



RESEARCH ARTICLE

Rising from the waves: Exploring post-traumatic growth of tsunami survivors who lost their parents

Siti Rahmah^{1*}, Iyulen Febry Zuanny²

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Abstract: This study aims to determine the condition of post-traumatic growth in Tsunami survivors who lost their parents on December 26, 2004. The subjects of this study were selected using a purposive sampling technique with a phenomenological approach from qualitative research of as many as two people. The instrument in this study used observation, in-depth interviews, and field notes. These two participants were selected based on the conditions intended by the researcher, namely losing their parents in the Aceh tsunami in 2004. Participants were given five open questions and conducted in-depth interviews. The data were analyzed using the Moleong approach, which consists of five aspects of post-traumatic growth, namely: (1) New possibilities, (2) Appreciation of Life, (3) Personal Strength, (4) Relationships with Others, and (5) Spiritual Enhancement. Data analysis used thematic analysis techniques to identify themes and subthemes from participant narratives. The results of this study indicate that tsunami trauma opens up opportunities for the emergence of new possibilities (new opportunities obtained), appreciation in life (in the form of gratitude, appreciating moments together and realizing the meaning of life), personal strength (resilience, revival, optimism, reflection, and responsibility), and relationships with others (relationship attachment, empathy, social support, and communication), as well as spiritual enhancement reflected in the reinterpretation of religious values and stronger beliefs. These findings are important for the development of interventions that empower disaster victims in the process of recovery and post-traumatic growth.

Keywords: Post-Traumatic Growth, Qualitative Research, Tsunami, Aceh

INTRODUCTION

Natural disasters significantly impact individuals, families, and communities, causing extensive damage to property and financial problems (Stanley & Williams, 2000). Disasters, whether natural or human-made, threaten and disrupt lives, resulting in loss of life, environmental destruction, property damage, and psychological consequences (UU No. 24, 2007). In late December 2004, Aceh experienced a devastating earthquake followed by a tsunami. Earthquakes occur due to movements of the Earth's tectonic plates, while tsunamis are caused by underwater disturbances such as tectonic shifts, leading to sudden sea level rises (Dzikron, 2009).

This catastrophe ranks among the deadliest in Indonesia's history, with massive casualties and losses (Nashori, 2005). According to Marthoenis et al (2016), the disaster resulted in 129,775 deaths, 38,786 missing people, and over a thousand children orphaned and displaced

approximately 504,518 people. After the Tsunami disaster, survivors still have worrying conditions, including loss of family, relatives, and property, and are experiencing physical injuries and disabilities. This also gives rise to conditions of fear, anxiety, sadness, and anger (Risky et al., 2023). Many exhibited behavioral and emotional problems, especially in older children and adolescents, with some developing post-traumatic stress disorder (PTSD), depression, and other mental health issues (Bonanno et al., 2010; Makwana, 2019).

Therefore, individuals who experience events such as earthquakes or tsunamis can face a dual impact: material losses, (financial, property, and environmental) and non-material consequences (physical and psychological injuries), influencing emotional well-being and behavioral patterns over time (Mäki et al., 2024). Disaster-related trauma has been widely documented as a significant mental health concern directly linked to such life-altering events (Aryuni, 2023; Bryant, 2019; Mäki et al., 2024; Makwana, 2019). Consequently, survivors often re-experience traumatic events, leading to behaviors that affect their daily lives, and may engage in avoidance strategies to cope (Aryuni, 2023). The prevalence of PTSD in the aftermath of natural disasters remains a pressing global public health issue (Norris et al., 2009; Tang et al., 2014).

Research indicates that adolescence which lasts roughly from age 10 to 22, is at especially high risk of trauma's emotional influence. During this phase, a person's identity

¹ Departement of Psychology, Medicine of Faculty, Syiah Kuala University

² Faculty of Psychology, Ar-raniry State Islamic University

**) corresponding author*

Siti Rahmah
Email: sitirahmah@usk.ac.id

is formed by needing supportive parents and the ability to think about their future (Marcia in Santrock, 2003). Though trauma is often linked to negative consequences, some authors in this field suggest that difficulties may help lead to positive psychological changes (Lowe et al., 2022; Tedeschi & Calhoun, 2004). Evidence supports that social support plays a critical role in fostering posttraumatic growth (PTG) among adolescents, particularly those who have lost a parent (Prati & Pietrantonio, 2009; Wu, 2024).

The term *Post-traumatic Growth* (PTG) refers to the positive psychological changes experienced by individuals as a result of a struggle with challenging life circumstances. These changes reflect an individual's ability to adapt and evolve in their understanding of the world and their environment (Tedeschi et al., 2018). PTG is an experience that profoundly impacts the individual, fostering improvement in various aspects of life. Since the 1990s, PTG has been scientifically studied, emphasizing that individuals who experience traumatic events also exhibit positive change in their lives (Tedeschi & Calhoun, 1995).

An illustrative statement from a participant highlights the critical role of social relationships and spirituality in promoting PTG among tsunami survivors:

"So far, what keeps me going is my sister and my extended family, my mother's family, and then... we just leave it to Allah, Allah knows what's best for us." (interpersonal communication/N).

This statement reflects the significant interplay between interpersonal and spiritual beliefs in fostering PTG. In its development, Tedeschi et al. (2018) identify five core domains of PTG: 1) Relating to others; 2) Appreciation for life; 3) Personal strength; 4) Spiritual change; and 5) New possibilities (Tedeschi et al., 2018). Research by Jung & Han (2023) in systematic qualitative literature research shows that in earthquake disaster victims, there is a condition of PTG which is classified into eight subcategories, namely reviewing one's existence, acceptance, finding strength in overcoming difficulties, gratitude for life, changes in personal relationships, changes in social relationships, accepting the existence of God, and the ability to overcome difficulties.

Numerous studies have illustrated that PTG can emerge, by due to various support factors. Furthermore, PTG has been shown to act as a protective factor for mental health issues, especially among adolescents who survived the Sewol Ferry disaster. Factors such as rumination, the meaning of life, and adaptive coping (including emotional and cognitive coping) significantly contribute to PTG and promote its development over time (Lee et al., 2024; Nowicki et al., 2023). Additionally, research by Jung & Han (2023) in their literature review shows that PTG conditions also emerge in disaster survivors from countries, such as Indonesia, New Zealand, Haiti, Nepal, China, and Japan.

Despite extensive research on PTG in disaster survivors, qualitative studies focusing on adolescent tsunami survivors in Aceh remain scarce. This research is crucial because adolescents have a distinct experience in coping with trauma, particularly the loss of parents, when compared to adults (Fayaz, 2025). The primary goal of this study is to fill this gap by exploring how the experience of adolescents who lost their parents in the tsunami affects their psychological development. According to Harmon & Venta (2021), PTG in adolescents is often influenced by factors such as social support, religiosity, and the way they make sense of their traumatic experience.

Moreover, the role of religiosity, local Aceh culture, and social support in the PTG process needs further attention. In Aceh, a region deeply rooted in religious values (Rahmah, 2017), religiosity plays an essential role in helping

individuals cope with trauma and find meaning in their experiences (Holt et al., 2018; Shaw et al., 2005). The Aceh culture, which places a strong emphasis on social solidarity and family support, significantly influences the recovery process. Family and community support are crucial in fostering positive growth after trauma (Kashyap & Hussain, 2018). As Suwardi (2018) explains, Aceh communities localized their understanding of trauma by integrating cultural and religious practices, which provide social support mechanisms that help survivors frame their experiences in terms of resilience and faith.

There's still a lot to explore when it comes to how religiosity, Aceh local culture, and social support influence the PTG process. In a place like Aceh, where religious life is strongly present in daily routines (Rahmah, 2017), many people turn to faith as a way to make sense of their suffering. Religion doesn't just offer comfort – it helps them give meaning to what happened (Holt et al., 2018; Shaw et al., 2005). The role of culture is equally important. In Aceh society, close family bonds and a deep sense of community are highly valued, and these cultural traits become a real source of strength during recovery. Support from loved ones and neighbors often helps people move forward after traumatic events (Kashyap & Hussain, 2018). As Suwardi (2018) points out, many communities in Aceh don't treat trauma as something purely individual or clinical. Instead, they incorporate religious and cultural rituals into their healing process, allowing survivors to see their experience through the lens of faith, solidarity, and resilience.

This study also highlights the differences in the experiences of adolescents who lost their parents in the tsunami disaster. Adolescents, compared to adults, undergo distinct grieving and recovery processes. Changes in family structure and the roles they often accelerate or delay their recovery (Agustini et al., 2011; Harmon & Venta, 2021). Cultural aspects, such as family togetherness, can significantly influence the PTG process (Kumar Pradhan & Kumar, 2020), particularly in Aceh culture. This cultural aspect affects how adolescents in Aceh recover, differentiating their recovery process from survivors in other regions (Khuzaimah et al., 2023).

The main objective of this study is to explore the phenomenon of PTG in adolescents who survived the tsunami in Aceh, this study aims to deepen our understanding of how adolescent who lost their parent in the tsunami can exhibit positive psychological development, shaped by the influence of religiosity, local culture, and the social support they receive. The contribution of this study not only provides theoretical insight into PTG but also lays the foundation for more effective interventions that support disaster survivors, particularly in the context of local Aceh culture.

METHODS

Research Design

This study adopts a qualitative phenomenological research approach, aimed at understanding the lived experiences of individuals within their natural social contexts. Phenomenology focuses on capturing the essence of a phenomenon as it is experienced by participants, recognizing that social contexts are inseparable from the phenomenon itself (Idrus, 2009). Researchers seek to explore the subjective meaning of events while acknowledging that these experiences are deeply rooted in

their environmental and social settings (Creswell, 2016). By using this approach, the study aims to gain a nuanced understanding of how adolescents in Aceh, who survived the 2004 tsunami and lost their parents, experience PTG.

Research Participants

Participants were selected using a purposive sampling technique, which involves selecting individuals based on specific characteristics that align with the research objectives (Sugiyono, 2016). The criteria for inclusion were as follows: 1) Victims who lost their parents (biological mother and father) during the tsunami when they were in their adolescence; 2) Participants must have been domiciled in Banda Aceh at the time of the disaster and directly affected by the tsunami

This study involved only two participants due to the specific inclusion criteria and the nature of the phenomenological approach, which prioritizes depth over breadth in data collection. While the small sample size allowed for an in-depth exploration of the participants' lived experiences and provided rich qualitative data, it also limits the ability to generalize the findings to the larger population of tsunami survivors. Consequently, the results should be interpreted in a manner that extends our understanding of PTG among adolescents affected by disaster, while acknowledging the limitations regarding generalizability.

Data Collection Methods

In this study, data were collected through in-depth interviews, observations, and field notes. As Nasution (2023) asserts, researchers function as human instruments, playing a crucial role in directing the focus and depth of qualitative research. In this study, the researchers first developed interview guidelines based on factors identified in the literature as contributing to PTG. These guidelines consisted of six open-ended questions, designed to be flexible enough to explore the participants' experiences in depth during the interview process. The interview questions were developed to probe various aspects of PTG, such as the impact of trauma, emotional responses, and sources of resilience.

Before participation, informed consent was obtained from all participants to ensure voluntary involvement and awareness of their rights throughout the study. The interviews were conducted face-to-face and individually, allowing for the collection of rich, personal data. This method facilitated a deeper understanding of the participants' lived experiences and emotional journeys, offering insights into the psychological effects of losing a parent in such a traumatic event.

Data Analysis Methods

Data analysis was conducted using thematic analysis, a technique widely used in qualitative research to identify and interpret themes emerging from interview data (Creswell, 2016). Themes are patterns or concepts that develop from data and reflect significant factors

contributing to PTG. The data analysis process involved the following steps from (Creswell, 2007): 1) Data Familiarization; all available data from interviews, observations, and field notes were carefully reviewed to gain an initial understanding of the information, 2) Initial Coding; relevant segments of data were coded based on recurring themes related to PTG, such as resilience, personal strength, relationships with others, and spirituality, 3) Categorization; the codes were categorized into broader themes following (Tedeschi et al., 2018) framework of PTG, 4) Interpretation; the researcher interpreted the data by considering the meaning of the identified themes within the context of the participants' experiences and the broader literature on PTG, and 5) Conclusion Drawing; conclusions were drawn by synthesizing the identified themes to understand how adolescents in Aceh experience PTG after the trauma of losing their parents in the tsunami.

The coding consists of several key components: A/B represents the participant identifier, with A denoting Participant 1 and B denoting Participant 2. W1/W2 refers to the specific interview session, with W1 indicating the first interview and W2 indicating the second. The b corresponds to the line numbers within the verbatim transcript, directing the reader to the precise location of the quotation in the data. For instance, a citation such as (A. W1./b.631-638) refers to a quotation from Participant A during the first interview, spanning lines 631 to 638. This coding system allows for the transparent identification of data sources, ensuring that each quotation can be accurately traced and verified. This methodology contributes to the overall credibility and transparency of the research, facilitating a clear connection between the data presented and the underlying interview transcript.

Ensuring Data Trustworthiness

To ensure the trustworthiness and credibility of the data, several strategies were implemented: 1) Participant Checking; After data analysis, the findings were shared with the participants to verify the accuracy of the interpretations and ensure that their perspectives were adequately represented, 2) Triangulation; Data from different sources (interviews, observations, field notes) were triangulated to provide a more comprehensive understanding of the participants' experiences, and 3) Audit Trail; Records were maintained at each stage of the research process, allowing for transparency in how data were collected, analyzed, and interpreted. This audit trail provides a means for others to follow the steps taken to ensure the rigor of the study.

RESULTS OF STUDY

This study involved two participants selected based on specific criteria. The interviews were conducted over the course of one week, with two interview sessions for each participant. Below is the demographic data of the participants:

Table 1. Demographic Data of Participants

Name (Pseudonym)	Age (Year)	Gender	Religion	Education	Marital Status	Age at the Tsunami
A	32	Woman	Islam	S1	Marry	12 years old
B	38	Man	Islam	S1	Marry	18 years old

The findings are presented thematically, based on participants' narratives and organized under the five core domains of PTG as outlined by (Tedeschi et al., 2018). The thematic map below summarizes the structure of identified themes and subthemes.

Table 2. Thematic structure of PTG in Tsunami Survivors

Theme	Subtheme Identified
Relationships with others	Relationship Strength, Empathy, Social support, Communication
Appreciation in life	Gratitude, cherishing moments, meaning of life
Personal strength	Resilience, Revival, Optimism, Reflection, Responsibility
Spiritual change	Strengthened faith, Meaning-Making, Acceptance
New possibilities	Taking New Roles, Adaptability, Openness to New Ideas/Opportunities

NARRATIVE PROFILES

Participant A

Participant A, aged 32, was born in Banda Aceh and is the youngest of six siblings. Married at 19, she now has three children and is a housewife. During the tsunami, A and her family were at home when the earthquake occurred. Initially deciding to stay inside, she later noticed people running and realized that the sea levels were rising. Despite efforts to protect themselves, A and her family were swept away by the tsunami. Afterward, she was rescued and taken to her brother's house in Lueng Bata. Over the following years, A relocated several times before returning to her hometown of Lamdingin. In the disaster, A lost both her parents, her biological brother, and his family. She spent years hoping to find her parents but eventually had to live with her older sister and two cousins. Until now, A has not been able to find the bodies of his parents.

In 2012, A married while continuing her studies and eventually took on the role of a housewife. At the time of the interview, she was busy raising her children, with frequent visits from her neighbors and her husband's relatives who lived nearby.

Participant B

Participant B, 38 years old, was born in Banda Aceh and is the fifth of six children. He married at 25 and now has three children. When the tsunami struck, B initially tried to stay calm, but when he heard that the water level was rising, he quickly sought safety. In the process, he lost both his parents, who stayed behind to warn others. Afterward, B lived with his older sibling in Sibreh for about seven months before moving back to Lamdingin. B also lost his parents, and the trauma led him to a period of uncertainty regarding his family's fate. He later found solace in his role as a community member, working at a government office, engaging in social and religious activities such as teaching the Qur'an, managing and following activities at the mosque, and participating in local organizations.

Both participants exhibited significant growth and transformation in the aftermath of their traumatic experiences, which are summarized across the five domains of PTG.

THEMATIC FINDINGS

Relationships With Others

Both participants reported significant changes in their relationship with others. Initially withdrawn, Participant A gradually became more open to connecting with her family and friends. She expressed, "... *we are for sharing with each other, staying close, still communicating, if I have problems with campus, whatever it is, I still share with my brother.*" (A. W1./b.605-608). A also established a close relationship with her school friend at MTsN, whom she described as family, stating, "*we are like siblings*" (A. W1./b.584), *even if we can't meet, we are still close at heart.*" (A. W1./ b.599-600).

For Participant B, the tsunami led to a closer bond with his extended family, especially his older sibling, and he maintains communication with his extended family. He remarked, "... *the extended family can become closer again*" (B. W1./b.305). "*Those who are only a few people left, of course often communicate, ask about how things are, keep communicating there*" (B. W1./b.326-330). Additionally, B's relationship with friends deepened, as they came together to share experiences and support each other, noting, "... *When the tsunami was over and activities started again, we met again, except for those who fled outside the area, but they still maintained their friendship*" (B. W1./b.362-365).

Appreciation in Life

After the tsunami, participant A initially saw her future as bleak but gradually found meaning in her life. She shared, "... *as time went by I was convinced that all of this must have wisdom, because I saw it getting better, God willing, what my life would be like in the future*" (A. W1./b.631-638).

A's newfound appreciation for life led her to prioritize being a good sister, wife, and mother, while also completing her studies. "*My family is the priority, but... it's not just that, even though I already have a husband and children now, my sister is still there, has a place in my heart, has her own position, if possible, if we can say my husband is my current leader, but under my husband there is my older sister, even though I already have a family, I still involve my older sister too*" (A. W1./b.660-668).

Similarly, participant B expressed a deep sense of gratitude reflecting on his parents' teachings. He explained, "...*with that advice we remember, right,...in the future do what we think is good, what feels good for our parents is good for us.*" (B. W1./b.431-434). B acknowledged that life would inevitable come to an end but emphasized being grateful for the opportunity to make positive impact on others, saying, "...*who are given opportunities that are more than there are, to be able to live and provide benefits to others, to be able to help others, to have provided benefits to others, that already brings out a happiness of not burdening others or whatever*" (B. W1./b.450-455).

Personal Strength

Both participants experienced a significant increase in personal strength after the trauma. Participant A acknowledged her transformation from a dependent person to one who embraced independence. She admitted, "... *After the tsunami, at first there were no parents, for personal needs I was spoiled, but now I have to be independent...*" (A. W1./b.519-521). A became more confident and assertive, saying, "*So now I have to be more independent, more open,*

meaning if I used to be shy, now I am braver..." (A. W1./b.734-740).

On the other hand, A also revealed that she can now motivate herself and find a way to deal with the problems she faces, thus making her more optimistic, becoming a strong and more resilient person in living her life. *"... that's what it means by motivating yourself, do it yourself" (A. W1./b.754-756). "If there's a problem, eh.. if there's a problem, I usually reflect on myself..." (A. W1./b.759-761). "... that I will definitely be happy, how to do it, the effort from now on, I mean I won't be sad anymore or anything like that, so if asked about the future how I am sure God willing I will be happy in the future" (A. W1./b.645-649). "I can be known because I stand alone, not because I have parents..." (A. W1./b.790-791). "...I can give birth without my parents, and I can be steadfast, I can go through this life" (A. W1./b.932-934).*

Similarly, participant B demonstrated greater optimism and decision-making capabilities. He noted, *"...by thinking positively and facing the accident, even though this little brother, when parents are not around." (B. W1./b.497-500).* B also emphasized the importance of seeking advice from trusted individuals, but ultimately making decisions independently.

Spiritual Change

Participant A reported a marked shift in her spiritual practices. She became more diligent in her religious observances, stating, *"...I can't postpone praying anymore, I mean the postponement is because of something we neglected to say, not because of something urgent we said..." (A. W1./b.870-874).* Additionally, A felt a deeper sense of gratitude for her life, saying, *"...Alhamdulillah, my parents are not among those who can witness the Day of Judgment, meaning that people who are still alive receive forgiveness from Allah, that is the first wisdom..." (A. W1./b.830-834).*

Participant B also experienced significant spiritual growth. He believed that the tsunami had taught him to trust in Allah's wisdom, saying, *"... Of course, Allah will not befall His servants, also what Allah gives us is not beyond our ability to be tested, and it turns out that Allah still gives us patience, be patient with the events that occur, whatever happens is Allah's provision and we surrender to Allah" (B. W1./b.336-343). "Because you get closer to religion, yes... religion is the answer, if there is no other answer, it is all God's will..." (B. W1./b.348-351).*

New Possibilities

Participant A found new opportunities post-tsunami, including meeting influential people such as the president of Indonesia and being interviewed on TV. She reflected, *"... they said they were invited to Jakarta to meet the president, and they would ask me to tell them about my complaints, so there were several of us who were interviewed at that time" (A. W1./b.687-688). "My friend and I were invited to TVRI to be interviewed about the tsunami" (A. W1./b.732-734).* Furthermore, A embraced her new roles as a wife and mother, with a renewed sense of purpose and healing.

Similarly, Participant B became involved in community service, teaching children, and participating in social aid programs. He expressed, *"...we will do more, also carry out things that are beneficial for other people too..." (B. W2./b.652-654). "... At that time it was still about JADUP (social assistance: Living Allowance)..." (B. W2./b.707). "...*

We have teaching, teaching at TPA, religious study hall... (B. W2./b.723-725).

The result highlights the psychological transformation experienced by both participants in the domains of resilience, personal growth, spirituality, and interpersonal relationships. Their experiences reflect a profound PTG that family support, spirituality, and community involvement played pivotal roles in facilitating this growth, demonstrating how PTG unfolds differently across individuals, even in the face of shared trauma.

DISCUSSION

The results of this study indicate that PTG was observed in both participants. Aligning with the five domains proposed by Tedeschi et al. (2018) Tedeschi: relationships with others, appreciation for life, personal strength, religious change, and new possibilities.

Relationships with Others

The development of deeper interpersonal bonds emerged gradually post-disaster. Both participants reported greater intimacy and reliance on their extended family and peers. This social re-engagement served as an emotional buffer that supported their psychological recovery. Harsono et al., (2020) found that such renewed social bonds can rebuild confidence in earthquake survivors who previously felt inferior and isolated. Victims who experience trauma will initially feel ashamed but will slowly become more confident in their abilities because they have gone through previous traumatic events (Rosenbloom et al., 2010). These findings are also supported by recent studies which emphasize the role of social support in mitigating trauma-related distress (Ning et al., 2023).

Appreciation for Life

The relationship factor with other people emerged over time after the tsunami in both participants. The event of changes in closeness and intimacy with other people, including extended family and relationships with other people also had an impact on the trauma conditions faced by the victims. Harsono et al., (2020) in their research explained that the increase in relationships with other people that emerged in earthquake victims who initially felt inferior and isolated, slowly rebuilt their social relationships, thus giving rise to a sense of self-confidence in the victims. Those who experienced trauma would initially feel ashamed but would slowly become more confident in their abilities because they had passed through the conditions that had caused them previous trauma (Rosenbloom et al., 2010).

Related to the appreciation of their lives, post-tsunami participants showed changes in their lives. Initially, participant A felt a bleak future and lost hope, but over time, the belief emerged that every event contains wisdom and opportunities for a better life. This is in line with research from Zoellner & Maercker (2006) that individuals who successfully reorganize the meaning of life and focus on new goals such as family, education, and social contribution tend to experience significant PTG.

Meanwhile, participant B also expressed appreciation for his life by being grateful for the opportunity to be able to provide benefits to others. This indicates the emergence of a strong existential awareness of gratitude, a theme that is following from Shakespeare-Finch & Lurie-Beck (2014) that

awareness of the transience of life increases gratitude and deepens the meaning of life in the context of PTG. Recent findings by Lei et al. (2025) have further confirmed that gratitude plays a pivotal role in long-term psychological recovery and life satisfaction in trauma survivors.

Personal Strength

Both participants were significantly able to face adversity by maintaining adaptive psychological functions and processing trauma constructively. These capacities align with Bonanno et al. (2010), who emphasized that resilience is a predictor of mental recovery. Furthermore, the revival process experienced by participants was marked by the ability to build new meaning and future planning, by the concept of rising from adversity proposed by Tedeschi & Calhoun (2004).

Participant B also showed similar growth in optimism, independence, positive thinking, and better decision-making skills, although still relying on social support as a source of advice. Empirical research in the last decade has strengthened these findings by emphasizing that independence and increased personal strength are crucial dimensions of PTG. The study by Zoellner & Maercker (2006) emphasized that two main components of PTG emerge, one of which is personal strength. Psychological independence and optimism are also strong predictors of PTG (Prati & Pietrantonio, 2009). Longitudinal research by Shakespeare-Finch & Lurie-Beck (2014) found that PTG correlates with internal motivation and control. In addition, the study by Linley & Joseph (2004) stated that the ability to cope with stress independently and motivate oneself contributes to psychological resilience and better life adjustment after a major traumatic event. This was also observed in our participants, especially in their ability to plan, act independently, and build confidence.

Spiritual Change

Participants also exhibited significant spiritual transformation. Participant A revealed an increase in the quality of worship, especially in maintaining the five daily prayers with discipline and praying consistently, which were previously often delayed due to negligence. This is a real manifestation of PTG in the spiritual dimension, namely where individuals not only experience recovery but also find meaning and positive changes in their relationship with God (Tedeschi et al., 2018). This change is also accompanied by a strengthening of faith and a deep sense of gratitude, marking a reorientation of values and beliefs after trauma.

Meanwhile, participant B showed an increase in belief in destiny and the provisions of Allah SWT, which is reflected in the belief that the trials given do not exceed the individual's ability and the importance of patience and surrender (tawakkal). This attitude is a concept that finds positive religious strategies, in the form of re-evaluation of religion which is associated with greater PTG (Tedeschi et al., 2018). Increased religiosity and spirituality after trauma are often reported as major components of PTG in several other studies, especially in the context of natural disasters and major calamities (Lee et al., 2024; Lies et al., 2014; Subandi et al., 2014) and even appear in nurses caring for COVID-19 patients (Nowicki et al., 2023).

Furthermore, this religious change can be understood as a critical meaning-making process in PTG (Park, 2010). The tsunami as a devastating event forced individuals to reconstruct their understanding of the world, life, and God, thus causing a positive transformation in the spiritual and religious aspects. This change can also have a further impact

that is internal (belief and worship), but also has an impact on social attitudes and behavior, for example becoming more patient, appreciating life more, and trying to improve social relationships through strong religious values. This is in line with the theory of PTG which states that individuals who experience the theory of PTG usually show an increase in the quality of life as a whole, including psychological, social, and spiritual aspects (Tedeschi & Calhoun, 2004).

New Possibilities

Participants embraced opportunities that arose after the tsunami. Participant A shared her story on national platforms, engaged with leaders, and assumed new roles as wife and mother. Meanwhile, participant B became involved in community education and social assistance programs. Such openness to experience and the willingness to take on new roles are core indicators of PTG, as emphasized by Helgeson et al. (2006) and (Vishnevsky et al., 2010). In addition, the mechanisms that drive PTG in this study can be understood through three important factors: social support, religiosity, and meaning-making.

Social support played a significant role in facilitating PTG. Both participants reported drawing strength from their extended family and community networks. In Aceh, where communal bonds are tightly knit, family and close social networks provide an essential support system that promotes emotional healing. Participant B, for example, emphasized the strength he drew from re-establishing connections with his extended family after the disaster. This aligns with findings from previous research indicating that social support can buffer against the negative impacts of trauma, fostering resilience and encouraging PTG (Makwana, 2019; Tedeschi & Calhoun, 2004).

Religiosity also emerged as a central mechanism of PTG. Both participants demonstrated a profound shift in their religious practices and beliefs, which they attribute to the trauma they experienced. Participant A, for example, described a newfound commitment to regular prayer and a deeper understanding of her faith, which provided her with a sense of purpose and connection to something greater. This reflects Tedeschi et al.'s (2018) assertion that religious beliefs often provide survivors with a framework for understanding and integrating their trauma. In the Acehese context, where Islam plays a central role in daily life, religiosity is not only a source of personal strength but also a communal anchor.

Finally, meaning-making processes played a pivotal role in how both participants constructed their post-trauma identity. As they reflected on their experiences, they found meaning in their survival and in the relationships they rebuilt. For instance, participant B found solace in helping others and fulfilling his social responsibilities, a form of meaning-making that transcended immediate trauma. This is consistent with the findings of Park (2010), who suggests that meaning-making enables individuals to reframe traumatic events as opportunities for personal growth and transformation.

In comparison to studies conducted in other disaster-stricken areas, the findings of this study align with the broader literature on PTG, particularly the role of social support, spirituality, and personal strength. For instance, in the aftermath of the 2004 tsunami in Sri Lanka, similar findings were observed, with survivors reporting significant spiritual growth and increased social connectedness as key aspects of PTG (Jayasuriya, 2014). Similarly, a study on earthquake survivors in Japan revealed that social relationships and a sense of community were essential to fostering resilience (Matsuyama et al., 2016). However,

fostering resilience (Matsuyama et al., 2016). However, what distinguishes this study is the unique cultural context of Aceh, where Islamic teachings and strong family ties seem to play a particularly crucial role in shaping the survivors' PTG. While global studies show consistent trends in PTG, the Acehnese emphasis on religious meaning-making and familial solidarity offers a culturally specific pathway to recovery, which should be considered when comparing PTG across regions.

RESEARCH GAP AND LIMITATION

While this study provides valuable insights into PTG in tsunami survivors, particularly adolescents who have lost a parent, there are limitations regarding the transferability of these findings to other disaster settings or populations. First, the small sample size (N=2) means that these findings cannot be generalized to all tsunami survivors or other disaster-affected groups. The unique socio-cultural and religious context of Aceh, where family and religion play a central role, may not be apply to areas with different cultural norms or religious practices. This is in line with (Pals & McAdams, 2020) call for greater scalability in qualitative trauma research.

However, some aspects of the PTG process observed in this study may be relevant to other groups facing similar trauma. For example, the role of social support and the importance of meaning-making are factors that have been widely documented in the broader PTG literature and may be applicable to survivors of natural disasters or other traumatic events (Shakespeare-Finch & Lurie-Beck, 2014). Future research should expand sample sizes to include more diverse groups of survivors and in other cultural settings, which would allow for more generalizable conclusions. Longitudinal research is also needed to explore how PTG develops over time and whether observed positive changes are sustained over the long term. Furthermore, integrating quantitative measures of psychological well-being and trauma symptoms may provide a more holistic understanding of the PTG process.

CONCLUSION AND RECOMMENDATION

This study highlight the PTG experienced by tsunami survivors in Aceh, particularly adolescents who lost their parent. The findings underscore the importance of social support, religiosity, and meaning-making in facilitating PTG. These insights can inform policy interventions for disaster recovery, especially by governments and NGOs. To support survivors, particularly adolescents, recovery programs should prioritize community-based interventions that strengthen the social network. In Aceh, where strong family and religious ties exist, family-based programs can help rebuild emotional connections. Rituals, and guidance from religious leaders can facilitate meaning-making and healing.

The study also suggests training local leaders to guide recovery efforts, particularly those that focus on resilience and meaning-making. These leaders, whether religious or community-based, can be pivotal in promoting PTG within the community. In conclusion, this research offers actionable recommendations for developing holistic recovery programs that integrate psychological, social, and spiritual support, providing a solid foundation for policy and intervention strategies aimed at fostering long-term resilience in disaster survivors.

“Ultimately, trauma does not always lead to despair; when appropriately supported, it can be the beginning of transformation.”

DECLARATION

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Ethics approval and consent to participate

This study did not require formal ethical approval as it did not involve any sensitive personal data, clinical procedures, or vulnerable populations. However, all procedures followed the general ethical principles for research involving human participants, including voluntary participation, informed consent, and confidentiality. Participants were informed about the purpose of the study and agreed to participate voluntarily. Written or verbal consent was obtained prior to data collection. All data were anonymized and used solely for research purposes.

Consent for publication

All participants (or their legal guardians) provided consent for the publication of anonymized data and results. Any identifying information has been removed to ensure confidentiality.

Availability of data and materials

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

Conflict of Interest

The authors declare that there is no conflict of interest in the research, writing, and/or publication of this article.

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Authors contributions

Siti Rahmah was responsible for conceptualizing and designing the study, conducting data collection, and leading the data analysis. Iyulen Febri Zuanny contributed to the literature review, assisted in data analysis, and drafted the manuscript. Both authors reviewed and approved the final version of the manuscript and take full responsibility for the content.

AUTHOR(S) INFORMATIONS

Siti Rahmah is a clinical psychologist and lecturer at Syiah Kuala University (USK). Active in research and community service, she focuses on mental health issues, trauma, and gratitude therapy-based interventions. As a practitioner at Psikodista Konsultan, she is also involved in public education related to child abuse and early marriage. She can be contacted at sitirahmah@usk.ac.id.

Iyulen Pebry Zuanny, M.Psi., Psychologist, is a clinical Psychologist and lecturer at the Faculty of Psychology, Ar-Raniry State Islamic University, Banda Aceh. A graduate of Bachelor of Psychology from Syiah Kuala University and Master of Professional Psychology from Gadjah Mada University, she is active in clinical intervention research and

positive approaches, especially the development of intervention modules. She can be contacted at iyulenpebry@ar-raniry.ac.id.

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ADDITIONAL INFORMATION

Correspondence All inquiries and requests for additional materials should be directed to the Corresponding Author.

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