



**Lorestan University of Medical Sciences
School of Nursing and Midwifery of Khorramabad**

Title:

**Comparatively Evaluate the Diagnostic Value of Delirium
Assessment Tools for Predicting Mortality and Hospital
Survival in Intensive Care Unit Patients at Shahid Rahimi
and Shohada Ashayer Hospitals in Khorramabad During
2024–2025**

By:

Fatemeh Yousefvand

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Thesis Supervisor:

Dr. Parastoo Kordestani Moghaddam

Thesis Advisors:

Dr. Sajad Yarahmadi

Dr. Mehdi Birjandi

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Abstract:

Introduction: Delirium is one of the most common disorders among patients admitted to intensive care units (ICUs), and its early detection using standardized tools can play a crucial role in reducing mortality and improving treatment outcomes. This study aimed to compare the diagnostic value of three tools (CAM-ICU, ICDSC, and RASS) in predicting mortality and hospital survival among ICU patients admitted to Shahid Rahimi and Shohada-ye Ashayer hospitals in Khorramabad during 2024–2025.

Materials and Methods: This diagnostic and screening test evaluation study included all adult patients admitted to the ICUs. Sampling was performed using a convenience method. Data were collected using the CAM-ICU, ICDSC, and RASS instruments and analyzed with SPSS software version 27.

Results: Findings from 86 patients indicated a hospital survival rate of 67.4%. The ICDSC correctly predicted survival in 66.3% of cases, CAM-ICU in 68.6%, and RASS in 77.9%. A statistically significant agreement was observed among the three tools in predicting patient survival ($P < 0.001$). Furthermore, a significant difference was found between RASS scores in deceased and surviving patients ($P < 0.001$). Among the instruments, RASS demonstrated the highest performance with a sensitivity of 93.1% and an accuracy of 80.2% in predicting ICU patient survival, whereas ICDSC (sensitivity: 56.9%, accuracy: 43%) and CAM-ICU (sensitivity: 56.9%, accuracy: 40.7%) showed comparatively weaker predictive performance.

Conclusion: Overall, although CAM-ICU and ICDSC indicated a relatively high incidence of delirium, none of the tools alone were sufficient for accurate prediction of final patient outcomes. However, due to its ease of use, high accuracy, and ability to identify high-risk patients, the RASS can be considered a superior instrument for use in intensive care unit.

Keywords: Diagnostic Value, Delirium, Prediction, Mortality, Survival, ICU, ICDSC, CAM-ICU, RASS.