EFFECTIVENESS OF VIDEO ASSISTED TEACHING (VAT) REGARDING FALL RISK ASSESSMENT TRAINING ON KNOWLEDGE AND SKILLS OF NURSES

Premalatha Paulsamy[*1]**, Krishnaraju Venkatesan**[2]**, Pranave Sethuraj**[3]**, M. D. Zaheen Hassan Ansari**[2]
[1*]College of Nursing for Girls, King Khalid University, Khamis Mushayit, Asir Province, Saudi Arabia.
[2]Department of Pharmacology, College of Pharmacy, King Khalid University, Abha, Asir Province, Saudi Arabia.
[3]Vee Care College of Nursing Chennai, Tamil Nadu, India.

ABSTRACT
In hospital settings, "patient fall" has become a huge concern. Clients must be assessed on a regular basis to identify vulnerable patients who are at risk of falling. As a result, "fall risk assessment" aids in the planning of suitable preventive actions to reduce the chance of patients falling. Hence, the aim of the study is to assess the effect of a video assisted teaching (VAT) regarding fall risk assessment on knowledge and skills of nurses in selected hospitals. A Quasi- experimental, one group pre and post-test design was conducted with 66 randomly selected ICU nurses from two general hospitals. The training module and the tool were developed by the investigators and the reliability value is r = 0.79. The tool comprised of dichotomous questions (Yes/No) on knowledge and skills on falls risk assessment. Pre-test, Video assisted teaching followed by post-test after 2 weeks which showed that the knowledge and skills of the nurses improved significantly after VAT (p=0.05). The professional qualification and experience had significant association with the level of skills scores at p=0.05 level. The study concluded that the VAT is effective in improving the knowledge and skills of nurses on fall risk assessment.

KEYWORDS
Fall risk assessment, Nurses, Knowledge, Skills and Video assisted teaching.

Author for Correspondence:
Premalatha Paulsamy,
College of Nursing for Girls,
King Khalid University, Khamis Mushayit,
Asir Province, Saudi Arabia.

Email: pponnuthai@kku.edu.sa

INTRODUCTION
In the healthcare industry, ensuring patient safety is critical. Patient safety refers to the avoidance of danger or injury to the patient, whether direct or indirect. All healthcare workers share equal responsibility for ensuring the safety of their patients. Nurses, as a significant part of the hospital's personnel, play a critical role in ensuring the safety

of their patients by reducing hospital-acquired infections, negligence and errors, falls, injuries and other incidents.

A fall is "an event in which a patient comes to rest on the floor suddenly and involuntarily". Hospital "patient falls" result in injuries, disability and a longer stay in the hospital. It not only has an impact on their quality of life, but it also puts a financial strain on the patients, their families and the hospital. Between 2000 and 2009, the Pacific Institute for Research and Evaluation (PIRE publication)[1] documented a 71 percent rise in the death of such individuals. Houry *et al*, projected an increase in the number of "patient falls" and the expense of the therapy. By 2030, the number of falls with fatal outcomes among older persons aged 65 and over is expected to reach almost 100,000 per year, with medical costs for treating these patients rising from $35 billion to over $101 billion which clearly reflects upon the need to prevent such incidences. All healthcare professionals must be prepared to assess "fall risk" so that correct preventive measures can be taken[2].

Falls among hospital inpatients are not uncommon, affecting between 2% and 17% of patients at some point during their stay[3]. According to the kind of hospital and patient profile, falls rates range from 0.3 to 19 per 1000 patient days[4]. Up to 50% of patients sustain injuries as a result of falls, with 1% to 10% of falls resulting in catastrophic injuries such as fractures, subdural hematomas and even death. In acute care hospitals, inpatient falls are one of the most prevalent nursing-sensitive quality indicators, hence reducing inpatient falls is a top concern for healthcare organizations and professionals. In-patient fall rates are frequently underreported by nurses and other healthcare workers, both in developed and developing nations, due to the risk of losing their jobs, as well as the shame of carelessness and its consequences[4].

Falls also can lengthen a patient's stay in the hospital and increase the use of healthcare resources as a result. In a retrospective case–control study for inpatients, Wong *et al*, (2011)[5] found that the patient who experienced fall, stayed in the hospital for 6.3 days longer. Furthermore, according to Alekna *et al*,

(2015)[6], the average total costs of per-patient falls were projected to be 254 EUR, with the majority of the expenditures being spent on hip fracture treatment. As a result, identifying patients who are at high risk for falls, as well as the consequences of falls, is critical to preventing the occurrence of falls in inpatients.

Nurses in developed countries are educated to assess patients' risk of falling and there may be standards, rules and protocols in place for fall risk assessment, reporting and subsequent care. Developing countries like India, on the other hand, lack such norms, policies and norms, as well as research efforts. In addition, both public and commercial institutions lack standard processes for assessing patients for the risk of falling. As a result, it's critical to look at nurses' knowledge and abilities to complete fall risk assessments on their patients. Hence, this study was undertaken to assess the effect of a video assisted teaching (VAT) regarding fall risk assessment training on knowledge and skills of nurses in selected hospitals.

MATERIAL AND METHODS
A Quasi- experimental, one group pre and post-test design was adopted for this study. Sixty six nurses, those who are working in ICUs in two general hospitals were randomly selected. The training module and the tool were developed by the investigators based on review of literatures and content validity was obtained from the experts. The reliability value is r = 0.79. The tool comprised of dichotomous questions (Yes/No) on knowledge and skills on falls risk assessment on the following subtopics such as age, fall history, ability to move, activity level, drugs in use, patient care apparatus, balance and gait, mental status, environmental hazards, personal history, urine and bowel elimination. Pre-test, Video assisted teaching followed by post-test after 2 weeks was done. For assessment of skills of the nurses, each nurse was given one patient to assess for fall risk and assessed their patient individually. One of the researchers also assessed the risk of falling in these patients so that the nurses' assessments could be judged and compared. Before the study, the chosen hospital

granted ethical permission. The hospital administration, selected nurses and selected patients all signed informed written consent forms. Throughout the study, privacy, secrecy, anonymity, and data security were all maintained.

RESULTS AND DISCUSSION

According to the study results, all nurses had finished the professional training and nearly half of them were in the age group of 26-30 years (47%) and 69% of nurses had less than 7 years and 31% nurses had more than 8 years of work experience. The overall knowledge score showed that, the pre-test mean and SD was 7.39 ± 2.44 and the post-test mean score was 18.07 ± 1.23. The overall knowledge (t = 15.286) was found to be statistically highly significant at p<0.001. The study by Hou W H *et al*,[7] also showed the similar finding and concluded that the nurses should be facilitated with the development of fall prevention interventions.

Table No.1 shows the mean and SD of the pre and posttest skill score of nurses which reveals that the skills score of the nurses on the fall risk assessment had improved significantly (p=0.001) after the VAT which says that the VAT is effective in enhancing the knowledge and skill of the nurses on fall risk assessment. The similar findings were reported by a study by Joshi B S and Solankhi G[8] concluded that knowledge and skills score of nurses improved after the training which confirms that fall risk assessment training was effective. So it is imperative to educate the health care professionals, not only nurses, to prevent hospital acquired accidents especially falls, so that we can prevent morbidity and mortality related to the same.

Table No.2 shows the association between posttest skill scores and demographic variables of nurses which indicates that the professional qualification of nurses and their years of experience have significant association with their level of skills at p =0.05 level. This indicates that the professional preparedness of the nurses and their professional experience makes them more skilful in handling the patient care especially fall risk assessment of patients and prevention of falls in the health care settings. A few studies[8,9] report the similar outcomes that the qualification, age and professional experience have significant association with the knowledge and skill of nurses.

Table No.1: Mean an SD of pre and post-test Skill Score (SS) of nurses

S.No	Test	Mean	SD	Paired "t"	df	"p" value
1	Pre-test	6.28	0.71	26.9	23	0.001***
2	Post-test	17.98	0.79			

Table No.2: Association between post-test Skill Scores and demographic variables of nurses

S.No	Variables	df	Table value	χ^2 value	Level of significance
1	Age in years	4	4.49	0.63	Not significant
2	Professional qualification	2	5.49	9.82	p = 0.007, S**
3	Designation	4	2.49	1.75	Not significant
4	Years of Experience	1	3.49	7.932	p = 0.05, S**
5	Exposure to In -service education	1	3.84	0.27	Not significant

CONCLUSION

This study finding concludes that the VAT is very effective in improving the knowledge and skills of the nurses regarding the fall risk assessment of the patients. Hence, it is essential to have frequent in-service education to the health care professional to provide safe and quality care to their consumers.

DECLARATION OF CONFLICTING INTEREST

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

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