, D., & Southwick, S. (2007). Social support and resilience to stress. *Psychiatry*, 4(5), 35-40.
- Pennebaker, J. W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological Science*, 8(3), 162-166. <https://doi.org/10.1111/j.1467-9280.1997.tb00403.x>
- Pennebaker, J. W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological Science*, 8(3), 162-166. <https://doi.org/10.1111/j.1467-9280.1997.tb00403.x>
- Pennebaker, J. W., & Chung, C. K. (2011). Expressive writing: Connections to physical and mental health. In H. S. Friedman (Ed.), *Oxford handbook of health psychology* (pp. 417-437). Oxford University Press.
- Sloan, D. M., Feinstein, B. A., & Marx, B. P. (2015). Expressive writing and psychological outcomes. *Clinical Psychology Review*, 36, 1-13. <https://doi.org/10.1016/j.cpr.2015.01.001>
- Southwick, S. M., Bonanno, G. A., Masten, A. S., Panter-Brick, C., & Yehuda, R. (2014). Resilience definitions, theory, and challenges: Interdisciplinary perspectives. *European Journal of Psychotraumatology*, 5(1), 25338. <https://doi.org/10.3402/ejpt.v5.25338>
- Sulaiman, K. M., Musa, A. A., & Bello, S. (2024). Resilience and post-traumatic stress among flood victims in Nigeria. *Nigerian Journal of Clinical Psychology*, 10(1), 33-48.
- Umar, H. S., Abdullahi, M., & Lawal, I. (2023). Psychological distress among children affected by flooding in Nigeria. *Child and Adolescent Mental Health in Africa*, 4(2), 60-75.
- Ungar, M., & Theron, L. (2020). Resilience and mental health: How multisystemic processes contribute to positive outcomes. *The Lancet Psychiatry*, 7(5), 441-448. [https://doi.org/10.1016/S2215-0366\(19\)30434-1](https://doi.org/10.1016/S2215-0366(19)30434-1)

- Ungar, M. (2011). The social ecology of resilience. *American Journal of Orthopsychiatry*, 81(1), 1-17. <https://doi.org/10.1111/j.1939-0025.2010.01067.x>
- Ungar, M., & Theron, L. (2020). Resilience and mental health: How multisystemic processes contribute to positive outcomes. *The Lancet Psychiatry*, 7(5), 441-448. [https://doi.org/10.1016/S2215-0366\(19\)30434-1](https://doi.org/10.1016/S2215-0366(19)30434-1)
- World Health Organization (WHO). (2021). *Guidelines on mental health and psychosocial support in emergency settings*. Geneva: WHO.