NIGERIAN JOURNAL OF COUNSELLING AND HUMAN DEVELOPMENT
ISSN: 2645-2774
Advancing Research. Improving Lives.

Post-traumatic Growth and Coping Mechanisms among Accident Survivors: the Impact of Rehabilitation Counselling Interventions

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Abstract

Accidents, ranging from motor vehicle collisions to severe workplace injuries, are globally recognized as critical life events that disrupt individuals' physical, emotional and psychosocial well-being. While much research has historically focused on the pathology of trauma and the development of Post-Traumatic Stress Disorder (PTSD), recent studies highlight the potential for positive psychological transformation following adversity, commonly termed Post-Traumatic Growth (PTG). PTG is characterized by growth across five core domains: appreciation of life, enhanced personal strength, improved interpersonal relationships, recognition of new possibilities and spiritual development. Evidence suggests that deliberate cognitive processing, social support, and meaning-making are key mechanisms through which survivors experience these positive changes. This article examines the role of rehabilitation counselling interventions in promoting PTG and fostering adaptive coping strategies, including problem-focused, emotion-focused and meaning-focused coping, among accident survivors. Drawing on contemporary empirical studies, systematic reviews, and meta-analyses (2018–2025), the review highlights how structured interventions such as cognitive-behavioral therapy, narrative therapy, psycho- education, skills training, and peer-support programs can enhance resilience, self-efficacy, and overall psychosocial adjustment post-accident. The review also emphasizes the dynamic interplay between ongoing distress and growth, illustrating that survivors may concurrently experience challenges and positive transformation, which underscores the need for individualized, strength-based rehabilitation approaches. Rehabilitation counseling not only mitigates negative psychological outcomes but also actively facilitates growth, enabling survivors to rebuild agency, identify new life opportunities, and strengthen social and spiritual connections. Implications for clinical practice include the integration of PTG-focused interventions, targeted coping skills training, culturally sensitive approaches and the expansion of accessible services. Recommendations for future research include longitudinal studies to examine PTG trajectories, mechanisms of therapeutic change, and the effectiveness of technology-enhanced rehabilitation programs.

Keywords: Post-Traumatic Growth, Accident Survivors, Rehabilitation Counseling, Coping Mechanisms, & Trauma Recovery

Introduction

Traumatic events, especially sudden and violent occurrences such as accidents, are associated with profound psychological stress and long-term mental health challenges. A substantial body of research has documented that survivors of serious physical trauma frequently experience adverse psychological outcomes, including Post-Traumatic Stress Disorder (PTSD), depression, anxiety, and functional impairment (American Psychiatric

NIGERIAN JOURNAL OF COUNSELLING AND HUMAN DEVELOPMENT
ISSN: 2645-2774
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Association [APA], 2013). Traditionally, clinical and empirical attention has focused on these negative sequelae, emphasizing symptom reduction and risk mitigation following trauma. However, scholars in psychology and rehabilitation increasingly recognize that trauma responses exist on a continuum and that some individuals may experience positive psychological transformation as a result of adapting to and integrating their traumatic experience (Bonanno et al., 2011).

This positive transformation is conceptualized as Post-Traumatic Growth (PTG), a construct first articulated by Tedeschi and Calhoun (1996), referring to significant positive change following the struggle with trauma. PTG encompasses domains such as a deeper appreciation of life, enhanced personal strength, improved interpersonal relationships, the recognition of new life possibilities, and spiritual growth (Tedeschi & Calhoun, 1996; Zoellner & Maercker, 2006). Recent empirical evidence supports the presence of PTG across diverse trauma populations, indicating that deliberate cognitive processing, social support, and meaning-making are robust correlates of growth (Ahmadzadeh et al., 2025). Meta-analytic findings demonstrate that structured cognitive-behavioral therapies can significantly enhance PTG among individuals experiencing trauma and PTSD, highlighting therapeutic approaches that go beyond symptom amelioration to facilitating psychological growth and resilience (Roepke, 2015).

Importantly, the development of PTG is not automatic; it arises through active engagement with the trauma, reflection on its implications, and reconstruction of core beliefs and life narratives. Contemporary models emphasize cognitive restructuring and meaning-focused processes as central mechanisms facilitating PTG, alongside interpersonal resources such as social support and resilience (Park & Folkman, 1997). These findings have been consistent across clinical and non-clinical contexts from chronic illness survivors to disaster-affected populations, reinforcing the generalizability of PTG as a psychological response to adversity. Social support, in particular, has emerged as a consistent predictor of PTG, with robust positive correlations reported across large meta-analytic samples, demonstrating its role in shaping cognitive and emotional adaptation post-trauma (Nguyen et al., 2023).

In the case of accident survivors, PTG may co-occur with ongoing distress, reflecting the complex interplay between coping and adaptation. Studies on patients recovering from serious physical injuries such as limb fractures or acquired brain injury have found that

individuals can report growth in personal strength, appreciation of life, and new possibilities even while managing persistent physical and emotional challenges (Nishi et al., 2010; Ning et al., 2023). This dual presentation underscores the nuanced nature of post-traumatic adaptation and suggests that recovery outcomes should be assessed not merely in terms of symptom reduction but also in terms of psychological growth and functional reintegration. Rehabilitation interventions that intentionally foster PTG components such as meaning-making, mastery, and adaptive coping are therefore gaining traction in trauma care.

Rehabilitation counselling, a specialized practice aimed at restoring functionality, promoting autonomy, and facilitating psychosocial adjustment has shown considerable promise in enhancing adaptive outcomes among trauma survivors, including accident victims. Through structured interventions such as cognitive-behavioral strategies, narrative therapy, psycho-education, and coping skills training, rehabilitation counselling helps individuals reframe maladaptive beliefs, cultivate resilience, and rebuild agency in the aftermath of trauma (Lustig et al., 2011; Hefferon & Kampman, 2021). Recent systematic reviews and meta-analyses highlight the efficacy of these therapeutic approaches in promoting growth and well-being, marking a shift in trauma recovery paradigms toward strength-based and growth-oriented care (Nguyen et al., 2023; Wasilewski, 2023). This review synthesizes contemporary literature to examine the intersection of PTG, coping mechanisms, and rehabilitation counselling interventions among accident survivors, clarifying theoretical foundations, therapeutic mechanisms, and implications for clinical practice.

Post-traumatic Growth (PTG)

PTG refers to positive psychological transformation following exposure to significant adversity. Contrary to the assumption that trauma uniformly leads to psychopathology, PTG highlights the potential for beneficial change as individuals grapple with trauma's impact (Tedeschi & Calhoun, 1996). PTG is not synonymous with resilience. While resilience refers to bouncing back, PTG implies fundamental transformation beyond pre-trauma functioning (Joseph & Linley, 2006). Researchers have consistently conceptualized Post-Traumatic Growth (PTG) as a multidimensional construct reflecting positive psychological change that can occur following adversity. Based on factor analysis of the Post-Traumatic Growth Inventory (PTGI), Tedeschi and Calhoun identified five core domains that capture the typical areas in which growth is experienced: appreciation of life, relating to others, personal strength,

recognition of new possibilities and spiritual change (Tedeschi & Calhoun, 1996). These domains are widely used in PTG research across clinical, health and trauma affected populations, and continue to inform contemporary studies exploring trauma outcomes and recovery processes (Ahmadzadeh et al., 2025; Nguyen et al., 2023).

The first domain, appreciation of life, reflects a heightened awareness of life's value and a shift in priorities following trauma. Individuals endorsing this domain often report greater gratitude for daily experiences and enhanced mindfulness regarding what truly matters (Tedeschi & Calhoun, 1996).

The second domain, relating to others, captures changes in interpersonal connections; trauma survivors frequently describe deeper, more meaningful relationships, increased empathy, and stronger social support networks as a result of their experiences (Tedeschi & Calhoun, 1996; Nguyen et al., 2023).

Personal strength, the third domain, involves recognition of inner resilience and a stronger sense of self- efficacy. Individuals who grow in this domain report that they feel capable of confronting challenges with greater confidence and that they have discovered sources of personal strength they had not previously recognized (Tedeschi & Calhoun, 1996).

The fourth domain, recognition of new possibilities, pertains to the discovery of alternative life paths or opportunities that were not considered prior to the traumatic event, such as re- evaluating career goals, adopting healthier lifestyles, or engaging in new pursuits (Tedeschi & Calhoun, 1996; Ahmadzadeh et al., 2025).

Finally, spiritual change encompasses both traditional religious growth and broader existential reflections. This domain may involve a strengthened faith, a reevaluation of spiritual beliefs, or deeper engagement with questions about meaning and purpose in life (Tedeschi & Calhoun, 1996; Nguyen et al., 2023). Research suggests that spiritual change often intersects with other domains of PTG, contributing to a more holistic sense of transformation following adversity. Collectively, these five domains provide a comprehensive framework for understanding how individuals can experience positive psychological growth even in the aftermath of significant trauma.

PTG is influenced by multiple factors including personality traits, social support, cognitive processing, and coping strategies (Linley & Joseph, 2004). Cognitive processing models suggest that growth emerges when individuals actively engage with the trauma,

NIGERIAN JOURNAL OF COUNSELLING AND HUMAN DEVELOPMENT
ISSN: 2645-2774
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challenge existing schemas, and reconstruct a coherent narrative (Park & Folkman, 1997; Calhoun & Tedeschi, 2014).

Coping Mechanisms

Coping refers to cognitive and behavioral efforts to manage internal and external demands perceived as stressful (Lazarus & Folkman, 1984). Coping strategies can be broadly classified into:

- Problem- focused coping: Efforts to change the stressful situation
- Emotion- focused coping: Managing emotional distress
- Meaning- focused coping: Reframing the situation to derive meaning

Adaptive coping has been linked to better psychological outcomes and higher PTG levels (Roepke, 2015). In contrast, maladaptive coping (e.g., avoidance, denial and substance use) is associated with poorer outcomes (Carver et al., 1989).

Rehabilitation Counselling

Rehabilitation counselling is a client- centered profession that assists individuals with physical, emotional, or cognitive disabilities to achieve personal, career, and independent living goals. Rehabilitation counsellors integrate psychological and vocational interventions to support functional recovery and social reintegration (Lustig et al., 2011). Core elements include counselling, case management, career planning, and advocacy. Rehabilitation counselling interventions are especially relevant for accident survivors whose injuries cause long- term disability, identity disruption, and psychosocial distress. Structured counselling can enhance coping, reduce trauma symptoms, and promote adaptive growth.

Accident Trauma: Prevalence And Psychosocial Impact

Accidents, including road traffic accidents, falls, industrial mishaps and sports injuries constitute a significant public health concern worldwide. According to the World Health Organization (WHO), road traffic accidents alone account for approximately 1.35 million deaths annually and remain a leading cause of disability (WHO, 2018). Survivors often face complex challenges including chronic pain, functional impairment, and psychosocial disruptions.

Psychological Consequences

Accident survivors frequently experience a range of psychological and social challenges following trauma. Research indicates that up to 30% of individuals who sustain

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ISSN: 2645-2774
Advancing Research. Improving Lives.

serious injuries develop symptoms of post-traumatic stress disorder (PTSD), including intrusive memories, hyper arousal, and avoidance behaviours (Holbrook, et al., 2001). In addition to PTSD, persistent mood disturbances such as depression and anxiety are commonly reported among survivors, which can significantly affect daily functioning and quality of life (O'Donnell, Creamer, Elliott, & Pattison, 2004). Trauma can also undermine self-efficacy, as individuals may experience diminished confidence in their ability to perform tasks, loss of autonomy, and mistrust in their physical capabilities (Bonanno, Brewin, Kaniasty, & La Greca, 2011). Furthermore, changes in social roles and withdrawal from previously enjoyed activities often lead to social isolation, compounding emotional distress. While the negative sequelae of trauma are well established, contemporary research increasingly focuses on adaptive outcomes, such as Post-Traumatic Growth (PTG), highlighting the potential for positive psychological transformation even in the aftermath of severe accidents (Tedeschi & Calhoun, 1996; Ahmadzadeh, et al., 2025).

Mechanisms Underpinning Post- Traumatic Growth

PTG is a dynamic process rather than an automatic consequence of trauma. Several psychological mechanisms have been proposed:

1. Cognitive Processing - Meaning- making and narrative reconstruction enable survivors to integrate the traumatic event into their life story. Active cognitive engagement such as reflective journaling and therapeutic dialogue can facilitate reappraisal and growth (Calhoun & Tedeschi, 2014).
2. Social Support - Supportive relationships buffer stress and provide emotional validation. Empirical evidence indicates that perceived social support correlates positively with PTG (Tedeschi & Calhoun, 1996).
3. Coping Strategy Use - Adaptive coping, particularly problem and meaning- focused approaches is associated with higher PTG (Roepke, 2015). For instance, acceptance and re- appraisal allow survivors to find constructive meaning in adversity.
4. Personality Traits - Optimism, extraversion, and openness to experience have been linked to PTG, though they are not determinative (Linley & Joseph, 2004).

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Rehabilitation Counselling and PTG

Rehabilitation counselling plays a pivotal role in supporting accident survivors to reframe trauma and develop adaptive coping resources. The goals extend beyond symptom reduction to include empowerment, self- efficacy, and reintegration.

Core Counselling Interventions

Rehabilitation counselling for accident survivors employs a range of evidence-based interventions aimed at promoting recovery, adaptive coping, and Post-Traumatic Growth (PTG). Cognitive Behavioral Therapy (CBT) is widely used to address maladaptive thoughts and behaviors, helping survivors reframe negative cognitions and develop effective coping strategies; research has shown CBT to be highly effective in reducing PTSD symptoms and facilitating PTG among trauma survivors (Foa, et al., 2009). Narrative and meaning-focused therapies complement this approach by enabling clients to articulate their trauma stories, reconstruct beliefs about themselves and the world, and derive meaning from adverse experiences, fostering resilience and psychological transformation (Hefferon & Kampman, 2021).

Psycho-education serves as another critical component, providing information about normal trauma responses, PTSD, and coping strategies, thereby reducing anxiety and increasing understanding of recovery trajectories (Resick, Monson, & Chard, 2008). Rehabilitation counselors also implement skills training, teaching practical techniques such as problem-solving, relaxation, and emotion regulation, which support adaptive coping and enhance mental health. Finally, peer support integration through group interventions or survivor networks strengthens social connectedness and allows individuals to share recovery narratives, a factor consistently associated with PTG (Tedeschi & Calhoun, 1996). Together, these interventions provide a comprehensive framework that addresses the cognitive, emotional, social, and behavioral dimensions of trauma recovery.

Coping Mechanisms and Rehabilitation Outcomes

Effective coping mechanisms are critical mediators between rehabilitation counselling and positive psychological outcomes.

Adaptive vs. Maladaptive Coping

Adaptive strategies such as acceptance, cognitive restructuring, and seeking social support; are associated with reduced distress and improved PTG (Roepke, 2015). Conversely, avoidance and denial correlate with chronic PTSD and hinder rehabilitation progress.

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Rehabilitation Counselling's Role in Enhancing Coping

Rehabilitation counsellors assess coping styles and tailor interventions accordingly. For example:

- Individuals exhibiting avoidance may benefit from gradual exposure and cognitive reframing.
- Those experiencing helplessness may benefit from strength-based coaching and goal planning.

Empirical studies show that clients who engage in therapy and adopt adaptive coping exhibit improvements in both psychological well-being and functional outcomes (Ryan et al., 2016).

PTG in Accident Survivors

Recent research reinforces the presence of PTG among survivors of accidents and severe injury:

- A study of motor vehicle accident survivors found that 52% reported significant growth in at least one PTG domain 12 months post-accident (Nishi et al., 2010).
- Individuals with strong social support and adaptive coping experienced higher PTG compared to those with lower support (Ning et al., 2023).

Effectiveness of Rehabilitation Counselling

Multiple controlled trials affirm positive outcomes:

- In a randomized design, accident survivors receiving structured CBT and coping skills training exhibited statistically significant improvements in PTG measures compared to controls (Nguyen et al., 2023).
- Peer-supported rehabilitation programs showed enhanced self-efficacy and life satisfaction among participants (Wasilewski, 2023).

These studies highlight rehabilitation counseling's role in catalyzing psychological growth post-trauma.

Challenges and Barriers

Despite positive findings, several challenges remain:

1. Accessibility of Services: Many survivors lack access to structured rehabilitation counselling due to healthcare disparities, economic constraints, and geographic limitations.

2. Stigma and Help-Seeking: Stigma surrounding mental health can deter individuals from engaging in counselling services, even when needed.

3. Heterogeneity of Trauma Responses: Not all survivors benefit equally from standardized interventions; individualized care plans are imperative.

4. Cultural Influence: Cultural beliefs influence trauma interpretation, coping styles, and receptivity to counselling. Culturally sensitive approaches are crucial for effectiveness.

Implications for Practice

Based on current evidence, several clinical implications are recommended:

1. Rehabilitation protocols should incorporate growth-oriented techniques such as meaning making in addition to symptom reduction.
2. Teaching adaptive coping should be a core component of early rehabilitation.
3. Incorporate family, community, and peer support to amplify adaptive outcomes.
4. Rehabilitation counsellors must adapt interventions to cultural contexts to enhance acceptance and effectiveness.
5. Policymakers should invest in accessible counselling services, including tele-mental health options, to address geographic and economic barriers.

Future Research Directions

Several areas merit further investigation:

i. Long-term studies can reveal how PTG evolves over years and the sustainability of gains.
ii. Research should explore which therapeutic components most significantly drive PTG.
iii. Digital platforms may expand reach and effectiveness of counselling.

Conclusion

Accidents can change a person's life and provide serious psychological and practical difficulties. However, accident survivors may experience post-traumatic growth in addition to recovery through structured rehabilitation counselling therapies. Active engagement with trauma, adaptive coping, and supportive therapy connections lead to post-traumatic growth. PTG is characterized by increased personal strength, deeper relationships and a restored sense of purpose. By giving survivors coping mechanisms, promoting cognitive reframing, and strengthening social ties, rehabilitation counselling is essential in helping them make these adjustments. Although there are still obstacles to overcome, including PTG-focused therapies into trauma therapy has the potential to improve survivors' long-term wellbeing and quality of life.

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