

# Post intensive care syndrome: Patients after ICU discharge experiences the cognitive, physical and mental health impairments.

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## Abstract

**Post Intensive Care Syndrome (PICS) is a collection of physical, mental, and emotional symptoms that persist after a patient leaves the Intensive Care Unit (ICU). As a consequence of medical advances over the last several decades, more individuals are now surviving catastrophic diseases. PICS describe health problems that continue after a severe illness. They are present while the patient is in the ICU and may remain after discharge. These concerns might have an impact on the patient's body, thoughts, feelings, or psychology, as well as the patient's family.**

**Keywords:** ICU survivors, PICS, PICS-F, Post-intensive care syndrome.

## Introduction

PICS were just recently identified as a novel clinical entity in individuals who survived critical illness Intensive Care Unit (ICU) stays. With improved ICU patient survival rates globally, there is a growing interest in post-ICU recovery. This includes the impairment domains that compose PICS, as well as the aetiology and risk factors. Second, preventative measures and potential treatment options that can be included into follow-up care are presented. Finally, the authors will talk about the current SARS-Cov-2 pandemic and the elevated risk of PICS in these post-ICU patients and their families. Includes a variety of physical, cognitive, and psychological deficits, but it also has an influence on global health owing to long-term negative socioeconomic consequences. PICS are also relevant to carers of post-ICU patients [1].

Many studies have compared PICS patients' quality of life to that of age-matched population-based controls. Many PICS research employed the 36-item Short Form health survey questionnaire, although data for SF-36 levels before and after ICU admission are lacking. As a result, clinically significant alterations in SF-36 characteristics are unclear. As a result, we investigated the incidence of PICS impairment co-occurrence 6 months after ICU admission. We also assessed changes in SF-36 subscales and assessed patients' perceived importance of impairment [2].

Psychological morbidity connected to the ICU experience in both patients and family members is a frequently ignored, and possibly chronic, healthcare condition identified as PICS by the Society of Critical Care Medicine. ICU diaries are a growing intervention with the potential to reduce ICU-related psychological morbidity, such as Post-Traumatic Stress Disorder (PTSD), sadness, and anxiety. As the number of ICU

survivors grows, especially in the aftermath of the coronavirus pandemic, doctors must be prepared to comprehend the severity and incidence of serious psychological consequences of critical illness. When compared to the intervention group, there was a substantially higher reduction in PTSD, hyperarousal, and depressive symptoms at week 4. Other assessments or follow-up periods revealed no significant differences. At all timepoints after ICU release, both study groups had clinically significant PTSD symptoms. Follow-up phone conversations with patients found that, while many were eager to obtain treatment for their symptoms, there were several hurdles to receiving proper therapy and clinical care [3].

The early diagnosis of various cognitive phenotypes may show the participation of various pathophysiological mechanisms and aid in the clarification of the role of precipitating and predisposing variables. Our major goal is to use an unsupervised machine learning method to detect cognitive phenotypes in critically sick survivors following ICU release and compares them to the traditional approach to cognitive impairment evaluation. Precipitating and predisposing variables for cognitive impairment were investigated for descriptive purposes. Patients having a history of cognitive impairment, neurological disease, or mental illness were excluded. Clinical factors were recorded during the ICU stay, and 100 patients were cognitively evaluated after they were discharged. To discover cognitive traits, the unsupervised machine learning K-means clustering approach was used. To investigate precipitating and predisposing variables for cognitive impairment, exploratory analyses were employed [4].

When appropriate, random-effects models with inverse variance weighting are used to weight pooled outcome data.

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Psychological results are classified as either 1) negative (anxiety, depression, PTSD, anguish, and burden) or 2) positive (courage, humanity, justice, transcendence, temperance, and wisdom and knowledge). Stratification based on intervention type and patient population was carried out. While increasing burden, mental health therapies for carers of critically sick patients increased short-term anxiety, sadness, humanity, and transcendence. Clinicians should explore prescribing short-term mental health therapies to informal carers of critically ill patients who have the ability to handle interventions [5].

## Conclusion

PICS were present in the survivors who got mechanical breathing at 6 months; co-occurrence of PICS deficits occurred. PICS were connected with a population that received solely compulsory schooling. Future research is needed to determine the MCID of SF-36 scores in ICU patients and to standardise the PICS criteria. Perhaps ICU diaries could be useful in aiding the work of a programme that provides PICS patients with comprehensive treatment and attentive mental monitoring. This study discovered a high frequency of ICU-related PTSD in our survivor group, as well as a significant obstacle to adequate PICS therapy and the resulting psychological morbidity.

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