Salud, Ciencia y Tecnología. 2025; 5:1730 doi: 10.56294/saludcyt20251730

REVIEW



Psychosocial Recovery Interventions for Flood Victims: A Narrative Review

Intervenciones de Recuperación Psicosocial para Víctimas de Inundaciones: Una Revisión Narrativa

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Cite as: Binti Harun NA, Md. Akhir N. Psychosocial Recovery Interventions for Flood Victims: A Narrative Review. Salud, Ciencia y Tecnología. 2025; 5:1730. https://doi.org/10.56294/saludcyt20251730

Submitted: 25-11-2024 Revised: 10-03-2025 Accepted: 14-06-2025 Published: 15-06-2025

Editor: Prof. Dr. William Castillo-González

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ABSTRACT

Flood disasters have a significant impact on the psychosocial well-being of victims, including trauma, emotional distress, and mental disorders. Based on a literature review, the unexpected major flood that occurred in December 2021 in Malaysia marked a dark historical event, causing severe physical destruction and exacerbating psychological issues among victims. This study aims to examine effective psychosocial recovery interventions for flood victims using a narrative review approach. The analysis found that various types of interventions have been implemented, including community-based interventions, individual psychological therapy, education-based recovery programs, and spiritual and religious interventions. The study highlights that culturally sensitive and community-centered intervention approaches are more effective in addressing the psychosocial needs of flood victims. Additionally, continuous support and adapting intervention strategies to the social and cultural context play a crucial role in victims' recovery. Therefore, this study provides guidance for developing more holistic and sustainable recovery strategies, which can help flood victims cope with psychosocial challenges more effectively while enhancing community resilience in facing future disasters.

Keywords: Psychosocial Interventions; Flood Victims; Community Support; Post Disaster; Community Resilience.

RESUMEN

Los desastres por inundaciones tienen un impacto significativo en el bienestar psicosocial de las víctimas, incluyendo trauma, angustia emocional y trastornos mentales. Basado en una revisión de la literatura, la inesperada gran inundación que ocurrió en diciembre de 2021 en Malasia marcó un evento histórico oscuro, causando una destrucción física severa y exacerbando los problemas psicológicos entre las víctimas. Este estudio tiene como objetivo examinar intervenciones efectivas de recuperación psicosocial para las víctimas de inundaciones utilizando un enfoque de revisión narrativa. El análisis encontró que se han implementado diversos tipos de intervenciones, incluyendo intervenciones basadas en la comunidad, terapia psicológica individual, programas educativos de recuperación e intervenciones espirituales y religiosas. El estudio destaca que los enfoques de intervención culturalmente sensibles y centrados en la comunidad son más efectivos para abordar las necesidades psicosociales de las víctimas de inundaciones. Además, el apoyo continuo y la adaptación de las estrategias de intervención al contexto social y cultural juegan un papel crucial en la recuperación de las víctimas. Por lo tanto, este estudio proporciona orientación para desarrollar estrategias de recuperación más holísticas y sostenibles, que pueden ayudar a las víctimas de inundaciones a enfrentar los desafíos psicosociales de manera más efectiva, mientras se mejora la resiliencia comunitaria frente a futuros desastres.

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Palabras clave: Intervenciones Psicosociales; Víctimas de Inundaciones; Apoyo Comunitario; Post-Desastre; Resiliencia Comunitaria.

INTRODUCTION

Flood disasters are one of the natural disasters that frequently occur in Malaysia and are considered a crisis that imposes physical, economic, and psychosocial stress on victims. (1,2) In most disaster situations, regardless of the level of injury or loss experienced, all affected victims will experience stress, anxiety, and uncertainty due to the loss of family members, homes, sources of income, and social support. Without proper psychosocial assistance, victims are at risk of prolonged depression, which in turn affects their well-being. (3,4) The psychosocial impact of flood disasters brings prolonged emotional stress among victims. (5,6) At the initial stage of the crisis, the primary needs of victims are emergency aid such as shelter, food, water, and financial assistance. However, in the long term, they also require psychosocial support to help them overcome the effects of trauma and the socio-emotional challenges they face. (7,8) A study shows that flood disasters affect individuals and the community, disrupting daily routines and leading to long-term changes in their lives. (9,10)

In Malaysia, major flood events such as those that occurred in Selangor in 2021 have profoundly impacted societal well-being, not only in physical and economic aspects but also in psychosocial aspects. (11,12) A study by shows that post-flood psychosocial effects can persist for an extended period if not adequately addressed. (13,14) Additionally, a report by the Department of Statistics Malaysia indicates that more than 50 percent of families in Temporary Evacuation Centers (PPS) experienced feelings of isolation due to the sudden displacement caused by the flood disaster. (15,16) There are several factors believed to trigger psychosocial problems among flood victims, including limited access to public facilities, an unstable social environment, and unsatisfactory sanitation systems. (17,18) These conditions can cause discomfort, an increased risk of disease, and the loss of family members, especially the primary breadwinners. As a result, victims often experience prolonged anxiety, fear, and trauma, which can ultimately lead to post-traumatic stress disorder (PTSD). (19,20) This indicates that individuals affected by disasters suffer a significant loss of quality of life. Additionally, psychosocial imbalance can also affect community resilience, cause social conflicts, and affect the overall recovery process. (21,22) Therefore any assistance and response should also include emotional and psychological components for helping the victims to cope and bounce back after flood disaster. (1,23)

However, although emergency aid such as shelter, food, and basic necessities are often prioritized postdisaster, psychosocial recovery for victims still receives less attention. (24,25) Flood victims need to adapt to loss and sudden changes in their lives and face challenges in rebuilding emotional and social stability. (26,27) Several previous studies have examined the psychosocial impact of disasters and the effectiveness of various interventions, including Psychological First Aid (PFA), group counseling, and community support programs. (28,29) However, studies focusing on psychosocial interventions in the context of floods, particularly in Malaysia, are still limited. (30,31)

One of the main issues that have not been widely studied is the impact of social isolation on flood victims, which can prevent them from quickly recovering and adapting to a new life post-disaster. (32,33) Additionally, the most affected groups due to psychosocial trauma are vulnerable groups such as children, the elderly, pregnant women, nursing mothers, disabled person, and individuals with chronic illnesses and comorbidities. (34) These vulnerable groups are at higher risk because their psychological stability is weaker due to developmental factors, health conditions, or direct exposure to disaster impacts. According to Aizan et al. (2), it is important to empower this vulnerable group to ensure social and development equality in all aspect of their life. Therefore, studying effective intervention strategies to help flood victims remain resilient and deal with their psychosocial issues is crucial. A study by Noremy et al. (3) also states that positive coping strategies can contribute to increased resilience among flood victims. Furthermore, Noremy et al. (4) also believe that coping strategy is one form of resiliency which protects the flood victims from experiencing any psychological distress.

Therefore, this study aims to explore effective psychosocial recovery interventions for flood victims by focusing on approaches that can enhance community resilience and reduce the impact of long-term trauma. The findings of this study are expected to contribute to the development of more systematic psychosocial recovery policies and programs, particularly in the context of flood disasters in Malaysia.

METHOD

This study is a literature review that analyzes primary research. The initial stage of this study began with formulating and determining the main problem, serving as a reference in the article search process. The retrieved articles were used to develop the conceptual framework for this study report. The article search process used keywords structured based on the PICO approach (Patient, Intervention, Comparison, Outcome), which was predetermined and linked with Boolean operators such as AND and OR. The articles Sapplied in

this study were obtained from several major academic databases: SciSpace, Scopus, Web of Science (WoS), ResearchGate, ScienceDirect, and Google Scholar. The keywords used in the search were ("psychosocial intervention" OR "psychosocial strategy" OR "trauma recovery" OR "mental health strategy" OR "mental health intervention") AND ("disaster") AND ("community"). This study only considered articles that met the following criteria: written in English, published within the last ten years (2014-2024), academic journal articles, full-text articles, and open access.

The process of article searching is systematically explained using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method. Researchers conducted independent data extraction and critically reviewed the articles to determine their suitability. The articles obtained through the search process were screened based on the title, keywords, and abstract. The inclusion criteria for this study were psychosocial interventions in the form of training or simulations conducted within communities or societies affected by disasters. A total of 15 articles went through the process of accurately identifying literature according to the study objectives, such as the process of identification, screening, eligibility, and inclusion. However, five articles were excluded for several reasons, including not being original research, unclear study design or methodology, and the study being a study protocol. After the screening process, 10 articles were selected for analysis in this literature review. Any additional studies were obtained through references from the selected articles. Figure 1 shows the detailed and systematic selection process of literature from previous works before undergoing an in-depth review procedure:

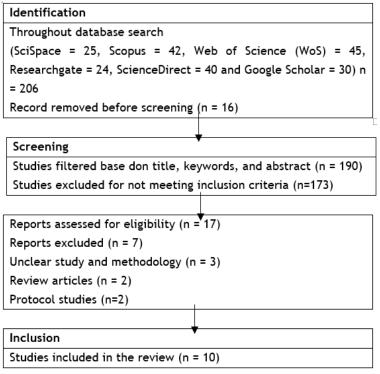


Figure 1. Article Selection Process

Figure 1 shows 206 articles in SciSpace, Scopus, Web of Science (WoS), ResearchGate, ScienceDirect, and Google Scholar databases. Subsequently, all articles were systematically and carefully reviewed and screened. The screening process was conducted based on title keywords and abstracts to assess the relevance and suitability of the study. It was used to evaluate the appropriateness and validity of the articles based on the research objectives, which focus on psychosocial recovery interventions such as community-based interventions, individual psychological therapy, education-based recovery programs, spiritual and religious interventions, and participation in economic recovery activities.

DISCUSSION

Based on previous studies selected from Astuti et al.⁽⁵⁾, Susanti et al.⁽⁶⁾, Sugianto et al.⁽⁷⁾, Ratri et al.⁽⁸⁾, Amelia et al.⁽⁹⁾, Mustaffa et al.⁽¹⁰⁾, Lestari et al.⁽¹¹⁾, and Anam et al.⁽¹²⁾, and Arwansyah Kirin et al.⁽¹³⁾ several key themes have been identified from the analysis of past studies on psychosocial interventions among flood victims. The identified themes include individual psychosocial therapy, social support through community interventions, empowerment through education, and recovery through spiritual and religious interventions.

Individual Psychosocial Therapy

Individual psychosocial therapy is an essential approach to helping flood victims cope with emotional distress and trauma caused by disasters. Flood victims often experience post-traumatic stress disorder (PTSD), anxiety, and depression due to the loss of their homes, belongings, or family members. (5) Therefore, individual psychosocial therapy, such as individual counseling and psychological therapy, can assist them in understanding and managing their emotions more effectively. Based on research findings, individual psychosocial therapy is effective in reducing PTSD symptoms among flood victims. This intervention includes approaches such as Cognitive Behavioral Therapy (CBT) and supportive counseling, which aim to help victims manage their emotional stress.

Furthermore, a study found that regular individual counseling sessions help victims recognize their emotions and develop healthier coping mechanisms. In this study, participants who underwent Cognitive Behavioral Therapy (CBT) experienced a reduction in anxiety levels and were more likely to use constructive problemsolving strategies. Additionally, a study found that CBT is the most effective approach to reducing PTSD symptoms. Participants who underwent an eight-week CBT program showed a significant decrease in anxiety, depression, and trauma-related flashbacks. This therapy helps victims identify negative thoughts that trigger trauma and replace them with more rational and positive thinking patterns.

Additionally, psychotherapy interventions such as narrative therapy and gradual exposure therapy also play a crucial role in helping flood victims process their traumatic experiences. A study by Mustaffa et al. (10) found that participants who underwent narrative therapy were able to restructure their experiences positively, leading to a reduction in PTSD symptoms. This therapy provides victims with a safe environment to share their experiences, which in turn aids in their emotional recovery process. A study further demonstrated that gradual exposure therapy helps victims reduce fear and anxiety related to flood trauma. In this study, participants who were gradually exposed to elements that reminded them of the flood, such as the sound of heavy rain and flowing water, showed increased psychological resilience and a decrease in PTSD symptoms after six weeks of treatment.

Another psychosocial approach is individual counseling, which focuses on emotional recovery and social support. Flood victims who receive regular individual counseling experience improvements in mental well-being and coping mechanisms for trauma. A study emphasized the importance of long-term psychosocial guidance. Their findings revealed that victims who received continuous psychological support for six months after the disaster showed better recovery outcomes compared to those who did not receive this intervention. Therefore, individual psychosocial therapy should be conducted in a systematic and continuous manner to ensure that victims achieve comprehensive emotional and mental recovery.

In conclusion, with proper treatment, approximately 80 percent of individuals experiencing PTSD symptoms can recover. At the same time, the remaining cases can still benefit from various intervention methods and treatments provided by psychologists and psychiatrists. It is evident that individual psychosocial therapy has been proven effective in helping flood victims manage emotional distress and build psychological resilience. Therefore, this approach should be incorporated as part of post-flood recovery strategies to ensure the psychological well-being of the victims is safeguarded.

Social Support Through Community Interventions

Social support through community interventions is a crucial element in the psychosocial recovery of flood victims. Positive social interactions with family members, friends, and the community can help reduce emotional distress and encourage victims to continue their lives after the disaster. (6) At the same time, some measures to address trauma and PTSD include gaining knowledge about PTSD and talking to others for support. Victims are encouraged to practice relaxation techniques and focus on positive activities. Moreover, victims should be exposed to various intervention techniques as early as their stay in the flood recovery center. Examples of intervention support include art therapy activities, group sessions focusing on spiritual techniques, positive encouragement, and fostering a positive mindset. Therefore, problem-solving efforts should focus on individuals or communities severely affected by floods by organizing community programs to rebuild the spirit and motivation of flood victims.

A study by Sugianto et al.⁽⁷⁾ found that strong community support helps victims rebuild their lives more quickly. Their research revealed that communities actively involved in support programs, such as emotional support groups and recreational activities, contributed to reducing depression levels among victims. This result indicates that positive social interactions can enhance an individual's psychological well-being. In a study, community assistance was recommended based on the views of a study, who stated that psychosocial issues can be addressed through community recovery resources and extra-community assistance. Additionally, the psychological challenges faced by victims require significant mental and emotional support through focused emotional coping strategies. Furthermore, community-based recovery programs, such as volunteer activities and experience-sharing sessions, have proven effective in alleviating psychosocial distress among victims. A

study by Ratri et al. (8) showed that flood victims who participated in community programs like group discussions were likelier to express their feelings and receive emotional support from others. This support helped them cope better with trauma and reduced feelings of isolation.

In Malaysia, community-based interventions have also been implemented through programs involving government agencies, non-governmental organizations (NGOs), and local community organizations. A study by Lestan et al.⁽¹¹⁾ found that this approach not only improves the psychological well-being of victims but also strengthens the community's overall resilience in facing future disasters. With strong social support, flood victims can overcome psychosocial effects more effectively. A key element of psychosocial intervention is the concept of resilience and community involvement in providing psychosocial support to address the psychological issues flood victims face.⁽³⁾ However, the main challenges in implementing these interventions include the shortage of mental health professionals in rural areas and the societal stigma surrounding psychological treatment. Therefore, community empowerment programs and mental health awareness initiatives must be expanded to ensure more victims receive the necessary psychosocial support.⁽¹³⁾ Finally, community-based psychosocial recovery programs should be continued and strengthened to ensure the emotional well-being of flood victims remains protected.

Empowerment Through Education

Education is an effective empowerment tool in helping flood victims rebuild their lives after experiencing a disaster. Psychosocial education programs assist victims in understanding and managing the psychological effects of floods while developing more effective coping skills. (9) Psychosocial education also aims to raise awareness among victims about the trauma they may experience and provide strategies to mitigate its impact. In addition, education on flood disaster preparedness should also be emphasized to ensure that victims are equipped to take early action when a flood occurs in the future. Studies have shown that individuals with prior awareness of the psychological impact of disasters are better able to manage stress and trauma effectively. For example, a study by Ratri et al. (8) highlighted that training related to mental health and psychosocial recovery among flood victims significantly enhances their resilience compared to those who did not receive such education.

Furthermore, a study showed that education on coping strategies and stress management helps victims adapt to life after a flood. In the study, participants who received life skills training, such as financial management and small-scale entrepreneurship, demonstrated increased self-confidence and the ability to become self-sufficient. This finding indicates that education is crucial for psychological recovery and plays a significant role in helping victims rebuild their lives holistically. Psychosocial education for children and adolescents affected by floods is also essential to ensure their mental well-being. A study by Mustaffa et al.⁽¹⁰⁾ found that psychosocial education sessions provided to students in disaster-affected areas helped reduce anxiety and enhance psychological resilience. Children are more vulnerable to the long-term effects of trauma caused by disasters, making psychosocial education a necessary intervention. This finding is further supported by a report from the Malaysian Department of Social Welfare, which revealed that a total of 14 995 children and 289 adults experienced depression and trauma due to floods in Malaysia.⁽¹⁴⁾ Therefore, psychosocial education programs should be implemented more systematically to help children understand and manage their emotions following a disaster.

Previous studies have shown that psychosocial education is not only crucial for short-term recovery but also effective as a preventive measure against long-term PTSD. A study in Australia found that disaster preparedness education, which includes mental health aspects, can reduce the negative psychological impact of flooding. From the perspective of emotional management, early psychological preparedness is essential for all victims. According to a study, such preparedness helps facilitate a smoother recovery process, strengthens the mental resilience of victims, and ensures they can adapt to post-disaster life. Furthermore, a study by Anam et al. (12) emphasized the importance of psychosocial recovery modules that integrate educational elements to enhance the mental resilience of flood victims. Their study designed a module to help victims understand the psychological effects of disasters while providing specialized training to manage their emotions more effectively.

In conclusion, empowerment through education can help flood victims enhance psychological resilience, reduce the risk of PTSD, and rebuild their lives more effectively. Education provides victims with knowledge about the psychological effects of disasters and equips them with effective coping skills to face future challenges. Therefore, psychosocial education programs should be an integral part of a more comprehensive disaster recovery strategy.

Recovery Through Spiritual Intervention

Spiritual and religious interventions play an essential role in the psychosocial recovery of flood victims, particularly in overcoming emotional distress and trauma caused by disasters. Faith in God and religious practices often serve as sources of peace and strength for individuals facing life challenges. (11) This belief not

only provides hope but also forms an effective coping mechanism for disaster victims to manage their emotions. A study by Arwansyah Kirin et al. (13) found that Muslim flood victims who engaged in religious activities such as congregational prayers, remembrance (zikir), and Al-Quran recitation experienced lower levels of stress. Religious activities help calm the soul, reduce anxiety, and provide hope for a better future. These activities also function as a medium of social support, where individuals who attend religious gatherings or worship in congregation feel a sense of community, thus reducing feelings of isolation after a disaster. A study in Indonesia found that spiritual therapy through Islamic religious practices helped disaster victims reduce PTSD symptoms. Victims who strongly adhered to religious teachings demonstrated better coping abilities and were quicker to adapt to life changes after a disaster.

Besides personal religious practices, religious leaders also play an important role in supporting the psychosocial recovery of flood victims. Susanti et al. (6) found that victims who attended religious talks and spiritual motivation sessions were more optimistic about-facing life after the disaster. Religious sermons and guidance sessions convey messages of resilience, patience, and gratitude and provide advice on facing life's challenges calmly. In Malaysia, support from imams, ustaz, and local religious figures are often a primary reference for disaster victims seeking peace of mind. A study found that counseling based on religious advice helped flood victims reduce psychological stress and provided them with a more positive perspective on life after the disaster.

Table 1. Findings of themes from selected studies		
Themes	Previous Studies	Findings
Individual Psychosocial Therapy	Ni Luh Seri Astuti et al.,(2022)	Individual therapy, such as Cognitive Behavioral Therapy (CBT) and
	Noremy et al., (2023)	Mental Health and Psychosocial Support Interventions (MHPSI), help reduce post-disaster trauma and enhance the psychological resilience of flood victims.
	Sholichah & Kushartati (2018)	A psychosocial recovery module that includes individual therapy can help flood victims cope with stress and trauma.
	Susanti et al., (2024)	Individual psychological therapy programs help reduce PTSD symptoms and depression among flood victims.
	Amelia & Eitisani (2023)	Relaxation techniques and cognitive therapy can enhance psychological resilience after a flood.
Social Support Through Community Interventions	Noremy Md. Akhir et al., (2023)	Community empowerment in flood disaster management enhances the psychosocial resilience of victims and promotes stronger social support.
	Dhian Ririn Lestari et al., (2023)	Community intervention programs, such as awareness education and disaster management training, can improve the psychosocial well-being of communities living in flood-prone areas.
	Mustaffa & Khalid (2021)	Social support from the community and local authorities plays a crucial role in psychosocial recovery.
	Zusof (2016)	Communities involved in social interventions have higher resilience in coping with the psychological effects of post-flood disasters.
Empowerment Through Education	Dhian Ririn Lestari et al., (2023)	Disaster awareness education helps communities understand how to manage psychological stress caused by disasters and enhances psychological well-being.
	Sholichah & Kushartati (2018)	A psychosocial recovery module incorporating educational elements helps enhance mental resilience and awareness of emotional management among flood victims.
	Sugianto et al., (2022)	Disaster education programs tailored to local communities help reduce fear and improve individuals' ability to manage stress.
	Mareray et al., (2022) Huq, (2016)	Continuous psychosocial education enables flood victims to recover quickly and be better prepared for future disasters.
Recovery Through Spiritual Intervention	Arwansyah Kirin et al., (2024)	Spiritual and religious-based interventions provide emotional calmness and help flood victims accept post-disaster conditions more positively.
	Ratri et al., (2024)	Religious and spiritual practices, such as prayer, worship, and meditation, help flood victims' psychological recovery process.
	Lestan & Rahmah (2023)	Studies show that religion-based counseling positively impacts the mental health of disaster victims.

In Japan, a study also studied the role of religion in psychosocial recovery after the tsunami. They found that religious ceremonies and spiritual guidance from Buddhist monks provided emotional comfort to victims who had lost family members and property. Overall, spiritual and religious interventions serve as an effective support mechanism in the psychosocial recovery of flood victims. Therefore, this element should be incorporated into psychosocial recovery strategies to safeguard victims' mental and emotional well-being.

Spiritual intervention provides peace of mind and helps victims develop positive values within themselves. A study by Ratri et al.⁽⁸⁾ found that individuals with strong religious beliefs demonstrate higher psychological resilience than those who practice religion less frequently. Values such as patience, gratitude, and perseverance form the foundation for the psychosocial recovery of disaster victims. A study on flood victims in Malaysia found that individuals actively engaged in religious activities recover emotionally more quickly because they perceive disasters as tests and divine destiny. This perspective helps them accept their situation with greater calmness and prevents feelings of despair or self-blame.

Overall, spiritual and religious interventions serve as an effective support mechanism in the psychosocial recovery of flood victims. Faith in God, religious practices, and guidance from religious leaders help victims reduce stress, enhance psychological resilience, and provide hope for rebuilding their lives. Therefore, spiritual elements should be incorporated into psychosocial recovery strategies to ensure the mental and emotional well-being of victims is continuously safeguarded. With a more holistic approach that includes psychosocial education, spiritual therapy, and psychological interventions, flood victims can recover more effectively and be better prepared to face future challenges.

CONCLUSIONS

In conclusion, this article highlights the importance of holistic and community-centered psychosocial interventions in the recovery of flood victims, which is in line with literature findings that demonstrate the significant impact of disasters on mental well-being. Individual psychosocial therapy helps victims manage trauma and emotional distress, while social support through community interventions plays a role in building support networks and enhancing psychological resilience. Empowerment through education provides victims with knowledge and coping skills, whereas spiritual interventions offer inner peace and hope for rebuilding their lives. The implications of this study emphasize the need to strengthen policies and the implementation of psychosocial recovery interventions that are more systematic, continuous, and adapted to the cultural and social context of local communities. Therefore, it is recommended that collaboration between the government, NGOs, educational institutions, and community leaders be reinforced to provide more structured and accessible support programs for victims. The hope is that this approach will enhance community resilience, reduce the long-term effects of trauma, and ensure better psychosocial well-being for flood victims facing future disasters.

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FINANCING

The authors did not receive financing for the development of this research.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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