

Analyze the Factors Responsible for Promoting Mental Health and Self-Efficacy among Patients with Epilepsy: A Comprehensive Review

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ABSTRACT

Epilepsy is a chronic neurological disorder associated not only with recurrent seizures but also with significant psychosocial and mental health challenges. Enhancing mental health and self-efficacy among people with epilepsy (PWE) is crucial for improving quality of life, treatment adherence, and coping capacity. This comprehensive review critically synthesizes findings from empirical studies, meta-analyses, and theoretical models to identify key factors that promote mental health and self-efficacy in epilepsy patients (Santos *et al.*, 2020). Five major domains emerge: self-management education, social support, psychological variables, socio-demographic factors, and structural or program-level influences. An integrative framework is proposed to explain how these factors interact to shape patient outcomes. The review concludes with recommendations for research, clinical practice, and policy.

Keywords: Epilepsy, Self-efficacy, Mental Health, Seizure

INTRODUCTION

Epilepsy affects more than 50 million people worldwide, making it one of the most prevalent chronic neurological disorders (de Boe *et al.*, 2021). Beyond seizure activity, epilepsy often impairs psychosocial functioning, restricts life opportunities, and contributes to mental health co-morbidities such as depression and anxiety. These psychological and emotional burdens can negatively influence self-management behaviors, adherence to medications, and overall quality of life (Beghi *et al.*, 2019; Keezer *et al.*, 2016).

While seizure control remains central in epilepsy treatment, recent research underscores the importance of “patient-centered approaches” that prioritize mental health, emotional adjustment, and self-efficacy. Self-efficacy — defined by Bandura as one’s belief in the ability to perform behaviors necessary to produce desired outcomes — is a critical determinant of self-management

in chronic illness (Bandura, 1997).

Understanding the factors that contribute to better mental health and self-efficacy in people with epilepsy (PWE) is essential for designing effective interventions and improving quality of life.

Importance of Mental Health and Self-Efficacy in Epilepsy:

Patients with high self-efficacy are more likely to:

- Adhere to medication
- Engage in seizure-trigger prevention behaviors
- Cope adaptively with stress
- Communicate effectively with healthcare providers
- Experience fewer psychological symptoms
- Report higher quality of life

Conversely, low self-efficacy is correlated with:

- Poor mental health outcomes

- Worse seizure control
- Low self-esteem
- Higher perceived stigma

Mental health and self-efficacy are thus intertwined, mutually reinforcing aspects of epilepsy well-being.

Purpose of This Review:

Although various studies explore self-management, mental health, and psychosocial outcomes in epilepsy, findings remain dispersed. This review consolidates current knowledge on factors that support mental health and self-efficacy, identifies research gaps, and proposes an integrative framework to guide future inquiry and intervention design.

METHODOLOGY

This review used a narrative and integrative approach. Sources included peer-reviewed journal articles, clinical trials, meta-analyses, and systematic reviews published in the last 15 years.

Search Strategy:

Keywords included:

- * “epilepsy self-efficacy”
- * “epilepsy mental health”
- * “self-management in epilepsy”
- * “psychosocial factors”
- * “quality of life in epilepsy”
- * “social support epilepsy”

Databases consulted included PubMed, ScienceDirect, PsycINFO, Google Scholar, Medline, and major open-access repositories.

Inclusion Criteria:

- Studies involving adults or adolescents with epilepsy.
- Research examining mental health, self-efficacy, or self-management outcomes.
- Randomized controlled trials (RCTs), cohort studies, qualitative analyses, or meta-analyses.

Exclusion Criteria:

- Studies focusing exclusively on pediatric epilepsy without psychosocial components.
- Purely biomedical research without mental health/self-efficacy outcomes.

RESULTS

Five major categories of factors influencing mental health and self-efficacy among people with epilepsy (PWE) emerged from the literature.

Self-Management Education and Supportive Interventions:

Self-management education is a key factor in improving both mental health and self-efficacy among individuals with chronic health conditions. It is one of the most consistently validated approaches for helping individuals gain control over their illness and improve their overall well-being. Through self-management education, individuals learn essential skills that enable them to manage symptoms, follow treatment plans, and make informed decisions about their health (Karoly *et al.*, 2020; Lin *et al.*, 2019).

Supportive interventions play an important role alongside self-management education. These interventions provide emotional, psychological, and practical support, helping individuals cope with stress, anxiety, and the challenges of daily life. When individuals feel supported, they are more likely to engage actively in their care and maintain a positive outlook.

Psycho educational Programs:

Psycho-educational programs play a vital role in the effective management of epilepsy by providing structured learning opportunities for individuals living with the condition. These programs focus on essential areas such as seizure control, lifestyle modifications, medication adherence, and the development of effective coping strategies. By addressing both medical and psychological aspects of epilepsy, psychoeducational programs help individuals better understand and manage their condition (ones *et al.*, 2021; Thompson *et al.*, 2020).

Participation in psychoeducational programs significantly improves knowledge about epilepsy. Increased awareness enables individuals to recognize seizure triggers, follow treatment plans correctly, and make informed decisions about their health. As a result, individuals gain greater confidence in handling seizures and responding appropriately in challenging situations.

These programs also contribute positively to emotional well-being. By learning coping strategies and stress management techniques, individuals are better equipped to manage anxiety, fear, and emotional distress

associated with epilepsy. Improved emotional stability further enhances self-efficacy scores, reflecting a stronger belief in one's ability to control and manage the condition effectively.

Moreover, group-based psycho-educational programs offer additional benefits by promoting peer connection. Sharing experiences with others who face similar challenges reduces feelings of isolation and fosters a sense of belonging and mutual support. This social interaction strengthens motivation and encourages long-term engagement in self-management practices. Overall, psycho-educational programs are a valuable intervention for improving knowledge, confidence, emotional health, and self-efficacy among individuals with epilepsy.

Self-Management Training:

Self-management training programs typically include components such as problem-solving skills, goal setting, stress reduction techniques, and lifestyle planning. These programs aim to empower individuals to take an active role in managing their condition. Evidence shows that participation in self-management training can lead to reduced seizure frequency, along with improvements in self-esteem and overall quality of life (Kwan *et al.*, 2020).

Digital and Tele health Self-Management:

Digital and tele-health self-management tools are becoming increasingly important in supporting individuals with epilepsy. WebEase and other mobile apps provide easily accessible platforms for identifying triggers, keeping an eye on symptoms, and encouraging medication adherence. Additionally, by incorporating cognitive-behavioral techniques, these tools assist users in creating better coping methods and enhancing their general psychological health. Reaching underprivileged or geographically remote people that might not have easy access to traditional healthcare services is one of the main benefits of digital treatments. However, careful, user-friendly design that takes into account a range of demands, technological abilities, and health literacy levels is crucial to these programs' efficacy. By offering ongoing support, tailored feedback, and increased autonomy in managing epilepsy, digital and tele-health solutions can greatly improve self-management when properly deployed (Modi *et al.*, 2020).

Social Support and Environmental Factors:

Social support consistently emerges as one of the

strongest predictors of mental health and self-efficacy among individuals living with chronic conditions, including epilepsy. Supportive environments not only enhance emotional well-being but also promote healthier coping mechanisms and greater confidence in managing the condition. When individuals feel understood and supported by those around them, they are more likely to engage in effective self-management behaviors and maintain a positive outlook.

Family Support:

Family support plays a central role in shaping patients' emotional and behavioral responses to their condition. Individuals who receive both emotional reassurance and practical assistance from family members tend to exhibit lower depressive symptoms, better medication adherence, higher perceived control over their condition, and reduced stigma-related stress. Such support systems can help buffer the negative emotional reactions associated with seizures, providing stability and comfort during challenging times. By fostering open communication and understanding, families can significantly contribute to improved psychological adjustment and overall well-being.

Peer Support:

Peer support is another crucial environmental factor, offering unique benefits that differ from those provided by family members. Engagement in peer networks or structured group interventions can reduce social isolation, increase self-confidence, and create a safe space for sharing experiences. These interactions allow individuals to validate their fears and learn from others who face similar challenges. Furthermore, peers can serve as powerful role models, demonstrating successful coping strategies and thereby enhancing self-efficacy through social learning. This shared understanding fosters a sense of belonging and motivates individuals to adopt healthier coping mechanisms (Reilly *et al.*, 2021).

Stigma Reduction:

Stigma remains a significant barrier to mental health and self-efficacy among individuals with epilepsy. It can lead to reduced self-worth, impaired social interactions, and diminished confidence in one's ability to manage the condition. Addressing and reducing stigma is therefore essential for improving psychosocial outcomes. Education campaigns and community-based awareness programs

play a vital role in challenging misconceptions, promoting acceptance, and encouraging supportive social environments. By fostering a more informed and inclusive community, these initiatives help individuals feel more empowered, understood, and capable in their daily lives (Jacoby and Snape, 2022; Devinsky *et al.*, 2018).

Psychological and Behavioral Variables:

A wide range of psychological and behavioral factors play a crucial role in shaping mental health and self-efficacy among individuals living with epilepsy. These variables influence how patients interpret their condition, respond to challenges, and engage in self-management behaviors. Understanding these factors is essential for developing interventions that strengthen resilience, enhance coping, and improve overall well-being.

Stress and Coping Strategies:

The way individuals cope with stress has a direct impact on both their mental health and their ability to manage epilepsy effectively. Adaptive coping strategies—such as positive reframing and problem-solving—are consistently associated with lower levels of anxiety and depression, higher self-confidence, and better self-management outcomes. These strategies enable patients to view challenges more constructively and to take meaningful action toward addressing them. In contrast, maladaptive coping methods, including avoidance and catastrophizing, predict poorer mental health outcomes and can exacerbate feelings of helplessness. Such strategies may hinder treatment adherence and increase emotional distress, making it harder for individuals to maintain control over their condition (Santos *et al.*, 2020).

Depression and Anxiety:

Depression and anxiety are common psychological challenges among individuals with epilepsy, and they significantly affect both mental health and self-efficacy. These symptoms can reduce motivation, impair cognitive functioning, and weaken belief in one's ability to manage the condition. As a result, everyday tasks—from taking medication to engaging in stress-reduction activities—may feel overwhelming or unmanageable. Addressing and treating depression and anxiety is therefore essential, as improvement in mental health often leads directly to enhanced self-efficacy. When patients experience relief from these symptoms, they are more capable of engaging in proactive behaviors and maintaining a sense of control.

Perceived Control and Mastery:

Perceived control and mastery are powerful psychological constructs that influence how patients adapt to living with epilepsy. Individuals with higher levels of perceived control tend to experience reduced emotional distress, increased proactive management of their condition, and an overall improvement in quality of life. Feeling capable and competent helps patients respond to challenges with confidence rather than fear. Those who develop a strong sense of mastery often feel empowered rather than helpless, which fosters resilience and strengthens their belief in their ability to navigate the demands of their condition. Enhancing perceived control is therefore a key component in promoting long-term psychological well-being and effective self-management.

Socio-Demographic and Disease-Related Variables:

Socio-demographic and disease-related factors also play an important role in influencing mental health, self-efficacy, and overall adjustment among individuals living with epilepsy. These variables shape access to resources, personal coping styles, and the broader context within which patients manage their condition. Understanding these influences helps clarify why individuals may experience different psychosocial outcomes and can guide the development of targeted interventions.

Education Level:

Education level is strongly linked to self-efficacy and effective disease management. Individuals with higher levels of education often possess a better understanding of epilepsy, including treatment options, triggers, and lifestyle adjustments. This greater knowledge base supports more informed decision-making and improves overall self-management. Furthermore, higher education is commonly associated with increased self-esteem, which contributes to stronger self-efficacy and greater confidence in one's ability to cope with the condition.

Income and Employment:

Socio-economic stability plays a crucial role in psychological well-being and access to adequate healthcare. Individuals with higher income or stable employment are more likely to obtain regular medical care, adhere to treatment plans, and afford medications or lifestyle modifications. Financial security also reduces stress, which can positively influence mental health.

Beyond economic benefits, employment offers a sense of identity, purpose, and normalcy, all of which support emotional resilience and enhance self-esteem.

Age and Duration of Condition:

Age and the length of time a person has lived with epilepsy can also shape their psychological adaptation. Older adults or individuals with a longer history of the condition may have developed more effective coping strategies and higher resilience due to accumulated experience. They may better understand their triggers, recognize early warning signs, and respond more confidently to challenges. However, these patterns vary widely from person to person, as individual differences in personality, support systems, and health status can influence coping capacity.

Seizure Frequency:

The relationship between seizure frequency and self-efficacy is complex and often produces mixed research findings. While high seizure frequency undeniably increases emotional burden and may contribute to anxiety, fear, or reduced quality of life, some studies suggest that self-efficacy does not always directly correlate with seizure frequency. This indicates that psychological factors—such as coping style, perceived control, and support systems—may play a more significant role in shaping individuals' confidence in managing their condition. As a result, even individuals

with frequent seizures can maintain strong self-efficacy if they possess effective psychological and social resources (Fisher *et al.*, 2017).

Structural and Health-System Factors:

Structural and health-system factors play a pivotal role in shaping the overall well-being and self-efficacy of individuals living with epilepsy. These factors determine the quality of care patients receive, the consistency of medical follow-up, and the availability of supportive services that address both physical and psychological needs. A well-functioning healthcare system can empower patients, enhance their confidence in managing the condition, and reduce the emotional burden associated with chronic illness.

Access to Quality Care:

Access to high-quality healthcare is essential for fostering positive outcomes among patients with epilepsy. Regular follow-up appointments allow healthcare providers to monitor treatment effectiveness, adjust medications as needed, and address emerging concerns before they escalate. Patient-centered communication—where clinicians listen actively, respect patient preferences, and provide clear explanations—plays an equally important role in strengthening trust in the healthcare system. When patients feel heard and supported, they are more likely to adhere to treatment plans and engage openly in discussions about their

Table 1 : Psychosocial, Behavioral and Lifestyle Factors Affecting Mental Health and Self-Efficacy

Factor	Description	Positive Outcomes for Patients
Social support	Support from family, peers, and community	Enhances coping skills, reduces depression and isolation
Reduced stigma	Awareness programs, workplace/school inclusion	Improves self-esteem and social participation
Psychological therapies (CBT, mindfulness)	Evidence-based interventions for emotional regulation	Reduces anxiety, improves problem-solving and resilience
Patient empowerment	Involvement in decision-making	Increases perceived control and self-efficacy
Physical activity	Guided exercise, walking, yoga	Enhances mood and reduces anxiety
Good sleep hygiene	Maintaining consistent sleep schedule	Decreases seizure frequency & emotional distress
Stress management techniques	Meditation, relaxation therapy	Improves emotional regulation and confidence

Table 2 : Educational and Healthcare-System Factors

Factor	Description	Impact
Epilepsy education	Knowledge about triggers, medications, and safety	Increases self-care ability and reduces fear
Self-management programs	Training in goal-setting, adherence, and crisis planning	Strengthens coping skills and autonomy
Access to quality healthcare	Multidisciplinary teams, regular counseling	Reduces psychological burden and increases trust
Digital health tools	Seizure tracking apps, telemedicine	Enhances adherence, monitoring, and confidence

condition. Additionally, access to support resources such as counseling, educational materials, and community programs can significantly reduce anxiety by providing patients with the tools and knowledge they need to manage their condition confidently. Together, these elements contribute to increased self-efficacy, enabling individuals to take an active role in their own health and to navigate the challenges of epilepsy with greater assurance.

DISCUSSION

The five domains identified do not function independently; rather, they interact with one another in dynamic and complex ways. Self-efficacy and mental health are not isolated traits that develop in isolation. Instead, they emerge from the continuous interaction of multiple factors that influence an individual's experiences and outcomes.

Psychological factors, such as coping skills, emotional resilience, and personal beliefs, play a central role in shaping mental health and self-efficacy. These are closely linked with social factors, including family support, peer relationships, and community acceptance. Positive social environments can strengthen confidence and emotional stability, while negative social experiences may increase stress and reduce self-belief (ones *et al.*, 2021).

Educational factors, such as access to accurate information and self-management training, further influence how individuals understand and manage their condition. Education empowers individuals with knowledge and skills, which enhances confidence and promotes better mental well-being. At the same time, structural factors—such as access to healthcare services, supportive policies, and available resources—either enable or limit the effectiveness of psychological, social, and educational efforts.

Together, these psychological, social, educational, and structural factors interact to shape both self-efficacy and mental health. Improvements in one domain often lead to positive changes in others, highlighting the importance of a holistic and integrated approach. Addressing these domains collectively is essential for promoting long-term well-being and empowering individuals to manage their condition effectively.

Interconnected Pathways:

- * Self-management programs increase knowledge

and confidence → enhance self-efficacy → reduce anxiety.

- * Social support fosters emotional resilience → improves coping → strengthens mental health.
- * Socio-economic stability reduces stress → allows greater focus on self-management.
- * Access to quality care reinforces trust and empowerment → improves health ownership.

Practical Implications

Healthcare providers should:

- Integrate mental health screening into routine epilepsy care.
- Provide tailored self-management programs.
- Engage families and caregivers.
- Offer culturally sensitive and stigma-aware care.
- Utilize technology to increase accessibility.

Limitations

- * Many studies are cross-sectional, limiting causality conclusions.
- * Cultural variations remain underexplored.
- * Few studies examine long-term sustainability of self-management interventions.
- * Psychological factors are sometimes measured inconsistently.

Conclusion:

Mental health and self-efficacy are essential components of holistic epilepsy care. A wide range of interconnected factors educational, psychological, social, demographic, and structural influence these outcomes. Self-management education and strong social support networks emerge as the most impactful factors. By integrating these insights into clinical practice and public health policy, providers can enhance the well-being, empowerment, and quality of life for people living with epilepsy. Continued research should further refine understanding and guide intervention development.

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