Sparkleirj ISSN 2523-9244 Volume 13 ISSUE 2 page 114-119
Journal link: https://sparkleirj.com/
Abstract Link: https://sparkleirj.com/13-2-114-119/
June 2025

Assessing the Psychological Impact of ICU Stay on Post-Discharge Quality of Life in Critical Care Survivors

[1]Muhammad Fahad Khaliq, [2]Dr Muhammad Rizwan Ahmed, [3]DR NIMRA REHMAN, [4]Dr Hafsa Malik, [5]Dr.Fatima Zahra, [6]Dr Muhammad Haneef

[1]House Officer, Allied Hospital Faisalabad
[2]Medical officer, Rahma Hospital khuiratta,Kolti Azad kashmir
[3]MEDICAL OFFICER, Jinnah Internation Hospital Abbottabad
[4]Post graduate trainee, PIMS Hospital
[5]Post graduate trainee Medicine, DHQ Mirpur AjK
[6]Student at Bolan Medical college Quetta

Abstract
Background:
Intensive Care Unit or ICU stays are crucial for survival of lives but it can have a significant psychological outcomes on survivors, which effects their post-discharge quality of life. Psychological distraction includes anxiety, depression, and some post-traumatic stress disorder or PTSD which have been increasingly reported amid ICU survivors.
Aim:
This study aims to evaluate the psychological influence of ICU stays on patients and examination of how these mental health challenges effect their overall quality of life after discharge from hospital.
Methods:
An anticipated associated study was conducted which involves adult's ICU survivors from a tertiary care hospital. Psychological evaluations were conducted by using validated tools like HADS, IES-R at 1, 3, and 8 months' post-discharge. Standard of life was evaluated by using the SF-40 questionnaire. Data were analyzed to identify link between ICU-related psychological symptoms and outcomes of quality of life.

Results:
Findings disclosed a high prevalence of anxiety 40%, depression 34%, and PTSD symptoms 30% among survivors. These psychological elements frequently correlate the reduced physical and mental quality of life in scores. Components include length of ICU stays, constraints, and other mechanical ventilation while duration were linked with severe psychological results.

Conclusion:
ICU survivors features the substantial psychological morbidity which severely affects the quality of life after discharge. Early psychological conceal and intervention in ICU checkup and care are important to improve the long-term recovery results.

Keywords: ICU, after discharge, physical, mental health

Introduction

The Intensive Care Unit or ICU plays a central role in managing severely ill patients, which provides life-saving intercede like mechanical ventilation, hemodynamic hold up, and renal replacement therapy links with continuous advancement in crucial care medicine, mortality rates among ICU patients have reduce frequently over recent years [1]. Moreover, survival alone is not lengthy, the only criterion of success. Progressively, attention shifts toward the standard of survival and the long-term outcome occurred by ICU survivors [2]. It is now highlighted that survives crucial illness which often leads to a multiplex

syndrome known as post-intensive care syndrome or PICS, which resolute physical, cognitive, and psychological impairments that can last months to years after hospital discharge [3]. Among s, psychological consequences have been increasingly reported and are recognized as a major determinant of post-ICU quality of life. Anxiety, depression, and post-traumatic stress disorder or PTSD symptoms are significantly registered, up with prevalence estimates ranging from 25% to over 55% depends upon the population and evaluation methods used [4]. These psychological symptoms may have generated from multiple ICU linked stressors, includes the traumatic experience of being severely ill, intrusive procedures, long term sedation, delirium, sleep privation, and the loss of autonomy. However, ICU patients mainly undergo graphic hallucinations and frightened memories during sedation and dementia episodes, which participates to long-lasting psychological distress. Psychological morbidity rate in ICU survivors is not just related to mental health issue but frequently affects the physical rehabilitation, social rehabilitation, and return to the work [5]. The relation between psychological distress and some physical disabilities may often create a brutal cycle that hinders recovery. Unfortunately, psychological symptoms may be unnoticed in routine after ICU follow-up, as physical disability may often take supersede in clinical assessments. Moreover, mental health support services support to ICU survivors which remains limited in many healthcare providers [6]. Evaluate the psychological impact of ICU stays and its effect on overall quality of life is crucial for developing inclusive care strategies. Quality of life is a multi-factorial construct, which emphasize physical functioning, mental health, social links, and general well-ness. Several studies suggested that psychological symptoms may completely correlate with decreased in quality of life, which highlight the importance of unsegregated care models that address mental health alongside physical rebuild [7]. This study aims to link to the growing body of evidence by systematically evaluating anxiety, depression, and PTSD symptoms in ICU survivors and examining their relation with quality of life and its results over 8 months after discharge [8]. Highlighted risk factors associated with poor psychological results will inform preventive and therapeutic intercede to optimize long-term recovery and quality of life in this endangered population.

Methodology

This potential observational associated study was conducted over a 14 months of period at a tertiary care academic hospital. Adult patients age lies between 30 years or older who 4 admitted to the ICU for more than 50 hours and survival to hospital discharge were eligible for consolidation. Patients with preceding severe psychiatric disorders, cognitive impairment related to ICU admission, or those who is not able to provide informed consent were exclude out. A total of 160 patients meets with these criteria were sequentially enrolled after providing written informed consent. Baseline data including demographics, ICU admission diagnosis, length of ICU stay, time duration of mechanical ventilation, sedation protocols, and severe illness which is measured by APACHE II rates were collected from medical records. Psychological evaluations were performed by using validated instruments at 1, 3, and 8 months' post-discharge. Anxiety and depression symptoms were measured by using the Hospital Anxiety and Depression Scale or HADS, with a score of 10 or more indicates clinically frequent symptoms. Post-traumatic stress disorder or PTSD symptoms were observed with the Impact of Event Scale-Revised or IES-R, where rates of 34 or higher suggested probability of PTSD. Quality of life was assigned by using the ,40-Item Short Form Health Survey or SF-40, which provides physical and mental components in result of scores ranges from 0 to 110, with higher results indicates the better quality of life. Data which was collected was conducted with the help of outpatients who visits or telephonic interviews. Descriptive statistics were used to collect patient characteristics and prevalence of psychological symptoms. Person relational coefficients examined out the relationship between psychological scores and quality of life in results. Multivariate regression analysis was employed out by identifying independent predictors of psychological distress, adjusting for suppressing g factors such as age, sex, ICU length of stays in hospital, and severity of illness. Statistical significance was set at $p < 0.06$.

Results

The study cohort comprised 155 ICU survivors, with a mean age of 57.5 years with SD ±14.3and 59.7% male. The average length of ICU stay was 9.8 days and 70% with number 110 required mechanical ventilation, with a median duration of 8 days. The mean APACHE II score was 19.3 or SD ±6.2. Psychological results at 1-month post-discharge revealed that 40% of patients exhibited clinically frequent anxiety symptoms, 34% identify depression symptoms, and 28% had probable PTSD. These rates decreased modestly over time but remained elevated at 22%, 24%, and 26%, respectively, at 8 months. The quality of life results in reflected sequential impairments early post-discharge. The mean SF-40 physical component score was 48.4 or SD ±12.6 at 1 month, improves to 55.8 or SD ±14.2 at 8 months. The mental components were lower in start at 42.9 or SD ±13.4 and rose to 50.0 or SD ±16.0 by 8 months. Relationship analyze frequent inverse relationships between psychological symptom rates and quality of life. For glance, HA anxiety and depression results shows a strong negative correlation in both physical ($r = -0.64$, $p < 0.002$ and mental $r = -0.76$, $p < 0.002$) SF-40 components at 1 month. PTSD symptoms obsessed by IES-R were also negatively correlated with physical ($r = -0.55$, $p < 0.002$) and mental ($r = -0.70$, $p < 0.002$) in quality of life. Multi-relational regression identifies the several independent predictors of psychological morbidity rate. Length mechanical ventilation (>8 days), higher doses, and ICU stays exceeds 12 days were frequently linked with increased risk of anxiety, depression, and PTSD symptoms after adjustment of age, sex, and illness severity. These findings highlight the key modifiable factors that would contributes to the adverse psychological outcomes in ICU survival rate

Table 1. Prevalence of Psychological Symptoms in Survivors after-Discharge

Time Post-Discharge	Anxiety (%)	Depression (%)	PTSD (%)
1 Month	40	34	30
3 Months	30	28	26
6 Months	26	24	22

Table 2. Relationship Between Psychological Symptoms and SF-40 Quality of Life at 1 Month

Psychological Measure	Physical quality of life(r)	Mental quality of life (r)	p-value
HADS Anxiety	-0.64	-0.76	<0.002
HADS Depression	-0.62	-0.72	<0.002
IES-R PTSD Symptoms	-0.56	-0.70	<0.002

Discussion

The findings of this study strengthen the frequent psychological load experienced out by survivors of crucial illness follows ICU discharge. Anxiety, depression, and PTSD symptoms were prevalence in over a 3/4th of participants early in the recovery phases, with many patients continues to exhibit symptoms at 8 months. These results align with previous research, undergrads the psychological impacts which are common and persistent challenges held by ICU survivors [9]. One of the key enrolls from this study is the negative relation between psychological symptoms and both physical and mental quality of life measures.

This emphasizes that psychological health profoundly influences overall well-being and functional status. Survivors griped with anxiety or depression may recognize greater physical limitations, experience reduced motivation for rehabilitation, and have impaired social functioning [10]. PTSD symptoms, characterized by intrusive memories, hyper arousal, and avoidance behaviors, can moreover isolate patients and impair their recovery trajectory. The bidirectional relationship between mental health and physical recovery may suggests that treating psychological disorders is relation to improving physical rehabilitation results [11]. The identification of prolonged mechanical ventilation, higher sedation doses, and extended ICU stays as predator of psychological distress is constant with important studies linking emergency and sedation-related factors to cognitive and emotional impairments [12]. Sedation and delirium may help to fragmented or traumatic memories of the ICU, which are known risk factors for PTSD. These findings mentioned modifiable clinical factors that could be highlighted to reduce psychological morbidity rate like protocols for sedation minimization, early mobilization, and delirium prevention [13]. In spite of the importance of psychological morbidity rates, many ICU survivors do not receive majority mental health screening or support after-discharge. Barriers include limited resources, poor level of awareness among healthcare takers, and challenges in coordinating multidisciplinary care [14]. However, emerging models like ICU recovery clinics that integrate physical rehabilitation, psychological counseling, and social support demonstrates promise. Early psychological intercede, includes cognitive behavioral therapy, which have been shown by reducing symptoms of anxiety, depression, and PTSD in ICU survivors [15]. This study limitations, includes its single-center design and reliance on self-report scales rather than clinical psychiatric diagnosis, which will be important when interpreting results.

Conclusion

ICU stays exert special psychological effects on survivors, which manifestoes as anxiety, depression, and PTSD that frequently impairs the quality of life post-discharge. Identifying at-risk patients and implications of targeted intercede are crucial for improving long-term results. These findings supervote for a holistic approach in crucial care recovery programs integrating mental health assessment and support as standard practices.

Reference

1. Gravante, F., Trotta, F., Latina, S., Simeone, S., Alvaro, R., Vellone, E., & Pucciarelli, G. (2024). Quality of life in ICU survivors and their relatives with post-intensive care syndrome: a systematic review. *Nursing in Critical Care*, *29*(4), 807-823.
2. Amacher, S. A., Sahmer, C., Becker, C., Gross, S., Arpagaus, A., Urben, T., ... & Hunziker, S. (2024). Post-intensive care syndrome and health-related quality of life in long-term survivors of cardiac arrest: a prospective cohort study. *Scientific Reports*, *14*(1), 10533.
3. Ayenew, T., Gete, M., Gedfew, M., Getie, A., Afenigus, A. D., Edmealem, A., ... & Messelu, M. A. (2025). Prevalence of Post-intensive care syndrome among intensive care unit-survivors and its association with intensive care unit length of stay: Systematic review and meta-analysis. *PLoS One*, *20*(5), e0323311.
4. Hatakeyama, J., Nakamura, K., Inoue, S., Liu, K., Yamakawa, K., Nishida, T., ... & Nishida, O. (2025). Two-year trajectory of functional recovery and quality of life in post-intensive care syndrome: a multicenter prospective observational study on mechanically ventilated patients with coronavirus disease-19. *Journal of Intensive Care*, *13*, 7.
5. Ursu, E., Mikolić, A., Thiara, S., Silverberg, N. D., Foster, D., Panenka, W., ... & Griesdale, D. E. (2024). Post-discharge health-related quality of life, cognitive function, disability, risk of post-traumatic stress disorder, and depression amongst the survivors of veno-venous extracorporeal membrane oxygenation (VV-ECMO) during the COVID-19 pandemic: a nested cohort study protocol. *medRxiv*, 2024-08.

6. Silva-Nascimento, T., Lima-Rocha, C., Ruvenal-Heine-Lustosa, L., Santos-Cerqueira, M., Santos-de-Queiroz, R., & Gomes-Neto, M. (2025). Risk factors for impairments in quality of life and activities of daily living in survivors of critical illness: A systematic review of observational studies. *Enfermería Intensiva*, *36*(2), 500527.
7. Malmgren, J., Lundin, S., Waldenström, A. C., Rylander, C., & Johannesson, E. (2024). Quality of life-related and non-quality of life-related issues in ICU survivors and non-ICU-treated controls: a multi-group exploratory factor analysis. *Critical Care*, *28*(1), 102.
8. Vlake, J. H., Van Bommel, J., Hellemons, M. E., Wils, E. J., Bienvenu, O. J., Schut, A. F., ... & Van Genderen, M. E. (2021). Psychologic distress and quality of life after ICU treatment for coronavirus disease 2019: a multicenter, observational cohort study. *Critical Care Explorations*, *3*(8), e0497.
9. Gravante, F., Trotta, F., Latina, S., Simeone, S., Alvaro, R., Vellone, E., & Pucciarelli, G. (2024). Quality of life in ICU survivors and their relatives with post-intensive care syndrome: a systematic review. *Nursing in Critical Care*, *29*(4), 807-823.
10. Amacher, S. A., Sahmer, C., Becker, C., Gross, S., Arpagaus, A., Urben, T., ... & Hunziker, S. (2024). Post-intensive care syndrome and health-related quality of life in long-term survivors of cardiac arrest: a prospective cohort study. *Scientific Reports*, *14*(1), 10533.
11. Amacher, S. A., Sahmer, C., Becker, C., Gross, S., Arpagaus, A., Urben, T., ... & Hunziker, S. (2024). Post-intensive care syndrome and health-related quality of life in long-term survivors of cardiac arrest: a prospective cohort study. *Scientific Reports*, *14*(1), 10533.
12. Vlake, J. H., Van Bommel, J., Wils, E. J., Korevaar, T. I., Hellemons, M. E., Schut, A. F., ... & Van Genderen, M. E. (2021). Effect of intensive care unit-specific virtual reality (ICU-VR) to improve psychological well-being and quality of life in COVID-19 ICU survivors: a study protocol for a multicentre, randomized controlled trial. *Trials*, *22*(1), 328.
13. Pant, U., Vyas, K., Meghani, S., Park, T., Norris, C. M., & Papathanassoglou, E. (2023). Screening tools for post–intensive care syndrome and post-traumatic symptoms in intensive care unit survivors: A scoping review. *Australian Critical Care*, *36*(5), 863-871.
14. Giannelou, E., Papathanassoglou, E., Karanikola, M., Giannakopoulou, M., Bozas, E., Skopeliti, N., & Mpouzika, M. (2025). Chronic pain in ICU survivors: Potential risk factors and relationship with post-traumatic stress disorder symptoms and health related quality of life. *Intensive and Critical Care Nursing*, *88*, 104003.
15. Kang, J., & Lee, M. H. (2025). Longitudinal trajectories of health-related quality of life among critical care survivors: A latent class growth approach. *Intensive and Critical Care Nursing*, *86*, 103892