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KNOWLEDGE ON FALL RISK FACTOR AND PRACTICE OF FALL PREVENTION IN ELDERLY AMONG NURSES IN ONE MALAYSIAN PUBLIC UNIVERSITY HOSPITAL

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ABSTRACT

Introduction*:* Fall has become one of the main health problems as it has been the second leading cause of unintentional injury that leads to death after road traffic injury and fall happen to occur at any place including the hospital. The elderly are the most at risk for falls as their physiological ageing process is related to a decline in health, including bone strength, gait and balance problems. This study was conducted to determine knowledge on fall risk factor and practice used in preventing fall in elderly among nurses in Hospital Universiti Sains Malaysia (Hospital USM). It also determines the association between the level of knowledge of fall risk factors and the level of practise on fall prevention toward elderly patients among staff nurses in Hospital USM. ***Methods:*** The questionnaire in the study consist of 16 questions regarding fall risk factor and four questions on practice in preventing fall. A total of 55 participants were provided with a self-administered questionnaire consisting of 16 items relating to fall risk factors and four questions on fall prevention practices. Then, descriptive statistics and Fisher's Exact Test was used to analyse the data collected in the present study. ***Results****:* The result revealed that nurses' knowledge of fall risk factors and practice in fall prevention is above average. It shows that nurses have good knowledge and practice in handling fall in the ward. There is no significant association between socio-demographic data and level of knowledge. There is also no significant association between level of knowledge and practice, although the result shows that nurses with a good level of knowledge have a good level of practice. ***Conclusion:*** In conclusion, most of the nurses have good knowledge about fall risk factors and preventive measures as their scoring on this matter was at the above-average level. Hence, it should be persistent and achieve excellent fall management with zero cases of falls.

INTRODUCTION

According to the WHO (2016), falls are a major public health problem and are common events for hospitalised older adults, resulting in negative outcomes both for patients and hospitals.

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There is an estimation that 646 000 fatal falls occur every year, making it the second leading cause of unintentional injury that leads to death after road traffic injury (WHO, 2016). Globally, the death rate due to falls is highest among adults over the age of 60 years old. The falls incidence among patients is one of the safety measures that the hospital needs to pay attention. Falls in older people are associated with significant morbidity and health care costs (Sazlina, Krishnan, Shamsul, Zaiton, & Visvanathan, 2008). Consequences from the falls could result in the length of hospitalisation increment; extra hospitalisation cost as well as severe injuries to the patient such as bone fracture and even death (Guirguis-Blake, Michael, Perdue, Coppola, & Beil, 2018).

Similarly, among Asian countries, the incidence of falls in Malaysia appears to be increasing. A study done in a primary care clinic in Kuala Lumpur, Malaysia, reported the prevalence of falls to be 47%, recurrent falls to be 57%, while injurious falls to be 61% (Sazlina S. G. et al., 2008). The differences in the falls prevalence in Malaysia compared to other studies could be due to the present study population was from an outpatient clinic in a tertiary centre and they are patients attending the clinic with health-related problems. In addition, in that study, many falls were recurrent. The majority of the participants in that study had chronic illnesses and used multiple prescriptions compared to those in the other studies who were healthier community-dwelling individuals; hence, it increases their tendency to fall (Sazlina S. G. et al., 2008).

The complication of falls in the social aspect of the elderly may also arise from falls. Falls can result in restriction of activities and fear of falling again, also known as a post-fall syndrome, which reduces one´s quality of life and affects one's self-esteem (Anena & Muchane, 2012). Other complication includes an elderly possible move into residential homes (Carter et al., 2001). In addition, 25%–55% of older adults who fall develop an apparent fear of falling, up to 40% restricting their activities of daily living (Soriano, DeCherrie, & Thomas, 2007). This further increases the risk of falls by worsening physical fitness and increased functional dependence, social isolation, and depression. Many ageing people experience emotional problems such as loss of confidence, fear, and anxiety following falls which may lead to a lack of motivation to do normal day-to-day activities in life (Anena & Muchane, 2012). Aside from their effects on mobility, independence and quality of life of older adults, there is also an increase in the burden on hospitals and residential care facilities (Alexander, Rivara, & Wolf, 1992).

The risk factors associated with falls are categorised into extrinsic and intrinsic factors. The intrinsic non-modifiable risk factors include age, gender, history of falls, gait and balance impairment, mobility restriction and multiple comorbidities (Kwan, Close, Wong, & Lord, 2011; Lee, Kwok, Leung, & Woo, 2006). The likelihood of falling and being seriously injured after a fall increase with age due to physiological and pathological changes. However, intrinsic factors are thought to play a major role in the fall of over 75 years, though environmental

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aspects are viewed more as contributory (Anena & Muchane, 2012).
The extrinsic factors considered modifiable include environmental hazards i.e. community hazards, home hazards, and footwear problems. These include poor lighting, slippery floors, loose carpets, and lack of bathroom safety equipment etc. (Vieira, Freund-Heritage, & Da Costa, 2011). Intrinsic and extrinsic factors can be further classified into four categories of risk factors that reflect the broad determinants of health: biological, behavioural, environmental, and social and economic risk factors (Anena & Muchane, 2012).

In Malaysia, one study reported that nurses' education level does not significantly affect patient safety and quality of care. Patient safety refers to common potential harm in the medical and surgical wards: nosocomial infection, pressure ulcers, patient falls, medication errors, readmission, and patient and family complaints (Abdul Rahman, Jarrar, & Don, 2015). However, the results are inconsistent with previous studies. Many studies found that nurses with higher education are significantly associated with delivering high quality of care and patient safety (Cramer, Jones, & Hertzog, 2011; Estabrooks A., Midodzi K., Cummings G., Ricker L., & Giovannetti, 2005; Tourangeau, Cranley, & Jeffs, 2006; Tourangeau et al., 2007). For instance, Tourangeau et al. (2007) found that increasing the proportion of bachelor nurses by 10% significantly led to a decrease in the mortality rate by nine cases among a thousand discharged patients (Tourangeau et al., 2007). Furthermore, highly educated healthcare providers help to be more patient-centred to improve the quality of care and patient safety (Abdul Rahman et al., 2015)

The elderly with a history of falls are at greater risk of falling again. Multifunction's approaches and interventions strategy is needed to reduce the rising rate of falls effectively. The majority of falls and fall-related injuries that are happening are preventable using prevention measures. Prevention of falls can be accomplished by combining various interventions (Anena & Muchane, 2012). A study in Arab Saudi has reported overall practice scores of the nurses on fall prevention revealed that the majority of them have a good practice (90.4%), and the minimum percentage has poor practice (9.6%). 60.9% of the respondent did seek occupational therapy for evaluation and management of Activity Daily Living. Nurses also did discuss interventions in managing the risk of falls in every patient in the ward. The colour-coding system has been identified as a major contributing factor in reducing the patients' risk of fall incidences (89.3%). On the other hand, nurses also acknowledged that they need to provide intervention such as sufficient hydration as well as nutrition (95.9%) and educating the patients about the tools regarding fall prevention (88.8%) (Ganabathi et al., 2017).

In Malaysia, a lack of study show data on the level of practice in fall prevention among nurses. However, a study among healthcare professionals in detecting barriers in implementing effective fall management. The study highlighted that healthcare professionals lacked inter-professional communication (Loganathan et al., 2015). Some healthcare professionals felt that they had been working independently, without knowing the relevant information and discussing

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it with other healthcare professionals involved in fall management (Loganathan et al., 2015). Therefore, older people with falls were rarely referred across disciplines, such as physiotherapists, pharmacists and occupational therapists (Loganathan et al., 2015). Therefore, this study was conducted to determine knowledge on fall risk factor and practice used in preventing fall in elderly among nurses in Hospital Universiti Sains Malaysia (Hospital USM).

MATERIALS AND METHODS

The research design selected for this study was a cross-sectional study among staff nurses in Hospital USM. After selecting eligible participants to fulfil the inclusion criteria, the researcher invited and recruited them to participate in this study. The participant was recruited from five wards include medical and surgical wards. The researcher explained the purpose of the study to the participant and sought informed consent. The participant was acknowledged that their participation is voluntary, and they had to complete a self-administered questionnaire that may take approximately 10 to 15 minutes to complete it. It is important to ensure the participant is willing to participate in this study and not disturbing their core duty at the same time. An appointment was made after working hours for data collection. Upon completion, the questionnaire was collected by the researcher.

The instrument adapted the modified version of the Connecticut Collaboration for Fall Prevention (CCFP) questionnaire (Asiri et al., 2018). The questionnaire consists of three parts: Part A, B and C. Respondent may take 10 to 15 minutes to answer it.

Part A: Socio-demographic data

Part A consisted of socio-demographic data. The demographic data of seven questions involving personal profile respondents include age, gender, ethnicity, level of education, working experiences, current working ward, post post-basic of gerontology or not, and whether they ever went to training/ talk regarding Fall Prevention Policies.

Part B: Knowledge of fall risk factors.

For part B consisting of 16 questions regarding participant's knowledge of fall risk factors. The question's answer is either 'yes', 'no' or 'unsure' option. They need to answer it based on their knowledge about that question.

Part C: Practice of fall prevention

Part C consisted of 5 questions regarding the current practice of fall prevention in the elderly. In this part, questions include how frequent nurses ask the elderly of their history of falls, identify and document risk for falling, provide interventions for fall risk factors, and refer patients to other healthcare professionals. Each question will be scored on a 4-points Likert scale with a score range of 1-4, which 1= almost never or never, 2= sometimes, 3= often, and 4= almost always or always.

The study variables were measured using the instrument tools, a self-administered questionnaire answer by the participants who fulfil the inclusion criteria. A scoring system was used for each component to assess the knowledge and practice level regarding fall prevention

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towards the elderly among staff nurses. For variables on fall risk factors knowledge, participants were given 11 statements on the subject related to fall risk factors. There are three-option answers: 'yes', 'no' or unsure and they need to answer it based on their knowledge about that question. Knowledge level was classified into two categories based on the scoring of above average and below average answers. Knowledge scores ranged from 9 to 16 indicated that the participants would be perceived as having knowledge above average regarding fall risk factors.

Regarding the fall prevention variable practice, participants were given 4 questions on the subject related to their current practice. Each question will be scored on a 4-points Likert scale with a score range of 1-4 which 1= almost never or never, 2= sometimes, 3= often, and 4= almost always or always. The practice level will be categorised into two levels: below average (<8), above average (≥8-16). Practice scores ranged from 8 - 16 indicated that participants had a greater practice level regarding fall prevention. Thus, the higher the level of scoring, the greater the practice implemented by the participants.

The study was approved by the Human Research Ethics Committee (HREC), Universiti Sains Malaysia, using the code USM/JEPeM/19110770 for ethical consideration. An introductory letter stating the study's goal, a voluntary and private declaration, researcher information, and informed consent was all supplied before the questionnaire questions.

Data Analysis

All data were analysed by using Statistical Package for Social Science (SPSS) of version 24.0. The descriptive statistics for discrete variables were presented as *n*= frequency (%) and the continuous variables were presented as mean and standard deviation. The association between working experience and level of knowledge on fall prevention towards elderly patients among staff nurses in the hospital and the association between attending the talk on fall prevention policies and level of knowledge onfall prevention towards elderly patients among staff nurses in Hospital USM are testes using Fisher's exact test where applicable (with a significant value *p*-value less than 0.05).

RESULTS

Socio-demographic characteristics

There were 55 (44%) of respondents who participated in this study with a mean age of 30.09. Out of 55 nurses, 44 were females (80%) and 11 were males (20%). Almost all the nurses were Malay (96.4%), not attending post basic gerontology (98.2%) and possess diploma (100%). 58.2% of nurses working in the medical ward of Hospital USM. About half of the nurses have working experience below than six years (50.9%), had undergone Fall Prevention Policies talk (58.2%) and working in the medical area (58.2%). Details of the characteristic of the respondent were described in Table I.

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Table I: Socio-demographic characteristic of Staff Nurses of Hospital USM. (*n*=55)

Variable		Frequency	%	Mean	SD
Age	15 -24 years old	4	7.3	30.09	4.498
	>25- 54 years old	51	92.7		
Gender	Male	11	20.0		
	Female	44	80.0		
Ethnic	Malay	53	96.4		
	Indian	1	1.8		
	Others	1	1.8		
Level of Education	Diploma	55	100.0		
Working Experience	<6 years	28	50.9		
	≥6 years	27	49.1		
Working ward	Surgical (3 Utara, 2 Intan, 1 Selatan)	23	41.8		
	Medical (7 Utara, 7 Selatan)	32	58.2		
Have Post basic Gerontology	Yes	1	1.8		
	No	54	98.2		
Undergone Fall Prevention Policies Talk	Yes	32	58.2		
	No	23	41.8		

The level of knowledge on fall risk factors toward elderly patients among nurses in Hospital USM.

The overall knowledge score toward fall risk factors among staff nurses was 94.5% for -average, which showed a high level of knowledge while 5.5% below average knowledge for fall risk factors among the elderly. Table II and Table III summarised the frequency and percentage level of knowledge towards fall risk factors in nurses at Hospital USM.

Table II: The overall knowledge score towards falls risk factor of elderly among staff nurses Hospital USM (n=55)

Level of knowledge	Frequency	(%)
Below Average	6	10.9
Above Average	49	89.1

Table III. Respondents' level of knowledge regarding fall risk factors in elderly among staff nurses in Hospital USM. (n=55)

Questions	Response	Frequency	%

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Footwear problems (behaviour)	Yes	53	96.4
	No	2	3.6
Environment Hazards (environment)	Yes	52	94.5
	No	2	3.6
	Unsure	1	1.8
Balance Deficit (biology)	Yes	51	92.7
	No	3	5.5
	Unsure	1	1.8
Impaired functional status (biology)	Yes	51	92.7
	No	3	5.5
	Unsure	1	1.8
Gait deficits (biology)	Yes	51	92.7
	No	1	1.8
	Unsure	3	5.5
Proper height of the bed (environmement)	Yes	49	89.1
	No	6	10.9
Postural hypotension (biology)	Yes	48	87.3
	No	2	3.6
	Unsure	5	9.1
Visual deficit (biology)	Yes	47	85.5
	No	8	14.5
Cognitive Impairment (biology)	Yes	45	81.8
	No	8	14.5
	Unsure	2	3.6
Raising side rails of bed (environment	Yes	42	76.4
	No	13	23.6
Improper use of assistive devices (behaviour)	Yes	40	72.7
	No	12	21.8
	Unsure	3	5.5
Hyperglycemia (biology)	Yes	39	70.9
	No	12	21.8
	Unsure	4	7.3
Elimination problems (biology)	Yes	35	63.6
	No	16	29.1
	Unsure	4	7.3
Polypharmacy (behaviour)	Yes	33	60
	No	19	34.5
	Unsure	3	5.5
Dysphagia(biology)	Yes	19	34.5

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	No	34	61.8
	Unsure	2	3.6
Normal muscle strength(biology)	Yes	14	25.5
	No	40	72.7
	Unsure	1	1.8

The level of practice on fall prevention towards elderly patients among nurses in Hospital USM.

The overall practice scores in preventing fall toward elderly patient among staff nurses at Hospital USM was 90.9% above average which showed an excellent practice while 9.1% below average practice in preventing falls among elderly. Table V summarised the frequency and percentage level of practice on fall prevention towards elderly patients among nurses in Hospital USM. Table IV revealed the overall practice scores on fall prevention towards elderly patients among nurses in Hospital USM.

Table IV: The overall practice scores on fall prevention towards elderly patients among nurses in Hospital USM. (n=55)

Practice level	Frequency	%
Below average	5	9.1
Above average	50	90.9

Table V: Respondents' level of practice on fall prevention towards elderly patients among nurses in Hospital USM. (n=55)

Questions	Response	Frequency	%
Identify Risk of Falling	Almost never or never	5	9.1
	Often	14	25.5
	Almost always or always	36	65.5
Document Risk of Falling	Almost never or never	3	5.5
	Sometimes	2	3.6
	Often	15	27.3
	Almost always or always	35	63.6
	Often and almost always or always		90.9
Refer To other Healthcare Professional	Almost never or never	1	1.8
	Sometimes	4	7.3
	Often	25	45.5
	Almost always or always	25	45.5

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	Often and almost always or always		91
Identify History of Falls in Elderly	Sometimes	14	25.5
	Often	18	32.7
	Almost always or always	23	41.8
	Often and almost always or always		74.5
Provide Intervention to Address Fall Risk Factors.	Almost never or never	2	3.6
	Sometimes	4	7.3
	Often	31	56.4
	Almost always or always	18	32.7
	Often and almost always or always		89.1

The association between working experience and level of knowledge on fall prevention towards elderly patients among staff nurses in Hospital USM

Table VI summarises the association between working experience and the level of knowledge of nurses in Hospital USM. There is no statistically significant association between the working experience of nurses with the level of knowledge tested using Fisher's exact test (P= 0.699)

Table VI: The association between working experience and level of knowledge

Variable		Knowledge level n(%)		P-value
		Below Average	Above Average	
Working experience	<6 years	4 (14.3%)	24(85.7%)	0.699
	≥ 6 years	2(7.4%)	25(92.6%)	

**Tested using Fisher's exact test*

The association between attending the talk on fall prevention policies and level of knowledge on fall prevention towards elderly patients among staff nurses in Hospital USM

Table VII summarises the association between attending the talk on fall prevention policies and nurses' level of knowledge in Hospital USM. There is no statistically significant association between attending a talk on fall prevention policies with the level of knowledge tested using Fisher's exact test (*P*= 0.223)

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Table VII: The association between attending a talk on fall prevention policies and level of knowledge

Variable		Knowledge level n(%)		P value
		Below Average	Above Average	
Attending a course on fall prevention policies	Yes	2(6.3%)	30(93.8%)	0.223
	No	4(17.4%)	19(82.6%)	

**Tested using Fisher's exact test*

The association between level of knowledge and level of practise among nurses in Hospital USM

Table VIII summarises the association between the level of knowledge and the level of practice of nurses in Hospital USM. There is no statistically significant association level of knowledge with a level of practice tested using Fisher's exact test (P= 0.086)

Table VIII: The association between knowledge level and practice level

Variable		Practice level n(%)		P-value
		Below Average	Above Average	
Knowledge level	Below Average	2 (33.3%)	4 (66.7%)	0.086
	Above Average	3 (6.1%)	46 (93.9)	

**Tested using Fisher's exact test*

DISCUSSION

This finding is consistent with a similar study done in King Abdul Aziz Hospital, which also reported that 94.9% of nurses have a good knowledge score on fall prevention. (Ganabathi et al., 2017). Conversely, another study conducted among healthcare providers by (Asiri et al., 2018) found that the nurses regarded lower levels of knowledge regarding fall risk factors than other healthcare providers. This difference might be attributable to educational and cultural differences between countries (Turner et al. 1996).

In relation to the data in the present study, almost all nurses were aware of footwear problems (96.4%) as one of the risk factors of falls. According to Anena & Muchane, (2012), These behavioural risk factors are the major risk factor of falls among elderly. On top of that, the nurses have also regarded environmental hazards as major (94.5%) risk factors of fall. Environment hazards have also been regarded as a major (94.5%) risk factor of falls by the nurses in the present study. As identified by a similar study in Malaysia. The most common places for falls were the bathroom and inadequate lighting (Sazlina S. G. et al., 2008).

The present study's result indicates that most of the nurses (90.9%) regarded themselves to have a high practice level in preventing fall among the elderly. This finding agrees with Ganabathi

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et al., (2017) finding, which also showed the majority(90.4%) of their nurses have good practice. According to (Loganathan et al., 2015), nurses' clinical skills are required to deliver good fall management apart from having good knowledge.

As reported by most (91%) of the nurses in the present study, they did identify and documented the risk factor of falls among the elderly. Conversely, in the previous study (Loganathan et al., 2015), the nurses reported that they could not screen for falls among elderly patients due to high patient loads and time constraints. As Anena & Muchane (2012) emphasised, the elderly with a history of falls are at greater risk of falling again. However, identified history of falls in the elderly is less (74%) being practice by nurses in the present study. Similarly, a study done by (Ganabathi et al., 2017) also found that one-fourth of nurses were unaware of the risk of recurrence in falls.

This present study revealed no significant association between working experience with the level of knowledge on fall risk factors among nurses in Hospital USM. Therefore, the null hypothesis was accepted (*P-value* = 0.699). Conversely, a similar study conducted by Ganabathi et al., (2017) and Gray-Miceli et al., 2016) showed a significant association between increasing age and working experience among nurses and higher knowledge level on the fall risk factor. They argued that those more senior nurses have more experience than junior nurses, which might contribute to a high knowledge level. Ganabathi et al., 2017).also suggested that patients at high risk of falls should be under the care of experienced nurses who have upgraded skills in fall prevention. Whereas in the present study, although the majority (92.6%) of the nurses above have more than six years of working experience show higher knowledge level than others, the result is not significant. This finding might be due to the small sample size compared to the previous study and perhaps other confounding factors that might affect the nurse's attitude.

Regarding the association between an attended course on fall prevention with knowledge level, the null hypothesis was accepted (*p-value* = 0.223). Even though there was no significant difference, the present study's finding shows that the majority (93.8%) of nurses who attended that course show a higher knowledge level than those who did not (6.3%). A similar study done by Hui Liu et al. (2012) has reported nurses who lack the knowledge to prevent hospitalised older people falls related to whether the nurses received training or not (Hui Liu et al., 2012). Another study in Malaysia also reported that the healthcare professionals felt inadequate or no training on fall management as evidence of a lack of knowledge in fall management (Loganathan et al., 2015). Therefore, many researchers suggested that nurses knowledge level of preventing hospitalised older people falls should be improved by education and training (Ganabathi et al., 2017, Hui Liu et al., 2012. Loganathan et al., 2015).

Nurses' age was categorised into two, which are 15-24 years old, and 24-54 years old. From the results, the range of age 24-54 years old has a good level of knowledge compared to the other

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categories as they have 7.3% participants in that category. This association between age and the level of practice in preventing falls has the Fisher's *p*-value was 1.000. Thus, the *p*-value was greater than 0.05 the null hypothesis was accepted the association was not significant. There was no significant association between ages and practice level in preventing fall among nurses in Hospital USM. However, a previous study showed a significant association between age and practice level of the nurses (Ganabathi et al., 2017). The inconsistent result in this study from the previous study is due to the small sample size that does not represent the whole population.

Based on Fisher's exact test, nurses with more working experience have better practice in preventing fall. 92.6% of nurses have more than 6 six years of working experience, while the remaining have one to five years of working experience. However, a study stated that nurses who had more years of experience were less likely to have better practice than nurses with fewer years of experience in providing good practice in referral to another healthcare professional (Peel et al., 2008). It may be that the more recent graduates received a greater emphasis on referral in their educational programs. Furthermore, the association between working experience and practice level has a p-value of 0.699, greater than 0.05. Therefore, the null hypothesis is accepted that there is no significant association between years of working and practice level.

Ward settings have been categorised into two which is medical and surgical ward. Results showed that nurses in the medical ward had a better level of practice than nurses in the surgical ward. Statistically test between attending the talk on Fall Prevention Policies and level of practice had Fisher's exact test, p-value 0.149 that greater than 0.05. Based on Fisher's exact test, p-value is 0.068, which is slightly greater than 0.05. Thus, the null hypothesis is accepted there is no significant association between working ward and practice level of nurses preventing fall. Other than that, nurses that attend Fall prevention Policies talk showed result who attend Fall prevention Policies talk showed that they have better practice than others. Thus, we had accepted there is no significant association between them. The findings of the present study on the level of knowledge among nurses contradict another study. One study in Saudi Arabia revealed that half of nurses needed the training to develop skills related to falls (Ganabathi et al., 2017).

This study shows no significant association between the level of knowledge with the level of practice among the nurses (p=0.086). Therefore, the null hypothesis was accepted. However, most nurses (93.9%) who regarded themselves as having high practice levels were among those who have higher knowledge about fall risk factors in the elderly. According to (Loganathan et al., 2015), besides having good knowledge, clinical skills are required to deliver good fall management to the elderly. As reported in the study, some healthcare professionals 'under-assessed the incidence of falls because they did not see it as a presentation of something more serious. Similarly, another similar study (2016) reported that one of the most significant barriers

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to implementing the guideline of fall prevention (2016) reported one of the most significant barriers to implementing the fall prevention guideline was lack of knowledge. As a result, healthcare professionals in the study only provided basic consultations without exploring the possible causes of a fall.

This study has a few potential limitations, such as the current study's cross-sectional design is one shortcoming. All the hypotheses have been proposed based on related ideas and data found in the literature; causal correlations between variables cannot be concluded due to the lack of a longitudinal design. Furthermore, the study variables were measured by obtaining a subjective response from participants via a questionnaire (self-reported issues). As a result, there's a chance that the sample will be biased and not provided a proper response to the questionnaire. The research's final limitation is a lack of literature on the association between all the study variables in a single study.

CONCLUSION

Fall is the problem that can be prevented and avoided if it had managed well with proper precaution. It shows the importance of knowledge and practice applied during duty. The knowledge and practices level scores about fall risk factors and prevention were relatively high among nurses at Hospital USM as they acknowledge the measure run by the Hospital USM safety team in handling fall cases. Thus, their level of knowledge and practice is excellent. Despite a statistically insignificant between course education and working experiences with a level of knowledge, the majority of the nurses who had taken a course in fall prevention and those who had working experience more than six years reported good practice managing fall among the elderly.

Similarly, although there is an insignificant association between level of knowledge and level of practice, those registered nurses who regarded themselves with the good practice were among those with higher knowledge levels about a factor of fall. Other than that, many scholars propose that nurses knowledge level of preventing hospitalised older people falls should be improved by education and training (Hui Liu et al., 2012). A pre and -study design might be useful to see the differences in the level of knowledge and practice in managing fall effectively.

Conflict of Interest

No conflict of interest

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QUESTIONNAIRE

Respondents no. ☐☐☐

QUESTIONNAIRE REGARDING KNOWLEDGE OF FALL RISK FACTOR AND PRACTICE OF FALL PREVENTION TOWARDS ELDERLY PATIENT AMONG NURSES IN HOSPITAL USM KUBANG KERIAN, KELANTAN

Part A: Socio-Demographic Data.

Instruction: Please answer all the questions which best corresponds to your response.

1) Age: _____
2) Gender: Male ☐ Female ☐
3) Ethnicity: Malay ☐ Chinese ☐ Indian ☐ Others: _____
3) Level of education
Diploma ☐ Degree ☐ Master ☐
4) Working experiences: _____years
5) Working ward:
1 Selatan ☐ 2 Intan ☐ 3 Utara ☐ 7 Selatan ☐ 7 Utara ☐
6) Have post basic in gerontology
Yes ☐ No ☐
7) Have undergone training/ talk regarding Fall Prevention Policies
Yes ☐ No ☐

Part B: Knowledge of fall risk factors among elderly patients.

Based on your current knowledge, tick as many fall risk factors as you can think of among elderly patients.

No	Falls risk factor	Yes	No	Unsure
1	Balance deficit			
2	Proper height of the bed			
3	Cognitive impairment			
4	Environmental hazards (e.g. slippery floor, inadequate lighting)			
5	Hyperglycemia			
6	Foot/footwear problems			
7	Gait deficit			
8	Raising side rails of bed			
9	Elimination problem			
10	Impaired functional status (e.g. need assistance to perform activity daily living)			
11	Normal muscle strength			

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12	Improper/limited use of assistive devices			
13	Postural hypotension			
14	Dysphagia			
15	Visual deficit			
16	Polypharmacy/multiple medications			

Part C: Practice on fall prevention

The following question relates to your current practice as a health care professional to prevent fall among elderly patients. For scoring, 1: almost never or never, 2: sometimes, 3: often and 4: almost always or always.

No	Question	1	2	3	4
6	In your initial assessment of elderly patients, how often do you ask older adults if they have a history of falls?				
7	In your assessment of elderly patients, how often do you: i) Identify the risk of falling?				
	ii) Document risk factor for falling?				
8	In your assessment planning for the elderly, how often do you provide interventions to address fall risk factors? List the interventions that you have provide: _____				
9	In your treatment planning, how often do you refer elderly patients to other healthcare professionals to address fall risk factors? (e.g. Medical doctor, occupational therapist, physiotherapist)				

10. Do you have any comment or suggestion regarding management of fall in the ward?

_____

_____