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The Coping Mechanism by School Children in Response to The Psychosocial Impact of Flood Disaster: Case Study at Ernakulam, Kerala India

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Abstract: Flood disasters profoundly impact school children in Kerala, particularly in Ernakulam, disrupting their lives, education, and emotional well-being. Despite the critical need for support, there is limited understanding of how these children cope with the psychosocial challenges posed by floods. This study aims to explore these coping mechanisms to inform effective mental health support and resilience-building programs in schools. Using a qualitative design with a case study approach, eight school children were purposively sampled. Data collection revealed four primary themes: regulating anxiety, the role of a multidisciplinary approach, the development of resilient behaviour, and rebuilding physical health. Regulating anxiety involves emotional regulation strategies, psychosocial support, and continuous mental health assessment, with family, peers, and professionals playing critical roles in providing support. A multidisciplinary approach, including integrated parental support, child-centered methodologies, and capacity-building initiatives, is essential for effective adaptation, with educators, healthcare providers, and community leaders fostering a supportive environment. Resilient behaviour is exhibited through adaptability, a rebuilding spirit, and altruistic tendencies despite challenges, highlighting the need for targeted interventions for children showing post-traumatic behaviours. Rebuilding physical health addresses psychosomatic issues, general health challenges, and malnutrition, emphasizing the necessity of integrating physical health concerns with psychosocial interventions. Overall, the findings stress the importance of comprehensive, child-focused interventions that combine emotional, social, and physical health support to enhance the well-being of flood-affected children in Ernakulam.

Keywords: Psychosocial adaptation; flood disasters; coping mechanisms; resilient behaviour; multidisciplinary approach

Introduction

Natural disasters pose significant challenges to communities worldwide, with children being particularly affected. Climate change exacerbates these issues, contributing to both physical and psychological impacts on humans (Noremy, 2020). Floods, due to their unique nature and location, require specific management approaches. A study from Malaysia emphasizes a comprehensive approach to flood disaster management, highlighting the importance of prevention, mitigation, preparedness, response, and recovery. Effective handling of initial phases can significantly reduce the burden on subsequent phases, enhancing overall disaster management (Ahmad et al., 2015). Floods can uproot communities, causing displacement, loss of homes, and separation from family members, creating widespread panic. The World Resource Institute (WRI) forecasted

that the number of people affected by floods would rise from 21 million in 2015 to over 54 million by 2030 (Statistic View, 2015).

Interventions fostering resilience at individual, familial, and community levels aid in the positive resolution of psychological issues post-disaster. Efforts should focus on enhancing community resilience through psychosocial support networks and empowering individuals and communities to actively participate in their own recovery processes (Noremy, Zakaria & Amin, 2020). In the immediate aftermath of disasters like floods, chaos and uncertainty prevail, with children being particularly vulnerable. Their developmental stage makes them susceptible to trauma and stress, leading to heightened anxiety, fear, and behavioural changes that hinder overall development and well-being (Vasu, 2018). Recent studies indicate that children are particularly susceptible to the emotional and psychological stresses brought about by natural disasters, requiring targeted interventions to mitigate these effects (Bonanno et al., 2015; Beasley et al., 2018). Children in disaster-affected areas often exhibit symptoms of post-traumatic stress disorder (PTSD), depression, and anxiety, which can persist long after the event (Furr et al., 2018; Lai et al., 2017). Comprehensive support systems are needed to address both immediate and long-term psychosocial needs of children post-disaster (La Greca et al., 2019; Felix et al., 2020).

Kerala's frequent floods significantly impact children's psychosocial development, affecting them physically, mentally, and educationally. Physically, children suffer from malnutrition and illnesses due to disrupted food supplies and contaminated water, with limited access to medical care exacerbating these issues. Mentally, the stress and trauma of floods, loss of homes, migration, grief, and disrupted social networks can cause long-term psychological harm. Educationally, floods displace families, damage schools, and destroy educational materials, particularly in Ernakulam, disrupting children's education and delaying exams (Kishor, 2020). Despite the recognized importance of addressing these issues, there is a notable gap in understanding the specific coping mechanisms that children employ to navigate the psychosocial challenges of flood disasters, particularly in school-level interventional programs in Kerala (Pandey & Jangid, 2018; John et al., 2021; Malatji et al., 2023). Understanding the unique cultural, social, and economic contexts in which these children live is essential for creating effective interventions (Nair et al., 2015; Thomas et al., 2016). Kerala's cultural context, known for strong social cohesion and communal resilience (Menon & Bhardwaj, 2019), provides a unique perspective on coping mechanisms and psychosocial adaptations.

Despite floods being a recurring issue in Kerala, school-oriented training for coping mechanism are not adequately implemented. There is a need to develop modified strategies as part of mental health programs to address the psychosocial challenges of floods through school-level education. A comprehensive disaster coping mechanism program should be included, as children, having experienced the severity of floods, are eager to learn and absorb information about managing such disasters. This study aims to fill the existing knowledge gap and provide actionable insights for educators, mental health professionals, and policymakers in crafting holistic support systems for flood-affected children in Ernakulam.

Literature Review

The literature emphasizing the importance of understanding and addressing children's emotional and behavioural responses in post-disaster contexts. This review synthesizes key findings from existing research,

1. Psychosocial Impacts of Floods on Children

Natural disasters significantly disrupt with children being among the most vulnerable populations affected. These events can cause displacement, loss of homes, and separation from family members, creating chaos and uncertainty (Bonanno et al., 2015; Beasley et al., 2018). Children often exhibit resilience but also experience significant stress and emotional upheaval, leading to symptoms of PTSD, anxiety, and depression (Furr et al., 2018; Lai et al., 2017). Their dependence on adults for emotional support and physical safety exacerbates their vulnerability, especially when adults are also distressed (Masten & Narayan, 2012). A longitudinal study in Kerala by Menon et al. (2019) showed that children initially coped by withdrawing and suppressing emotions, but over time developed more adaptive strategies like seeking social support and engaging in community

rebuilding. Understanding these coping mechanisms is crucial for mitigating the psychological impact and supporting children's recovery.

2. Coping Mechanisms

Hadi and Abdallah (2014) provided a systematic review on the psychological consequences of natural disasters on children, highlighting PTSD symptoms and various coping strategies, emphasizing the importance of addressing psychosocial needs for effective recovery. Dai et al. (2016) conducted a meta-analysis on earthquake survivors, identifying coping mechanisms like problem-solving, social support, and cognitive restructuring. Purworini et al. (2019) applied chaos theory to crisis communication during floods, stressing the need for adaptable communication strategies. Noremy (2019) categorized coping strategies into problem-focused, emotion-focused, religious, and maladaptive, underscoring the enhancement of resilience and problem-solving abilities through effective coping. Kumar and Priya (2022) explored gender differences in coping mechanisms among flood-affected children in Kerala, with boys favouring physical activities and distraction, and girls seeking social support and emotional expression. Perrin et al. (2005) validated PTSD screening instruments for children, offering insights into trauma and coping.

3. School-Based Interventions

There is a notable gap in the literature regarding the specific coping strategies employed by children in response to natural disasters, especially in the Indian context (Pandey & Jangid, 2018; John et al., 2021). Understanding the unique cultural, social, and economic contexts in which these children live is essential for creating effective interventions (Nair et al., 2015; Thomas et al., 2016). Research specific to the Indian context includes the work of Kumar et al. (2017), which explores how children in rural areas rely on familial support and traditional practices to cope with disaster-induced stress. Additionally, Ranganathan et al. (2018) emphasizes the importance of integrating local cultural practices into disaster response programs to enhance their effectiveness. Das et al. (2020) explored the effectiveness of school-based interventions in mitigating the psychosocial impact of natural disasters on children. Their research indicated that programs focusing on emotional regulation, peer support, and trauma-informed education significantly improved children's coping capacities.

In conclusion, understanding the coping mechanisms of children affected by flood is essential for developing effective interventions. This study aims to fill the existing knowledge gap and provide actionable insights for supporting flood-affected children in Ernakulam.

Methodology

This study employs a case study of qualitative research methodology to delve deeply into the psychosocial experiences, emotional responses, and coping strategies of school children and their families in Ernakulam, India.

1. Research Design

This research employs a qualitative case study methodology, focusing on an in-depth analysis of school children affected by flood disasters in Ernakulam district, Kerala. This method offers an in-depth understanding of a particular case or phenomenon, group and community using its diverse sets of collected data (Creswell 2013; Yilmaz 2013). Case study is selected to gain a comprehensive understanding of the experiences and challenges faced by a specific group within the broader context of disaster-affected communities (Yin, 2018). Therefore, this study mainly focussed on coping mechanisms of children on their psychosocial impact on flood they faced. For that the study explores the interplay among school children who are key stakeholders, along with school social workers and parents, to provide a holistic view of the processes involved in this study.

It is the justification of case study in this research, the choice of a case study approach is deliberate, emphasizing an in-depth examination of the lives of school children who have experienced floods. This method allows for a nuanced understanding of the coping mechanism of school children.

2. Location of The Study

Ernakulam, Kerala, has been chosen for this study due to its frequent and severe flood events, which significantly impact local communities. Floods are a recurring flood in Kerala, with increasing frequency making them an annual concern. The Gadgil Committee, formed in 2011, addressed the ecological fragility of the Western Ghats, focusing on Kerala. The committee's recommendations to the central government highlighted Kerala's high concentration of vulnerable zones and their ecological fragility. The flood crisis in Kerala is driven by high-intensity rainfall, poor drainage capacity, and reservoir regulation issues, leading to severe community challenges (Veda, 2020). The region's schools and children face unique challenges and stressors during these disasters, making it crucial to understand their coping mechanisms.

3. Sampling Technique

A purposive sampling technique was employed to select informants who meet specific inclusion and exclusion criteria. This approach ensures that the sample is homogeneous and representative of the population under investigation, thereby enhancing the precision and reliability of the study. The selection process involves choosing school children who have directly experienced floods to enhance the accuracy and relevance of the research findings. This deliberate inclusion of students with firsthand flood experiences is aimed at gaining deeper insights into the impact of floods on the younger population. Simultaneously, the study had gathered extensive data from school social workers and parents of these children through interactive sessions as part of triangulation process.

4. Criteria for Choosing Informant

According to school Children, the inclusion criteria for school children are: they must be school-going children who have experienced flooding, aged between 12 and 16 years, from Ernakulam district, attending upper primary or high school, and enrolled in public schools. Conversely, the exclusion criteria eliminate homeschooled children, those outside of Ernakulam district, lower primary students, university-level students, and students from private schools. These criteria ensure a focused and relevant sample of children who share common characteristics related to the research focus.

When it comes to School Social Workers, inclusion criteria for school social workers require them to be providing services to the children participating in the study, having a minimum of three years of continuous working experience in the same school where the sample students are studying, and being certified by an authorized authority. Exclusion criteria remove those working in different schools, those with less than three years of experience in the selected school, and teachers without counselling experience. This ensures the selection of experienced and relevant professionals who have a direct impact on the students being studied.

Furthermore, the inclusion criteria for parents are that they must be parents of the selected school children, have experienced flood and flood management activities, and be residents of Ernakulam district. Exclusion criteria rule out parents of non-selected children, those without flood experience, and those from other parts of Kerala. These criteria help in selecting parents who have directly encountered the challenges posed by floods and can provide insightful perspectives related to their children's experiences.

5. Data Collection Techniques

The data was collected through Focus Group Discussions (FGDs) with school children, while semi-structured interviews was done among parents and school social workers. The process begins with explaining the study's objectives to participants and requesting accurate information. Qualitative data is gathered using protocol-guideline questions focusing to explore coping mechanisms of psychosocial challenges of flood affected children.

6. Procedure of Data Collection

In this qualitative study, a range of instruments was used to collect comprehensive data on the psychosocial behaviour of school children following a flood in Ernakulam, India. The primary data collection method involved Focus Group Discussions and semi-structured interview. FGDs were conducted with eight school

children from Ernakulam to ensure diverse representation. Three sessions of approximately 45 minutes each were held, allowing for in-depth exploration of the children’s flood experiences and coping strategies. The researcher’s background as a school social worker enhanced the understanding gained from these discussions.

Additionally, semi-structured interviews were conducted with three parents and school social workers. These interviews used flexible, open-ended questions to explore themes related to familial support, parental roles, and professional insights into psychosocial adaptation. This approach provided a comprehensive view of the experiences and support systems affecting children post-disaster, ensuring data saturation and balanced perspectives.

7. Data Analysis

Thematic analysis, as outlined by Eiksund (2022), was employed to identify recurring themes and patterns within the qualitative data. The thematic analysis process was divided into several stages: data familiarisation, initial code generation, theme identification, theme review, definition, and theme name (Braun & Clarke, 2022). In this study, thematic analysis reflects on the coping mechanisms of school children in response to the psychosocial impacts of flood disasters. By identifying recurring themes from informants’ opinion and analysis highlights their copying mechanism to manage psychosocial challenges. Researcher underwent manual thematic analysis. Manual thematic analysis gave assistance to the researcher in many ways such as in-depth familiarity with data, flexibility to adapt coding schemes, rich interpretation leading to comprehensive understanding, enhanced trustworthiness through rigorous documentation, and personal engagement fostering a deeper connection with the research subject and findings.

Findings

This study investigates and get findings on the psychosocial adaptation of children in Ernakulam, India, following flood disasters. Table 1 shows the demography of informants.

Table 1. Demography of informant

Participant Group	Number of Participants	Age	Gender Balance	Method of Data Collection
Student	1	13	Female	Focus Group Discussion
	2	13	Female	
	3	13	Female	
	4	14	Female	
	5	13	Male	
	6	13	Male	
	7	14	Male	
	8	14	Male	
Parents	1	45	Male	Semi-structured Interview
	2	38	Female	
	3	42	Female	
School Social Worker	1	37	Female	Semi-structured Interview
	2	30	Female	

The diverse perspectives of the students, parents, and school social workers provide a well-rounded understanding of the psychosocial impacts of flood disasters on children. These sessions are really meaningful as they open up their emotions and experience of flood and also their suggestions. The details of the findings are illustrated below:

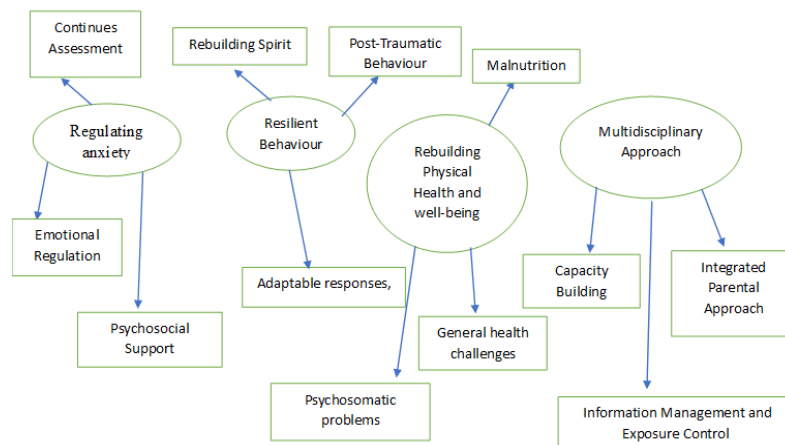


Figure 1. Themes and sub-themes

Four themes have been developed to address the study's objectives based on the depiction of the research findings. Each Themes have related sub-themes to give details on findings, detail explanations are followed:

1. Regulating Anxiety

Regulating anxiety is the perspectives underscore the critical need for emotional regulation, Psychosocial support and it continues assessment. These insights underscore the critical need for coordinated efforts to support the well-being of disaster-affected children.

Emotional Regulation

Emotional regulation is a critical component in the recovery of children affected by flood disasters. Emotional regulation is a critical component in the recovery of children affected by flood disasters. Some quotes related with it are given below,

"I felt scared and anxious, especially at night. With my counsellor's support, I've learned calming techniques like breathing exercises and discussing my fears, which helped me regain control of my emotions."

(Student 3,13 years, Female)

"Initially, our child was quite shaken by the flood situation, experiencing heightened anxiety for the first few weeks. We noticed gradual improvements as we focused on providing a safe and comforting environment."

(Parent 2, 38years old, Female)

"Acknowledging the fears and concerns of children, providing reassurance, and fostering a sense of safety and security through discussion."

(SSW1, 37 years old, Female)

The quotes illustrate the multifaceted approach needed to help children regulate their emotions after a flood disaster. A 13-year-old female student shared how her counsellor taught her calming techniques such as breathing exercises and open discussions about her fears, which helped her regain emotional control. A parent of a 13-year-old girl emphasized that their child experienced heightened anxiety initially but showed gradual improvement as they provided a safe and comforting environment. Additionally, a 37-year-old female school social worker highlighted the importance of acknowledging children's fears, providing reassurance, and fostering a sense of safety and security through open discussions.

Psychosocial Support

During a flood disaster, children are particularly vulnerable to psychological and emotional distress. To address these challenges, various psychosocial support activities can be implemented to help children cope and recover. Here mention quotes of students, parents and school social worker down,

"Support groups are established to foster a sense of belonging and mutual understanding among those affected."

(Student 4, 14years old, Female)

"Children may actively participate in community cleanup efforts. They might assist in clearing debris, organizing relief supplies, or cleaning affected areas, contributing to the recovery process."

(Parent 1, 45years old, Male)

"We collaborated with mental health professionals to conduct workshops and seminars focusing on resilience-building and coping strategies."

(SSW2, 30years old, Female)

These quotes highlight the various ways in which children receive psychosocial support. Student 4 explains Support groups provide children with a sense of belonging and mutual understanding, fostering emotional resilience. Whereas parents shared, active participation in community cleanup efforts empowers children and instils a sense of responsibility as they contribute to recovery. At the same time school social worker mentioned, collaboration with mental health professionals through workshops and seminars enhances children's coping strategies and resilience, providing comprehensive support for their emotional well-being during challenging times.

Continues Assessment

Continues Assessment involves the ongoing monitoring and evaluation of children's physical, emotional, and psychological health to ensure timely and appropriate interventions. In the context of a disaster such as a flood, children are exposed to numerous stressors that can significantly impact their overall well-being.

"I expected having regular check-ins with my support group made me feel like someone was always there to listen and help. It wasn't not effective; no one took initiation they really wanted to know how I was doing and feeling every day."

(Student 3, 13years old, Female)

"The schools were not regular updates about their well-being helped calm my fears. Instead of that they focussed on covering up academic portion which missed during flood."

(Parent 3, 42years old Female)

"Continuously assessing the emotional and psychosocial needs of children affected by the flood and providing ongoing support and follow-ups as needed is crucial for their recovery. But there is a gap on it."

(SSW 1, 37years Female)

These quotes highlight the crucial role of continuous assessment helping children for regulating anxiety. While regular check-ins and parental concern provided emotional reassurance to some children, the lack of consistent follow-ups and a focus on academics over well-being were noted gaps. Addressing these gaps with ongoing, dedicated emotional support is essential for the holistic recovery of flood-affected children. The study highlights the critical role of emotional regulation, psychosocial support, and continuous assessment in managing anxiety among children affected by floods. Effective professional support, familial care, and proactive communication are essential for fostering emotional stability and resilience. However, gaps in continuous follow-up and a tendency to prioritize academic over emotional recovery were noted. These results

align with Pfefferbaum et al. (2014), who showed the effectiveness of psychosocial interventions in reducing anxiety, and Bonanno et al. (2020), who emphasized the importance of emotional flexibility. Future research should focus on developing structured support mechanisms that balance both emotional and academic needs

2. Multidisciplinary Approach

A multidisciplinary approach is essential for a holistic response to the challenges faced by children post-flood. This involves an integrated parental approach where parents are actively engaged in the recovery process, child-centred approaches that prioritize the specific needs and perspectives of children, prevention and preparedness education to equip children with the knowledge and skills to handle future disasters, and capacity building to strengthen the resilience and response capabilities of families and communities.

The Integrated Parental Approach

It is in disaster preparedness emphasizes the importance of family collaboration and support during crises. Families work together to secure essentials and provide comfort, highlighting the role of parents in fostering resilience and preparedness.

“My family helped in preparing for the flood by securing essentials and evacuating together. During the flood, neighbours provided boats for rescue, and local authorities coordinated shelters and distributed food.”

(Student 8, 14 years old Male)

“Once we are in a safe place, I would provide them with comfort and reassurance, making sure they understand that what happened was not their fault and that we will get through this together as a family.”

(Parent 3, 42 years old Female)

“Teaching them these practical steps was essential in empowering them and their families to be better prepared for future emergencies.”

(SSW1, 37 years old Female)

Above quotes illustrated families working together to secure essentials and coordinate rescues illustrate the collective effort in crisis situations. Parents providing comfort and practical preparedness education help empower children and their families, ensuring they are mentally and physically prepared to face future emergencies. This integrated approach fosters a sense of security and resilience among family members, emphasizing the importance of unity and practical knowledge in disaster situations.

Capacity Building

Capacity building involves equipping individuals and communities with the skills and training necessary to effectively respond to emergencies. Practical training and regular drills are essential components in developing these capabilities. Related quotes are given below,

“We talk about what to do during a disaster, but we actually need more training to tackle any critical situation.”

(Student 6, 13 years old Male)

“I’d feel more reassured if they had more practical training. Knowing they can handle emergencies would give me peace of mind.”

(Parent 3, 42 years old Female)

“While awareness classes are a good start, they are not enough. We need to incorporate regular drills and hands-on training to ensure our students are truly prepared.”

(SSW 1, 37 years old Female)

Capacity building through regular hands-on training and drills is essential to ensure that individuals, families, and schools are equipped to effectively respond to critical situations. Students express the need for

more practical training, and parents agree that this would provide reassurance and peace of mind. School social workers emphasize the importance of moving beyond awareness classes to incorporate practical skills development, ensuring that students are truly prepared to handle emergencies confidently.

Information Management and Exposure Control

Information management and exposure control focus on teaching individuals how to find reliable information and manage media consumption during crises. These skills are crucial for maintaining emotional stability and ensuring informed decision-making.

“After the flood, we were taught how to find reliable information about what was happening. Knowing which sources to trust helped me feel less scared and more in control.”

(Student 5, 13 years old Male)

“Please watch what media my kids are exposed to. Restrict their exposure to images that are graphic or upsetting as these could heighten their anxiety.”

(Parent 1, 45 years old Male)

“We suppose teaching students how to find reliable information and manage their media consumption is crucial.”

(SSW2, 30 years old Female)

Empowering students with the skills to discern reliable information sources and regulate media exposure is crucial for managing emotional responses. Students feel more in control when they know how to identify trustworthy sources, while parents emphasize the importance of restricting exposure to distressing media to reduce anxiety. School social workers advocate for educational initiatives focused on information management, highlighting the significance of equipping individuals with tools to navigate media content responsibly in times of crisis.

3. Resilient Behaviour

Resilient behaviour in children during floods often manifests through adaptive coping mechanisms and emotional regulation. In the face of adversity, resilient children may demonstrate flexibility in their response, such as staying calm amidst chaos or seeking help when needed. They might draw strength from supportive relationships with family, peers, or community members, which serve as buffers against the stress of the disaster.

Adaptable Responses

Adaptable responses in the face of disasters reflect the ability of individuals and families to remain flexible and resilient during challenging situations. This sub-theme explores how children, parents, and school social workers demonstrate adaptability and create supportive environments.

“My family and neighbours worked together to reinforce our homes and move valuables to higher ground before the flood.”

(Student 1, 13 years old Female)

“I was amazed at how quickly my child adapted to the changing situations during the flood. Despite the uncertainty, they remained calm and followed safety protocols without hesitation.”

(Parent 1, 45 years old Male)

“I’ve prioritized creating a safe, nurturing, and non-judgmental environment where children affected by the flood feel comfortable expressing their emotions and sharing their experiences.”

(SSW2, 30 years old Female)

Children demonstrate adaptability by staying calm and following safety protocols during uncertain situations, as observed by their parents. The school social worker's focus on creating a supportive and non-judgmental environment highlights the importance of nurturing resilience and providing safe spaces for emotional expression. These combined efforts emphasize how adaptability and support are crucial in helping individuals navigate and recover from flood-related challenges.

Rebuilding Spirit

The rebuilding spirit highlights the collective efforts and emotional resilience of individuals and communities as they recover from disaster events. This sub-theme focuses on how support from neighbours, organizations, and personal resilience contribute to the recovery process.

"NGOs like Mercy Corps provide livelihood support and psychological assistance to affected families."
(Student 8, 14 years old Male)

"Witnessing our children's resilience in rebuilding their spirits after the flood was truly inspiring. They approached each day with newfound determination and positivity."
(Parent 2, 38 years old Female)

"The essence of psychological rehabilitation lies not only in treating psychological distress but also in instilling hope, restoring dignity, and nurturing a sense of empowerment in individuals who are navigating their way through challenging circumstances."
(SSW1, 37 years old Female)

The collective efforts of neighbors and organizations, such as NGOs providing support, contribute significantly to community recovery. Parents are inspired by their children's resilience and positivity during the rebuilding process. The school social worker emphasizes the importance of psychological rehabilitation, highlighting that effective recovery involves restoring dignity, instilling hope, and empowering individuals. These elements are essential for facilitating recovery and rebuilding after a disaster.

Post-Traumatic Behaviour

Post-traumatic behaviour reflects the psychological impact of disasters, including symptoms such as anxiety, flashbacks, and hallucinations. This sub-theme addresses the need for ongoing support and understanding to address the mental health challenges faced by individuals after a traumatic event.

"My anxiety spiked during and after the flood. The constant worry about what's going to happen next and how we'll recover was overwhelming."
(Student 3, 23 years old Female)

"Coping with post-traumatic behaviour was a significant challenge for our family after the flood. Our children experienced flashbacks, nightmares, and heightened anxiety, reminding us of the importance of long-term support and understanding."
(Parent 3, 42 years old Female)

"In one particularly distressing incident, a student recounted experiencing hallucination of an anaconda slithering through the flooded streets, causing intense fear and panic."
(SSW2, 30 years old Female)

The accounts of heightened anxiety, flashbacks, and hallucinations highlight the severe psychological impact of the flood, indicating symptoms of post-traumatic stress disorder (PTSD). These manifestations underscore the profound effect of trauma and the urgent need for long-term support and understanding. Addressing these mental health challenges requires a comprehensive approach to support individuals in their recovery process.

4. Rebuilding physical health and well-being

Rebuilding physical health is a critical theme that addresses the physical consequences of the flood on children. Psychosomatic problems refer to physical symptoms that arise from emotional distress. Health challenges include the direct impact of the flood on children's health, such as injuries or illnesses, and malnutrition, which may result from disrupted food supplies and living conditions.

Psychosomatic Problems

Psychosomatic problems manifest as physical symptoms resulting from emotional distress, particularly in the aftermath of traumatic events. This sub-theme explores how emotional stress from the flood has led to various physical complaints among children and their families.

"I didn't have any major health issues, but I felt constantly fatigued. The stress and disruption made it hard to get enough rest."

(Student 4, 14 years old Female)

"The flood experience took a toll on our children's emotional well-being, particularly behaviours like difficulty sleeping and frequent complaints of physical discomfort. Addressing their mental health became a priority for us."

(Parent 3, 42 years old Female)

"I've observed various manifestations of psychosomatic behaviour among students affected by the flood, such as headaches, stomach aches, and fatigue, which often stem from the emotional distress they're experiencing."

(SSW1, 37 years old Female)

The fatigue, sleep difficulties, and physical complaints described by the student, parent, and school social worker illustrate the prevalence of psychosomatic behaviour among children affected by the flood. These symptoms, including headaches and stomach aches, are often linked to underlying emotional distress. This highlights the critical need for addressing both mental and physical health aspects to support children's well-being in the aftermath of traumatic events.

General Health Challenges

General health challenges following a disaster can be exacerbated by environmental conditions and exposure to contaminants. This sub-theme examines the impact of these challenges on individuals' health and the importance of addressing them effectively.

"Exposure to damp environments can exacerbate these conditions, causing breathing difficulties."

(Student 2, 13 years old Female)

"It developed a fever and body aches in my kid, possibly due to exposure to contaminated water. It took some time to recover fully."

(Parent 2, 38 years old Female)

"We had to work closely with healthcare providers and families to support their recovery."

(SSW 2, 30 years old Female)

Exposure to damp environments and contaminated water significantly exacerbates general health issues, such as breathing difficulties, fevers, and body aches. The experiences of the student and parent underscore the need for comprehensive healthcare support in post-disaster scenarios. Collaborating closely with healthcare providers is crucial for addressing these health challenges and supporting recovery.

Malnutrition

Malnutrition often emerges as a significant issue following disasters, impacting individuals' health and recovery. This sub-theme highlights the prevalence of malnutrition and the challenges of securing adequate food supplies in the aftermath of the flood.

“After the flood, we didn't have enough food at home. I felt weak and couldn't concentrate in class because I was always hungry.”

(Student 5, 13 years old Male)

“It was difficult to find fresh food after the flood. My children started losing weight and became more prone to getting sick.”

(Parent 1, 45 years old Male)

“We relied on food donations, but they were often not enough or not nutritious. I worried constantly about my kids' health.”

(SSW 2, 30 years old Female)

Malnutrition became a prevalent issue after the flood, as evidenced by the student's difficulty concentrating due to constant hunger and the parent's observation of weight loss and increased sickness among their children. The reliance on insufficient or non-nutritious food donations, as noted by the school social worker, further exacerbates these health concerns. This underscores the critical need for adequate and nutritious food supplies in post-disaster recovery efforts to support overall health and well-being.

Discussion

This study delves into the coping strategies employed by school children in response to the psychosocial challenges posed by flood disasters. The study emphasizes the importance of emotional regulation, psychosocial support, and continuous assessment for managing anxiety in children affected by floods. Professional support, familial care, and communication are crucial for resilience, but there are gaps in follow-up and a tendency to prioritize academics over emotional well-being. These findings align with Pfefferbaum et al. (2014) and Bonanno et al. (2020), highlighting the need for emotional flexibility and support systems. Future research should focus on structured support that balances emotional and academic recovery.

The multidisciplinary approach in disaster response, emphasizing integrated parental support, capacity building, and information management. Practical preparedness education and hands-on training are essential for effective emergency response. Teaching children to discern reliable information and manage media exposure is vital for emotional regulation during crises. These insights echo Peek et al. (2018) who stressed the importance of family cohesion and community-based interventions in disaster resilience.

Children's adaptability and resilience were evident, illustrating their ability to remain calm and follow safety protocols. Creating supportive environments fostering resilience and providing spaces for emotional expression is essential. This finding is in line with Mathew et al. (2021) study about children's resilience and coping strategies following the 2018 Kerala floods, finding familial support, community solidarity, and religious faith pivotal for recovery. Masten (2014) and Werner (2021) highlight the role of supportive relationships and structured environments in promoting resilience. Future research should identify specific supportive elements promoting resilience effectively.

The significant physical health challenges, including psychosomatic problems, general health issues, and malnutrition. Addressing mental and physical health aspects in post-disaster recovery is essential. Exposure to damp environments and contaminated water exacerbated health issues, while malnutrition was prevalent. These findings align with previous research which emphasizes integrated care approaches and the critical role of nutrition and healthcare access (Pfefferbaum et al., 2018; Bartels & VanRooyen, 2012).

Implications and Future Directions

The insight from real life experience of flood gained highlight the need for a holistic approach integrating emotional, psychological, and physical health support. Such an integrated approach can serve as a model for other areas of study, including trauma recovery and mental health interventions. Future research should investigate the long-term impact of these interventions on children's overall development and well-being through school-based curriculum as a part of their Mental Health programme. Since flood and its allied disaster is become major issues nowadays in Kerala it is very significant to develop a strategical plan for resilient building among children with reference of coping mechanism of psychosocial challenges. It helps to enhance preparedness and resilience for future disasters.

Conclusion

In conclusion, this study offers valuable insights into coping strategies for school children during flood disasters, emphasizing the necessity for integrated and comprehensive support systems. Effective emotional regulation through professional, familial, and community support is crucial for managing anxiety and emotional distress. The multidisciplinary approach highlights the importance of parental involvement, practical training, and accurate information management in enhancing preparedness and response. Children's resilient behaviour and the supportive environments created by families and communities further underscore the need for nurturing resilience and providing emotional expression spaces. Addressing physical health challenges such as psychosomatic issues, general health problems, and malnutrition is vital for mitigating adverse effects. Future research should explore the effectiveness of integrated support systems, family and community cohesion, and comprehensive healthcare to improve disaster interventions. Policymakers and practitioners should use these findings to develop holistic disaster response programs that ensure children's well-being and resilience in future crises.

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