

ARTICLE INFORMATION

Received: January, 23, 2025

Revised: April, 21, 2025

Available online: April, 23, 2025

at : <https://e-jurnal.iphorr.com/index.php/minh>

Knowledge, attitudes, and practices regarding the prevention of patient falls among registered nurses in a private hospital in Malaysia

Keetha Aramo, Annamma Kunjukunju*, Nurul Fariza Mohd Mustafa

KPJ Healthcare University, Negeri Sembilan, Malaysia.

Corresponding author: *E-mail: ann@kpjue.edu.my

Abstract

Background: Falls are the second leading cause of accidental injury and non -intentional deaths worldwide, according to World Health Organization (WHO).

Purpose: To identify knowledge, attitude and practices on preventing patient fall among Registered Nurses of a Private Hospital.

Method: A quantitative non-experimental cross-sectional study was chosen as the research design. The questionnaire used in this study was adapted from Cho and Jang (2020), and the knowledge test consists of 13 items as a questionnaire adapted from the Nursing clinical practice guidelines on preventing patient fall in hospitals by the ministry of health, Singapore. An online google form was distributed to a sample size of 132 Registered Nurses (Using Krejcie and Morgan Table (1970)). For the study population, the researcher involved all the registered nurses working at private hospital with a total population of N=200. The data were analysed using IBM Statistical Package for Science (SPSS) Version. Participants' knowledge, attitude and practices were analysed using frequencies, percentages, means, and standard deviations. Pearson's correlation coefficients were calculated for the relationships between knowledge, attitudes, and practices in fall-prevention activities.

Results: The majority of registered nurses in private hospital have good knowledge on patient fall prevention.

Conclusion: The study suggested multifaceted implementation programs for fall prevention should be implemented to strengthen their positivity in knowledge, attitude and practice.

Keywords: Attitude; Knowledge; Practice; Prevention Fall; Registered Nurses.

INTRODUCTION

Globally, falls are recognized as a major public health concern. They are the second leading cause of accidental injury and unintentional deaths worldwide (World Health Organization, 2008; Zhang, Dalal, Yin, Yuan, Andrews, & Wang, 2012; Twibell, Siela, Sproat, & Coers, 2015). Hospitalized patients have a 12% chance of experiencing a fall during their stay (Kalisch, Tschannen, & Lee, 2012; Kirkpatrick, Boblin, Ireland, & Robertson, 2014; Howland, Hackman, Taylor, O'Hara, Liu, & Brusch, 2018). According to the Ministry of Health Malaysia's Fall Guideline (2019), falls are the most frequently reported safety incidents

in hospitals and can lead to significant patient complications. Common factors contributing to patient falls include inadequate patient assessments, communication breakdowns, non-compliance with safety procedures, deficiencies in staff orientation and supervision, poor leadership, an imbalanced skill mix among staff, and environmental hazards surrounding the patient (Alert, 2015; Wong & Pang, 2019; Janse van Rensburg, Van der Merwe, & Crowley, 2020). Inpatient falls have also been linked to prolonged hospital stays and increased likelihood of discharge to long-term care facilities (Oliver, Healey, & Haines,

Knowledge, attitudes, and practices regarding the prevention of patient falls among registered nurses in a private hospital in Malaysia

2010; Laing, Silver, York, & Phelan, 2011; Gutta, Joseph, Chakraborty, & Alexander, 2013; Dykes, Bogaisky, Carter, Duckworth, Hurley, Jackson, Khasnabish, Lindros, Lipsitz, Scanlan, Yu, Bates, & Adelman, 2018; Davenport, Cameron, Samson, Siron, & Liu, 2020). Therefore, it is essential to understand the knowledge, attitudes, and practices of Registered Nurses in relation to fall prevention efforts (King, Pecanac, Krupp, Liebrezeit, & Mahoney, 2018). In the study setting, the highest number of inpatient falls was recorded in 2018 with 15 incidents. This number decreased slightly to 6 in 2019, rose to 9 in 2020, and dropped to 2 in 2021. Despite the fluctuations, these statistics indicate that fall incidents continue to occur. This study investigated the knowledge, attitudes, and practices (KAP) related to patient fall prevention among Registered Nurses working in a private hospital.

RESEARCH METHOD

This quantitative, non-experimental study was conducted in 2022 at a private hospital in Perak, Malaysia. The study population consisted of all Registered Nurses employed at the hospital (N = 200). A non-probability purposive (judgemental) sampling method was used to select participants based on defined inclusion and exclusion criteria. According to Krejcie and Morgan's sample size determination table (1970), for a population of 200, the appropriate sample size is 132 (S = 132).

In this study, data were collected using a structured questionnaire distributed via Google Forms. The questionnaire was adapted from Cho and Jang (2020), with the knowledge section further adapted from the Singapore Ministry of Health Nursing Clinical Practice Guidelines on Prevention of Falls in Hospitals. The reliability of the questionnaire

was tested using Cronbach's Alpha to assess internal consistency. The questionnaire was divided into four sections: Section A focused on demographic data and included nine items; Section B assessed knowledge regarding falls through 13 multiple-choice questions; Section C examined attitudes toward fall prevention using 13 items on a 5-point Likert scale; and Section D measured fall prevention practices with 20 items rated on a 4-point Likert scale.

An online Google Form was used for data collection, comprising four sections related to socio-demographic data, knowledge, attitudes, and practices. The reliability of the three main sections (knowledge, attitudes, and practices) was assessed using Cronbach's Alpha, yielding a value of 0.798, which indicates acceptable internal consistency. Due to the COVID-19 pandemic, data collection was conducted remotely, and the questionnaire link was distributed to participants via WhatsApp. The Google Form included a clear explanation of the study, participant information, and an informed consent section to ensure voluntary participation. Data were analyzed using SPSS software. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to summarize the data. Inferential analysis included the Kruskal-Wallis and Mann-Whitney U tests, while Pearson's correlation coefficients were calculated to examine the relationships between knowledge of falls, attitudes towards fall prevention, and engagement in fall-prevention practices. Ethical clearance was obtained from the Institutional Research and Ethics Committee of the university, as well as the Clinical and Research Ethics Review Committee (CRERC). The purpose of the study, informed consent process, and measures to ensure privacy and confidentiality were clearly explained and documented in the Google Form.

RESEARCH RESULTS

Table 1. Characteristics of the Respondent (N=132)

Variable	Results
Age (n/%)	
< 30	31/23.5
30 – 39	74/56.1
40 – 49	20/15.1
≥ 50	7/5.3

Keetha Aramo, Annamma Kunjukunju*, Nurul Fariza Mohd Mustafa

KPJ Healthcare University, Negeri Sembilan, Malaysia.

Corresponding author: *E-mail: ann@kpju.edu.my

DOI: <https://doi.org/10.33024/minh.v8i2.670>

Knowledge, attitudes, and practices regarding the prevention of patient falls among registered nurses in a private hospital in Malaysia

Variable	Results
Educational Level (n/%)	
Community College	2/1.5
Diploma in Nursing	83/62.9
Post Basic Certificate/ Advance Diploma	39/29.6
Bachelor Degree	6/4.5
Master /PHD	2/1.5
Work Experience (n/%)	
< 5 years	20/15.2
≥5 years	112/84.8
Registered Nurses (n/%)	
Yes	83/62.9
No	49/37.1
Department (n/%)	
Medical Surgical	71/53.8
Intensive Care Unit	5/3.8
Day Care	1/0.8
Special Diagnostic	6/4.5
Dialysis	21/15.9
Operation Theatre	17/12.9
Maternity Ward	4/3.0
Emergency Department	7/5.3
Experience of Patient Fall (n/%)	
Yes	108/81.8
No	25/18.2
Falls Prevention Training Attendance (n/%)	
Yes	123/93.2
No	9/6.8
Number of Times Experienced Patient Falls (n/%)	
≥ 5 Times	16/12.1
4 Times	2/1.5
3 Times	9/6.8
2 Times	36/27.3
1 Times	69/52.3
Knowledge (n/%)	
Good	110/83.3
Poor	22/16.7
Attitude (n/%)	
Good	100/75.8
Moderate	19/14.4
Poor	13/9.8
Practices Fall Prevention (n/%)	
Good	109/82.5
Moderate	20/15.2
Poor	3/2.3

Keetha Aramo, Annamma Kunjukunju*, Nurul Fariza Mohd Mustafa

KPJ Healthcare University, Negeri Sembilan, Malaysia.

Corresponding author: *E-mail: ann@kpju.edu.my

DOI: <https://doi.org/10.33024/minh.v8i2.670>

Knowledge, attitudes, and practices regarding the prevention of patient falls among registered nurses in a private hospital in Malaysia

Table 1 presents the demographic characteristics of the 132 registered nurses who participated in the study. The majority were registered nurses (62.9%), with most respondents aged between 30 and 39 years (56.1%) and holding a Diploma in Nursing (84.8%). More than half (53.8%) were working in the medical-surgical ward. Furthermore, 81.8% reported having prior experience with patient falls, and 93.2% had attended education sessions on fall prevention. A significant portion of participants (84.8%) had five or more years of work experience. In terms of fall prevention, 83.3% of the respondents demonstrated good knowledge, 75.8% exhibited a positive attitude, and 82.5% reported engaging in good fall prevention practices.

Table 2. Kruskal-Wallis Test and Mann-Whitney U test

Variable	p		
	Knowledge	Attitude	Practices
Age	0.809	0.792	0.607
Knowledge	0.319	0.825	0.836
Work Experience	0.358	0.656	0.792
Experience of Patient Fall	0.948	0.428	0.755

Table 2 presents the results of the Kruskal-Wallis and Mann-Whitney U tests conducted to examine the differences in knowledge, attitude, and practices (KAP) related to fall prevention among registered nurses based on selected demographic variables. The Kruskal-Wallis test was used to assess differences in KAP based on age. The findings revealed p-values of 0.809 for knowledge, 0.792 for attitude, and 0.607 for practices. As all p-values were greater than 0.05, the results indicate that there were no statistically significant differences in KAP among nurses of different age groups. Thus, the null hypothesis was retained. Similarly, the Kruskal-Wallis test conducted for educational level showed p-values of 0.319 (knowledge), 0.825 (attitude), and 0.836 (practices). These values also exceeded the 0.05 threshold, indicating no significant differences in KAP based on educational background. Hence, the null hypothesis was retained. The Mann-Whitney U test was applied to evaluate KAP based on work experience. The results showed p-values of 0.358 for knowledge, 0.656 for attitude, and 0.792 for practices. These findings suggest no significant differences in KAP across different levels of work experience. Lastly, the Mann-Whitney U test was used to analyse KAP differences based on experience with patient falls. The p-values were 0.948 (knowledge), 0.428 (attitude), and 0.755 (practices), all of which were greater than 0.05. This indicates no statistically significant difference in KAP between those with and without prior experience of patient falls. Overall, the

statistical analysis showed no significant differences in knowledge, attitude, and practices regarding fall prevention across the examined demographic variables among registered nurses in the private hospital.

DISCUSSION

From data collection, the researcher found that 81.8% (108 respondents) had experienced patient falls in the hospital, while 18.2% (24 respondents) had not. A knowledge test was conducted among registered nurses in a private hospital, revealing that 84% (110 respondents) answered correctly, indicating good knowledge, while 16% (22 respondents) answered incorrectly, showing poor knowledge. These results align with research conducted at King Abdul Aziz Hospital, where 75.12% (148 nurses) reported a high recurrence of falls among patients with a previous history of falls (Ganabathi, Mariappan, & Mustafa, 2017). A similar finding was reported in Nigeria, where 89% of physiotherapists rated their knowledge of fall prevention in older adults as high (Kalu, Vlachantoni, & Norman, 2019). In this study, 44.7% (59 respondents) identified the risk of falls as related to a previous history of falls, while 28.8% (38 respondents) identified incontinence as a risk factor. This is consistent with a study in Chungbuk, Korea, which found that items with over 95% correct answers included: "Anyone who experiences a fall has a higher risk of recurrence," "Dysuria is a risk factor for falls,"

Keetha Aramo, Annamma Kunjukunju*, Nurul Fariza Mohd Mustafa

KPJ Healthcare University, Negeri Sembilan, Malaysia.
Corresponding author: *E-mail: ann@kpju.edu.my

DOI: <https://doi.org/10.33024/minh.v8i2.670>

Knowledge, attitudes, and practices regarding the prevention of patient falls among registered nurses in a private hospital in Malaysia

and "Falls occur more often when patients get up from or lie down on the bed" (Kim, Jeon, & Chon, 2015).

In identifying the attitudes of registered nurses in a private hospital toward preventing patient falls, the researcher found that 39.4% (52 respondents) strongly disagreed with the statement "I do not think that fall-related physical injuries are severe," and 33.3% (44 respondents) disagreed. Additionally, 11.4% (15 respondents) were neutral, 9.8% (13 respondents) agreed, and 6.1% (8 respondents) strongly agreed, with a mean and standard deviation of 2.1. These findings conflict with a study in Chungbuk, Korea, where respondents believed physical injuries from falls were not severe and felt that the responsibility for falls fell to nurses, expressing feelings of guilt when falls occurred (Kim, et al., 2015). Moreover, 54.5% (72 respondents) agreed that falls in hospitals are an important responsibility of nurses, similar to findings at King Abdul Aziz Hospital, where nurses reported that the personal responsibility for preventing falls was crucial (Ganabathi et al., 2017). This demonstrates the critical responsibility of nurses in fall prevention. The study also revealed that 46.2% (61 respondents) agreed that fall prevention education should be provided upon admission, mirroring research in long-term care hospitals, where fall prevention education led to effective fall prevention activities (Han, Kim, & Hong, 2020).

To assess practices related to patient fall prevention, the researcher used a 20-item Likert scale questionnaire administered to 132 registered nurses. The results showed that 82% of respondents reported "always using" fall prevention practices, while 2% never used them, 3% rarely used them, and 13% sometimes used them. This finding is similar to research at King Abdul Aziz Hospital, where 90.4% of nurses demonstrated good practice in fall prevention, with only 9.6% showing poor practice (Ganabathi et al., 2017). The mean value of practice scores was 11.08, with a standard deviation of ± 2.263 . Hospital-based programs focusing on patient safety culture are also critical for promoting patient safety. It is recommended that patients at high risk of falls be cared for by experienced nurses who have enhanced skills in fall prevention. The high percentage of nurses reporting always using fall prevention practices suggests positive awareness among registered

nurses in private hospitals regarding the management and identification of high-risk fall patients. This aligns with findings where 52.2% of nurses had moderately adequate awareness of fall risk factors. Therefore, an on-site training program to raise awareness about fall risk factors is crucial to help nurses identify the most significant risk factors and apply their knowledge effectively (James et al., 2020).

The researcher used Pearson Correlation to examine the relationship between two variables in the study ($n = 132$). The results showed a positive correlation between age and knowledge, attitude, and practice. For knowledge, the p -value was 0.541, for attitude $p = 0.490$, and for practice $p = 0.840$, indicating that the p -values are greater than 0.05. This finding aligns with a study at King Abdul Aziz Hospital, where the relationship between certain socio-demographic variables and KAP (Knowledge, Attitude, and Practice) regarding fall prevention among nurses was statistically significant, as evidenced by the chi-square test ($X^2 = 3.778$) (Ganabathi et al., 2017).

The researcher also found that the level of education was positively correlated with knowledge, attitude, and practice. For knowledge, the p -value was 0.511, for attitude $p = 0.582$, and for practice $p = 0.486$, indicating that the p -values are greater than 0.05. However, no similar research findings were identified for this result. Furthermore, work experience was positively correlated with knowledge, attitude, and practice, with knowledge $p = 0.421$, attitude $p = 0.955$, and practice $p = 0.949$. These results suggest that work experience is significantly related to knowledge, attitude, and practice. These findings align with the research of James et al. (2020), which emphasized that years of experience in nursing positively impacted knowledge and attitude towards fall prevention. As nurses gain more experience, they accumulate more knowledge and develop a stronger positive attitude toward fall prevention.

Additionally, the study revealed a positive correlation between patient fall experiences and knowledge, attitudes, and practices. For knowledge, the p -value was 0.906, for attitude $p = 0.976$, and for practice $p = 0.515$, indicating a significant relationship between patient experience and KAP. Similar results were found in South Korean hospitals, where nurses' knowledge of patient falls was positively correlated

Keetha Aramo, Annamma Kunjukunju*, Nurul Fariza Mohd Mustafa

KPJ Healthcare University, Negeri Sembilan, Malaysia.
Corresponding author: *E-mail: ann@kpju.edu.my

DOI: <https://doi.org/10.33024/minh.v8i2.670>

Knowledge, attitudes, and practices regarding the prevention of patient falls among registered nurses in a private hospital in Malaysia

with their experiences of inpatient falls. Moreover, nurses' attitudes toward falls were influenced by their nursing experience and fall prevention education (Cho & Jang, 2020).

Nurses are fully responsible for patient care and ensuring patient safety, which underscores the necessity of fall prevention activities and education (Han, Kim & Seo, 2020). Previous studies indicate that nursing care practices significantly influence patient outcomes, as they represent the majority of care provided in hospitals (Shever, Tittler, Mackin, & Kueny, 2011). Falls in hospitals result from a combination of patient-related factors, as well as nursing and environmental factors (Ganabathi et al., 2017; Joshi & Solankhi, 2019).

CONCLUSION

This study revealed that the majority of registered nurses in the private hospital have good knowledge of patient fall prevention. However, the researcher also found that fall recurrence is high among individuals with a history of falls, and incontinence is a major contributing factor to patient falls. Therefore, regular fall risk assessment training should be conducted to improve nurses' knowledge and skills in assessing patients at risk for falls, helping them identify vulnerable patients and plan appropriate preventive measures to minimize falls.

The study also found that nurses take full responsibility for patient care and safety, underscoring the importance of fall prevention activities and education. Evidence-based nursing care practices play a significant role in patient outcomes, as they are central to the care patients receive in hospitals. Experience in managing patients who fall benefits nurses in preventing future falls. Patients at high risk for falls should be under the care of experienced nurses with enhanced skills in fall prevention, ensuring that knowledge is applied effectively in practice.

LIMITATION AND RECOMMENDATION

This study has some limitations that should be considered. Firstly, data was only collected from a private hospital in Perak, limiting the ability to generalize the results to a larger population. It is recommended that this study be repeated with a larger sample of nurses from other private hospitals to

ensure a broader perspective. Additionally, nurses may have interpreted the questions differently. Due to the pandemic, data collection was conducted through an electronic Google Form questionnaire, limiting the ability of the researcher to monitor the integrity and trustworthiness of the responses. There is a possibility that respondents may have discussed the questions among colleagues or referred to the internet before answering, which could have affected the accuracy of their responses. Lastly, a longitudinal study is needed to further evaluate the results and their long-term impact on fall prevention in hospitals.

The results of this study suggest that more educational programs should be conducted to enhance nurses' knowledge, attitude, and practices regarding fall prevention in hospitals. Nurses' knowledge, attitudes, and practices are positively correlated with age, educational level, work experience, and experience with patient falls. Therefore, the researcher recommends that educational training programs on fall prevention be implemented to raise awareness among nurses, strengthen their knowledge, attitude, and practice, and cultivate a sense of responsibility among nursing staff.

ACKNOWLEDGEMENT

The researcher is grateful to all registered nurse, supervisors, Chief Nursing officers, Deputy chief nursing officer, nurse instructors and all unit manager who had involved in this research project.

REFERENCES

- Alert, S. E. (2015). Preventing falls and fall-related injuries in health care facilities. *The Joint Commission*, 55, 1-55.
- Cho, M., & Jang, S. J. (2020). Nurses' knowledge, attitude, and fall prevention practices at South Korean hospitals: a cross-sectional survey. *BMC Nursing*, 19,108(2020).
- Davenport, K., Cameron, A., Samson, M., Sri-on, J., & Liu, S. (2020). Fall prevention knowledge, attitudes, and behaviors: A survey of emergency providers. *Western Journal of Emergency Medicine*, 21(4).

Keetha Aramo, Annamma Kunjukunju*, Nurul Fariza Mohd Mustafa

KPJ Healthcare University, Negeri Sembilan, Malaysia.
Corresponding author: *E-mail: ann@kpju.edu.my

DOI: <https://doi.org/10.33024/minh.v8i2.670>

Knowledge, attitudes, and practices regarding the prevention of patient falls among registered nurses in a private hospital in Malaysia

- Dykes, P. C., Bogaisky, M., Carter, E. J., Duckworth, M., Hurley, A. C., Jackson, E. M., Khasnabish, S., Lindros, M. E., Lipsitz, S. R., Scanlan, M., Yu, S. P., Bates, D. W., & Adelman, J. S. (2018). Development and validation of a fall prevention knowledge test. *Journal of the American Geriatrics Society*, 67(1), 133–138.
- Ganabathi, M., Mariappan, U., & Mustafa, H. (2017). Nurses' knowledge, attitude and practices on fall prevention in king Abdul Aziz Hospital, Kingdom of Saudi Arabia. *Nursing & Primary Care*, 1(7), 1–6.
- Gutta, S., Joseph, A., Chakraborty, A., & Alexander, A. M. (2013). Study on the knowledge, attitudes and practices regarding prevention of recurrent falls in the elderly. *IOSR Journal of Dental and Medical Sciences*, 9(3), 32-38.
- Han, Y. H., Kim, H. Y., & Hong, H. S. (2020). The effect of knowledge and attitude on fall prevention activities among nursing staff in long-term care hospitals. *Open Journal of Nursing*, 10(07), 676–692.
- Han, Y., Kim, J. S., & Seo, Y. (2020). Cross-sectional study on patient safety culture, patient safety competency, and adverse events. *Western journal of nursing research*, 42(1), 32-40.
- Howland, J., Hackman, H., Taylor, A., O'Hara, K., Liu, J., & Bruschi, J. (2018). Older adult fall prevention practices among primary care providers at accountable care organisations: A pilot study. *PLOS ONE*, 13(10).
- James, K. M., Ravikumar, D., Myneni, S., Sivagnanam, P., Chellapandian, P., Manickaraj, R. G., Sargunan, Y., Kamineni, S. R., & Surapaneni, K. M. (2020). Knowledge, attitudes on fall and awareness of hospitalised patient's fall risk factors among the nurses working in tertiary care hospitals.
- Janse van Rensburg, R., Van der Merwe, A., & Crowley, T. (2020). Factors influencing patient falls in a private hospital group in the Cape Metropole of the Western Cape. *Health SA Gesondheid*, 25(1), 1-8.
- Joshi, B. S., & Solankhi, G. (2019). Effect of fall risk assessment Training on Knowledge and skills of nurse. *Journal of quality in Health care and economics*, Medwin publisher, <https://medwinpublishers.com/JQHE/JQHE16000126.pdf>
- Kalisch, B. J., Tschannen, D., & Lee, K. H. (2012). Missed nursing care, staffing, and patient falls. *Journal of nursing care quality*, 27(1), 6-12.
- Kalu, M. E., Vlachantoni, A., & Norman, K. E. (2019). Knowledge about risk factors for falls and practice about fall prevention in older adults among physiotherapists in Nigeria. *Physiotherapy research international*, 24(1), e1742.
- Kim, M. H., Jeon, H. W., & Chon, M. Y. (2015). Study on the knowledge and attitudes of falls and awareness of fall risk factors among nursing students. *Indian Journal of Science and Technology*, 8(S1), 74.
- King, B., Pecanac, K., Krupp, A., Liebzeit, D., & Mahoney, J. (2018). Impact of fall prevention on nurses and care of fall risk patients. *The Gerontologist*, 58(2), 331-340.
- Kirkpatrick, H., Boblin, S., Ireland, S., & Robertson, K. (2014). The nurse as Bricoleur in falls prevention: Learning from a case study of the implementation of fall prevention best practices. *Worldviews on Evidence-Based Nursing*, 11(2), 118–125.
- Laing, S. S., Silver, I. F., York, S., & Phelan, E. A. (2011). Fall prevention knowledge, attitude, and practices of community stakeholders and older adults. *Journal of aging research*, 2011(1), 395357.

Keetha Aramo, Annamma Kunjukunju*, Nurul Fariza Mohd Mustafa

KPJ Healthcare University, Negeri Sembilan, Malaysia.
Corresponding author: *E-mail: ann@kpju.edu.my

DOI: <https://doi.org/10.33024/minh.v8i2.670>

Knowledge, attitudes, and practices regarding the prevention of patient falls among registered nurses in a private hospital in Malaysia

- Ministry of Health Malaysia. (2019). Falls guideline for hospitalised older adults in the ministry of health. Accessed from: <https://jknmelaka.moh.gov.my/hmelaka/images/borang/Patient%20Fall%20-%20KKM%20Guideline%202019.pdf>
- Oliver, D., Healey, F., & Haines, T. P. (2010). Preventing falls and fall-related injuries in hospitals. *Clinics in geriatric medicine*, 26(4), 645-692.
- Shever, L. L., Titler, M. G., Mackin, M. L., & Kueny, A. (2011). Fall prevention practices in adult medical-surgical nursing units described by nurse managers. *Western Journal of Nursing Research*, 33(3), 385-397.
- Twibell, R. S., Siela, D., Sproat, T., & Coers, G. (2015). Perceptions related to falls and fall prevention among hospitalised adults. *American Journal of Critical Care*, 24(5).
- Wong, M. M. C., & Pang, P. F. (2019). Factors associated with falls in psychogeriatric inpatients and comparison of two fall risk assessment tools. *East Asian Archives of Psychiatry*, 29(1), 10-14.
- World Health Organization. (2008). WHO global report on falls prevention in older age. Accessed from: <https://www.who.int/publications/i/item/9789241563536>
- Zhang, L. L., Dalal, K., Yin, M. M., Yuan, D. G., Andrews, J. Y., & Wang, S. M. (2012). The KAP evaluation of intervention on fall-induced injuries among elders in a safe community in Shanghai, China. *PLoS One*, 7(3), e32848.

Keetha Aramo, Annamma Kunjukunju*, Nurul Fariza Mohd Mustafa

KPJ Healthcare University, Negeri Sembilan, Malaysia.
Corresponding author: *E-mail: ann@kpju.edu.my

DOI: <https://doi.org/10.33024/minh.v8i2.670>