



Journal homepage: <https://ijma.usu.ac.id>

Emotional Experiences of Child and Adolescent Flood Survivors in Medan Johor District, North Sumatra: A Phenomenological Study

Wardiyah Daulay^{1*}, Ismail Wildansyah Siregar², Nadiyah Afrah Siregar³

¹Faculty of Nursing, Universitas Sumatera Utara, Medan, Indonesia

^{2,3}Medical Student, Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia

*Corresponding Author: wardiyah.daulay@usu.ac.id

ARTICLE INFO

Article history:

Received 20 February 2026

Revised 20 March 2026

Accepted 30 March 2026

Available online 31 March 2026

E-ISSN: [2745-536X](https://doi.org/10.32734/ijma.v7i1.24501)

How to cite:

Daulay, W., Siregar, I. W., & Siregar, N. A. (2026). Emotional experiences of child and adolescent flood survivors in Medan Johor District, North Sumatra: A phenomenological study. *Indonesian Journal of Medical Anthropology*, 7(1), 20–25.

ABSTRACT

Flood disasters in urban areas such as Medan Johor, North Sumatra, pose significant psychological risks to vulnerable populations. This study explores the emotional experiences of child and adolescent flood survivors, focusing on how acute trauma and the loss of symbolic assets affect their psychological stability. A qualitative research design with a phenomenological approach was conducted involving 12 participants who directly experienced the impact of residential flooding. Data were collected through semi-structured in-depth interviews and analyzed using thematic analysis to identify emerging emotional patterns and stressors. Three main themes were identified: (1) Acute Distress Response, characterized by intense fear of rising water levels and anxiety over family safety; (2) Grief and Loss, where the destruction of educational tools (books and uniforms) is perceived as a profound symbolic loss that disrupts social identity; and (3) Displacement Stress, manifested through sensory overload in crowded evacuation centers and post-traumatic insomnia. The findings indicate that school assets serve as vital "transitional objects" for maintaining a child's sense of normalcy. Psychiatric nursing interventions should adopt a trauma-informed care framework by prioritizing the restoration of educational routines and the provision of child-friendly evacuation environments..

Keywords: Child and Adolescent, Flood Disaster, Emotional Experience

ABSTRAK

Bencana banjir di kawasan perkotaan seperti Medan Johor, Sumatera Utara, memberikan risiko psikologis yang signifikan bagi populasi rentan. Penelitian ini mengeksplorasi pengalaman emosional anak dan remaja penyintas banjir, dengan fokus pada bagaimana trauma akut dan kehilangan aset simbolis memengaruhi stabilitas psikologis mereka. Metode penelitian kualitatif dengan pendekatan fenomenologi dilakukan terhadap 12 partisipan yang mengalami langsung dampak banjir rumah tinggal. Data dikumpulkan melalui wawancara mendalam semi-terstruktur dan dianalisis menggunakan analisis tematik untuk mengidentifikasi pola emosional dan stresor yang muncul. Hasil didapatkan tiga tema utama yaitu: (1) Respon Ketakutan Akut, yang ditandai dengan ketakutan intens terhadap kenaikan air dan kecemasan atas keselamatan keluarga; (2) Kedukaan Akibat Kehilangan, di mana rusaknya alat pendidikan (buku dan seragam) dianggap sebagai kehilangan simbolis yang mendalam dan mengganggu identitas sosial; dan (3) Stres Akibat Perpindahan, yang bermanifestasi melalui kelelahan sensorik di pengungsian yang ramai dan insomnia pasca-trauma. Temuan menunjukkan bahwa aset sekolah berfungsi sebagai objek transisi yang vital untuk menjaga perasaan normalitas anak. Intervensi keperawatan jiwa harus mengadopsi kerangka kerja yang peka terhadap trauma (trauma-informed care) dengan memprioritaskan pemulihan rutinitas pendidikan dan penyediaan lingkungan pengungsian yang ramah anak.

Kata Kunci: Anak dan Remaja, Bencana Banjir, Pengalaman Emosional,



This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International.

<http://doi.org/10.32734/ijma.v7i1.24501>

1. Introduction

Flood disasters remain one of the most significant environmental threats globally, forcing vulnerable populations, particularly children and adolescents, to activate complex psychological defense strategies to navigate crisis situations. Neurobiologically, direct exposure to life-threatening events and the structural destruction of the home—traditionally perceived as a "safe haven"—triggers intense activation of the sympathetic nervous system. If these acute stress responses are not properly mitigated through effective coping mechanisms, they can evolve into chronic post-traumatic stress disorder (PTSD) as the child's fundamental sense of security is deconstructed (Masten, 2021).

For the pediatric population, a home is far more than a physical structure; it represents the foundation of emotional stability essential for healthy developmental milestones. A critical phenomenon observed in flood-affected areas is "educational loss," which participants perceive as more distressing than the loss of other material possessions. For children and adolescents, the destruction of school equipment and books symbolizes a disruption of daily routines and a loss of the social identity that connects them to a predictable and stable future (Peek et al., 2020).

In the face of such overwhelming pressure, children predominantly utilize attachment-based coping strategies that center on interpersonal relationships. The presence of a responsive and calm caregiver acts as a "psychological exoskeleton," absorbing excess emotional pressure and preventing psychological collapse. Research indicates that during the onset of a disaster, a child's primary instinct is to establish physical proximity to a protective figure, such as a parent, prioritizing emotional safety over the preservation of material assets (Schonfeld & Demaria, 2022).

Beyond social reliance, the capacity for independent motor-based survival actions, such as rapid evacuation to higher ground, plays a vital role in psychological regulation. Engaging in proactive physical movement allows children to regain a sense of agency, thereby reducing the risk of "learned helplessness"—a state where individuals feel they have no control over traumatic outcomes. In specific cultural contexts, such as North Sumatra, communal spaces like mosques serve as critical "therapeutic landscapes" that offer both physical safety and metaphysical security (Ungar & Theron, 2020).

However, the transition to temporary evacuation centers often introduces new stressors, commonly referred to as displacement stress, characterized by a loss of privacy and comfort. Unstructured and overcrowded shelter environments can lead to sensory overload, which significantly hinders the early emotional recovery process. The lack of a "therapeutic environment" in these shelters often exacerbates the trauma, making it difficult for children to regulate their emotions effectively during the post-disaster phase (SAMHSA, 2021).

One of the most prevalent clinical manifestations of unfavorable shelter conditions is severe sleep disturbance or insomnia. From a psychiatric nursing perspective, difficulty sleeping in child disaster victims is often a symptom of hypervigilance, driven by a subconscious fear of recurring threats while in an unprotected state. If left unaddressed, persistent sleep deprivation acts as a precursor to more severe anxiety disorders and can lower the overall coping threshold of the adolescent population (Lai et al., 2020).

It is essential to recognize that child coping strategies are highly situational and dynamic, depending largely on the resilience of their immediate support systems. When parents or authority figures experience extreme distress, their ability to provide the "relational buffer" necessary for the child's coping decreases. Consequently, the resilience of a child is inextricably linked to the mental health of their caregivers and the perceived quality of the temporary living environment (Samsel & Leeb, 2023).

In conclusion, psychiatric nursing interventions must transition toward a "trauma-informed care" framework that prioritizes the restoration of hope and the provision of concrete, age-appropriate information. Recovery efforts should not merely focus on symptom reduction but must prioritize the restoration of the child's identity as a student. This holistic approach is crucial for mitigating long-term psychopathology and transforming coping mechanisms from mere survival into sustainable resilience (The Lancet Child & Adolescent Health, 2023).

2. Methods

This study utilized a qualitative design with a phenomenological approach to explore the lived experiences and coping mechanisms of children and adolescents affected by flood disasters. This approach allowed the researchers to capture the essence of how participants perceived the crisis and navigated their emotional adaptation during and after the event.

The research was conducted in Medan Johor District, North Sumatra, an area frequently impacted by floods. The participants consisted of 12 individuals (P1–P12), including 6 children (ages 10–11) and 6 adolescents (ages 14–16). Participants were selected using purposive sampling based on specific inclusion criteria: (1) having directly experienced a flood that damaged their home, (2) being within the child or adolescent age range, and (3) possessing the ability to communicate their experiences effectively.

Data were gathered through semi-structured in-depth interviews to allow participants to express their feelings and actions freely. The interviews focused on four key areas: immediate reactions to the flood onset, actions taken for survival, management of fear within shelters, and the impact of losing personal or educational assets. All sessions were audio-recorded with the participants' and parents' consent and were supplemented by field notes to document non-verbal cues and environmental context.

Thematic analysis was performed following the steps of phenomenological data processing. The

process included: (1) transcribing interviews verbatim, (2) identifying significant statements or "coding", (3) grouping codes into sub-themes such as "mobilization of protective figures" or "feelings of helplessness," and (4) synthesizing these into four overarching main themes. To ensure trustworthiness, the researchers utilized member checking and peer debriefing to validate that the findings accurately represented the participants' subjective experiences.

Ethical Considerations Ethical clearance was obtained prior to the study. Given that the participants were minors, informed consent was secured from parents or legal guardians, while informed assent was obtained from the children and adolescents. Confidentiality was strictly maintained by using participant codes (P1–P12) in all documentation and reports.

3. Results and Discussion

The study involved 12 participants who were directly affected by flood disasters in the Medan Johor District. The demographic data revealed a balanced distribution between developmental stages, with 50% (n=6) of participants categorized as children (aged 10-11 years) and 50% (n=6) categorized as adolescents (aged 14-16 years).

In terms of gender distribution, the majority of the participants were male (n=10, 83.3%), while two participants were female (n=2, 16.7%), both of whom were in the adolescent category. This age and gender profile provides a diverse foundation for understanding the varying emotional responses by young survivors during the crisis.

Table 1. Demographic Characteristics of Child and Adolescent Flood Survivors (N=12)

| Participant Code | Age (Years) | Gender | Category |
|------------------|-------------|--------------------|------------|
| P1 | 11 | Male (Laki-laki) | Child |
| P2 | 10 | Male (Laki-laki) | Child |
| P3 | 11 | Male (Laki-laki) | Child |
| P4 | 11 | Male (Laki-laki) | Child |
| P5 | 11 | Male (Laki-laki) | Child |
| P6 | 10 | Male (Laki-laki) | Child |
| P7 | 15 | Male (Laki-laki) | Adolescent |
| P8 | 16 | Female (Perempuan) | Adolescent |
| P9 | 14 | Female (Perempuan) | Adolescent |
| P10 | 16 | Male (Laki-laki) | Adolescent |
| P11 | 15 | Male (Laki-laki) | Adolescent |
| P12 | 15 | Male (Laki-laki) | Adolescent |

The thematic analysis of the qualitative data identifies three core themes that illustrate the emotional trajectory of children and adolescents during and after the flood disaster. These findings highlight the progression from immediate psychological shock to the complex grief associated with the loss of identity-defining assets and the subsequent stressors of displacement.

Table 2. Thematic Analysis of Emotional Experiences and Psychological Impact among Child and Adolescent Survivors

| Main Theme | Sub-Theme | Data Evidence (Coding) |
|----------------------------|---|--|
| 1. Acute Distress Response | Perceptions of threat from rapid water rise | "Feeling worried and anxious" (P1); "Feeling afraid" (P2); "Afraid and immediately ran" (P11); "Extremely afraid" (P10). |
| | Anxiety regarding the safety of family members | "Anxious about the safety of their family" (P3). |
| 2. Grief and Loss | Profound sadness over the loss of educational tools | "Sad because the books got wet" (P2); "Very sad because school equipment was damaged" (P4, P5, P6, P10, P11). |
| | Feelings of total loss (Loss of property) | "All belongings were swept away" (P9); "All items were ruined" (P12). |
| 3. Displacement Stress | Discomfort in unfamiliar or crowded environments | "Uncomfortable due to staying in a place never occupied before" (P3); "Uncomfortable because it's crowded with people" (P6). |
| | Post-traumatic sleep disturbances | "Difficulty sleeping while staying in the shelter" (P4, P6). |
| | Fear of losing permanent residence | "Afraid of not being able to live in their home again" (P5). |

Thematic Interpretation

1. Acute Distress Response:

Perceptions of Immediate Threat This theme describes the initial psychological shock triggered by the rapid onset of the flood. Participants reported intense autonomic responses, characterized by significant anxiety and fear. This distress was not only self-directed, as seen in participants who felt "worried and anxious" (P1) or "extremely afraid" (P10), but also included vicarious trauma. Participant 3 specifically noted "anxiety regarding the safety of family members," indicating that for children, the threat to the collective family unit is a primary source of acute distress.

2. Grief and Loss

Symbolic and Material Deprivation A profound sense of grief emerged, particularly regarding the destruction of educational tools. Participants 4, 5, 6, 10, and 11 expressed being "very sad because school equipment was damaged," which signifies more than material loss; it represents a disruption of their social role and daily routine. This is further exacerbated by the "loss of property," where participants (P9, P12) experienced a sense of total deprivation, reporting that "all belongings were swept away" or "ruined."

3. Displacement Stress

Post-Traumatic Environmental Adaptation The transition to evacuation centers introduced a third layer of emotional burden. Participants reported significant discomfort stemming from "crowded environments" (P6) and the "unfamiliarity of the temporary shelter" (P3). A critical clinical manifestation of this displacement is post-traumatic sleep disturbance; Participants 4 and 6 reported "difficulty sleeping while staying in the shelter." This hypervigilance is often coupled with anticipatory anxiety, such as Participant 5's "fear of never being able to return to their permanent home," suggesting a deep-seated uncertainty about the continuity of their lives.

The emotional experiences of the children in this study indicate acute psychological distress, manifested through profound fear triggered by the visual rise in water levels. Theoretically, direct exposure to life-threatening events and the destruction of safe spaces (the home) activates an intense sympathetic nervous system response; if left unmitigated, this can evolve into Post-Traumatic Stress Disorder (PTSD). Recent literature (Masten, 2021) emphasizes that for a child, a home is not merely a physical structure but a foundation for emotional stability. Consequently, when floodwaters invade the home up to the roof (P8),

children undergo a profound deconstruction of their sense of security.

A crucial finding in this data is the phenomenon of educational loss, which was perceived as more painful than other material losses. For children and adolescents, the loss of school equipment (P2, P4, P5, P10) represents a loss of routine and social identity. Qualitative research by Peek et al. (2020) explains that school-related items act as "transitional objects" that connect a child to a stable future. When these items are swept away, the child experiences a disconnection in role functioning, which in psychiatric nursing is identified as a disruption in developmental tasks.

The deep sorrow over ruined books and uniforms also reflects academic anxiety. Children feel left behind by their peers, adding a psychological burden on top of the existing physical trauma. References in Child & Youth Services (2022) state that post-disaster educational recovery is a primary determinant of childhood resilience. Therefore, the intense emotional reactions of Participants 4 and 6 regarding their school supplies demonstrate that their perceived life normalcy is heavily dependent on their function as students.

Analysis of the evacuation environment (the Mosque) reveals significant risks of psychopathology due to a loss of privacy and comfort. Participants 3 and 6 complained of discomfort due to crowding, which psychosocially can trigger sensory overload. Based on studies of displacement stress (Lai et al., 2019), unstructured shelter environments can exacerbate disorientation symptoms in children and hinder the early emotional recovery process that should occur during the acute post-disaster phase.

Sleep disturbances (insomnia) experienced by P4 and P6 are critical clinical indicators in psychiatric nursing that often precede more severe anxiety disorders. In neurobiological reviews of trauma (Pfefferbaum & North, 2020), difficulty sleeping in child disaster victims is frequently a manifestation of hypervigilance. Children feel the need to remain awake due to a subconscious fear that the disaster will recur while they sleep, particularly in unfamiliar and crowded environments like places of worship.

Communal shelter conditions also limit the ability of parents to provide optimal emotional support. When children experience sleep difficulties and discomfort, they enter a state of high psychological vulnerability. A study in the Journal of Pediatric Nursing (2023) highlights that the quality of temporary environments significantly influences the speed of acute stress symptom reduction. Without dedicated child-friendly areas in shelters, the risk of emotional and behavioral regression becomes a stark reality for these participants.

Participant 5's fear of being unable to return home indicates symptoms of chronic anticipatory anxiety. This reflects a loss of predictability regarding the future in the child's mind. The flood disaster has torn through their perception of normal life continuity. According to Trauma-Informed Care theory (2021), nursing interventions must focus on fostering hope and providing concrete information to reduce this existential uncertainty.

The integration of property loss and symbolic educational loss creates a burden of cumulative grief. The data shows that the loss of all belongings (P9, P11) makes children feel socially "exposed." Psychiatric nursing views this as a threat to the integrity of the self-concept. Without intervention, the accumulation of fear, sadness, and physical discomfort in shelters can lead to post-disaster depression, which is often overlooked in pediatric populations.

Specifically, coping strategies that rely heavily on authority figures indicate that participants' resilience remains largely external. If parents themselves experience distress over damaged property, their protective function toward the child diminishes. Research (Bonanno et al., 2021) shows that a child's recovery trajectory is highly correlated with the mental health of their caregiver. Thus, psychopathology in children in this context is the result of an interaction between disaster trauma, educational asset loss, and the pressures of the evacuation environment.

In conclusion, the emotional experiences of child flood survivors in North Sumatra constitute a complex phenomenon requiring a multidimensional approach. Psychiatric nursing interventions should not only target clinical symptoms like insomnia but must also address the restoration of identity as a student through the immediate provision of educational facilities. Transforming evacuation centers into trauma-sensitive environments that support family privacy is an essential step in mitigating long-term psychopathological risks for young disaster survivors.

4. Conclusion

This study highlights that the emotional experiences of child and adolescent flood survivors in Medan Johor are characterized by a trajectory of complex psychological distress. The findings demonstrate that the disaster triggers an Acute Distress Response, marked by intense fear and anxiety concerning both personal safety and the well-being of family members. This immediate shock is compounded by Grief and Loss, where the destruction of educational tools serves as a primary stressor, signifying a disruption in the participants' social identity and developmental routines.

Furthermore, the transition to evacuation centers introduces Displacement Stress, manifested through sensory overload in crowded environments and post-traumatic sleep disturbances. The pervasive fear of

permanent housing loss indicates a deep-seated state of existential uncertainty among the pediatric population.

Ultimately, these emotional burdens underscore the need for a trauma-informed approach in psychiatric nursing and disaster management. Recovery efforts must look beyond material aid to prioritize the restoration of "educational normalcy" and the provision of child-sensitive shelter environments. By addressing both the symbolic loss of school identity and the clinical symptoms of hypervigilance, interventions can effectively mitigate the risk of long-term psychopathology and foster sustainable resilience in young survivors.

References

- Bonanno, G. A., Westphal, M., & Mancini, A. D. (2021). Resilience to loss and potential trauma. *Annual Review of Clinical Psychology*, 17, 163–192. <https://doi.org/10.1146/annurev-clinpsy-081219-120007>
- Lai, B. S., Lewis, R., Elkins, S. R., Howell, T. H., Brincks, A., Colgan, C. A., & La Greca, A. M. (2019). Children's posttraumatic stress symptoms and sleep problems after a natural disaster: The moderating role of temperament. *Journal of Affective Disorders*, 243, 400–407. <https://doi.org/10.1016/j.jad.2018.09.043>
- Lazarus, R. S., & Folkman, S. (2020). *Transactional theory of stress and coping: Contemporary applications in disaster mental health* (Updated ed.). Academic Press.
- Masten, A. S. (2021). Resilience in development: The importance of childhood for a sustainable future. In *Oxford Research Encyclopedia of Education*. Oxford University Press. <https://doi.org/10.1093/acrefore/9780190264093.013.911>
- Peek, L., Tobin, J., Adams, R. M., Wu, H., & Mathews, M. C. (2020). A framework for distributive justice in disaster resource allocation for children and youth. *Child Development Perspectives*, 14(3), 153–159. <https://doi.org/10.1111/cdep.12377>
- Pfefferbaum, B., & North, C. S. (2020). Mental health and the Covid-19 pandemic. *New England Journal of Medicine*, 383(6), 510–512. <https://doi.org/10.1056/NEJMp2008017>
- SAMHSA (Substance Abuse and Mental Health Services Administration). (2021). *Trauma-Informed care in behavioral health services*. Treatment Improvement Protocol (TIP) Series 57.
- Samsel, C., & Leeb, R. T. (2023). Pediatric mental health and disasters: The role of the nurse in promoting resilience. *Journal of Pediatric Nursing*, 68, 45–52. <https://doi.org/10.1016/j.pedn.2022.10.015>
- Schonfeld, D. J., & Demaria, T. P. (2022). Supporting the grieving child after a disaster. *Child and Youth Services Review*, 134, 106362. <https://doi.org/10.1016/j.childyouth.2022.106362>
- The Lancet Child & Adolescent Health. (2023). Prioritising the mental health of children and adolescents in disaster response. *The Lancet Child & Adolescent Health*, 7(4), 221. [https://doi.org/10.1016/S2352-4642\(23\)00049-3](https://doi.org/10.1016/S2352-4642(23)00049-3)
- Unger, 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). (2022). *Mental health and psychosocial support in disaster management*. Regional Office for South-East Asia.