SELF-EFFICACY-DRIVEN RECOVERY IN ICU SURVIVORS: A LITERATURE REVIEW

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Abstract

Patients who survive critical illness develop long-term physical and psychological and functional disabilities which doctors call post-intensive care syndrome (PICS) after they leave the intensive care unit (ICU). The implementation of rehabilitation services and follow-up care has grown but patients achieve different levels of recovery because their self-efficacy levels affect their results. The research study combined existing data to understand how self-efficacy affects physical rehabilitation and psychological adjustment and post-ICU care participation in adult ICU survivors. The research team performed a literature review which included studies from PubMed and Scopus and Web of Science and CINAHL databases for papers published between 2020 and 2024. Research studies using quantitative and qualitative and mixed-methods approaches investigated self-efficacy and its associated behavioral factors which affect recovery results through thematic analysis. The research included twelve studies which fulfilled all necessary criteria. The research produced three main findings which showed self-efficacy determines physical recovery and helps people adjust psychologically and affects their participation in post-treatment appointments. The research showed that people with higher self-efficacy levels participated more in their rehabilitation program and handled their situation better while maintaining their medical treatment. People who had lower self-efficacy levels tended to stop participating in their care and their recovery process became longer. Self-efficacy stands as a primary behavioral element which determines how patients recover from their critical illness. The implementation of self-efficacy assessment and support programs during post-ICU nursing care could lead to better recovery results for patients.

Keywords: Self-efficacy; ICU survivors; post-intensive care syndrome; rehabilitation; recovery; nursing care

INTRODUCTION

The discharge of critical illness survivors leads to enduring medical conditions which healthcare professionals identify as post-intensive care syndrome (PICS) that results in multiple types of health problems which negatively affect life quality and self-care abilities (1–3) . The scientific community now focuses on developing recovery-enhancing treatments for PICS because researchers have moved past the stage of identifying its symptoms (4–6). The impact of PICS on patients remains severe because it affects numerous ICU survivors who experience difficulties in their ability to work or maintain their previous occupations (7).

Self-efficacy stands as a vital psychosocial recovery determinant because it represents a person's faith in their capacity to execute recovery work which affects their rehabilitation participation and their ability to follow doctor's orders and maintain ongoing medical check-ups (8). The connection between self-efficacy and recovery results becomes more evident

through psychological resilience which shows how people handle stressful situations and difficult circumstances (9).

Research about these constructs continues to gain popularity but scientists still need to understand how self-efficacy affects physical rehabilitation and psychological resilience and treatment compliance in ICU patients and how these connections differ between various population subgroups and cultural backgrounds (4,7,10) The current research about rehabilitation programs shows inconsistent results regarding their ability to enhance patient recovery through improved long-term results thus requiring new methods which unite medical factors with behavioral elements for recovery success (11,12)

The research review combines existing data about how self-efficacy affects recovery results from adult ICU patients after they leave the hospital while focusing on their physical rehabilitation and psychological recovery and their ability to follow post-discharge medical instructions. The knowledge of these connections will help researchers create specific intervention programs which match different cultural backgrounds to create fair recovery routes for all patients.

The medical community now views recovery as an extended behavioral transformation which requires longer-term support instead of brief hospital-based treatment so researchers seek evidence-based methods to help ICU patients after hospital release. The implementation of self-efficacy in structured post-ICU care practices shows no clear pattern and scientists have not completed their analysis of how this approach helps patients recover.
The research aims to evaluate existing studies about self-efficacy effects on post-ICU patient recovery and to determine its value for creating nursing-based recovery programs. The review aims to support the creation of complete patient-focused recovery plans which focus on behavior change for ICU patients through this synthesis.

RESEARCH METHOD

Materials and Methods

This narrative review followed methodological guidance from the Joanna Briggs Institute (JBI) for scoping and evidence synthesis approaches [1,2]. The identification, screening, and reporting of articles were conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR) [3]. The review process consisted of three structured phases: (1) identification of relevant literature, (2) application of eligibility criteria, and (3) synthesis of included evidence [4]. Although a formal protocol registration was not required for narrative reviews, the review process was documented prospectively to ensure transparency and prevent duplication of research efforts.

Selection Criteria

Eligibility criteria were developed based on the PCC framework (Population, Concept, and Context), consistent with JBI guidance [1,2].

PCC Element	Definition Used in This Review
Population	Adult ICU survivors (≥18 years) who were discharged from the ICU and subsequently received follow-up care or rehabilitation services. Caregivers were included when outcomes related to survivor recovery were reported.

CConcept	Self-efficacy or closely related behavioral constructs (e.g., coping confidence, belief in recovery, engagement in self-management) measured in relation to physical, psychological, functional, or social recovery outcomes, including domains of Post-Intensive Care Syndrome (PICS).
CContext	Studies conducted in hospital settings, post-ICU follow-up clinics, rehabilitation centers, community-based recovery programs, telehealth follow-up, or home-based recovery settings.

Inclusion Criteria

Studies were included if they:

1. Examined ICU survivors and reported recovery outcomes beyond hospital discharge
2. Explicitly measured or discussed self-efficacy or constructs relevant to confidence in recovery
3. Were published between 1 January 2020 and 31 December 2024
4. Were available in full text and written in English
5. Used quantitative, qualitative, mixed-methods designs**,** or were systematic/narrative reviews relevant to the conceptual framework

Exclusion Criteria

Studies were excluded if they:

1. Focused exclusively on acute ICU management without post-discharge outcomes
2. Included pediatric populations (<18 years)
3. Did not report outcomes linked to behavioral engagement, recovery, or psychological processes
4. Were editorials, opinion papers, dissertations without peer review, or conference abstracts without full data

The research team conducted a systematic literature search to find empirical studies which studied self-efficacy-related results in critical illness survivors. The research design included both clinical and behavioral evidence collection methods. The search of PROSPERO and the Open Science Framework did not find any registered or finished reviews which studied the same research topic so the current literature lacks this information.

The research team performed electronic database searches through PubMed and Scopus and Web of Science and CINAHL. The research strategy used Medical Subject Headings (MeSH) when available together with appropriate free-text search terms. The research used three essential terms which included intensive care survivorship and self-efficacy and recovery processes through this specific search string.
("intensive care survivors" OR "post-ICU" OR "critical illness recovery" OR "ICU discharge")
The search term includes AND ("self-efficacy" OR "confidence" OR "self-management" OR "behavioral engagement")
The search term includes AND ("rehabilitation" OR "follow-up" OR "post-intensive care syndrome" OR "recovery").
The search results included only peer-reviewed English-language articles which appeared between 2020 and 2024. The research team performed manual screening of reference lists from included studies and review articles to discover additional eligible studies.

Data Extraction and Analysis

The research team used a standardized matrix to extract data which included study details and self-efficacy measures and follow-up care information and recovery results. The study used narrative thematic analysis to combine results because different research methods and reporting techniques made it impossible to perform a meta-analysis.

RESEARCH RESULTS

1. Characteristics of Included Studies, Contexts, and Populations

The database search yielded a total of 426 records from PubMed, Scopus, Web of Science, and CINAHL. After removal of duplicate records, 297 articles remained and were screened based on titles and abstracts. Of these, 241 records were excluded as they did not meet the scope of the review. Subsequently, 56 full-text articles were assessed for eligibility using predefined inclusion and exclusion criteria. Following full-text evaluation, 38 articles were excluded due to limited relevance to post-ICU recovery outcomes, absence of self-efficacy or related behavioral constructs, inclusion of pediatric populations, or non–peer-reviewed publication formats.

In total, 12 studies published between 2020 and 2024 met the inclusion criteria and were included in the narrative synthesis. The study selection process is illustrated in Figure 1 using the PRISMA flow diagram.

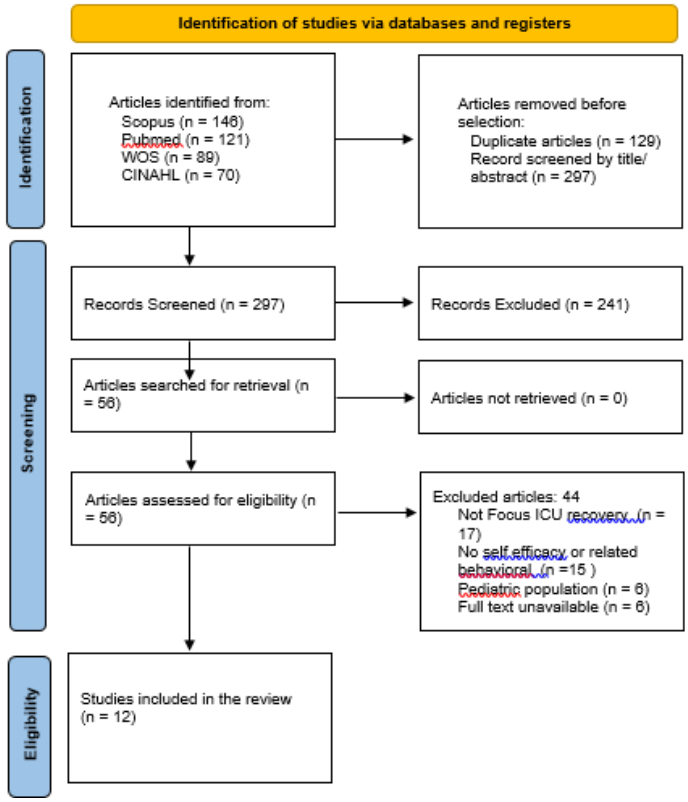

Figure 1. PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) 2020 flow diagram of study selection

The research included studies which took place in different nations while most of them happened in high-income healthcare facilities located in the United States and the United Kingdom and Australia and Japan and various European nations. Research articles about ICU survivorship and recovery used evidence from worldwide studies because these topics affect patients everywhere.

The included literature contained studies with different research designs which included prospective cohort and longitudinal studies and observational or cross-sectional studies and qualitative investigations and mixed-methods research and review-based studies. Research studies have primarily examined adult ICU survivors who receive care after hospital discharge through three main settings which include post-ICU follow-up clinics and outpatient or community-based rehabilitation programs and transitional care facilities. Research studies investigated two separate digital follow-up systems and structured recovery programs.

The included studies investigated self-efficacy either as their main focus or as a component of complete behavioral and psychosocial models which studied recovery participation and functional enhancement and mental health adaptation. The research studies included in this review present their main results together with their essential features in Table 1.

2. Data Presentation

The researchers created Table 1 to help readers understand the main study results by presenting essential details from each included study. The table presents vital data which includes author information and publication date and study objectives and research methods and participant characteristics and treatment locations and essential results about self-efficacy and recovery in ICU survivors. The presentation structure enables readers to evaluate research settings and experimental methods and resulting results which will serve as a systematic base for thematic synthesis in upcoming sections.

Table 1. Characteristics and key findings of included studies examining self-efficacy in post-ICU recovery (2020–2024)

Author(s), Year, Country	Study Aim	Study Design	Population / Setting	Key Findings Related to Self-Efficacy and Recovery
Puthucheary et al., 2020, UK(10)	Identify determinants of functional recovery after critical illness	Prospective cohort	Adult ICU survivors enrolled in rehabilitation programs	Greater confidence in physical ability was associated with higher participation in exercise and rehabilitation activities
Wu & Moser, 2020, USA(13)	Examine the role of self-efficacy in recovery engagement	Behavioral observational study	Adults with chronic illness (conceptual relevance to ICU recovery)	Higher self-efficacy predicted better adherence to recovery behaviors

Author(s), Year, Country	Study Aim	Study Design	Population / Setting	Key Findings Related to Self-Efficacy and Recovery
				and functional outcomes
Stayt et al., 2020, UK(14)	Explore communication and recovery experiences in ICU follow-up	Qualitative study	Adult ICU survivors and clinicians in follow-up care	Supportive nursing communication reinforced confidence, engagement, and perceived control during recovery
Honderson et al., 2021, Australia(15)	Evaluate effectiveness of early mobilization interventions	Systematic review and meta-analysis	Adult ICU patients and survivors	Early mobilization improved perceived capability, motivation, and functional recovery outcomes
McPeake et al., 2023, UK(15)	Evaluate peer-support interventions following ICU discharge	Mixed-methods study	Adult ICU survivors attending follow-up clinics	Peer support enhanced coping confidence, emotional readiness, and engagement in recovery
Shimizu et al., 2024, Japan(16)	Explore lived recovery experiences after ICU	Qualitative interviews	Adult ICU survivors	Survivors with higher confidence demonstrated adaptive coping strategies and proactive recovery behaviors
Turner, et al., 2022, UK(17)	Examine rehabilitation participation after critical illness	Observational study	Adult ICU survivors in post-acute rehabilitation	Motivation and perceived capability influenced rehabilitation intensity and participation
Schmidt et al., 2024, USA(18)	Examine psychological adjustment following critical illness	Longitudinal study	Adult ICU survivors receiving psychological follow-up	Higher coping self-efficacy was associated with lower PTSD symptoms and improved adjustment

Author(s), Year, Country	Study Aim	Study Design	Population / Setting	Key Findings Related to Self-Efficacy and Recovery
Cagino et al., 2022, USA(19)	Describe ICU survivorship outcomes and care needs	Narrative review	Adult ICU survivors	Highlighted the importance of behavioral and self-efficacy-based approaches in survivorship care
Porter et al., 2025, Netherlands(20)	Identify barriers and facilitators to recovery after ICU	Observational study	Adult ICU survivors	Psychological readiness and confidence influenced engagement in recovery and follow-up care
Zhang et al., 2024, (21)	Examine behavioral influences on post-ICU recovery	Narrative review	Adult ICU survivors	Behavioral constructs, including self-efficacy, were linked to long-term recovery outcomes
Cureus Systematic Review, 2024(22)	Summarize management strategies for post-intensive care syndrome	Systematic review	Adult ICU survivors across care settings	Self-efficacy and related behavioral factors correlated with physical and psychosocial recovery

DISCUSSION

The research evaluated how self-efficacy together with other behavioral factors influence recovery outcomes in adult patients who survived ICU care. The included studies show that self-efficacy stands as a primary element which affects how survivors interact with rehabilitation programs and how they handle psychological changes and their need for post-discharge medical services. The research indicates that critical illness recovery requires more than physical recovery because patients need to demonstrate their ability to handle recovery requirements.

Self-Efficacy functions as a system which enables people to achieve their recovery goals.

The research results show that self-efficacy functions as a key factor which affects patient recovery from ICU discharge. People who believed they had the ability to recover better started and maintained their involvement in rehabilitation programs while handling pain and continuing their recovery work even when they felt tired or their body functions were impaired (1,23). The research shows that survivors' recovery success depends on their confidence in their ability to heal rather than their physical strength or their ability to receive rehabilitation

treatment. Moreover the research shows that patients with low self-efficacy face obstacles which prevent their recovery from progressing because they delay their activities and stay away from difficult work and leave their rehabilitation program early (1,7). The research indicates that survivors with equivalent medical conditions will experience different physical recovery paths because their confidence levels affect their willingness to participate in rehabilitation activities (24). Findings from research conducted in the field of nursing emphasize the importance of addressing patients' self-confidence and belief in their own abilities alongside their physical healing journey (25). It is crucial for healthcare providers to recognize that patients' mental and emotional well-being plays a significant role in their overall recovery. By fostering an environment that encourages self-efficacy and empowerment, nurses and other healthcare professionals can significantly enhance the therapeutic process (26). This holistic approach not only aids in patients' physical rehabilitation but also nurtures a positive mindset, which can lead to improved health outcomes and a more resilient recovery experience (27). Therefore, integrating strategies that boost patients' confidence into care plans is essential for achieving comprehensive and effective healthcare.

The observed relationship between self-efficacy and functional recovery matches social cognitive theory because people start and continue challenging behaviors based on their perceived ability to succeed.(13) Self-efficacy functions as a connecting factor which helps ICU survivors turn their medical recovery into actual functional improvements (28).

Psychological Adjustment and Emotional Recovery

The review found that self-efficacy maintained a direct link to psychological recovery as well as functional recovery in patients who experienced critical illness. The research shows that survivors who demonstrated stronger coping confidence abilities experienced fewer symptoms of anxiety and depression and post-traumatic stress while achieving better emotional control during their recovery process (8,12). The research shows that survivors who lacked strong self-efficacy developed more severe emotional problems while showing increased avoidance behaviors and decreased participation in recovery work (29).

The research results indicate that psychological well-being and self-efficacy create a mutual influence pattern. The combination of psychological distress with low perceived capability creates a negative feedback loop which hinders recovery because low self-efficacy intensifies emotional vulnerability (30). Research findings through qualitative evidence showed that people who had higher self-efficacy tended to use effective coping methods and view their recovery process as something they could handle but those with weak confidence experienced fear and lost control and became uncertain about their situation (3,6).

The research results demonstrate that nurses should perform psychological evaluations at the beginning of post-ICU care while providing emotional support to patients throughout their recovery. The nursing staff serves as essential providers who help survivors build their self-assurance while acknowledging their recovery difficulties and preparing them emotionally for the recovery process.

Engagement in Follow-Up Care and Recovery Behaviors

The included studies showed that self-efficacy played a major role in determining how well people followed up with their care and recovery services. People who believed recovery was achievable tended to visit their follow-up clinics and follow rehabilitation instructions and use digital recovery tools (5,10,11). The survivors who lacked confidence and felt they had no

control over their situation tended to skip their appointments and stop participating in their care. (11)

The research indicates that self-efficacy acts as a behavioral barrier which determines how survivors will use the recovery resources which exist for them. The results have significant effects on the development of post-ICU follow-up systems which need to address both resource constraints and patient care disruptions. The combination of self-efficacy-enhancing strategies in interventions through individualized goal-setting and peer support and structured feedback systems will enhance patient participation and their recovery success rates in the long run(31). The recovery models which use digital technology show promising results but their success rate depends on how well survivors can handle technology and how prepared they are to participate in the process. The development of specific recovery methods requires researchers to study how people behave together with their ability to use technology(32)

Implications for Nursing Practice

The research results demonstrate that self-efficacy stands as a changeable intervention point which nurses can use to help patients during their ICU recovery process. Nurses have a special ability to evaluate survivors' self-assurance while they help survivors maintain recovery behaviors and build their confidence through educational programs and motivational speech and goal development. The assessment of self-efficacy during post-ICU follow-up care enables healthcare providers to create personalized treatment plans which help them detect patients who will lose interest in their care.

The combination of nursing-led interventions which focus on reachable targets and positive feedback and social backing from peers will help patients build their self-assurance while maintaining their involvement in recovery. The implementation of these strategies across follow-up clinics and rehabilitation programs and community-based services will help patients recover better while using existing resources at a minimal cost.

Limitations and Future Directions

The evaluation contains multiple restrictions which affect its overall assessment. The research period from 2020 to 2024 might have omitted essential studies which were conducted before this time. The research studies failed to measure self-efficacy through standardized methods because they used different proxy variables which included confidence and perceived control and engagement. The different research methods and various measurement approaches used in studies make it difficult to perform direct analysis between them.

Future studies need to conduct both long-term observational research and intervention-based studies which will measure self-efficacy directly while investigating its direct impact on post-ICU recovery. Research on nursing-led interventions which focus on self-efficacy development and assessment could help healthcare providers create better recovery plans for ICU patients who survive their stay.

CONCLUTIONS

The research review identifies self-efficacy as a primary behavioral element which affects recovery outcomes for adult patients who survive ICU care. The included studies show that survivors who felt capable about their abilities would participate in rehabilitation programs and achieve better psychological outcomes while following up with their doctors after hospital discharge. The research shows that recovery from critical illness requires more than physical

recovery because patients' faith in their ability to handle recovery work plays a significant role in their recovery process.

The research shows that self-efficacy determines how survivors begin their recovery process and maintain their efforts while making adjustments to their recovery activities which leads to better functional results and improved emotional health and sustained medical services. People who had stronger self-efficacy tended to participate more fully in their rehabilitation program and learned effective coping methods and service utilization but those with weak confidence were more likely to stop participating and experience longer recovery times.

The research results from a nursing viewpoint demonstrate that post-ICU care needs to include self-efficacy assessment and support as a vital component. The recovery process of ICU survivors will benefit from nursing-led interventions which build their self-assurance while helping them set realistic targets and granting them independence. Research should concentrate on creating and testing specific treatment programs which focus on self-efficacy development as a treatable factor for post-ICU recovery.

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