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A scoping review: Nurses' workload in patients for fall risk screening

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ABSTRACT

Half of all falls result in injury, of which 10% are seriously impacted. Direct medical expenses resulting from falls amount to nearly $30 billion annually. Nurses must engage cognitive, affective, and actions that put patient safety first. The breadth of the nurse's role can allow for the risk of errors in service. This scoping review is prepared to discuss the effect of nurse workload in screening the risk of falls on patients. The method used here is scoping review which is used to develop a 'map' regarding the effect of nurse workload in screening the current patient's fall risk. The search databases used in this writing include: SINTA, PubMed, EBSCOhost, and SagePub. The search was conducted on October 16, 2023 and the included studies were research taken in 2013-2023. The authors found seven scientific journals that discuss the effect of workload in screening patient fall risk. The four journals came from Indonesia, one journal each from Brazil, Taiwan, and Canada. Workload is consistently associated with suboptimal fall risk screening. This is because nurses will be busy doing other things, so screening and monitoring patients from the risk of falling cannot be done properly.

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INTRODUCTION

Falling is a condition in which a person experiences a body movement to the ground or a lower location than the previous one suddenly and accidentally (Pasquetti et al., 2014). An outpatient fall is usually defined as a fall that occurs accidentally, not due to a particularly severe acute event or external event that could befall someone who is vulnerable. Falls are a condition that occurs more often with age. Every year, about 30-40% of people aged 65 and over living in such communities fall (Phelan et al., 2015). About half of all falls result in injury, of which 10% are seriously impacted. Direct medical expenses resulting from falls amount to nearly $30 billion annually (Phelan et al., 2015). The reported incidence of falls among adults is 30% per year for ages >65, and between 4-50% for ages >80 (Montero-Odasso, 2016; Rubenstein, 2006). The incidence of falls each year is close to 60% in individuals who have a history of falls in the previous year. The prevalence of falls increases to 40% in older inpatients, whereas older adults in long-term care facilities have a fall prevalence ranging from 45-50% (Montero-Odasso, 2016; Rubenstein, 2006).

Falls are caused by the interaction of various risk factors and situations. These interactions are modified based on age, disease, and environment (Pasquetti et al., 2014). The underlying causes of falls tend to be varied and complex (Montero-Odasso, 2016). Various risk factors have been identified as causes of falls, so the list is very heterogeneous such as age-related alterations, sensory impairments, muscle weakness, comorbidities, cardiovascular, polypharmacy, and environmental hazards. The classification falls based on risk factors related to extrinsic hazards or due to intrinsic disorders (Julius et al., 2017; Montero-Odasso, 2016; Zaninotto et al., 2020).

A history of falls is associated with an increased risk of previous falls and the incidence of falls increases with age (Todd & Skelton, 2004). Fall is considered a major public health problem. A serious impact of falls is an increased risk of hospitalization with prolonged recovery periods resulting in increased health care costs.[1] Nurses are professionals who play an important role in the functioning of a hospital. It is based on the number of nurses as the largest segment in hospitals (Ariga, 2020).

Nurses are the personnel who have the most contact with patients (24 hours continuously). Nurses are also part of a team in which there are various other professions such as doctors. Nurses should apply patient safety and care when providing nursing care to patients (Wardhani, 2017). Nurses must engage cognitive, affective, and actions that put patient safety first. The breadth of the nurse's role can allow for the risk of errors in service (Arso & Sriatmi, 2017; Syam, 2017; Wola, 2021).

This scoping review is compiled by the author to discuss the effect of nurse workload in screening the risk of falls in patients. The researchers expect it to significantly contribute to widen the knowledge range regarding the issue since there has only been few research on it.

METHOD

The study method that the authors conducted is a scoping review which was used to develop a 'map' regarding the effect of nurses' workload in screening the risk of falling patients at this time. The scoping review methodology was chosen for this article because it supports an examination of the "breadth, range and nature of research activities". This allows rapid identification of current methods and research gaps in the literature. This method is guided by the stages of scoping review described by Arksey and O'Malley (2005) and Levac et al. (2010) and further informed using Preferred Reporting Items for Systematic Reviews and Meta-Analyses Statement (PRISMA). Keywords used in the search include: "workload", "nurse", "screening", and "fall risk".

The search databases used in this writing include: SINTA, PubMed, EBSCOhost, and SagePub. The inclusion criteria of the research to be involved, among others: research with Indonesian and English, discussing the effect of nurse workload in conducting fall risk screening, research conducted in hospitals or *Puskesmas*/clinics. Editorial, research that does not have a full text, or research without a DOI is issued. The search was conducted on October 16, 2023 and the included study is research conducted in the last 10 years. The research data taken, among others: author's name, year of writing, author's origin, writing method, number of participants, and conclusions from the study. The author did not perform statistical analysis.

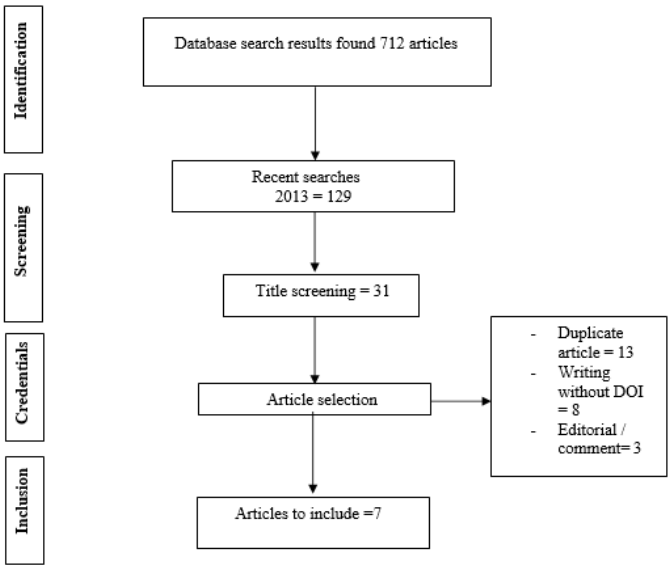

Figure 1. Search Flow Chart

Table 1. Search Keywords

Database	Search keywords
Pubmed	*("workload"[MeSH Terms] OR "workload"[All Fields] OR "workloads"[All Fields]) AND ("nurse s"[All Fields] OR "nurses"[MeSH Terms] OR "nurses"[All Fields] OR "nurse"[All Fields] OR "nurses s"[All Fields]) AND ("diagnosis"[MeSH Subheading] OR "diagnosis"[All Fields] OR "screening"[All Fields] OR "screening"[All Fields]) OR "mass screening"[All Fields] OR "early detection of cancer"[MeSH Terms] OR ("early"[All Fields] AND "detection"[All Fields] OR "screen"[All Fields] OR "screenings"[All Fields] OR "screened"[All Fields] OR "screens"[All Fields]) AND "fall"[All Fields] AND ("risk"[MeSH Terms] OR "risk"[All Fields])*
EBSCOhost	*‘‘workload’’ or ‘‘nurses’ or ‘‘screening” or ‘‘early detection’ or ‘‘fall risk”*
SagePub	*“workload” AND “nurse” AND “screening fall risk”*

SINTA	"workload" and "nurse" and "screening" and "fall risk"

RESULTS AND DISCUSSION

The authors obtained seven scientific journals that discussed the effect of workload in screening the risk of falling patients. The four journals came from Indonesia, one journal each from Brazil, Taiwan, and Canada.

Table 2. Search Results

Researcher, Year	Country of Origin	Method	Participants	Conclusion
(Purnomo, 2021)	Indonesia	Literature review	6 Journals	There is a relationship between workload and knowledge to patient safety practices.
(Sulawa et al., 2021)	Indonesia	Cross sectional study design	75 nurses	There is a relationship between knowledge and workload on nurse compliance in implementing standard operating procedures (SOPs) to prevent risk of the patient falling.
(Rahmawati, 2020)	Indonesia	Review Literature	15 articles	There is a relationship between workload and knowledge of Execution Patient Safety
(Jaggi et al., 2018)	Canada	Design Cross Studies sectional (Cut latitude)	433 nurses	The nurse agreed very much about the importance of reconciliation treatment and fall risk assessment, despite the load their work heavy
(Nur et al., 2017)	Indonesia	Design Cross Studies sectional (Cut latitude)	304 nurses	Understanding about fall risk study not guarantee nurse to always comply with execution study risk fall
(Chiang et al., 2017)	Taiwan	Design Cross Studies sectional (Cut latitude)	1.429 nurse	Factor milieu related to development professional and participation deep hospital affairs and burden work nurse has a predictive effect which is limited to safety practices.
(Möller & de Magalhães, 2015)	Brazil	Design Cross Studies sectional (Cut across)	62 nurses	Number of nursing staff and a workspace non-compliant affect Service Organization and can cause events unwanted for professionals and patient.

Discussion

A fall is a sudden, accidental displacement of the body to the ground or a lower location than the previous one. Falls on the elderly are considered a major public health problem. A serious impact of falls is an increased risk of hospitalization with prolonged recovery periods resulting in increased health care costs (Pasquetti et al., 2014). Falls have been brought to the attention of hospital management experts, where falls can cause a health care facility to get a red report card.

Falls have a number of serious medical, physiological, and social impacts that sometimes go unreported or underestimated in the literature. Falls are the leading cause of injury death in men and women aged >65. One rule of thumb used to describe the frequency of various unexpected fall outcomes by older adults found that 20% of individuals experienced a "fear of falling"; 15% had sufficient injuries and were taken to the ER

due to pain, bruising, or dizziness; 10% had severe injuries but not fractures, and 5% had fractures with 1% of them being hip fractures (Montero-Odasso, 2016).

Research shows that workload is a variable that has a significant relationship to nurse compliance, but has an inversely proportional influence on compliance (the medium workload group will be less compliant with SOPs than the heavy workload group) (Sulawa et al., 2021). The workload of nurses in hospitals includes physical and mental workloads. The physical workload carried out includes lifting patients, bathing patients, helping patients to the bathroom, pushing medical devices, making patient beds, pushing patient beds (Ross et al., 2019).

Mental workloads can include stress (especially for nurses working in isolation or critical care), shift or shift work, complicated work (preparing mentally and spiritually for patients and their families especially those who will require surgery or in critical condition), working with specific skills in caring for patients, responsibility for patient recovery and having to communicate well to patients/families (Ross et al., 2019). Research shows that nurses agree that fall risk assessment is essential, despite their heavy workload (Jaggi et al., 2018).

Nurses feel that better documentation forms can support efficiency. This nursing perspective is invaluable in informing efforts to standardize and simplify documentation, including the design and implementation of clinical information systems. This can support patient safety, including assessment of fall risk in nurses with moderate and heavy workloads (Jaggi et al., 2018). Nurse compliance in this regard is greatly helped by the presence of the Morse scale. The Morse scale is used to predict a patient's risk of falling because it consists of six risk factors: fall history, secondary diagnosis, walking assistance, parenteral therapy, gait, and mental status (Watson et al., 2016).

Nurses conduct fall risk assessment as a nursing care routine. Most nurses are still burdened with tasks in the hospital, namely nurses have to do administrative tasks outside of nursing. This will certainly increase the workload of nurses, so we need to create a conducive work environment to anticipate boredom at work. Saturation in work can be minimized with the development of appropriate staff and the fulfillment of equipment for nursing care. Staff development can be done with opportunities to continue formal education and training. Fulfillment equipment consists of tools to facilitate patient care or tools for self-protection at high risk of exposure to disease transmission and dangerous drugs (Nadia & Permanasari, 2018).

The inversely proportional relationship between nurses' workload and compliance with SOPs can be caused by the large proportion of nurses whose workload is heavy (Sulawa et al., 2021). Ward nurses are generally responsible for monitoring fall risk, which will increase the workload for nurses and must be accompanied by compliance with the implementation of SOPs. This can explain why groups with moderate workloads tend to be less compliant with the implementation of SOPs. This is in accordance with the theory where the factor that influences compliance in completing nurse documentation is responsibility which in this case can also be seen from workload, location status, legitimacy, and proximity of authority figures (KARS, 2019).

CONCLUSION

The results show that there is a relationship between knowledge and workload on nurse compliance in implementing standard operating procedures (SOPs) to prevent risk of the patient falling. Workload is consistently associated with suboptimal fall risk screening. This is because nurses will be busy doing other things, so screening and monitoring patients from the risk of falling cannot be done properly. This nursing perspective is invaluable in informing efforts to standardize and simplify documentation, including the design and implementation of clinical information systems. Ward nurses are generally responsible for monitoring fall risk, which will increase the workload for nurses and must be accompanied by compliance with the implementation of SOPs.

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