



INTRODUCTION

> Navigating Challenges of ICU Patient Care

Patients in the intensive care unit (ICU) face intricate health challenges - **Pain, Agitation, Delirium, Immobility, and Sleep disturbances (PADIS)** - demanding specialized nursing care. Effective PADIS evaluation is essential, emphasizing the need for educational and specialized training programs that enhance nurse's knowledge, attitudes, and clinical skills.

> Delirium: A Common Yet Distressing Condition

Delirium is a frequent and serious condition in critically ill adult patients, presenting similar pathophysiological conditions across various settings. As a clinical diagnosis, delirium is identified using tools like:

- Confusion Assessment Method for the ICU (**CAM-ICU**)
- Intensive Care Delirium Screening Checklist (**ICDSC**)

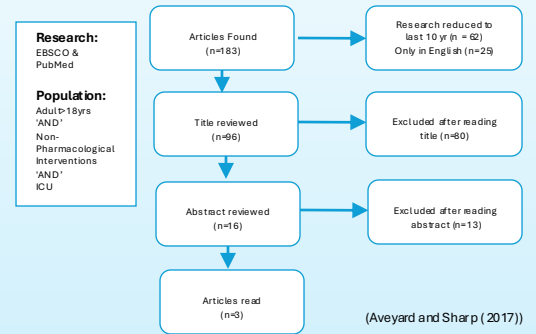
> Why it Matters:

Delirium impacts patients and their families deeply, contributing to:

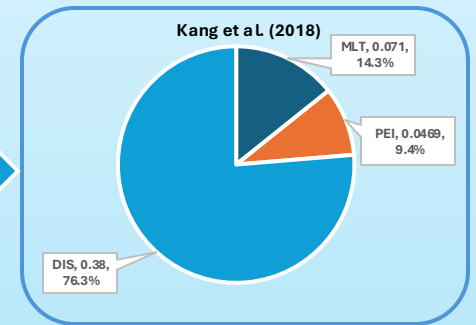
- **Poorer health outcomes**
- **Prolonged ICU and hospital stays (LOS)**
- **Increased healthcare costs**

(Devlin et al. (2018))

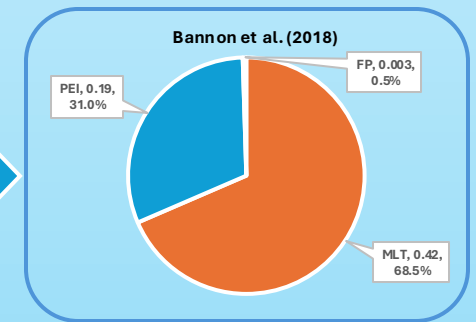
RESEARCH STRATEGY



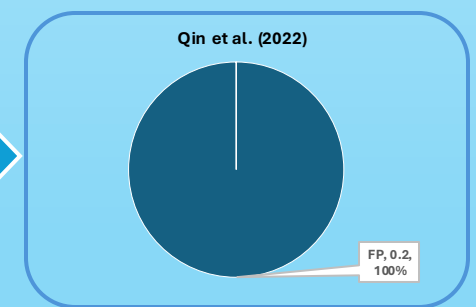
Study	Intervention	Findings	Limitations
Kang et al. (2018) "Effect of non-pharmacological interventions for the prevention of delirium in the ICU: A systematic review and Meta-analysis" Population: 25,283 patients 35 studies 20 studies- Cohort 11 studies- RCT 3 studies- CBA 1 study- CCT	Examine non-pharmacological interventions for ICU delirium prevention: -Multi component Interventions (MLT): 1. Awakening and Breathing Trials 2. Reorientation Strategies 3. Early Mobilization 4. Music therapy 5. Sleep-wake cycle promotion -Physical Environment: 1. Facing a window 2. Bright Light Therapy 3. Noise Reduction	• Multi-component interventions significantly reduced delirium occurrence ($p < 0.001$) but did not shorten duration ($p = 0.071$). • Physical environment interventions (PEI) ($p = 0.0469$) • Daily interruption of sedation (DIS) ($p = 0.380$) Effective in reducing delirium duration and occurrence, but not ICU length of stay or mortality.	• Limited studies restrict publication dates and language. • Assessment tools varied, causing inconsistencies.



Study	Intervention	Findings	Limitations
Bannon et al. (2018) "The effectiveness of non-pharmacological interventions in reducing the incidence and duration of delirium in critically ill patients: a systematic review and meta-analysis" Population: 2812 persons 15 Trials- RCT	MLT Intervention focused on comprehensive strategies targeting different aspects of ICU care: 1. Bright Light Therapy (PEI) 2. Family Voice Reorientation (FP) 3. Occupational Therapy & Range of Motion (EP)	• Four MLT trials showed a non-significant effect on delirium duration (-0.65 days, 99% CI -2.73 to 1.44, $p = 0.42$). • One FP study revealed a significant reduction (-1.30 days, 99% CI -2.41 to -0.19, $p = 0.003$). • Four PEI trials found no significant reduction in delirium incidence (99% CI 0.10 to 2.13, $p = 0.19$). • EP had limited significance in reducing delirium duration due to high variability. Only the FP study was significant ($p = 0.003$); other interventions were non-significant due to variability and small samples.	• Heterogeneity in intervention types, delivery methods, and outcome measures present challenges. • Inconsistencies in delirium duration reporting hinder data presentation. • Most trials are small, limiting statistical power and widening confidence intervals. • Lack of standardization in interventions leads to significant trial heterogeneity.



Study	Intervention	Findings	Limitations
Qin et al. (2022) "Family intervention for delirium for patients in the intensive care unit: a systematic meta-analysis" Population: 4199 patients 6 Studies 4 RCTs 1 Before-and-after study 1 Cohort Trial	To evaluate the effects of family intervention (FP) on the incidence and duration of delirium, length of ICU stay, and duration of ventilation in ICU patients.	Family intervention was associated with a 24% lower risk of delirium $p = 0.20$ Family intervention reduced the number of delirium days $p = 0.08$. No significant differences between the two groups in -Length of stay in ICU $p = 0.14$ -MVD $p = 0.56$ -Mortality $p = 0$.	• Small sample size which affected the outcome evaluation. • Studies used different types of family interventions which led to analytical bias. • Family engagement had a negative effect as opposed to positive.



DISCUSSION

- The three articles emphasize the need for effective non-pharmacological interventions to manage and prevent delirium in ICU patients. All studies recognize delirium as a common and serious condition and promote interventions that avoid medication. Multi-component strategies are often recommended for addressing multiple risk factors, although evidence for their efficacy varies.
- Qin et al. (2022) focused on family interventions, showing significant delirium risk reduction but minimal impact on ICU stay or mortality. In contrast, Bannon et al. (2018) and Kang et al. (2018) assessed various intervention types. Kang et al. (2018) found multi-component strategies most effective in reducing delirium incidence, while Bannon et al. (2018) questioned the efficacy of most, calling for better-designed trials for clearer conclusions.
- Key differences include the studies' scopes and sample sizes: Qin et al. (2022) analyzed a larger patient population using family-based strategies, while Kang et al. (2018) and Bannon et al. (2018) examined a wider range of interventions with varying evidence quality.
- Despite these differences, all articles stress the need for robust research to confirm the benefits of non-pharmacological interventions, especially multi-component approaches and family engagement, in improving delirium outcomes in critically ill patients.

RECOMMENDATIONS

