RESEARCH ARTICLE

RISK FOR FALL AMONG PATIENTS IN THE ACUTE CARE SETTINGS

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ABSTRACT

Introduction: A fall is an unexpected event in which the participant comes to rest on the ground, floor, or lower level.An unfamiliar environment, acute illness, surgery, bed rest, medications, treatments, and the placement of various tubes and catheters are common factors that place patients at risk for falling in the hospital setting.
Aim: The aim of the study is to assess the level of risk for fall among patients in acute care setting.
Methods and Materials: Cross sectional research study was conducted in acute care setting with 60 samples which was selected by convenient sampling technique. The instrument used for the study was Morse Risk Fall Scale and the data were analyzed by using descriptive and inferential statistics.
Results: Out of 60 samples, 15(25%) of them are no risk for fall, 35(58.3%) of them are low risk for fall and 10(16.7%) of them are high risk for fall. The mean value of risk for fall is 45.5 with the standard deviation is 30. There is a significant association between body mass index and risk for fall with P<0.005.
Conclusion: The study findings emphasized that Screen fall-related injury risk factors and related history at the time of admission and standard protocol and interventions for patients at highest risk of fall-related injury.

INTRODUCTION

A fall is an unexpected event in which the participant comes to rest on the ground, floor, or lower level. Falls from standing position to flat ground may cause serious injuries.Falls can occur in a home, community, long-term rehabilitation, or acute care setting. Fall risk tends to be related mostly to mobility status, exposure to hazardous environments and risk-taking behaviors such as climbing ladders for seniors living in the community setting (Scott, Votova, Scanlan, & Close, 2007). There are three main reasons why the people are more likely to have a fall. These are: chronic health conditions, such as heart disease, dementia and low blood pressure (hypotension), which can cause dizziness and impairments, such as poor vision or muscle weakness.

According to WHO, falls are the second leading cause of accidental or unintentional injury deaths worldwide. Each year, an estimated 424 000 individuals die from falls globally of which over 80% are in low- and middle-income countries.Adults older than 65 suffer the greatest number of fatal falls. 37.3 million Fall that are severe enough to require medical attention, occur each year. An unfamiliar environment, acute illness, surgery, bed rest, medications, treatments, and the placement of various tubes and catheters are common factors that place patients at risk for falling in the hospital setting (Dykes, Carroll, Hurley, Benoit, & Middleton, 2009).

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While the risk factors for a fall in hospitalized adults are greatly influenced by acute illness that often has a marked, albeit temporary, impact on physical and cognitive function compounded by care provided in unfamiliar surroundings (Scott et al., 2007). Falls among hospital inpatients are common, generally ranging from 2.3 to 7 falls per 1,000 patient-days. Approximately 30% of inpatient falls result in injury, with 4% to 6% resulting in serious injury. These serious fall-related injuries can include fractures, subdural hematomas, excessive bleeding, and even death. Injuries due to falls also increase health care costs. (Halfaon et al., 2001). Patient falls make up 38% of all adverse events occurring in hospital settings, and may result in physical injury and undesirable emotional and financial outcomes. (Emily Ang Neo Kim, et al, 2007) Fall risk factors include intrinsic risks of cognitive, vision, gait or balance impairment, high-risk/contraindicated medications, and/or the extrinsic risks of assistive devices, inappropriate footwear, restraint, poor lighting, uneven or slippery surfaces. Fall causes include, among others, orthostatic hypotension, arrhythmia, infection, generalized or focal muscular weakness, syncope, seizure, hypoglycemia, neuropathy and medication. Risk factors for injurious falls may differ from risk factors for falling, and little research has been performed to identify predictors of injurious falls in hospitals. Studies performed in community, long-term care, and rehabilitation hospital settings have documented a wide variety of patient-related risk factors for suffering a serious fall-related injury. These include female gender, white race, cognitive impairment, gait or balance impairment, low body mass index, presence of two or more chronic conditions, and a previous fall

with fracture. Patients sick enough to be in the hospital have underlying disease, are receiving physiologically altering medications and treatments, and are likely experiencing pain, fatigue, anxiety, sleep disturbance, and other symptoms that interfere with cognitive and physical functioning.

Nassar et al. (2013), had conducted a study on Predicting falls using two instruments (the Hendrich Fall Risk Model and the Morse Fall Scale) in an acute care setting in Lebanon with prospective observational cross-sectional design was used. It identified the adult population group with the most frequently observed risk factors for   injurious falls in acute hospital settings .Data from 1815 inpatients at the American University of Beirut Medical Center (AUBMC) in Lebanon were evaluated using two instruments to predict falls: the MFS and the HFRM.Although both instruments were easy to use in a Middle Eastern country, the HFRM rather than the MFS is recommended for inpatients in an acute care setting as it had higher sensitivity and specificity. Prospective study on Fall risk six weeks from onset of stroke and the ability of the Prediction of Falls in Rehabilitation Settings Tool and motor function to predict falls to investigate whether the Prediction of Falls in Rehabilitation Settings Tool (Predict FIRST) and motor function could be used to identify people at risk of falling during the first six weeks after stroke, and to compare the risk of falling according to Predict FIRST with real falls frequency. (Nystrom et al. (2010)

Swartzell et al. (2004), had conducted a study on relationship between occurrence of falls and fall-risk scores in an acute care setting using the Hendrich II fall risk model.The purpose of this study was to explore the relationship between scores on the Hendrich II Fall Risk Model (HIIFRM) and fall occurrence as recorded in the medical record for patients diagnosed with diabetes mellitus, stroke, or heart failure in an acute care inpatient setting. No health care professionals are affected more by falls than nurses who work in the hospital on the frontlines of patient care. Falls violate nurses' legal and ethical responsibility to do no harm and are contrary to the culture of institutional safety promoted at every level of health care. The key to preventing falls among hospitalized patients may lie in addressing how the hospital environment creates risk. The purpose of the study is to assess fall risk and implement interventions that modify or eliminate risk when possible. Preventing falls among patients in health care settings requires a multifaceted approach, and the recognition, evaluation and prevention of patient falls are significant challenges. This study focus on risk for falls among the adult in hospital admitted in acute care settings and to reduce the incidence accidents among the patients in hospital by providing safety measures and precautions while transporting, handling and caring the patients.

METHODS AND MATERIALS USED

The research approach used in the study was quantitative approach by using non-experimental cross sectional research design. The study was conducted at intensive care units of selected hospital in Chennai, India with 60 samples. The samples were selected by using convenient sampling technique. The tool used for the study was demographic variables and MORSE FISK FALL SCALE. Explained the study to the samples and got the consent from the samples. Demographic

variables and the risk for fall was assessed. The data were analysed by using descriptive and inferential statistics.

RESULTS

Frequency and percentage distribution of Demographic variables among patient risk for fall in acute care setting

S.No	Demographic variables	Frequency	Percentage
1	Age in years		
	40-45	14	23%
	46-50	16	27%
	51-55	14	23%
	56-59	16	27%
2	Gender		
	Male	37	61.7%
	Female	23	38.3%
3	BMI		
	Under weight	10	16.7%
	Normal	30	50%
	Over weight	15	25%
	Obesity	5	8.3%
3	urinary/stool frequency		
	Yes	16	26.7%
	No	44	73.3%
4	Sedated		
	Yes	43	71.7%
	No	17	28.3%
5	Orthoststic Hypotension		
	Yes	40	66.7%
	No	20	33.3%
6	Agitated/uncooperative		
	Yes	10	16.7%
	No	50	83.3%

Percentage Distribution of Risk for fall
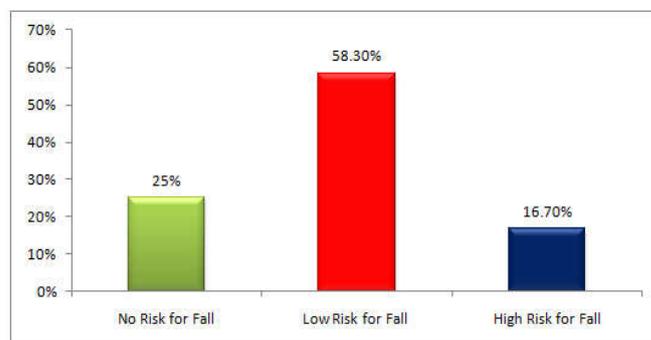
Out of 60 samples, 15(25%) of them are no risk for fall, 35(58.3%) of them are low risk for fall and 10(16.7%) of them are high risk for fall. The mean value of risk for fall is 45.5 with the standard deviation is 30. There is a significant association between obesity and risk for fall at the level of $P<0.005$.

DISCUSSION

Fall may occur in anywhere in the hospital setting. Risk factors for falls may differ from one client to another and little research has been performed to identify the risk factors for falls in hospitals especially in acute care setting.In present study findings revealed that around 75% of them are have risk to fall. The risk of fall is associated that body mass index of the client at the level of $P<0.05$. The causes of risk for fall found that in the study are orthostatic hypotension and side effects of sedation. Swartzell et al had reported that scores on the

Hendrich II Fall Risk Model (HIIFRM) and fall occurrence as recorded in the medical record for patients diagnosed with diabetes mellitus, stroke, or heart failure in an acute care inpatient setting. The study findings emphasized that Screen fall-related injury risk factors and history at the time of admission.

Conclusion

Assessment of risk for fall is one of the important assessments like vital signs to identify the clients who are risk for fall which helps to protect the client from fall. Many research related risk of fall have been conducted in the community setting and rehabilitation center. However conduct further studies in acute care setting among patients in semiconscious and conscious state. A finding of the study helps to customize standard protocol and interventions for patients at highest risk of fall-related injury and improve the quality care and reduce the length of stay in the hospital.

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