Rehabilitation and Sports Medicine. 2023; 3:55
doi: 10.56294/ri202355

REVIEW

Independent care performed by nursing professionals in the prevention of delirium

Cuidados independientes que realizan los profesionales de enfermería en la prevención del delirio

María Rosenda Fernanda Calcagno[1]

[1]Universidad ISALUD. Ciudad Autónoma de Buenos Aires, Argentina.

Cite as: Calcagno MRF. Cuidados independientes que realizan los profesionales de enfermería en la prevención del delirio. Rehabilitation and Sports Medicine. 2023;3:55. https://doi.org/10.56294/ri202355

Submitted: 16-05-2023 **Revised:** 08-07-2023 **Accepted:** 20-08-2023 **Published:** 21-08-2023

Editor: Dr. Carlos Oscar Lepez

Translated by: Cristhian Alejandro Pérez Pacheco

ABSTRACT

Introduction: Delirium is a condition that affects attention, consciousness, and cognition, especially in older people. It can result from underlying diseases or medications. It has a great economic and social impact, with the need for special care, increased risk of falls, prolonged hospitalization and institutionalization.
Methods: A literature search was performed in SciELO and Scopus with the keywords "delirium", "prevention" and "nursing" establishing inclusion and exclusion criteria to select 15 relevant articles on the independent care provided by nursing professionals in the prevention of delirium occurrence in the last 5 years and open access.
Results: The importance of delirium prevention and management through nursing interventions and the use of specific tools is highlighted. The potential of technology for early detection and preventive intervention is highlighted. Nurses play an essential role in the early identification and management of delirium by implementing various interventions and assessment tools. The implementation of standardized measures and protocols to improve the quality of care is recommended, although the need for future studies to improve delirium care is suggested.
Conclusion: The importance of nursing interventions in the prevention and management of delirium was observed, highlighting their effectiveness in reducing the incidence and severity. The usefulness of easily accessible tools and technologies for early detection is highlighted. On the other hand, the need for continuous research to improve patient care and quality of life was emphasized.

Keywords: Delirium; Prevention; Nursing; Intervention.

RESUMEN

Introducción: el delirio es una condición que afecta la atención, conciencia y cognición, especialmente en personas mayores. Puede resultar de enfermedades subyacentes o medicamentos. Tiene un gran impacto económico y social, con necesidad de cuidados especiales, mayor riesgo de caídas, hospitalización prolongada e institucionalización.
Métodos: se realizó una búsqueda bibliográfica en SciELO y Scopus con las palabras clave "delirio", "prevención" y "enfermería" estableciendo criterios de inclusión y exclusión para seleccionar 15 artículos relevantes sobre los cuidados independientes que realizan los profesionales de enfermería en la prevención de la aparición de delirio en los últimos 5 años y de acceso abierto.
Resultados: se resalta la importancia de la prevención y manejo del delirio mediante intervenciones de enfermería y el uso de herramientas específicas. Se destaca el potencial de la tecnología para la detección temprana e intervención preventiva. Los enfermeros desempeñan un papel esencial en la identificación y control temprano del delirio, implementando diversas intervenciones y herramientas de evaluación. Se

recomienda la implementación de medidas y protocolos estandarizados para mejorar la calidad del cuidado, aunque se sugiere la necesidad de futuros estudios para mejorar la atención del delirio.
Conclusión: se observó la Importancia de las intervenciones de enfermería en la prevención y manejo del delirio, resaltando su efectividad en la reducción de la incidencia y gravedad. Se destaca la utilidad de herramientas y tecnologías de fácil acceso para la detección temprana. Por otro lado, se enfatiza la necesidad de investigación continua para mejorar la atención y calidad de vida de los pacientes.

Palabras clave: Delirio; Prevención; Enfermería; Intervención.

INTRODUCTION

Delirium, also known as Acute Confusional State (ACS), is an acute and variable condition characterized by disturbances in attention, consciousness, and cognition. It can occur as a result of an underlying medical condition or in susceptible individuals exposed to precipitating factors. Delirium represents a significant cognitive impairment in older adults, both in terms of prevalence and prognosis. It can manifest as a clinical feature of severe medical conditions or emerge during their course, occasionally associated with the use of specific medications.[1]

The impact of delirium is considerable, bearing significant economic and social implications since patients necessitate specialized care by healthcare personnel, have an elevated risk of falls, a prolonged hospitalization, and may lead to the need for institutionalization. These factors underscore the necessity for physicians and healthcare professionals to achieve accurate and early diagnosis.[2]

There are three primary classifications of delirium. Hyperactive delirium is distinguished by symptoms such as agitation, aggressiveness, confusion, hallucinations, and delusional ideation. It accounts for approximately 15-25 % of cases and is often linked to substance withdrawal or intoxication, as well as the anticholinergic effects of specific medications.[3] Hypoactive delirium, more prevalent among older individuals, is characterized by reduced motor activity, psychomotor retardation, bradyphrenia (slowed thinking), slow speech, limited facial expressiveness, lethargy, and apathy. It typically arises in cases of metabolic disturbances. Lastly, mixed delirium comprises approximately 35-50 % of cases, presenting with alternating episodes of hyperactivity and hypoactivity over time.[4]

Nursing professionals implement a range of autonomous care interventions aimed at preventing delirium in patients under their care. These measures encompass cognitive stimulation and activation, fostering active family engagement, and the utilization of validated assessment tools, such as the Confusion Assessment Method for the Intensive Care Unit (CAM-ICU) and the Richmond Agitation-Sedation Scale (RASS)[5] in the Intensive Care Unit (ICU).

Fundamental measures for stimulating cognitive function include orienting the patient to their surroundings, offering flexible and extended visiting hours, ensuring the presence of visible clocks and natural light throughout the day and night. It is imperative to maintain open communication with the patient, with all interacting personnel wearing clear identification.[6] Furthermore, patients should be provided with comprehensive explanations regarding their illness and all procedures and interventions being administered. Therapeutic activities, such as discussions on current or engaging topics and structured memories, should be scheduled. Additionally, patients should have the freedom to use dentures and access newspapers, reading materials, music, radios, and televisions. Other actions encompass addressing visual and auditory impairments, supplying eyeglasses and hearing aids as needed, along with proper eye and ear cleaning. Lastly, the environment should be adapted to facilitate the mobility of patients with visual and auditory impairments.[7]

Involving the patient's family actively in their care can be highly beneficial, as it enhances control over the situation and reduces the necessity for interventions like mechanical restraint in cases of hyperactive-type delirium.[8]

The Richmond Agitation-Sedation Scale (RASS) is a widely utilized tool in the intensive care unit (ICU) for assessing the sedation levels of patients receiving medical sedation. This scale comprises ten levels, ranging from +4 points (indicating combative agitation) to -5 points (indicating profound sedation). These levels are categorized into three ranges: anxiety-agitation (+1 to +4 points), moderate-conscious sedation (0 to -3 points), and deep sedation (-4 to -5 points). The RASS is designed to be user-friendly and aids healthcare professionals in precisely evaluating the sedation status of patients, as well as identifying states of agitation or delirium.[9]

The Confusion Assessment Method for the Intensive Care Unit (CAM-ICU) is another scale utilized to assess the presence of delirium. This tool considers four key criteria: the presence of acute and fluctuating onset, inattention, disorganized thinking, and an altered level of consciousness. The assessment process begins by evaluating the patient's reactivity level using the RASS scale. If the patient's reactivity falls within the range of -3 to +4 on the RASS, the criteria of acute or fluctuating onset and inattention are then assessed. Subsequently,

https://doi.org/10.56294/ri202355

to confirm the presence of delirium, an evaluation is conducted for disorganized thinking or an altered level of consciousness. The presence of either of these two alterations confirms the diagnosis of delirium.[2]

The intensive care unit (ICU) is acknowledged as a stressful environment, and when combined with the risk factors present in critically ill patients, it significantly elevates the likelihood of delirium development. Studies indicate a high incidence rate, with up to 80 % of patients admitted to the ICU experiencing delirium.[10] Moreover, approximately 40 % of elderly patients who develop delirium during their ICU stay continue to experience it after leaving the ICU, and around 35-40 % of hospitalized patients with delirium do not survive beyond one year.[10] Given the substantial incidence and mortality rates, it becomes paramount for nursing professionals to implement proactive measures and employ validated assessment tools to prevent the onset of delirium in ICU patients. This proactive approach allows for primary prevention through the observation of early warning signs, prompt detection, ongoing symptom monitoring, and timely intervention to mitigate the manifestation of this syndrome.

METHODS

To perform a literature search on the independent care provided by nursing professionals in preventing delirium, the Scielo and Scopus databases were utilized. The keywords used were “delirium”, “prevention”, and “nursing”. The search expression employed was “delirium AND prevention AND nursing”. Inclusion and exclusion criteria were established to select relevant studies, with a focus on those addressing actions independently undertaken by nursing professionals to prevent delirium in intensive care units. The selected studies were required to be in English, Spanish, or Portuguese, fall within the nursing thematic area, have been published within the last five years (2018-2023), and be available as open access and free. Conversely, studies centered on violence against nursing professionals, predisposing factors for delirium such as pharmacological aspects, infectious diseases, dementia, fractures, falls, and pain management were excluded. The emphasis was on the autonomous actions of nursing professionals in preventing the onset of delirium in patient care, ensuring the relevance and pertinence of the selected studies for our analysis. The review was conducted following the PRISMA workflow.[11] Ultimately, ten articles were included for analysis after applying the selection criteria (figure 1).

RESULTS

Primary prevention holds vital significance for nursing professionals. The ability to discern these measures and initiate their implementation at the outset of patient care is fundamental for preventing the appearance of delirium.

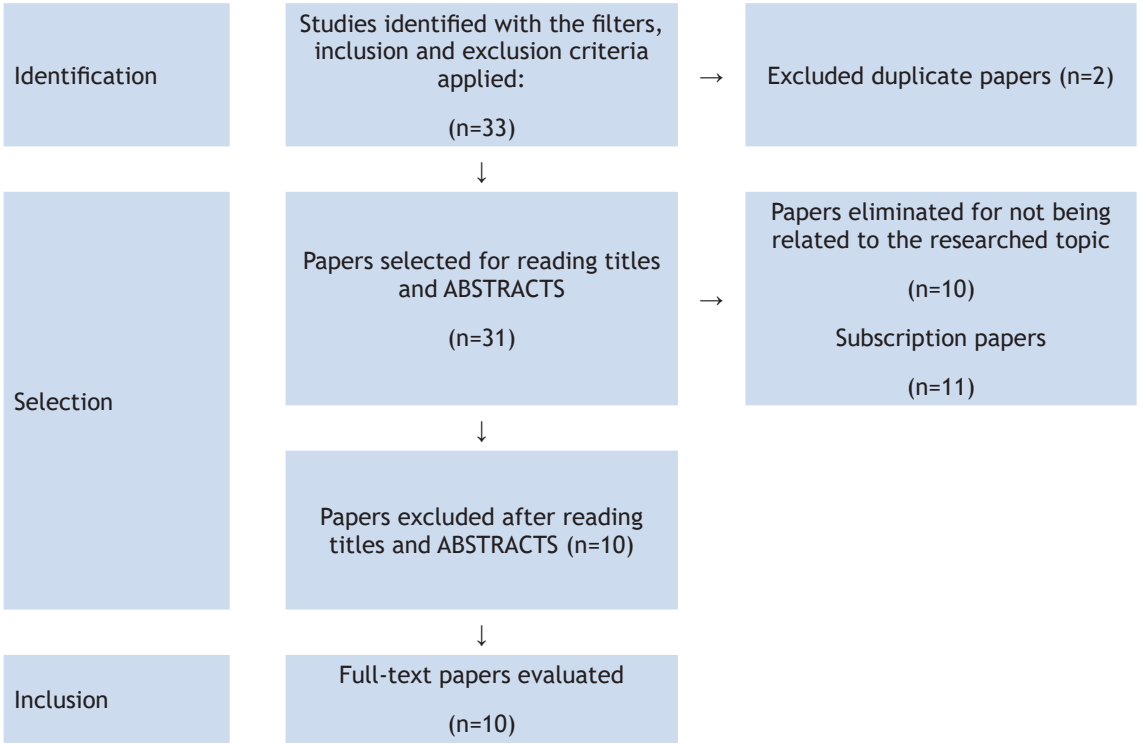

Figure 1. Identification of studies via databases and records. Workflow in accordance with the PRISMA methodology

Table 1. Main results from the analyzed articles

N	Author, year, country	Type of study	Sample	Type of intervention	Main results
1	Park et al.[12] 2023. Republic of Korea.	Clinical Trial	130 patients	Monitoring through a digital application.	The easily accessible digital application, Web_DeliPREVENT_4LCF, demonstrated efficacy in reducing delirium episodes and one-month hospital mortality. The intervention group exhibited a lower incidence of delirium, with a relative risk of 0,30 (95% CI 0,12–0,79; P = 0,015), and a reduced one-month hospital mortality, with a relative risk of 0,08 (95% CI 0,01–0,79; P = 0,031), in comparison to the control group. These findings underscore the feasibility of healthcare professionals to access and utilize the application for early detection and preventive intervention in cases of delirium
2	Oliveira et al.[13] 2022. Portugal.	Literature review	Scholarly Articles	Interventions at nursing level that contribute to reducing morbidity and mortality associated with delirium in hospitalized patients.	Nurses play an essential role in the identification, prevention, and early management of delirium, thereby contributing significantly to the reduction of both morbidity and mortality. Nursing interventions should include the identification of predisposing and/or precipitating factors, encompassing those related to the environment, sleep promotion, early therapeutic interventions, cognitive assessments, patient orientation, the systematic interventions in protocols, and initiatives targeting family involvement, nursing education, and patient education. The identification of risk factors and the utilization of assessment tools also feature in this approach.
3	Méndez-Martínez et al.[14] 2021. Spain.	Literature review	Scholarly Articles	Interventions at nursing level in the implementation of standardized measures and protocols.	Nursing interventions appear to play a key role in the prevention or reduction of delirium after episodes of anesthesia. Nursing staff assumes a fundamental role in the prevention, diagnosis, and management of delirium. The adoption of standardized measures and protocols as routine clinical practice is strongly recommended. These measures may encompass non-pharmacological strategies such as patient reorientation through time-related objects such as clocks and calendars in the patient's room, maintaining adequate lighting conditions, minimizing excessive noise levels, facilitating the use of hearing aids and eyeglasses, and promoting early mobilization, among others.
4	Flores-Oñate et al.[15] 2021. Chile.	Literature review	Scholarly Articles	Implementation of preventive measures for delirium	Four factors influencing delirium have been delineated: pathophysiology and risk factors, prevention and promotion, objective assessment, and management within critical care units. The management of care assumes a fundamental role, and delirium incidence impacts detrimentally the care quality and contributing to prolonged hospital stays, extends the mechanical ventilation requirements, and elevates mortality rates. Strategies for delirium prevention have been identified, encompassing risk reduction measures and interventions designed to stop its progression and mitigate its consequences. These strategies encompass the deployment of delirium assessment tools, the enhancement of risk management, the implementation of comprehensive protocols for both pharmacological and non-pharmacological interventions, patient and family education initiatives, and the utilization of validated delirium assessment tools such as the CAM-ICU and the checklist for delirium detection in intensive care settings.

https://doi.org/10.56294/ri202355

5	Contreras et al.[16] 2021. Colombia.	Quasi-Experimental Study	157 patients in the intervention group and 134 patients in the control group	Nursing intervention via actions aimed at patient orientation, cognitive stimulation and family support was effective in preventing delirium in critically ill patients.	The incidence of delirium in the control group was 20,1 %, whereas in the intervention group, it was 0,6 %. Nursing interventions were found to be highly effective in preventing delirium among critically ill patients. The average intervention duration was 4 days, with a dedicated time of 15 minutes per patient. The effectiveness of nursing interventions in reducing delirium among ICU patients was demonstrated. The research group recommends the implementation of interventions focused on patient orientation, cognitive stimulation, and robust family support.
6	Kubota et al. 2020. Japan[17].	Retrospective Cohort Study	2168 patients admitted to the surgical unit	Intervention through the development of a delirium detection tool for hospitalized patients. (Subjective Delirium Screening Scale by Nurse).	A delirium detection tool was developed for hospitalized patients with a total score of 5 points. The tool comprises 2 points for disorientation and 1 point each for restlessness, drowsiness, and hallucination. The area under the curve for the Subjective Delirium Screening Scale by Nurse was 81,9 %, with a more appropriate cutoff value of 2 (sensitivity of 61,0 % and specificity of 96,7 %). The tool exhibited satisfactory diagnostic accuracy.
7	Lawlor et al. 2019. Canada[18].	Review	104 studies	Intervention through empirical evidence mapping in four key domains of delirium management in palliative care: detection, prognosis and diagnosis, management, and health-related outcomes.	Significant lacunae in the evidence were discerned, encompassing risk prediction for delirium, comparative effectiveness of preventive interventions, the adverse effects of that interventions, disparities in delirium management practices across various palliative care settings, the active involvement of patients and caregivers in care-related decisions, and the long-term repercussions of delirium on patients. The necessity for robust future research is highlighted to address these lacunae and augment the quality of delirium care within palliative care contexts.
8	Ono et al. 2018. Japan[19].	Observational Study	19 patients	Intervention through the evaluation of the effectiveness of continuous monitoring of postoperative delirium in patients undergone esophagectomy using the NEECHAM Confusion Scale.	NEECHAM confusion scale scores exhibited a sharp decline on the first day, followed by marked and consistent improvement on each subsequent day. Patients without delirium displayed a steady recovery pattern, whereas those afflicted by delirium exhibited a protracted recovery. The proposition of continuous mental function monitoring after esophagectomy was set forth as a means to anticipate postoperative delirium. Early detection and proactive measures for delirium prevention can optimize patient care and outcomes.
9	Contreras et al. 2021. Colombia[20].	Clinical Trial	81 patients	The multicomponent nursing intervention is characterized by including mediation against some of the risk factors for the development of delirium in intensive care units.	The multicomponent nursing program has demonstrated efficacy in preventing delirium among critically ill patients. In the intervention group, the incidence of delirium was 5 %, while in the control group, it reached 24 %. This represents an absolute risk reduction of 19,39 %, with a needed number to treat of 5 patients (95% CI 3 to 26 %). The multicomponent nursing intervention is distinguished by including the mediation to mitigate some of the risk factors associated with delirium development in intensive care units. Furthermore, these interventions can be autonomously executed by nursing personnel, as they are feasible strategies in the current healthcare context. Measures such as temporal, spatial, and personal orientation, the provision of visual and auditory stimuli, and robust family support consistently yield favorable outcomes throughout the evolution of the condition. Moreover, they exhibit cost-effectiveness in delirium prevention as well as a reduction in their severity and duration.

https://doi.org/10.56294/ri202355

10	Pão-Mole et al. 2018. Portugal[21].	Literature Review	Scholarly Articles	Intervention involving the identification of studies presenting dynamic, preventive, and predominantly non-pharmacological strategies against delirium.	Five studies were identified in the literature review, which presented dynamic, preventive, and predominantly non-pharmacological strategies for combatting delirium. This underscores the critical role of nurses in implementing preventive measures, (primarily targeted at mitigating the risk factors associated with this neurological disorder) encompassing the preservation of sensory equilibrium, environmental management, ensuring appropriate nutrition and feeding, pain monitoring, sleep promotion, and the facilitation of early mobilization.

https://doi.org/10.56294/ri202355

The reviewed articles address diverse aspects pertaining to the prevention and management of delirium through independent nursing interventions, alongside the utilization of specific tools and protocols. It is noteworthy that the digital application "Web_DeliPREVENT_4LCF". which demonstrated its effectiveness in reducing delirium incidence and one-month hospital mortality.[12] This underscores the potential of easily accessible technologies for early detection and preventive intervention in the context of delirium. Park M and Moon KJ posit that healthcare professionals can readily access and adeptly employ this digital application for the early detection and preventive management of delirium in hospitalized patients. This underscores the application's potential utility as an accessible tool for medical and nursing personnel, thereby enhancing their capacity to identify delirium and institute appropriate preventive measures. It is imperative to accentuate that such non-pharmacological interventions hold significant value within the healthcare field, offering a viable alternative to the overreliance on medicines for delirium prevention and management. Furthermore, early delirium detection has the potential to facilitate timely interventions and, conceivably, to augment outcomes and the quality of care delivered to afflicted patients.

Another specific tool for early delirium detection, as highlighted by Kubota K et al.[17], is the "Subjective Delirium Screening Scale by Nurse". This tool seems to hold promise with commendable diagnostic accuracy, featuring a total score of 5 points that encompasses various indicators including disorientation, restlessness, drowsiness, and hallucination. The tool manifests a sensitivity of 61,0 % and a specificity of 96,7 %. These findings indicate its substantial diagnostic accuracy and can be a valuable instrument for nurses in early delirium detection.

Other important factor discerned in the reviewed studies is the indispensable role of nurses in the identification, prevention, and early management of delirium, notably within the Intensive Care Unit (ICU).[15,16,20] The studies enumerate a range of interventions that nurses can competently undertake, including measures related to the environment, the promotion of sleep, the timely initiation of therapeutic interventions, cognitive assessment, and patient orientation. Moreover, there is a pronounced accentuation on the creation of systematic interventions in protocols to ensure that nurses can provide consistent and evidence-based care.[13]

Méndez-Martínez et al. accentuate the significance of the implementation of non-pharmacological interventions directed at patient reorientation, integrating familiar objects like clocks and calendars within the patient's immediate surroundings, so confusion and anxiety can be reduced.[14] Furthermore, the importance of maintaining appropriate lighting levels and noise reduction within the patient's environment is underscored. The facilitation of the utilization of hearing aids and eyeglasses can substantially enhance communication and sensory perception. The early mobilization promotion assumes key importance. The early instigation of movement and physical activity can preserve cognitive function and reduce the perils associated with protracted immobility. The importance of delirium prevention in surgical patient care is also mentionated, advocating continuous monitoring of cognitive function as a predictive tool for postoperative delirium. This accentuates the pertinence of early delirium detection and prevention, with the potential to augment patient care management and clinical outcomes.[14] These preventive actions could include some modifications to the hospital environment to promote a better patient orientation, a higher sleep quality, and a reduction in ambient noise and disorientation.[15]

Contreras C et al. also posit the significance of patient orientation as a crucial strategy to help patients to stay connected with the reality and prevent confusion. Cognitive stimulation can fortify mental acuity and augment patients' cognitive capacity, thereby facilitating information processing and cognitive clarity.[16]

Multiple authors underscore the importance of family support. According to Contreras C et al., the presence of family members can exert a favorable influence on the emotional well-being and stability of patients, thereby contributing to delirium prevention.[20] Flores-Oñate G et al. emphasize that educational initiatives targeting both patients and their families assume a crucial role in the prevention and management of delirium.[15] By empowering patients and their families with knowledge pertaining to delirium and preventive measures enables them to actively participate in their care, thereby fostering more favorable recovery trajectories.[15]

Pão-Mole M et al. additionally enumerate other non-pharmacological measures in delirium prevention, extending beyond patient orientation. These encompass environmental management, for instance, noise reduction and appropriate lighting to foster an environment conducive to recovery. Adequate nutrition and feeding are underscored as crucial facets for preserving patient well-being, given that malnutrition and dehydration can serve as risk factors for delirium development. The monitoring and management of pain are imperative, as uncontrolled pain can contribute to the precipitation of delirium.[21] Sleep hygiene is another important aspect to consider, as sleep deprivation acts as another predisposing factor. Finally, it is imperative the promotion of early mobilization, especially within hospitalized or intensive care contexts.[21]

Flores-Oñate G et al. emphasize that objective assessment is an essential part of delirium management. The employment of specific and validated assessment tools such as the CAM-ICU and ICDSC is deemed vital, permitting the early and precise identification of delirium. Timely assessment is crucial in facilitating the prompt initiation of pertinent interventions. Among the manifold preventive measures identified, the accentuation on

the possession of specific assessment tools remains prominent. These tools enable the identification of delirium and facilitate the assessment of its severity in a more objective manner.[15]

Furthermore, several articles mention the necessity for the implementation of standardized measures and protocols which can help improve patient outcomes and the quality of care. Given the intimate and sustained proximity of nursing personnel to patients, the potential for nursing staff to exert a substantial impact on delirium prevention and reduction is evident, ultimately contributing to more favorable patient recovery trajectories and an overall well-being.[13,14]

In the context of delirium management in palliative care, Lawlor P et al. emphasize the necessity of addressing gaps in the existing delirium-related evidence. They advocate for the imperative need for future robust studies that focus on various facets, including risk prediction, comparative evaluation of interventions, assessment of adverse effects, standardization of management approaches, the active involvement of both patients and caregivers, and the evaluation of long-term impacts. Such aspects are essential to advance patient care standards and enhance the overall quality of life for individuals undergoing palliative care.[18]

Concerning postoperative delirium, Ono H et al. accentuate the significance of continual monitoring of mental function, using the NEECHAM Confusion Scale in patients after esophagectomy. Their findings reveal a distinctive pattern in NEECHAM Confusion Scale scores, with a sharp decline observed on the first day following surgery, followed by a significant and consistent improvement in patients without delirium. In contrast, patients afflicted with delirium experienced a protracted and less favorable recovery trajectory. These results underscore the indispensability of the employment of validated assessment scales within the intensive care unit (ICU).[19]

Contreras C et al. conducted a study that highlight the effectiveness of a multicomponent nursing program in the prevention of delirium among critically ill patients. Their intervention revealed noteworthy outcomes, manifesting as a substantial reduction in delirium incidence within the intervened group in comparison to the control group. The observed discrepancy in delirium incidence is substantial, with a mere 5 % of patients in the intervened group developing delirium, as opposed to a significantly higher rate of 24 % in the control group. These findings highlight the efficacy, feasibility, and cost-effectiveness of the multicomponent nursing program as a strategy to both prevent delirium and ameliorate its severity and duration. The implications of these results extend to the enhancement of healthcare quality and patient outcomes within critical care settings, thereby underscoring the relevance of nursing in healthcare improvement.[20]

CONCLUSION

Through the review of the articles, it became evident that the independent interventions conducted by nursing professionals play a crucial role in the prevention and management of delirium. The significance of providing comprehensive, patient-centered care was emphasized, highlighting the importance of healthcare professionals' collaboration, the utilization of appropriate technological tools, and the implementation of non-pharmacological interventions as essential components of effective delirium prevention and management, these factors contribute significantly to foster positive outcomes and enhancing the quality of life for affected patients. Furthermore, it underscores the necessity of ongoing research efforts to address existing gaps in evidence, thereby improving the care and quality of life for these patients.

REFERENCES

1. Quesada Astorga D. Delirium en el adulto mayor 2015;614:3-7.

2. Stollings JL, Kotfis K, Chanques G, Pun BT, Pandharipande PP, Ely EW. Delirium in critical illness: clinical manifestations, outcomes, and management. Intensive Care Med 2021;47:1089-103. https://doi.org/10.1007/s00134-021-06503-1.

3. Boehm LM, Jones AC, Selim AA, Virdun C, Garrard CF, Walden RL, et al. Delirium-related distress in the ICU: A qualitative meta-synthesis of patient and family perspectives and experiences. Int J Nurs Stud 2021;122:104030. https://doi.org/10.1016/j.ijnurstu.2021.104030.

4. Burry LD, Cheng W, Williamson DR, Adhikari NK, Egerod I, Kanji S, et al. Pharmacological and non-pharmacological interventions to prevent delirium in critically ill patients: a systematic review and network meta-analysis. Intensive Care Med 2021;47:943-60. https://doi.org/10.1007/s00134-021-06490-3.

5. Khan TN, Itrat M, Ansari TH. Public health approach of Unani medicine to cope and stay safe in hot environmental conditions. J Basic Clin Physiol Pharmacol 2021;33:235-41. https://doi.org/10.1515/jbcpp-2020-0296.

6. Delirium: prevention, diagnosis and management in hospital and long-term care. London: National Institute for Health and Care Excellence (NICE); 2023.

7. Palencia-Herrejón E, Romera MA, Silva JA, Grupo de trabajo de sedación y analgesia de la SEMICYUC. Delirio en el paciente crítico. Medicina Intensiva 2008:77-91.

8. Tonna JE, Dalton A, Presson AP, Zhang C, Colantuoni E, Lander K, et al. The Effect of a Quality Improvement Intervention on Sleep and Delirium in Critically Ill Patients in a Surgical ICU. Chest 2021;160:899-908. https://doi.org/10.1016/j.chest.2021.03.030.

9. Hui D, De La Rosa A, Wilson A, Nguyen T, Wu J, Delgado-Guay M, et al. Neuroleptic strategies for terminal agitation in patients with cancer and delirium at an acute palliative care unit: a single-centre, double-blind, parallel-group, randomised trial. Lancet Oncol 2020;21:989-98. https://doi.org/10.1016/S1470-2045(20)30307-7.

10. Li J, Cai S, Liu X, Mei J, Pan W, Zhong M, et al. Circadian rhythm disturbance and delirium in ICU patients: a prospective cohort study. BMC Anesthesiol 2023;23:203. https://doi.org/10.1186/s12871-023-02163-4.

11. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. Declaración PRISMA 2020: una guía actualizada para la publicación de revisiones sistemáticas. Revista Española de Cardiología 2021;74:790-9. https://doi.org/10.1016/j.recesp.2021.06.016.

12. Park M, Moon KJ. Web-Based Delirium Prevention Application for Long-Term Care Facilities. Journal of the American Medical Directors Association 2023;24:559-563.e2. https://doi.org/10.1016/j.jamda.2022.12.023.

13. Oliveira C, Garnacho Martins Nobre CF, Centro Hospitalar Universitário Lisboa Norte, EPE, Dourado Marques RM, Universidade Católica Portuguesa, Madureira Lebre Mendes MM, et al. O papel do enfermeiro na prevenção do delirium no paciente adulto/idoso crítico. Rev Cuid 2022. https://doi.org/10.15649/cuidarte.1983.

14. Méndez-Martínez C, Fernández-Martínez MN, García-Suárez M, Martínez-Isasi S, Fernández-Fernández JA, Fernández-García D. Related Factors and Treatment of Postoperative Delirium in Old Adult Patients: An Integrative Review. Healthcare 2021;9:1103. https://doi.org/10.3390/healthcare9091103.

15. Flores-Oñate G, Ceballos-Vásquez P, Mejías-Parada R. Cuidados para el manejo de delirio en Unidades de Paciente Crítico: una revisión integrativa. cuid 2021. https://doi.org/10.14198/cuid.2021.59.15.

16. Contreras CCT, Páez-Esteban AN, Rincon-Romero MK, Carvajal RR, Herrera MM, Castillo AHDD. Nursing intervention to prevent delirium in critically ill adults. Rev esc enferm USP 2021;55:e03685. https://doi.org/10.1590/s1980-220x2019035003685.

17. Kubota K, Suzuki A, Ohde S, Yamada U, Fujitani I, Koitabashi A. Development of a Simple and Practical Delirium Screening Tool for Use in Surgical Wards. Journal of Nursing Research 2020;28:e90. https://doi.org/10.1097/jnr.0000000000000366.

18. Lawlor PG, Rutkowski NA, MacDonald AR, Ansari MT, Sikora L, Momoli F, et al. A Scoping Review to Map Empirical Evidence Regarding Key Domains and Questions in the Clinical Pathway of Delirium in Palliative Care. Journal of Pain and Symptom Management 2019;57:661-681.e12. https://doi.org/10.1016/j.jpainsymman.2018.12.002.

19. Ono H, Doki Y, Miyata H, Yamasaki M, Takahashi T, Endo Y, et al. Postoperative Delirium After Esophagectomy: The Efficacy of Continual Monitoring Using the NEECHAM Confusion Scale. SAGE Open Nursing 2018;4:237796081875679. https://doi.org/10.1177/2377960818756799.

20. Contreras CCT, Esteban ANP, Parra MD, Romero MKR, Silva CGD, Buitrago NPD. Multicomponent nursing program to prevent delirium in critically ill patients: a randomized clinical trial. Rev Gaúcha Enferm 2021;42:e20200278. https://doi.org/10.1590/1983-1447.2021.20200278.

21. Pao Mole Bento MS, Dourado Marques RM, Pontífice Souza P. Delirium: intervenciones de enfermería en el adulto hospitalizado – una revisión bibliográfica. Enfermeria Global 2018.

FINANCING

There is no funding for this work.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

AUTHORSHIP CONTRIBUTION

Conceptualization: María Rosenda Fernanda Calcagno.
Research: María Rosenda Fernanda Calcagno.
Methodology: María Rosenda Fernanda Calcagno.
Project administration: María Rosenda Fernanda Calcagno.
Original writing-drafting: María Rosenda Fernanda Calcagno.
Writing-revision and editing: María Rosenda Fernanda Calcagno.

https://doi.org/10.56294/ri202355