



THE ROLE OF BEHAVIORAL ASPECTS IN THE IMPLEMENTATION OF THE INTERNATIONAL PATIENT SAFETY GOALS TO REDUCE THE RISK OF PATIENT FALLS IN HOSPITALS: A SCOPING REVIEW

Indriyani¹, Zahroh Shaluhiah², Daru Lestantyo³

¹Magister of Public Health, Faculty of Public Health Diponegoro University

^{2,3}Department of Health Promotion and Behavioral Sciences, Faculty of Public Health Diponegoro University
indriyani.garuda@gmail.com, shaluhiah.zahroh@gmail.com, darulestantyo@live.undip.ac.id

Abstrak

Nurses represent the largest proportion of healthcare professionals in hospitals (40–60%) and are entrusted with the continuous implementation of patient fall prevention measures. Accordingly, they hold a critical role in influencing the success of hospital accreditation. Tujuan: Penelitian ini bertujuan untuk melakukan tinjauan literatur guna mengidentifikasi bukti ilmiah terkini mengenai faktor-faktor risiko jatuh pasien serta efektivitas berbagai intervensi pencegahan yang diterapkan di fasilitas pelayanan kesehatan. Metode: Penelitian menggunakan desain scoping review yang direncanakan melalui penelusuran artikel ilmiah pada basis data ScienceDirect, dengan kata kunci "patient safety goals", "fall risk", dan "care". Hasil analisis bibliometrik dari VOSviewer dikombinasikan dengan temuan analisis tematik untuk menyusun peta konseptual. Hasil: Berdasarkan literatur yang ada, pencegahan jatuh efektif dilakukan melalui intervensi multifaktor yang melibatkan penilaian risiko terstandar, edukasi pasien dan keluarga, peningkatan keselamatan lingkungan, serta keterlibatan aktif tenaga kesehatan. Namun, efektivitas tiap intervensi bervariasi tergantung pada konteks implementasi dan karakteristik pasien. Kesimpulan: Diperlukan tinjauan literatur yang komprehensif untuk mengintegrasikan hasil-hasil penelitian terkini, mengidentifikasi kesenjangan bukti, dan merumuskan rekomendasi strategis bagi penerapan program pencegahan jatuh yang efektif dan berkelanjutan di fasilitas pelayanan kesehatan.

Kata Kunci: *International Patient Safety Goals; Perilaku Risiko; Pasien Jatuh.*

Abstract

Nurses represent the largest proportion of healthcare professionals in hospitals (40–60%) and are entrusted with the continuous implementation of patient fall prevention measures. Accordingly, they hold a critical role in influencing the success of hospital accreditation. *Objective: This study aimed to conduct a literature review to identify the latest scientific evidence regarding patient fall risk factors and the effectiveness of various preventive interventions implemented in healthcare facilities. Methods: The study used a scoping review design informed by a search of the ScienceDirect database for scientific articles using the keywords "patient safety goals," "fall risk," and "care." The results of a bibliometric analysis using VOSviewer were combined with thematic analysis findings to construct a conceptual map. Results: Based on the existing literature, effective fall prevention is achieved through multifactorial interventions involving standardized risk assessments, patient and family education, environmental safety improvements, and active involvement of healthcare workers. However, the effectiveness of each intervention varies depending on the implementation context and patient characteristics. Conclusion: A comprehensive literature review is needed to integrate current research findings, identify evidence gaps, and formulate strategic recommendations for implementing effective, sustainable fall prevention programs in healthcare facilities.*

Keywords: *International Patient Safety Goals; Risk Behaviors; Patient Falls*

@Jurnal Ners Prodi Sarjana Keperawatan & Profesi Ners FIK UP 2026

* Corresponding author :

Address : Semarang

Email : indriyani.garuda@gmail.com

Phone : +62 815-6619-269

INTRODUCTION

Nurses represent the largest proportion of healthcare professionals in hospitals (40–60%) and are entrusted with the continuous implementation of patient fall prevention measures. Accordingly, they hold a critical role in influencing the success of hospital accreditation. Nurses serve as key agents in safeguarding patient safety and mitigating potential harm throughout the continuum of care delivery. (Bargmann & Brundrett, 2020). Nurses are expected to adhere to organizational strategies aimed at identifying hazards and risks through patient assessment, care planning, monitoring and supervision activities, re-evaluation, offering assistance, and effective communication with other healthcare providers. (Keuseman & Miller, 2020). In addition to clear policies, effective leadership, healthcare staff training, and patient participation, nurses’ adherence to patient safety principles is essential for the success of interventions aimed at preventing practice errors and achieving a more sustainable and safer healthcare system. (Yasan et al., 2025).

Nurses are required to engage with patients continuously over a 24-hour period, resulting in more frequent and prolonged interactions compared to other healthcare professionals. (Bowo et al., 2018). The effective implementation of fall prevention strategies necessitates an interdisciplinary collaboration and shared accountability among diverse professional groups within the hospital setting. (McLennan et al., 2024). The involvement of all parties, including physicians, nurses, and other healthcare staff, can enhance the effectiveness of fall prevention programs. Continuous training for medical personnel on patient safety procedures and fall prevention is essential. (Keuseman & Miller, 2020). Studies have shown that adequate training can improve compliance with fall prevention interventions.

Implementing patient safety in hospitals requires the development of several key aspects, one of which is knowledge. Knowledge is the outcome that arises after an individual perceives or senses a particular object or phenomenon. (Okuyucu, 2025). The factors influencing the level of knowledge include age, education, access to information, and experience or length of employment. The occurrence of patient falls in hospitals is closely related to nurses as primary care providers who directly interact with patients in their daily duties. Therefore, nurses must possess adequate knowledge of the Standard Operating Procedures (SOP) for fall risk and consistently implement these procedures in accordance with established policies to minimize patient fall risks and prevent fall-related injuries.

A nurse’s attitude toward adherence to a patient safety culture reflects a shared norm that has been mutually agreed upon and implemented within the hospital. A positive attitude among nurses fosters greater compliance with patient safety practices, thereby enhancing the overall safety and quality of care. (Baek et al., 2024). A positive attitude can be cultivated when it is rooted in a strong sense of responsibility for one’s choices and the potential risks they entail. The more positive a

nurse’s attitude, the more effectively patient safety practices can be implemented in accordance with established standards, ultimately reducing the likelihood of patient injury. However, fall risk prevention has not been fully optimized, largely due to the limited awareness among nurses regarding the importance of continuously expanding their knowledge and understanding of patient safety, particularly fall prevention, through mass media and digital platforms. Many nurses remain dependent on the information obtained solely from formal training session.

The implementation of patient safety is also closely linked to the availability of facilities and infrastructure. According to the Indonesian Ministry of Health Regulation No. 11 of 2017 on Patient Safety, healthcare institutions are mandated to provide supporting facilities to ensure compliance with safety standards in service delivery. In this context, reducing fall risk during initial patient assessments can be challenging when existing infrastructure does not adequately support the work of healthcare professionals. The effectiveness of these facilities depends not only on their physical availability but also on their proper utilization and maintenance. Without competent human resources and a strong safety culture, even well-equipped facilities will fail to optimally support patient safety initiatives.

Fostering a culture of safety within hospitals where all staff members feel personally responsible for patient safety, can significantly reduce fall risk. This includes ensuring adherence to all safety procedures and maintaining accountability for every fall incident. Behavioral aspects such as patient education, engagement of medical staff, appropriate use of equipment and protocols, and the cultivation of a robust safety culture are critical components in the implementation of the International Patient Safety Goals (IPSGs) aimed at minimizing patient fall risks (Alhatmi, 2011). Through a comprehensive and collaborative approach, the risk of patient falls can be significantly minimized.

To effectively reduce fall incidents, healthcare facilities must consider both intrinsic and extrinsic factors that contribute to fall occurrences. These efforts include enhancing patient awareness and engagement, improving environmental safety, ensuring adequate staffing levels, and implementing consistent and accurate risk assessments. However, various studies indicate that the effectiveness of each intervention may vary depending on contextual factors, patient characteristics, and the quality of implementation in practice. Therefore, an in-depth literature review is needed to identify the most recent evidence, evaluate the effectiveness of different prevention strategies, and formulate appropriate recommendations to enhance patient safety within healthcare settings.

METHOD

1. Research Design

This study employed a *scoping review* design with the aim of mapping the existing scientific evidence regarding the role of behavioral aspects in the implementation of the International Patient

Safety Goals (IPSG) in reducing the risk of patient falls in hospital settings. The research question guiding this review was: *“What is the role of behavioral aspects in the implementation of the International Patient Safety Goals (IPSG) in reducing patient fall risk in hospitals?”*

2. Literature Search Strategy

The literature search was conducted systematically using the Scopus database as the primary source, given its comprehensive multidisciplinary coverage and inclusion of highly reputable international scientific journals. The types of publications included were original research articles, qualitative and quantitative studies, and review articles relevant to the topics of the International Patient Safety Goals (IPSG) and healthcare professionals’ behavioral aspects. The search was performed using a combination of keywords applied to the title, abstract, and keyword fields, including *“patient safety goals”* AND *“fall risk”* AND *“care”* (Figure 1).



Figure 1. Results of the literature search from the Scopus database

3. Data Analysis

To strengthen the results of the literature mapping, a bibliometric analysis was conducted using **VOSviewer** (Li & Hassan, 2023). The analysis steps included:

a. Data Extraction from Scopus database

Bibliographic data obtained from the Scopus search were exported in **RIS** format, including citation information (title, authors, year, journal), abstracts, and keywords.

b. Data Import to VOSviewer

The RIS data were then imported into VOSviewer using the options “Create a map based on bibliographic data” and “Read data from Scopus files.” The types of analyses performed included: Co-occurrence analysis, which identifies the most frequently appearing terms or topics in the literature; Co-authorship analysis, which examines the collaboration networks among authors and countries contributing to the topics of IPSG and patient fall prevention; and Citation analysis, which determines the most influential articles or journals within this field (Karlsson et al., 2023).

c. Visual Mapping Development

VOSviewer generated visual maps (*network visualizations*) illustrating the relationships among terms based on their co-occurrence within the analyzed literature. Several types of visualizations were utilized, including network visualization, which displays the interconnections among key terms such as *“patient safety,”* *“behavior,”* *“IPSG,”* and *“fall prevention.”*

d. Interpretation of Mapping Results

The visualization results were then interpreted to identify the dominant research themes related to IPSG implementation and patient fall prevention, uncover research gaps that remain underexplored,

particularly those concerning the behavioral aspects of healthcare professionals and determine future research directions aimed at enhancing patient safety through behavioral approaches

4. Integration of Analysis

The results of the bibliometric analysis from VOSviewer were integrated with thematic analysis findings to construct a conceptual framework illustrating the relationships among *“IPSG implementation,”* *“healthcare professionals’ behavioral factors,”* and *“reduction of patient fall risk in hospitals.”* This integration provided a comprehensive understanding of the current research landscape and highlighted opportunities for future studies to advance patient safety through interdisciplinary and behavior-based interventions.

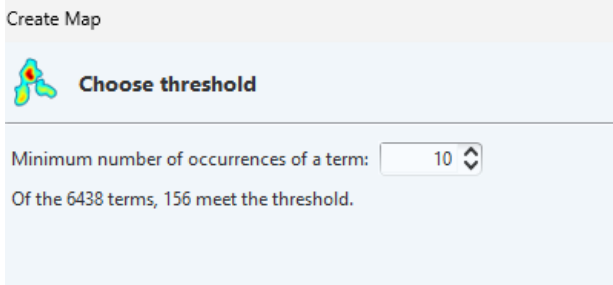


Figure 2. VOSviewer analysis based on the minimum occurrence threshold.

Figure 2 illustrates the minimum occurrence threshold for terms to be included in the analysis or mapping. A threshold value of 10 indicates that only terms (words or phrases) appearing at least ten times within the dataset were considered for inclusion in the map. Out of a total of 6,438 terms identified in the dataset, only 156 terms met this criterion, and therefore, only these terms were utilized for visualization and mapping

RESULTS AND DISCUSSION

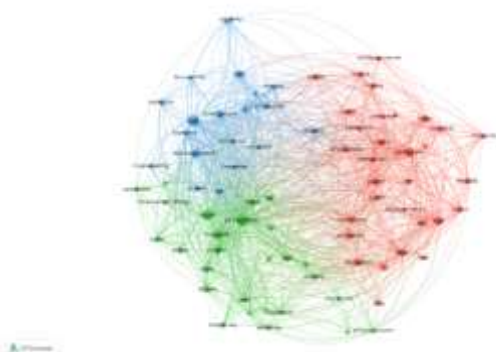


Figure 3. Keyword Co-occurrence Network Map of Research Themes

Figure 3 presents a **keyword co-occurrence network map**, which illustrates the relationships among concepts or terms that frequently appear together within a collection of scientific publications. The map visually represents how research themes are interconnected based on the frequency and strength of co-occurrence between keywords. A detailed explanation of the elements in the figure is as follows:

1. Node

Each node represents a single keyword. The size of the node indicates the frequency of the keyword’s occurrence within the dataset, the larger the node,

the more frequently it appears. For example, keywords such as “*prevention*,” “*nurse*,” and “*participant*” appear as larger nodes, signifying their frequent use in the analyzed publications.

2. Edges

Edges connect two keywords that co-occur frequently within the same article. The thickness or density of the line between two nodes represents the strength of their co-occurrence relationship, the thicker the line, the stronger the association between the two terms.

3. Colors (clusters)

Colors represent clusters of keywords that are closely related, which can be interpreted as major research themes or topic areas

- a. Green: Associated with hospital care, fall prevention, nursing processes, and inpatient care.
- b. Blue: Focused on tool development, risk assessment, evaluation tools, and measurement.
- c. Red: Related to participants, clinical trials, intervention effectiveness, and research outcomes.

4. Interpretation

Overall, the figure illustrates three major research themes: The clinical and fall prevention theme in hospital settings (green); The risk assessment and measurement tools theme (blue); and the participant-based and clinical intervention research theme (red). The overlap between these themes indicates a strong interconnection, demonstrating that these topics are mutually supportive within the broader context of nursing research and patient injury prevention.

Based on the analyzed keyword co-occurrence network, the research landscape on patient safety, particularly fall risk prevention in hospitals, can be categorized into three main clusters: (1) clinical processes and prevention efforts by healthcare professionals cluster, (2) utilization of measurement tools and risk assessment cluster, and (3) patient participation and evaluation of intervention effectiveness cluster. These three clusters are highly interrelated and reflect a multidisciplinary approach in implementing the International Patient Safety Goals (IPSG), particularly the sixth goal, which emphasizes the reduction of patient fall risks.

The first cluster, dominated by terms such as *nurse*, *prevention*, *process*, and *inpatient*, highlights that the role of nursing professionals is a fundamental component in the successful implementation of the IPSG. In practice, nurses are not only responsible for performing technical procedures but also play a crucial role in fostering safety-oriented behavior through adherence to risk assessment, incident reporting, and effective communication with patients and other healthcare team members. Proactive behavior, awareness of patient safety importance, and the ability to identify risk factors early are tangible manifestations of *safety behavior* that support IPSG implementation at the operational level.

The second cluster, characterized by terms such as *tool*, *risk assessment*, and *protocol*, underscores the importance of systemic and instrumental aspects in reinforcing safety behavior. Fall risk assessment tools such as the *Morse Fall*

Scale or *Hendrich II Fall Risk Model* serve as essential guidelines for healthcare professionals in making data-driven decisions. However, the effectiveness of these tools largely depends on user behavior. Nurses’ compliance in performing routine assessments, interpreting the results accurately, and implementing preventive measures according to risk categories reflects professional conduct that strengthens IPSG implementation.

Meanwhile, the third cluster, represented in red, reflects the active involvement of patients and their families, with keywords such as *participant*, *activity*, *life*, and *effectiveness*. This indicates that behavioral change is required not only among healthcare providers but also among patients. Educating patients about fall risks, encouraging active participation in maintaining their own safety, and fostering open communication with healthcare professionals are key strategies in cultivating a sustainable patient safety culture. Thus, behavioral aspects play a dual role: as a determinant of healthcare professionals’ compliance with safety standards and as a means of empowering patients to engage in safe practices during hospitalization.

Overall, the visualization of the keyword network reinforces the understanding that the implementation of the IPSG cannot rely solely on systems and protocols it requires behavioral transformation and an organizational culture that places patient safety as a top priority. A consistent behavioral approach, combined with strong managerial support, continuous education, and effective interprofessional communication, will make a substantial contribution to reducing fall incidents in hospitals and improving the overall quality of patient safety.

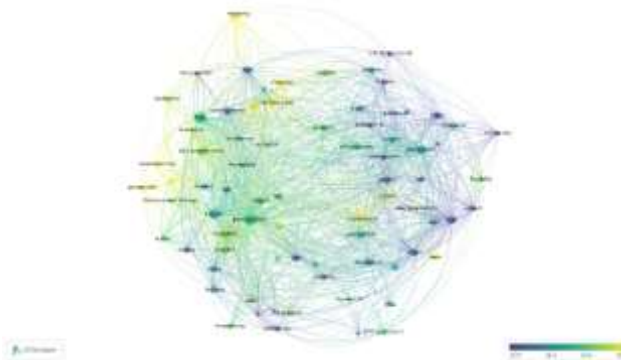


Figure 4. Keyword co-occurrence network map based on research trend over time.

Figure 4 illustrates the relationships among research topics within the literature on patient fall prevention in hospital settings over a specific time span (2017–2020), as represented by the color trends. The color of the nodes and connecting lines indicates the average publication year associated with each keyword: dark blue corresponds to around 2017, green to 2018–2019, and yellow to approximately 2020. This temporal gradient helps visualize the evolution of research trends over time.

It indicates that research during this period predominantly focused on fall prevention strategies in inpatient settings, emphasizing the role of nurses and the use of risk assessment tools or instruments.

Keywords such as “awareness,” “knowledge,” “role,” “experience,” and “protocol” frequently co-occurred with “prevention” and “nurse,” suggesting that behavioral and human competency factors have been central themes in both research and the practical implementation of fall prevention measures. Behavioral aspects including awareness, compliance, and risk perception are the critical role in determining the effectiveness of patient safety initiatives (Cámara-Calmaestra et al., 2025; Danial et al., 2025; Tana et al., 2025). Training interventions, effective communication, and a strong safety culture need to be reinforced so that fall prevention strategies transcend administrative procedures and become an integral part of everyday professional behavior. More recent studies (represented in yellow, 2019–2020) increasingly emphasize the development of tools and behavior- or education-based programs aimed at enhancing the effectiveness of the IPSG implementation.

Based on the bibliometric visualization of the keyword network, research on patient fall prevention in hospitals demonstrates a clear interconnection between technical aspects and healthcare professionals’ behavioral components. Larger nodes such as “prevention,” “nurse,” “inpatient,” “tool,” and “risk assessment” indicate that these are the central themes within the scientific discourse on patient safety. The strong associations among keywords like “awareness,” “knowledge,” “protocol,” “experience,” and “performance” suggest that behavior, knowledge, and compliance of healthcare workers play a pivotal role in the successful implementation of fall prevention strategies.

Within the framework of the International Patient Safety Goals (IPSG), particularly IPSG 6: “Reducing the risk of patient harm resulting from falls”, behavioral aspects serve as a determining factor for the effectiveness of implementation at the operational level. This goal underscores the importance of conducting thorough fall risk assessments, implementing evidence-based preventive interventions, and maintaining continuous evaluation for patients identified as high-risk. Strengthening behavioral commitment through ongoing training, multidisciplinary collaboration, and organizational culture development is therefore essential to achieving sustainable improvements in patient safety outcomes. (Alvarado et al., 2024; Testa et al., 2024). However, the effectiveness of implementation does not solely depend on the availability of assessment tools or standardized procedures, but also on the behavior of healthcare professionals in consistently adhering to established protocols. Levels of awareness, risk perception, compliance with guidelines, and interprofessional communication are critical behavioral elements that strongly influence the success of IPSG implementation.

The keyword network map also reveals that recent research trends (2019–2020) have shifted from a predominantly technical focus toward a more comprehensive and behavior-oriented approach, emphasizing the development of tools and behavior-based programs. This shift indicates that preventive measures are now increasingly recognized not

merely as procedural responsibilities, but as integral components of a safety culture that must be internalized by every healthcare professional. Behavioral factors such as intrinsic motivation, incident reporting, and organizational support have emerged as key determinants in fostering a safe and proactive work environment (Baek et al., 2024; Ortenzio et al., 2024).

Thus, it can be concluded that the implementation of the International Patient Safety Goals (IPSG) in efforts to reduce patient fall risk is inherently linked to the behavioral aspects of healthcare professionals. Enhancing patient safety can be achieved more effectively when accompanied by the reinforcement of positive behaviors through training, supervision, effective communication, and the establishment of a sustainable patient safety culture within the hospital environment.

CONCLUSION

The implementation of the International Patient Safety Goals (IPSG) has been shown to play a crucial role in reducing the risk of patient falls in hospitals, primarily through the compliant, vigilant, and safety-oriented behaviors of healthcare professionals. Opportunities for further development include the application of behavior-based training programs, the utilization of safety monitoring technologies, and interprofessional collaboration to strengthen the overall patient safety culture. However, key challenges remain, such as the inconsistent behavioral adherence among healthcare personnel, limited resources, and the suboptimal integration between policy and practice at the operational level. Therefore, strengthening safety-oriented behaviors through a systemic approach supported by strong managerial commitment is essential to ensure the sustainable and effective implementation of IPSG across healthcare settings.

REFERENCES

Alhatmi, Y. (2011). Safety as a hospital organizational priority: A case study. *Clinical Governance*, 16(3), 203–219. <https://doi.org/10.1108/14777271111153831>

Alvarado, N., McVey, L., Hardiker, N., Zaman, H., Dowding, D., Gardner, P., Healey, F., & Randell, R. (2024). Strategies used by nurse leaders to support the delivery of falls prevention practices in hospitals. *Nursing Older People*, 36(6). <https://doi.org/10.7748/nop.2024.e1478>

Baek, O.-J., Moon, H. J., Kim, H., & Shin, S.-H. (2024). Content Analysis of Patient Safety Incident Reports Using Text Mining: A Secondary Data Analysis. *Korean Journal of Adult Nursing*, 36(4), 298–310. <https://doi.org/10.7475/KJAN.2024.36.4.298>

Bargmann, A. L., & Brundrett, S. M. (2020). Implementation of a Multicomponent Fall Prevention Program: Contracting with Patients for Fall Safety. *Military Medicine*, 185, 28–34. <https://doi.org/10.1093/milmed/usz411>

Bowo, E. A., Suwandi, T., & Indriani, D. (2018).

- The relationship of lack of control factors with the basic cause in effort to prevent fall risk on hospitalized patients in Muhammadiyah Lamongan hospital. *Indian Journal of Public Health Research and Development*, 9(5), 32–36. <https://doi.org/10.5958/0976-5506.2018.00407.2>
- Cámara-Calmaestra, R., Martínez- Amat, A., Aibar-Almazan, A., Hita-Contreras, F., de Miguel-Hernando, N., Rodríguez-Almagro, D., Jiménez-García, J. D., & Achalandabaso-Ochoa, A. (2025). Resistance exercise to reduce risk of falls in people with Alzheimer's disease: a randomised clinical trial. *Physiotherapy (United Kingdom)*, 126. <https://doi.org/10.1016/j.physio.2024.101440>
- Danial, M., Chow, C. T., Lim, M. H., Ayop, N. A., Looi, I., & Ch'ng, A. S. H. (2025). AI-based patient monitoring for fall prevention in stroke patients: a pilot study at a Malaysian acute stroke unit. *Journal of NeuroEngineering and Rehabilitation*, 22(1). <https://doi.org/10.1186/s12984-025-01706-9>
- Karlsson, A. W., Kragh-Sørensen, A., Børgesen, K., Behrens, K. E., Andersen, T., Kidholm, M. L., Rothmann, M. J., Ketelaar, M., & Janssens, A. (2023). Roles, outcomes, and enablers within research partnerships: A rapid review of the literature on patient and public involvement and engagement in health research. *Research Involvement and Engagement*, 9(1), 1–27. <https://doi.org/10.1186/s40900-023-00448-z>
- Keuseman, R., & Miller, D. (2020). A hospitalist's role in preventing patient falls. *Hospital Practice*, 48(sup1), 63–67. <https://doi.org/10.1080/21548331.2020.1724473>
- Li, P., & Hassan, S. H. (2023). Mapping the literature on Gen Z purchasing behavior: A bibliometric analysis using VOSviewer. *Innovative Marketing*, 19(3), 62–73. [https://doi.org/10.21511/im.19\(3\).2023.06](https://doi.org/10.21511/im.19(3).2023.06)
- Mclennan, C., Sherrington, C., Tilden, W., Jennings, M., Richards, B., Hill, A.-M., Fairbrother, G., Ling, F., Naganathan, V., & Haynes, A. (2024). Considerations across multiple stakeholder groups when implementing fall prevention programs in the acute hospital setting: a qualitative study. *Age and Ageing*, 53(10). <https://doi.org/10.1093/ageing/afae208>
- Okuyucu, K. (2025). Enhancing patient safety: identifying fall risks during patient transfers in operating rooms. *BMC Health Services Research*, 25(1). <https://doi.org/10.1186/s12913-025-12750-5>
- Ortenzio, M. P., Brittain, G. V., Frommeyer, T. C., Muwanga, D. P., Stolfi, A., Parikh, P. P., & O'Malley, P. A. (2024). Quality evaluation of the usefulness of an emergency department fall risk assessment tool. *American Journal of Emergency Medicine*, 76, 93–98. <https://doi.org/10.1016/j.ajem.2023.10.033>
- Tana, C., Di Risio, A., Moffa, S., Gallo, C., Di Nardo, R., Palmieri, M., Cipollone, F., & Racciatti, D. (2025). Perceived knowledge and attitudes toward fall prevention among nurses and healthcare assistants: a Cross-Sectional survey study. *Annals of Medicine*, 57(1). <https://doi.org/10.1080/07853890.2025.2559127>
- Testa, L., Richardson, L., Cheek, C., Hensel, T., Austin, E., Safi, M., Ransolin, N., Carrigan, A., Long, J., Hutchinson, K., Goirand, M., Bierbaum, M., Bleckley, F., Hibbert, P., Churruca, K., & Clay-Williams, R. (2024). Strategies to improve care for older adults who present to the emergency department: a systematic review. *BMC Health Services Research*, 24(1). <https://doi.org/10.1186/s12913-024-10576-1>
- Yasan, C., Pretto, G., & Burton, P. (2025). A High Fall Risk Patient Perspective—Reducing Safety Challenges in an Acute Care Hospital. *Nursing Open*, 12(2). <https://doi.org/10.1002/nop2.70161>