

KIBOGORA POLYTECHNIC

FACULTY OF HEALTH SCIENCES

DEPARTMENT OF GENERAL NURSING

ASSESSMENT OF NURSES'S KNOWLEDGE AND PRACTICES IN THE MANAGEMENT OF THE PATIENTS WITH HIP FRACTURE

Case study: Bushenge Provincial Hospital

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DECLARATION

Declaration by the candidate

We, MUTUYIMANA EMIMA and BAHUFITE NZAYIRATA CECILE hereby declare that this is our own original work and does not a duplication of any similar academic work. It hasn't been submitted to any other institution of high learning. All material listed in this paper which are not our own have been duly acknowledge

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Declaration by the Supervisor

I declare that this research thesis was submitted for examination with my approval as KP supervisor.

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ABSTRACT

Hip fractures are an acute and worsening public health problem; they mainly affect elderly people, a population group that is highly vulnerable to disease and accidents and to falls in particular. (Guerado et al., 2016), nurses have a great role and many responsibilities while giving care to patient with fracture. Maintaining skin care is needed to reduce the risk of pressure ulcers and turning and positioning the patient's, movement, sensation of affected part, exercise, assessing pain, pressure area, and nursing measure the promote adequate circulation in the affected part. Aim of this study was to assess knowledge and practice regarding management of patient admitted with hip fracture at Bushenge provincial Hospital. The specific objectives of this study Are: (1) To assess the level of nurse's knowledge about the management of the patients with hip fracture at Bushenge Provincial Hospitals, (2) Identify the nurses 'practices about the management of the patients with hip fracture at Bushenge Provincial Hospital. A quantitative approach and descriptive cross-sectional design were adopted to conduct this study. A non-probability convenience sampling strategy was used to select the nurses who met the study inclusion criteria to get the sample. A sample size of 60 nurses was calculated and considered in this study. Data will be collected using a structured questionnaire and a statistical package for social sciences (SPSS) version 26 will be used to analyze them. The knowledge of the nurses was 93.3% and their practices were 98.3%, we found that level of education, working experiences, working services, being trained about hip fracture management are significantly influencing the management of patient with suspicion or real hip fracture. Knowledge of the nurses regarding to management of the patient admitted with suspicion of hip fracture was good at rate of **93.3(56)**, Practices to management of the patient admitted with suspicion of hip fracture as 98.3 %(n=59) of the participants of this study. This should reduce the mortality rate of adult patient from the hip fracture.

DEDICATION

We dedicate this research to the almighty God, our beloved parents, families and fellow classmates for their kind collaboration to handle and accomplish this work.

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LIST OF ABBREVIATIONS AND ACRONYMS

BMP:	Basic Metabolic Panel
CHNs:	Community Health Nurses
CT:	Computer Tomography
CPD:	Continuous Professional Development
EDs:	Emergency departments
ECG:	electrocardiogram.
KP:	Kibogora Polytechnic
NCDs:	Non-communicable diseases
NSAIDs:	Non-Steroid Anti-Inflammatory drugs
OPD:	Out Patient Department
PT:	Prothrombin Time.
SCT:	Social Cognitive nursing Theory
SPSS:	Statistical Package for the Social Sciences
VTE:	Venous Thromboembolism
WHO:	World Health Organization

CHAPTER ONE: INTRODUCTION

1.0 INTRODUCTION

This chapter includes background of the study, problem statement, and purpose of the study, objective of the study, research questions, and significance of the study, limitation and scope of the study.

1.2 BACKGROUND OF THE STUDY

Hip fractures are cracks or break in the top of the thigh bone (femur) close to the hip joint. They're usually caused by a fall or an injury to the side of hip, but may occasionally be caused by health condition, such as cancer weakens the hip bone.

The hip fracture is a global problem among the elder person, but provision of effective medical intervention should reduce the complications that should occur after surgical interventions and maximize patient outcome. The nursing intervention to reduce the postoperative complications (undesirable cardiovascular, pulmonary and urinary effects, reduced muscle tone, loss of bone mineral density, and negative psychological effects) include the early patient mobilization before and after the surgical intervention (Kenyon. S et al, 2019).

Worldwide, 2050, it is expected that the prevalence of hip fracture should over 6 million patients with hip fracture. At least one of the following short-term complications such as infection, delirium, venous thromboembolism (VTE), pressure ulcers or cardiovascular events should occur in 50% of patients with hip fracture, while more than half of the causalities with hip fracture will experience adverse long-term outcomes including worsened ambulation or functional status, additional fractures and excess mortality” (Sarvi, 2018).

In the developed countries, the postsurgical outcomes of hip fracture are a major public health concern. For instance, in the United States, in the following year after surgical intervention, about 30% of people with a hip fracture die, one to three or many more will experience significant functional loss(Fractures & States, 2015).

Some studies have shown excess long-term mortality even 10 years after an episode, although other studies have only shown moderate increases in mortality (Brauer et al, 2009).

Falls are the one of the most common geriatric syndromes threatening the independence of the older persons. Between 30 and 40% of community dwelling adults older than 65 years fall each year (Shobha 2005).

A few studies are available from Africa on the incidence of hip fracture. Osteoporosis and fragility fractures are believed to be uncommon in Africa (Kanis et al,2012).

Patients with hip fractures require immediate evaluation to stabilize any medical conditions and optimize them for surgery. Routine studies like electrocardiograms, coagulation studies, blood counts, and blood type are baseline and required for most patients going into the operating room.(Bass,2009).

Tests should not delay fixation but rather be done only when needed to evaluate and treat a patient's condition. Although turning and repositioning are imperative to preventing skin breakdown, limiting patient transfers to carts for tests will ensure the patient's comfort as well as reduce additional trauma to the fracture site (Latimer et al., 2015)

Management of patients with hip fractures should optimize outcome after discharge from hospital. This involves several stages of care, beginning before the patient is admitted to hospital. It is vital that specific goals are set at each stage. The main goal of prehospital care is to diminish pain and discomfort for the patient at the place of injury and during transportation. On admittance to the emergency room or ambulance, diagnosis and assessment – including medical history – should be carried out rapidly to diminish the risk of deterioration of health due to the fracture. Care, including pain management, oxygen, intravenous fluids and prophylaxis for pressure ulcers to improve status for surgery, should be administered, and comorbidities optimized. Many patients with hip fractures are poorly nourished and require specific attention, after diagnosis, the patient should be prepared for surgery, with the expectation that surgery will be performed within 24 hours. Care and pre-operative management (cushioning and temporary stabilization of the fractured limb, monitoring of fluids, body temperature, oxygen saturation and pain) should be continued to ensure that the patient is comfortable, but preoperative management also aims to limit postoperative complications. Surgical management involves choosing the optimal treatment method and performing high quality fracture surgery in a timely manner to enable restoration of function and minimize pain. The surgical methods vary depending on the type of hip fracture; trochanteric fractures are commonly stabilized with plates and screws or intra-medullary nails depending on fracture fragmentation, while arthroplasty is an additional and often preferable option for femoral neck fractures. During surgery, different aspects of anesthesia should be considered to optimize patient outcome. This involves choosing a strategy aiming to minimize the possibility of negative cerebral and cardiovascular effects, with spinal

anesthesia most commonly employed. Care should also be taken to avoid pressure ulcers. Appropriate surgical technique should be employed to minimize tissue damage, blood loss and operating time.

1.2 STATEMENT OF THE PROBLEM

Hip fractures are associated with the highest degree of morbidity and mortality of all fractures; particularly patients need support through the rehabilitation and recovery process. However, many do not receive optimal care and experience long-term disability, with 27% of patients entering a nursing home for the first time within 1 year of the hip fracture.

In developed countries, hip fracture is a major public health problem. Increased life expectancy, in conjunction with social changes, has made many elderly persons vulnerable to loneliness and to disability. The elderly persons tend to suffer more frequently from hip fracture than others because they have a higher propensity to falls, as a result of sensorial and neurological deterioration, together with muscular atrophy (Guerado et al., 2016).

Shortage of skilled nurses about management of hip fracture, insufficient materials, patients ignorance, miscommunication, absence of commitment or working as a team there are the elements that aggravate or worsen the problem, finally lead to disability, death due to mismanagement of patients with hip fracture (Matheson et al., 2011).

This study intends to assessment of nurse's knowledge and practice in the management of the patients with hip fracture at Bushenge Provincial Hospital. In Bushenge hospitals received many patients with hip fracture cases, for examples there is secondary survey that shows that 60 cases of hip fracture received at Bushenge hospital within 6 months from January to June, 2022, 23 cases among of that cases have developed disability (38.3%) as a result of lack of enough skills among nurses on hip fracture managements this situation has pushed us to tackle this topic in Bushenge Provincial Hospital, this study intends to assessments of nurse's knowledge and practice in the managements of the patients with hip fracture at Bushenge provincial hospitals.

1.3 OBJECTIVES OF THE STUDY

1.3.1 Main objective

The main objective of this research project is to assess the level of nurse's knowledge and practices in the management of the patients with hip fracture at Bushenge Provincial Hospital.

1.3.2 Specific objectives

The specific objectives of this study are:

1. To assess the level of nurse's knowledge about the management of the patients with hip fracture at Bushenge Provincial Hospital.
2. To identify the nurses' practices about the management of the patients with hip fracture at Bushenge Provincial Hospital.

1.4 RESEARCH QUESTIONS

1. What is the knowledge level of nurses about the management of the patients with hip fracture at Bushenge Provincial Hospital?
- 1 What are the practices of nurses about the management of the patients with hip fracture at Bushenge Provincial Hospital?

1.5. SIGNIFICANCE OF THE STUDY

This study provides baseline information of knowledge about awareness, level and activities of nurses in managements of patients with hip fracture. The findings of this study can contribute to nursing practices or activities, nursing education, and development of further research in nursing profession as follow:

Bushenge Hospital

The hospital, the study provided an opportunity for the nurses to evaluate themselves how they care patients with hip fracture. It might enhance combined effort of the nurses and health institution's administration to induce change with the aim of improving nurse's knowledge and practice about hip fracture through training programs.

Nurses' students

For nursing education, evidenced based information shows a need to incorporate NCDs (non-communicable diseases) courses include hip fracture in nursing curriculum to increase capacity building in management of hip fracture and disseminate accordingly.

Researchers : For nursing research, the research findings can be used as baseline reference for future research, such as the effectiveness of educational program to increase knowledge and practice regarding hip fracture management.

1.6. SCOPE OF THE STUDY

Nurses work at Bushenge Provincial Hospital, are the ones this study is emphasize on, because there are the ones who are supposed to take care of the patients and who receive firstly the patients with hip fracture.

The study conducts the research by using interview and questionnaire during sampling and data collection. Time frame is 5 months, from 15st December, 2021 to 15st may 2022.No potential bias in a study's design, interpretation of it results or presentation of its scientific/medical content, including but not limited to commercial, personal, political, intellectual, or religious interests.

1.7. LIMITATIONS OF THE STUDY

Due to a low number of the patients admitted at Bushenge provincial Hospital with hip fracture, it may interfere with our study such that the nurses do not have a continuous professional development (CPD) on the management of the patient with hip fracture.

The Nurses have to participate when probably there is a training campaign talking about management of hip fracture because of limit space of practice and make nurses to refrain from having that knowledge and practices.

Also, the time frame may limit the information which our study supposed to collect and have for investigation, as the admitted patients also would be fewer in that time frame we have.

Language barrier as most of the nurses mainly understand well French, and time to get to every person and administer the questionnaires, the inaccessibility of the area of study and data biasness will likely affect the study.

Other limitation during the study was that there were fewer researches about the knowledge and the nurses about the management of the patient with hip fracture

CHAPTER TWO: LITERATURE REVIEW

2.0 INTRODUCTION

This chapter deals with analysis of existing literature on the objective of revealing contribution, weakness, and gaps. Hip fracture is a break in the upper portion of the femur (thighbone), most hip fracture occurs in elderly patients whose bones have become weakened by osteoporosis. This chapter will be made of theoretical and empirical literature review on assessment of nurses' knowledge and practices about the management with hip fracture. The recent articles published within the last 7 years will be used to make contents of empirical literature, while the contents of theoretical literature will focus on the risk factors of hip fracture, nursing assessment and management of hip fracture.

2.1 DEFINITION OF TERMS

Fracture: is a complete or non-complete disruption of continuity of the bone tissue. Fractures can be classified as open or closed fractures, and multi-fragmented or simple and displaced (Braxley et al.,2011).

The hip is a multiracial ball-and-socket synovial joint in which the rounded head of the femur articulates with the concave acetabulum of the pelvis (Metcalf, 2008).

Hip fracture: is a medical condition in which there is a break in the continuity of the femoral bone and cause impaired mobility (Sarvi, 2018).

Knowledge is the ability to use information in a way that it will enable you to achieve your objectives (Newell & Marabelli, 2014).

Nurses practice: according to WHO, (2014) practice means "what is done". It is action rather than thought or idea and require the use of ideas, believes, or skills, as opposed to theories relating to it (Cambridge dictionary, 2009). In this study, Nurses' practice refers to the level of nurses' ability to apply their knowledge by caring out specific procedures or hands on of hip fracture management for the patient admitted while they suspecting to have hip fracture.

2.2 NURSE'S KNOWLEDGE ABOUT THE MANAGEMENT OF THE PATIENTS WITH HIP FRACTURE

Preoperative Care

Sustaining a hip fracture is a sudden traumatic event, threatening many aspects of patients' lives and a forceful reminder of their mortality. Factors affecting outcomes following hip fracture are dominated by restoring function, so physical care attracts the most attention. The primary goal of nursing care for the older adult with fragility hip fracture is to maximize mobility and preserve optimal function; psychosocial factors, however, must be incorporated into a holistic approach to care so that patients can be motivated to rehabilitate.(Editors et al., n.d.) Assessment and subsequent care is best provided by effective multidisciplinary team working based on sound "orthogeriatric" principles; treating the fracture while considering the causes and effects of the fall and the unstable comorbidities and initiating effective rehabilitation while considering bone health with the aim of preventing further fractures. Emergency departments (EDs) are noisy, busy, overstimulating places, making them inappropriate care environments for vulnerable older people in a state of personal and physical crisis. Avoiding the impact of this situation requires consideration of the following three principles:(Editors et al.)

- **Effectiveness**—aiming for optimal outcomes using the best available evidence
- **Patient-centeredness**—care that is respectful of and responsive to individual needs.

Providing care to older people following trauma must follow the same principles as for all age groups, using the ABCDE approach. The normal and abnormal changes of ageing, compounded by active comorbidities, mean that morbidity and mortality are increased concerns. Examples of physiological considerations relating to ageing include:

Airway: ageing causes degeneration of the physiological airway and musculoskeletal pathology, such as osteoarthritis, can reduce neck and spine flexibility, making airway management difficult.(Ali, 2019)

Breathing: loss of respiratory resilience means loss of hypoxic reserve and potential hypoventilation with oxygen administration; oxygen therapy is still needed but requires closer monitoring in recognition of this. Older people are more at risk of respiratory failure because of the increased work of breathing.

Circulation: reduction in cardiopulmonary reserve means that there is increased risk of fluid overload when administering intravenous fluids (particularly colloids), requiring closer monitoring. Normal heart rate and blood pressure are not a guarantee of normal cardiac output

and use of beta-blockers and antihypertensive agents can mask the signs of deterioration. Blood loss from the fracture site can vary from a few milliliters for a displaced extracapsular fracture to over a litre for a multi-fragment or sub trochanteric fracture. All patients should have intravenous saline from the time of presentation, with the rate of infusion adjusted according to the estimated blood loss and degree of dehydration.(Editors et al.,)

Disability—prolonged inactivity and disuse limits ultimate functional outcome and impacts on survival.

Exposure—skin and connective tissue undergo extensive changes with ageing, resulting in diminished thermoregulation, increased risk of infection, poor wound healing and increased susceptibility to hypothermia.

A full and comprehensive history should include relevant comorbidities and medication history and previous functional ability as well as personal and social history. Many older people, with and without cognitive impairment, are unable to provide an accurate history, so the history should also be sought from a relative, caregiver or general practitioner. Patients' skin should also be thoroughly examined to identify skin problems and potential skin breakdown. To prevent pressure injuries, patients should be transferred to a bed with a pressure-relieving/redistributing mattress as soon as possible. (Editors et al.)

Hip Fracture Diagnosis and Surgery

A hip fracture is diagnosed by the symptoms and verified with X-rays; these may be supplemented with MRI or CT to establish diagnosis. Most hip fractures occur in one of two locations; at the femoral neck or in the intertrochanteric region.

The location of the fracture and the degree of displacement or impaction help determine the best treatment. In nearly all cases, surgery is the treatment of choice as this is the most effective way to manage pain and stabilize the fracture so that the patient can remobilize as soon as possible.(Editors et al.)

Femoral neck fracture: This occurs in the neck region of the femur in the intracapsular region (within the hip joint capsule). The blood supply to this area means that, if displaced, this type of fracture may disrupt the blood supply to the femoral head, causing it to collapse due to necrosis. Hence, if the fracture is displaced.

It is usually managed with hemi-arthroplasty. Displaced fractures are managed with parallel Implants.

Intertrochanteric hip fracture: An intertrochanteric hip fracture occurs in the upper 8–12 cm of the femoral shaft in the region between the lesser and greater trochanters. As an extracapsular fracture (outside the joint capsule), the blood supply is less likely to be disrupted, so internal fixation can be performed with nails, Screws, and /or plates.

Caring for patients following hip fracture is an everyday event for care staff, but, for the patient, it is a life-changing event with severe and frightening consequences

Although management usually follows standardized guidelines, each person needs holistic and individual care. The aim of preoperative care is to prepare the patient for surgery in a manner that avoids the development of complications of immobility and surgery.(Editors et al., n.d.)

Perioperative Care

Surgery is the preferred treatment for hip fracture because it provides stable fixation, facilitates full weight bearing and decreases the risk of complications.

Conservative management carries additional risks of immobility, thromboembolism, pressure injuries, other complications and loss of independence. There are three phases to perioperative care: preoperative, intraoperative and postoperative.(Editors et al.)

The preoperative phase is the period prior to arrival in the operating department for surgery. The goals are to stabilize the injury, manage pain and restore function, and standardized preoperative assessments and patient-centered management protocols are needed. The aim is to facilitate prompt preparation for surgery through coordinated orthogeriatric and anesthetic care.

Intraoperative care aims to mitigate the pathophysiological effects of surgery without destabilizing the patient's physiology. Patients are at substantial risk of perioperative morbidity and mortality due to age and frailty, so they have decreased physiological reserve; one or more comorbidities, polypharmacy and cognitive dysfunction are common and can have a negative impact on physiology. Postoperatively, orthogeriatric care aims to mitigate the effects of surgery and remobilize, re-enable and remotivate patients in preparation for discharge, ideally back to their place of residence before the fracture. The early postoperative phase is crucial, as delayed remobilization is associated with prolonged hospital stay. Postoperative care includes, therefore, early mobilization, pain management, postoperative hypotension and fluid management,

postsurgical anemia management, delirium assessment and nutritional optimization.(Editors et al.)

Postoperative Care

Mobilizing the patient soon after surgery has proven to be beneficial in prevention of the complications of mobility and in assisting recovery. Following surgery, it should be standard practice to sit the patient out of bed and begin to stand them on the day after surgery, providing this is not medically contraindicated.

Progress thereafter varies considerably depending on the individual patient and the type of fracture or surgery. Patients with extracapsular fractures tend to take longer than those with intracapsular fractures. Initially, patients may be afraid of weight bearing on the operated leg and should be motivated by the care team, bearing in mind the need for effective pain management.

Pain

Most patients have constant pain in the days following surgery which worsens when they move, so they want to lie still to avoid pain, increasing the risk of immobility. The same principles of pain assessment and pain management discussed earlier apply in the postoperative period. If pain is poorly controlled, mobilization will be delayed, increasing the risk of the complications of prolonged immobility and leading to increased dependency and associated rise in the risk of delirium. The highly variable nature of pain and an individual's response to it make accurate assessment a central aspect of nursing care to facilitate individualized pain management and monitoring. Many studies have shown that cognitively impaired and acutely confused patients receive less analgesia than their unimpaired counterparts. To help staff understand the individual needs of a person with dementia, the use of an assessment tool such as the "this is me" tool encourages relatives and carers to share individual information, characteristics and behavior that enable staff to better understand pain experience and needs. Pain assessment, evaluation, reassessment and appropriate administration of analgesia should be central to routine care.

Preparation for Discharge

Discharge planning should be a coordinated effort between the patient, the patient's family, the multidisciplinary team and staff in the destination setting, if the patients to be discharged to another care facility. This process should begin as soon as possible following admission.

Education of the patient and family or other care is an important aspect of preparing for discharge. This can be a challenge for healthcare providers because of decreasing lengths of stay and the need to deliver increasingly complex information, so providing patients with alternative ways receiving information is valuable. The responsibility for the patient's care after discharge from the hospital is often delegated to the patient and their family along with the general practitioner and, sometimes, community care staff. The patient and their caregivers must be able to understand the discharge instructions so that they can recall aftercare instructions and recognize that the information they require for their post-discharge care can be found in their instructions. Providing patients with an information booklet or automated pictographic illustration of discharge instructions have been proven valuable. There are several reasons for supporting oral information or education: the older person's visual clarity and auditory acuity decreases, making it difficult for them to receive information and poor lighting, Noise levels and room temperatures can inhibit the learning process. Managing multiple messages can be difficult for older people; their personal perception of the severity of their injury and surgery can be significant and pain will limit their ability to receive and understand information. Anticipation, anxiety and fear all contribute to diminished reception of knowledge and fear and preconceived notion of the consequences of acquiring a hip fracture have also been reported to block patients' ability to receive information. These factors need to be taken into consideration when preparing the patient for discharge.

2.3 NURSES 'PRACTICES ABOUT THE MANAGEMENT OF THE PATIENTS WITH HIP

According to Santy-Tomlinson et al. (2018)⁷, one of the most important parameters for the positive development of the health of a patient who has sustained a fragility hip fracture is nursing: Nurses are the largest group of the whole orthogeriatric team which deals with the restoration of the patient's health, they are by his side 24 hours a day, every day, and are the first, in most of the cases, who are going to intervene, if something goes wrong with the patient's condition. The successful results of the care of those patients can be measured through various indicators, the most important in the elderly patients being:

- **Pain relief**, with minimization of the need for prescription of painkillers: Since the Non-Steroid Anti-Inflammatory drugs (NSAIDs) can cause a big number of side-effects (gastrointestinal

ulcers, deregulation of the arterial blood pressure, cardiac arrhythmias, deterioration of the renal and the kidney function), and the opioids also carry various side effects (drowsiness, concentration disorders, constipation), the geriatric patients need to use as little of these medications as possible.

- **Delirium:** One of the most common complications after a hip fracture is delirium (with the occurrence incidence in the area of 35%), especially in the elderly patients suffering from dementia. The advanced orthogeriatric nurse practitioner has to recognize the risk factors for the occurrence of this complication (past medical history of delirium, blood transfusion intra- and post-operatively, low hematocrit, living in an institution prior to the injury and not being functionally independent, and a high American Society of Anesthesiology Score) and try to prevent it since after such an episode the risk of complications increases a lot⁸. The role of the ANP is very important as well, in the early diagnosis of the syndrome, the immediate information of the treating physician and in ensuring that the patient receives the appropriate medication.

- **Pressure ulcers and injuries:** Those complications can be important inhibitors for the patient's timely postoperative mobilization – which is crucial for the overall outcome after every operation for a hip fracture. The orthogeriatric ANP should be able to recognize the risk factors for those complications (irritated and red skin in patients who have sustained a hip fracture), and to ensure the optimal treatment: frequent changes of the patient's position, optimal hydration and nutrition, effective management of skin moisture, in relation, especially, to incontinence.

- **Hydration and Nutrition:** Elderly patients, especially in the immediate postoperative period, very often experience fluid and electrolyte disorders, which very often remain unnoticed since their manifestations are non-specific and most of the health practitioners do not suspect them; many times, the proper diagnosis is delayed or even missed, exposing the patients in a significant risk. The ANP should be able to recognize as soon as possible those disorders, which are not difficult to be treated if, of course, the diagnose is early.

- **Constipation:** A very annoying symptom, which can be a combination of many factors (opioid and other medication, immobilization, dehydration); if treated successfully, the quality of life of the patient during the postoperative period will improve a lot.

- **Venous Thromboembolism and Secondary infections prevention:** Both complications are severe and responsible for a significant proportion of the immediate postoperative period's

mortality. The ANP, in cooperation with the treating physicians, has to ensure all the appropriate precautionary measures to minimize the occurrence of those complications.

However, apart from the pure nursing duties that the ANPs have to provide to the geriatric patient, their role in the patient's training and education in order to promote and improve their health is very important. Most of the elderly patients cannot recognize the risk factors which will lead them to sustain a fall and a consequent hip fracture, and even if they get informed, they do not comply with the instructions given to them. For example, osteoporosis is one of the main causes for hip fractures, and although there are several treatment options available in reducing fracture risk, the patient's compliance is poor. The first step in improving compliance to osteoporosis treatments is identifying the causes of poor compliance. Additional way to this direction is the communication with the patient, including discussion of osteoporosis medication benefits, and feedback of treatment effects.

In addition, the role of the ANP is crucial for the education of the elderly patients for proper and careful gait in order to avoid falls and injuries, which will eventually lead to a fracture of their hip. The nurse should also spend time and educate the family of the elderly patient about the causes and the prevention of the fragility fractures; and should always bear in mind that every fall of fracture should become the opportunity to prevent the next fall fracture.

The effectiveness of Nurse Practitioners in Orthopaedic Service

Taylor and Staruchowicz in 2012⁹ published a comprehensive systematic review of the current literature regarding the effectiveness of the Advanced Nurse Practitioners in the Orthopaedic setting; according to them, fifty years ago, ANPs evolved, initially in U.S.A. in order to address the problem of the deficit of the physicians in the primary health sector. Some years after (1967), Canada followed, while in the U.K. and Australia, ANPs were introduced at the beginning of 1990's. All those years ANPs have an extensive range of duties in their responsibility: Treatment of patients sustained injuries accidents and musculoskeletal trauma, helping the patients deal with their chronic Orthopaedic conditions, such as osteoarthritis and osteoporosis, and of course being an active and important member of the orthogeriatric team, treating the elderly patients after sustained a hip fracture for which they have been operated on. Their clinical role is advanced, performing a wide variety of clinical tasks in direct patient care, indirect patient care, and various other service-related activities.

McCleery et al. in 2014¹⁰ published a systematic review of the current literature regarding the effectiveness and the quality of care that is being provided by the Advanced Practice Nurses. They included in total 10 studies (12 articles), and the outcome measures were the mortality rate of the patients under treatment, the length of their hospitalization, the improvement they had in their health status during the hospitalization, and the overall quality of life, which was achieved during their hospitalization period but also after their discharge from the hospital. The main questions which this review needed to answer were:

- What is the comparison between the quality of care provided to the patients by the APN and the physicians independently?
- Is there a difference between the quality of care provided by the APN according to the patients' type of care (specialized care or primary care)? The quality of care they provide to their patients in the end?

The results of the systematic literature review did not show any statistically significant difference in any of the above-mentioned outcome measures. However, there are some indications that the care provided by the APN was, to various extent helpful to all the examined outcome measures. The authors conclude that the role of the ANP is accepted and improves the target outcomes.

Henderson et al. in 2017¹¹ published a prospective study in order to investigate the benefits which a comprehensive orthogeriatric service (an essential and integral part of which is the advanced nursing practitioner) to various outcomes in elderly patients who sustained an osteoporotic – fragility hip fracture. Under the care of the specialized orthogeriatric team were treated 206 patients (Group A), whereas 248 patients were treated in the traditional way (group B). After the one year's follow-up period, the mortality rate of group A was statistically significantly lower ($\chi^2=13.34$, $p<0.001$), the length of the patients' hospitalization after the fracture was shorter ($U=-3.77$, $p<0.001$), and the post-discharge needs for specialized rehabilitation were much less ($\chi^2=26.59$, $p<0.001$). The patients' functional status in Group B was worse, requiring much more care from external caregivers ($\chi^2=5.34$, $p=0.021$). The authors' conclusions were that the specialized multidisciplinary orthogeriatric treatment of patients who have sustained a fragility hip fracture (including the services of the dedicated advanced specialized orthogeriatric nurse) improves most of the outcome measures of those patients, reducing the mortality, the hospitalization period and improving their functional condition and independence on their discharge from the hospital.

The long-term treatment of fragility fractures in the elderly and the role of the ANP

Hip fractures present one of the most difficult to treat problems in the elderly, being the cause for prolonged pain, disability, depression, and functional deterioration. Older adults living in long term care (LTC) are especially vulnerable to those complications after having sustained such a fragility fracture. Kaasalainen et al. (2015)¹² published their study regarding the role of the specialized nurse practitioners in the long-term treatment of this group of patients. It was a qualitative, two-stage study: in the first stage, 12 nurses (67% response rate) completed an online questionnaire, and in the second stage, 11 out of those twelve agreed to carry on with a semi-structured interview. There were three main questions under investigation:

Which were the tools that the nurse practitioners (NP) have been using in order to assess the resident's degree of osteoporosis and the consequent risk of a fragility hip fracture?

2.4 PATIENTS' SATISFACTION TO HIP FRACTURE MANAGEMENT

Hallström et al. determined that patients prevented transferring each earlier than and after surgical treatment due to pain, a truth which made mobilization extra tough. This indicates that it's miles vital to offer pain comfort before mobilization and that clear verbal exchange between the nurse and physiotherapists essential for making sure that ache comfort is given in true time before the schooling. It additionally appeared that patient's typical being in pain because they had passed through foremost surgery.

This has also been confirmed through Dahlman et al. And sHallström et al. at the same time as the patients conventional having ache after predominant surgical operation, in addition they did no longer want to trouble the nurse to ask for pain comfort. Nurses had one of a kind methods of speaking with sufferers. The ones nurses who requested extra direct questions on the patient's ache also obtained clearer solutions, and the pain may be more successfully addressed. Whilst clean questions were now not made, it was less complicated to misinterpret the affected person's answer about the ache skilled, and ache remedy changed into now not provided. For the nurse, it is critical to be attentive to the affected person's frame language and facial expression. Ageing results in changes inside the body's metabolism and removal of drugs which in flip increases the chance of unfavorable outcomes. Patients relied on the personnel's information of capsules that had been provided and felt that that they had obtained sufficient ache alleviation, despite the fact

that they have been nevertheless in pain. Fear of taking too many capsules changed into also expressed. The patients' earlier stories of negative drug effects, within the shape of hallucinations, triggered them to forego pain alleviation because of fear. As a substitute, they tried to hide their ache, which in turn caused an exacerbated pain enjoy and impaired mobility. Nurses who participated in a schooling day on pain remedy gave a better dose of intravenous pain comfort than formerly which brought about the sufferers experiencing less pain. Schooling days on the motion of medication—pharmacological in addition to physiological—have to be recommended for nurses. This will allow patients with worry of capsules to be knowledgeable by means of the nurse approximately the effect of the drug and the negative impact of ache on the body.

There ought to also be a strong emphasis on character pain comfort and tracking to be able to reduce the risk of unfavorable consequences.

Outcomes confirmed that sufferers felt nicely taken care of and comfy within the medical institution. The personnel's attitude became "fabulous", as become their staying power and helpfulness, but numerous patients, though, felt stressful about going home. The sufferers had come to the health facility instantly from home and were used to coping on their very own. On returning home, they would need aid and help, each from the nearby authorities and their own family. The patients could be confronted with an entirely new scenario in which they're dependent on others. Maslow's hierarchy of desires makes it clear that no longer most effective primary needs consisting of food and drink ought to be met, however that secondary needs and Meta needs, which includes a experience of safety and the which means of life, also need to be extra really addressed in the course of illness. All sufferers in our observe lived at domestic, which can be a contributing reason why the result showed that many have been anxious approximately going domestic. It is important for nursing group of workers to interpret indicators from the patients and try to elicit their feelings in addition to possible; this lets in the body of workers to provide statistics and reply to concerns if you want to relieve uncertainty and make sufferers feel less insecure approximately going home. At some stage in care planning, nursing staff with the great understanding of the affected person ought to attend.

The observe suggests that patients appreciated the capability to choose between distinctive dishes, however at the identical time had no appetite. They said that portions have been too big

and they typically took their meals in their room. The point of interest should be on person nursing care of the patient with admire to vitamins; meals intake and assist around mealtimes; information and the personal involvement of patients in growing their meals consumption. A exchange of environment at mealtimes should have contributed to enhancing the patients 'appetite. it'd get them out in their room for some time into the dining room wherein they would meet different sufferers with whom they may proportion a meal and communicate. Because the loss of urge for food was a ordinary trouble, nurses have to be searching for sufferers whose nutritional status is impaired or who are in the threat region so that nursing measures can be taken as speedy as possible. The reason why the workforce did not offer nutrients liquids or serve them frequently may have been that the sufferers have been in a very good dietary kingdom. This may also had been a motive why no patient developed pressure ulcers, because the body of workers' energetic role with recognize to the affected person's choice of dishes contributed to the affected person's involvement.

This observe has obstacles; 10 sufferers were included, nine women, and most effective one guy. The distribution in Sweden is 70% ladies, so, it would be preferable to have included greater men inside the have a look at, which may have given other consequences, as well as a higher wide variety of blanketed patients. Suggest age in

Sweden amongst sufferers with a hip fracture is eighty three years. on this examine, imply age turned into seventy eight years. If the observe institution were older, we'd have had different consequences since older people are greater vulnerable to be afflicted by headaches. However, we hope that the end result provided on this study highlights the sufferers 'view, leading to similarly improvements of the nursing care of those frail patients.

2.5 THEORETICAL LITERATURE

Osteoporotic fractures of the proximal femur hereafter referred to as hip fractures, present a major global challenge to health care systems and to patients (Fernandez et al., 2015).

Hip fractures are associated with significant morbidity, mortality, loss of independence, and financial burden. A recent meta-analysis revealed that women sustaining a hip fracture had a fivefold increase and men almost an eightfold increase in relative likelihood of death within the

first 3 months compared with age- and sex-matched controls generally, the first year after hip fracture appears to be the most critical time (Sarvi, 2018).

Initial assessment of the patient begins upon their arrival at the emergency department, where the patient is medically stabilized and evaluated for possible coexisting injuries. After initial stabilization, basic laboratory test results are obtained (i.e., complete blood count, Basic Metabolic Panel (BMP), Prothrombin Time (PT)/international normalized ratio, and urinalysis) for assessment of anemia, renal function, and coagulation status and to document a preexisting condition, imaging is also performed at this time (Ikpeze et al., 2017).

At the start of the patient's journey through the hospital system, their initial management lays the foundation for subsequent care. Rapid assessment and first line investigations for the patients suffering a hip fracture can identify other injuries and medical conditions early, allowing timely optimization for surgery (Anna HK Riemen & James D Hutchison, 2016).

All patients were clinically assessed by an orthopedic surgeon upon arrival at the emergency room and imaging studies were carried out. According to institutional protocols and provision of quality of care, the surgical intervention is plan with 48h, unless a contraindication existed (Frenkel et al., 2018).

On admission to the hospital, patients and their care providers are often anxious, frightened, and in need of information and education. You should provide instruction about preoperative testing, new medications, surgical care, postoperative care, discharge or rehabilitation after surgery, as well as complications and interventions designed to prevent them (Latimer et al., 2015).

The rehabilitation begin during hospital stay following the principle that patients should get out of bed and should recover ambulation as quick as possible (Pioli et al., 2010)

Common causes of hip fracture

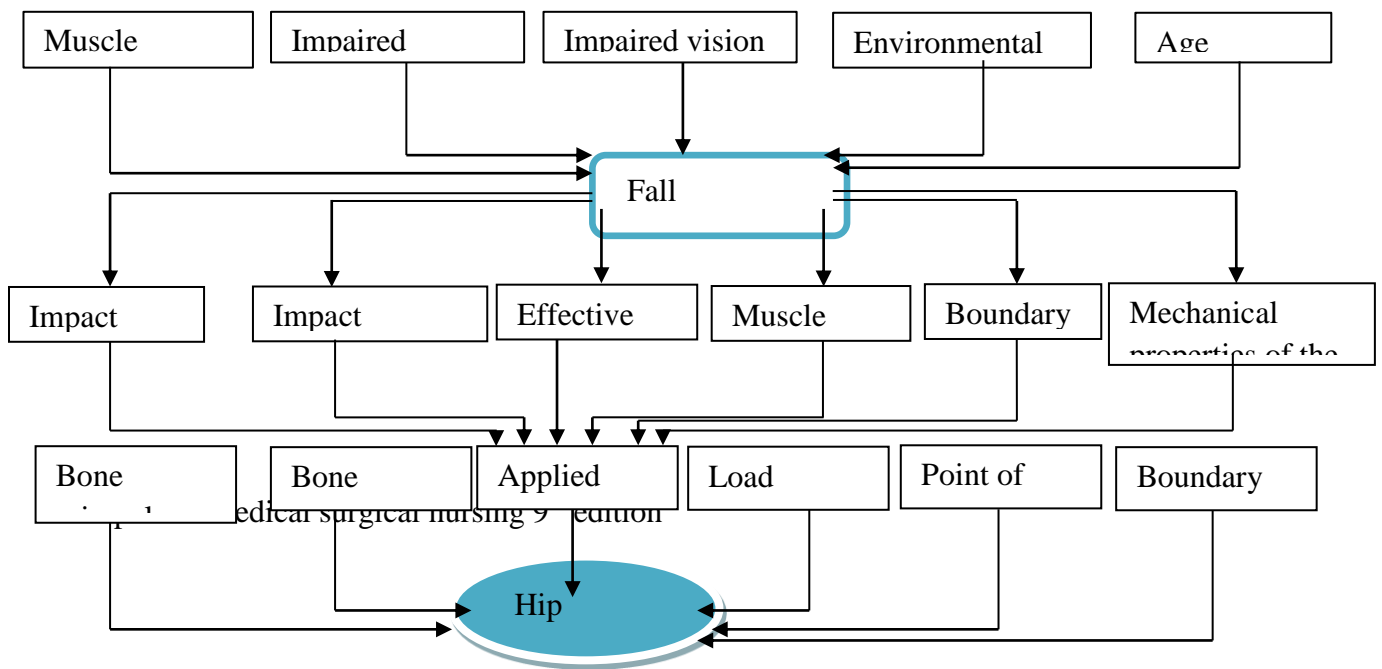
Hip fracture is usually caused by an applied force that exceeds the strength of the femur bone. Therefore, any situation that either induces a high level of force on the femur bone or decreases the bone strength should be considered as a hip fracture cause.

The main cause of hip fracture is falling; In particular falling in sideways direction (63–69% in fall-related fractures) as it induces a high level of force on the femur (Sarvi, 2018).

Parameters that increase the risk of fall and apply a high level of force on the femur, especially in the elderly, are mental impairment and confusion, impaired vision, impaired muscle reactions, slow reflex response, inability to effectively use the arms to reduce the energy of the fall, impaired neuromuscular coordination and neurological diseases such as hemiplegia, Parkinson’s disease, and reduced soft tissue padding over the hip (Sarvi, 2018).

Apart from osteoporosis, several other causes may reduce the strength of the bone such as bone cancer and medical side effects; other factors associated with reduction in bone strength include: genetic and family history, sedentary lifestyle, impaired nutrition, smoking, excess alcohol, medications (including tranquilizers, hypnotics, anticonvulsant drugs, and steroids), osteomalacia from vitamin D deficiency, malabsorption, and liver or renal disease, Cardiovascular disease and cardiac arrhythmias, underlying bone disease (for example Paget’s disease, bone tumors, and secondary bone tumors), Endocrine abnormalities: hyperthyroidism, hyperparathyroidism, or hypercortisolism (Sarvi, 2018)

Figure 1: Pathophysiology of hip fracture



Signs and symptoms of hip fracture

Unable to walk, Leg held in a fixed position; neck of femur fractures may be shortened and externally rotated, Limited range of motion , Assess neurovascular status: palpate pulses and

check capillary refill, Patient may report pain in the groin, hip, thigh, or medial aspect of the knee (Braxley et al., 2011).

Classification of hip fracture

Hip fractures can be classified into intracapsular (femoral neck) fractures that are contained within the hip capsule itself and extracapsular (Intertrochanteric and Sub trochanteric) fractures (Bateman et al., 2020).

Femoral neck fractures occur in the narrow section of the proximal femur that lies between the femoral head and the Intertrochanteric cross section. Most femoral neck fractures occur within the capsule surrounding the hip joint and are, therefore, termed intracapsular fracture.

Intertrochanteric fractures occur at a lower location than femoral neck fractures, in the area between the greater and lesser trochanters. Intertrochanteric hip fractures occur outside of the joint capsule and are therefore also called extracapsular fracture in the literature.

Subtrochanteric fractures occur in the zone about 5 cm below the lesser trochanter of the proximal femur. In more complicated cases, the fracture of the bone can involve more than one of these zones.

Diagnosis of hip fracture

Plain radiography is the initial diagnostic test for hip fracture. A cross-table lateral view of the hip and an anteroposterior view of the pelvis are appropriate. The frog-leg view should be avoided; positioning the limb for this view results in severe pain and can cause displacement of a non-displaced fracture or worsen a displaced fracture.

If radiography is negative and a hip fracture is still suspected, magnetic resonance imaging or a bone scan should be performed, as well as computer tomography (Leblanc et al., 2014).

2.6 TREATMENT AND MANAGEMENT OF HIP FRACTURE

At the start of the patient's journey the hospital system, their initial management lays the foundation for subsequent care. Rapid assessment and the first line investigations for the patient's sufferings a hip fracture can identify other injuries and medical conditions early, nurses have a key and essential role in providing the care for these complex patients. Nurses are uniquely placed to spend time communicating with the patient and care givers and finding out

about a patient's pre-injury or pre-confusion state; pressure care is essential and ward nurses will continue and expand on the initial care delivered, patients may already have a pressure area problem from prolonged lying on the floor following a fall, may be malnourished and/or dehydrated, and have pre-existing poor mobility- all leading to increased risk, so nursing staff are excellently placed to liaise surgical, and anesthetic staff to minimize pre-operative risks, including fasting times(Riemen & Hutchison, 2016).

The way to manage hip fracture vary according to the location of the fracture as(Braxley et al., 2011)described as follow

Femoral neck fractures

High risk for avascular necrosis, avoid traction with Elastoplast as blood flow to femoral head may be further compromised o Call consultant and refer to orthopedics OPD for early surgical fixation (ideally <6hrs).

Intertrochanteric fractures

Typically occur along a line between the greater and the lesser trochanter, Initial traction with Elastoplast, Operative treatment within 48 hours is preferred, but consult OPD orthopedics for timeline of intervention

Trochanteric fractures

Isolated lesser trochanter fractures are rare and require surgical fixation, Greater trochanter fractures with less than 1cm of displacement can be treated with bed rest (until pain improves), weight bearing as tolerated with crutches, full weight bearing in 6-8wks

Subtrochanteric fractures

Require surgical treatment; refer to orthopedics OPD for internal fixation or hip replacement, where available.

Hip dislocation

This is a true orthopedic emergency - early reduction leads to better outcome. Must attempt reduction in the district hospital; Posterior dislocation reduction (Allis maneuver)

Requires two practitioners; One assistant stabilized the pelvis, by applying posterior pressure to the pelvis; The second practitioner stands on the foot of the stretcher and gently and slowly

flexes the hip and the knee to 90 degrees; The hip is then gently adducted and internally rotated while increasing sustained traction is applied by pulling on the knee.

Anterior dislocation reduction

Requires two practitioners; the assistant applies longitudinal traction and gentle internal rotation to the femur in its abducted position; Practitioner holds the pelvis and applies gentle pressure to the femoral head to push it back into the acetabulum.

Control XR is required to confirmed reduction; Transfer all dislocations that cannot be reduced immediately.

2.7 EMPIRICAL LITERATURE

2.7.1 Knowledge of nurses about management of patient with hip fracture

The very nature of frail patients requires that many different specialists are involved in their care. This multidisciplinary approach works best in a hip fracture unit where all individuals learn from each other and develop an effective team through working together. It is essential to have a shared vision, positive attitude and a culture that embraces respect and shared responsibility. The team requires ward based leadership and co-ordination with a senior decision maker actively involved(Wilson, 2017).

The registered nurse is accountable for the quality of nursing care rendered to patients, registered nurse assumes responsibility for assessing, diagnosing, identifying outcomes, planning, implementing, and evaluating nursing care of patients. Additionally, the registered nurse role includes directing and supervising nursing care for patients in the gastroenterology setting, registered Nurse is responsible for determining the education and competency level of assistive personnel to whom he/she is delegating patient care(Board, 2016)

A significant proportion of patients presenting with hip fracture will have fallen as a result of a medical condition, for example; postural hypotension, cardiac syncope, inter-current infection or acute stroke. A thorough history and examination is necessary to understand an individual's current medical state.

A baseline set of bloods and ECG should be routine with other investigations such as Chest x-ray, arterial blood gases or CT brain scan indicated in certain circumstances, Patients with hip fracture require a rapid but thorough pre-operative assessment. There should be a clear

understanding of medical co-morbidities and the impact that each has on the individual(Wilson, 2017).

2.7.2 Practices of nurses about the management of the patient with hip fracture

All healthcare professionals with prescribing and drug administering skills should be aware of risks of using opiates in frail patients. Communication between team members including paramedics, emergency department staff, theatre staff and ward teams is essential to ensure patients receive appropriate, effective analgesia without causing harm(Wilson, 2017).

The registered nurse standards for practice consist of the following seven standards:

- Thinks critically and analyses nursing practice.
- Engages in therapeutic and professional relationships.
- Maintains the capability for practice.
- Comprehensively conducts assessments.
- Develops a plan for nursing practice.
- Provides safe, appropriate and responsive quality nursing practice.
- Evaluates outcomes to inform nursing practice (Board, 2016).

Peri- and postoperative care in hip-fracture patients

Management of patients with hip fractures should optimize outcome after discharge from hospital. This involves several stages of care, beginning before the patient is admitted to hospital. It is vital that specific goals are set at each stage. The main goal of prehospital care is to diminish pain and discomfort for the patient at the place of injury and during transportation. On admittance to the emergency room or ambulance, diagnosis and assessment – including medical history – should be carried out rapidly to diminish the risk of deterioration of health due to the fracture. Care, including pain management, oxygen, intravenous fluids and prophylaxis for pressure ulcers to improve status for surgery, should be administered, and comorbidities optimized. Many patients with hip fractures are poorly nourished and require specific attention, after diagnosis, the patient should be prepared for surgery, with the expectation that surgery will be performed within 24 hours. Care and pre-operative management (cushioning and temporary stabilization of the fractured limb, monitoring of fluids, body temperature, oxygen saturation and

pain) should be continued to ensure that the patient is comfortable, but preoperative management also aims to limit postoperative complications. Surgical management involves choosing the optimal treatment method and performing high quality fracture surgery in a timely manner to enable restoration of function and minimize pain. The surgical methods vary depending on the type of hip fracture; trochanteric fractures are commonly stabilized with plates and screws or intra-medullary nails depending on fracture fragmentation, while arthroplasty is an additional and often preferable option for femoral neck fractures. During surgery, different aspects of anesthesia should be considered to optimize patient outcome. This involves choosing a strategy aiming to minimize the possibility of negative cerebral and cardiovascular effects, with spinal anesthesia most commonly employed. Care should also be taken to avoid pressure ulcers. Appropriate surgical technique should be employed to minimize tissue damage, blood loss and operating time.

Post-surgery care until discharge from the acute care unit should ensure maximum wellbeing of the Patient to avoid complications such as infections. This generally requires a multidisciplinary team of

Nurses, physio- and occupational therapists apart from orthopedic surgeons, physicians specialized in eldercare. Pain management should be continued, as should nutritional supplements. It is also important

That steps are taken to ensure that the patients regain mobility as early as possible. This should include treatment of anemia, which has been associated with decreased mobility following surgery³⁴.

Planning to prepare patients for discharge should start as soon as they are admitted to hospital. Pain medications must be tailored to the individual's needs and discontinued at an appropriate time, otherwise patients may experience dizziness and become more likely to fall again. It is essential that multidisciplinary teams are coordinated so that care after surgery is continuous and patient outcome is optimized. Fracture liaison services or clinical care pathways are essential in this respect, in order to diminish fall risk and to initiate

Pharmacological treatment for osteoporosis

Treatment of postmenopausal osteoporosis effect on hip fractures

Many osteoporosis treatments are currently available to reduce the risk of fractures, including agents that inhibit bone resorption (bisphosphonates, hormone replacement therapy [HRT], SERMs, calcium with vitamin D) or stimulate bone formation (PTH) and agents with complex mechanisms (D-hormones and strontium ranelate). Most fracture studies on osteoporosis treatments have been designed to assess

Improvements in vertebral fractures; however, some data on hip fracture risk are available. This section summarizes hip fracture data from bisphosphonate and strontium ranelate trials in postmenopausal women with osteoporosis. The Fracture Intervention Trial (FIT 1) assessed the effects of alendronate (5 mg/day increased to 10 mg/day at 24 months) in postmenopausal women with prevalent vertebral fractures³⁵. Results at 36 months showed there was a reduction in radiological hip fracture for patients receiving alendronate versus placebo (relative hazard ratio 0.49 [95% confidence interval [CI]: 0.233–0.99]); however, this showed borderline significance. The effect of risedronate on risk of hip fracture in elderly women (> 70 years) was assessed in the Hip

Intervention Program (HIP). In Group 1, patients were 70–79 years old with confirmed osteoporosis.

Group 2 patients were at least 80 years old, with clinical risk factors (mainly non-skeletal) for hip fracture.

The osteoporosis status was unknown for the majority of these patients. Risedronate reduced the overall risk of hip fracture versus placebo at 36 months in Group 1

Pharmaceutical management of hip fracture

In patients with a prior hip fracture, the risk of a new osteoporotic fracture is 2.5-fold higher than in age matched people without a previous hip fracture. The increased fracture risk is associated with increased morbidity and the cost of managing hip fracture patients. Despite this, few patients receive evaluation and treatment for osteoporosis following a hip fracture. Furthermore,

few data are available to guide treatment following hip fracture, and this is partly due to the fact that hip-fracture patients are frail, elderly individuals and constitute a challenge in terms of trial design. Only one study to date, the HORIZON Recurrent Fracture Trial, has assessed the efficacy and safety of an osteoporosis treatment, zoledronic acid, in men and women who had undergone recent surgical repair of a hip fracture. This section gives an overview of this unique study. The HORIZON Recurrent Fracture Trial was a 3-year, event-driven, randomized, double-blind, placebo-controlled trial in 2127 men and women, from 148 clinical centers in 23 countries. Participants were aged 50 years or older and were ambulatory prior to hip fracture. They were randomized to an annual infusion of either zoledronic acid 5mg or placebo, plus a loading dose of vitamin D (50 000–125 000 IU), then calcium 1000–1500 mg/day plus vitamin D 800–1200 IU/day up to 90 days after surgery. The primary objective was to reduce the rate of new clinical fractures after a surgical procedure for a low-trauma hip fracture. Secondary objectives included reduction of clinical vertebral, non-vertebral and hip fracture risk. Zoledronic acid 5mg significantly reduced the cumulative risk of all clinical fractures, clinical vertebral fractures and clinical non-vertebral fracture over 3 years by 35%, 46% and 27%, respectively. Risk of hip fracture was reduced by 30%; however, this was not significant due to the low number of events. Furthermore, this is the first study to show a reduction in mortality with an osteoporosis therapy after a hip fracture. All-cause mortality was reduced by 28% over 3 years in the zoledronic acid group versus the placebo group⁴⁸. The study investigators speculated that this may have been related in part to a reduction in new fractures after the initial hip fracture.

Nutritional aspects in the management of hip fracture

Undernutrition is common in elderly people, particularly those who are hospitalized or in nursing homes. It is also a problem in hip fracture patients, many of whom require hospitalization and admission to a nursing home. Proper nutrition is essential in hip fracture patients to assist bone repair and prevent further falls. Both vitamin D deficiency and protein deficiency can impact on falls and bone mass. Severe vitamin D deficiency (serum levels < 30 nmol/L) is common in hip fracture patients. Neuromuscular function is sensitive to vitamin D levels and patients with lower vitamin D levels have slower walking times and take longer to stand up⁵³. After hip fracture, patients with higher serum vitamin D levels (> 22 nmol/L) have a better outcome in terms of lower extremity function and are less likely to fall. Vitamin D supplementation

(To serum levels > 60 nmol/L) in hip fracture patients is associated with a reduction in falls and an increase in hip BMD. Therefore, vitamin D is important in the outcome – and possibly the recurrence – of hip fracture. To achieve adequate calcium balance and prevent bone loss and falls, elderly patients will benefit most from a combination of 800 IU of vitamin D with 1000–1200 mg of calcium daily. In people with a low protein intake, insulin-like growth factor-1 (IGF-1) levels are reduced, which leads to a reduction in bone and muscle mass, thereby increasing the risk of fracture and falling⁵⁹. The effect of protein supplements on rehabilitation after hip fracture risk has been investigated in several studies. In one study, patients were given a protein supplement (20 g/day), plus a vitamin D injection (200 000 IU) and calcium (500 mg/day) 10 days after fracture, or isocaloric placebo. In patients receiving the protein supplement, serum IGF-1 levels increased at the 6-month follow-up relative to placebo. In another study, IGF-1 levels increased within the first 7 days of receiving the protein supplement and then plateaued, suggesting that early protein supplementation is beneficial but that it does not need to be maintained in the long term⁶¹. Other studies have shown that protein supplements have a beneficial effect on proximal femur BMD and vertebral fracture rate, a favorable clinical course and length of stay in rehabilitation.

Hospital. Evidence shows that identifying malnourished patients with hip fracture and providing appropriate nutritional supplementation 10 days after fracture to optimize rehabilitation is important.

2.8 CONCEPTUAL FRAMEWORK

With an aging global population, hip fracture management has become a significant health issue (Kenyon-Smith et al., 2019).

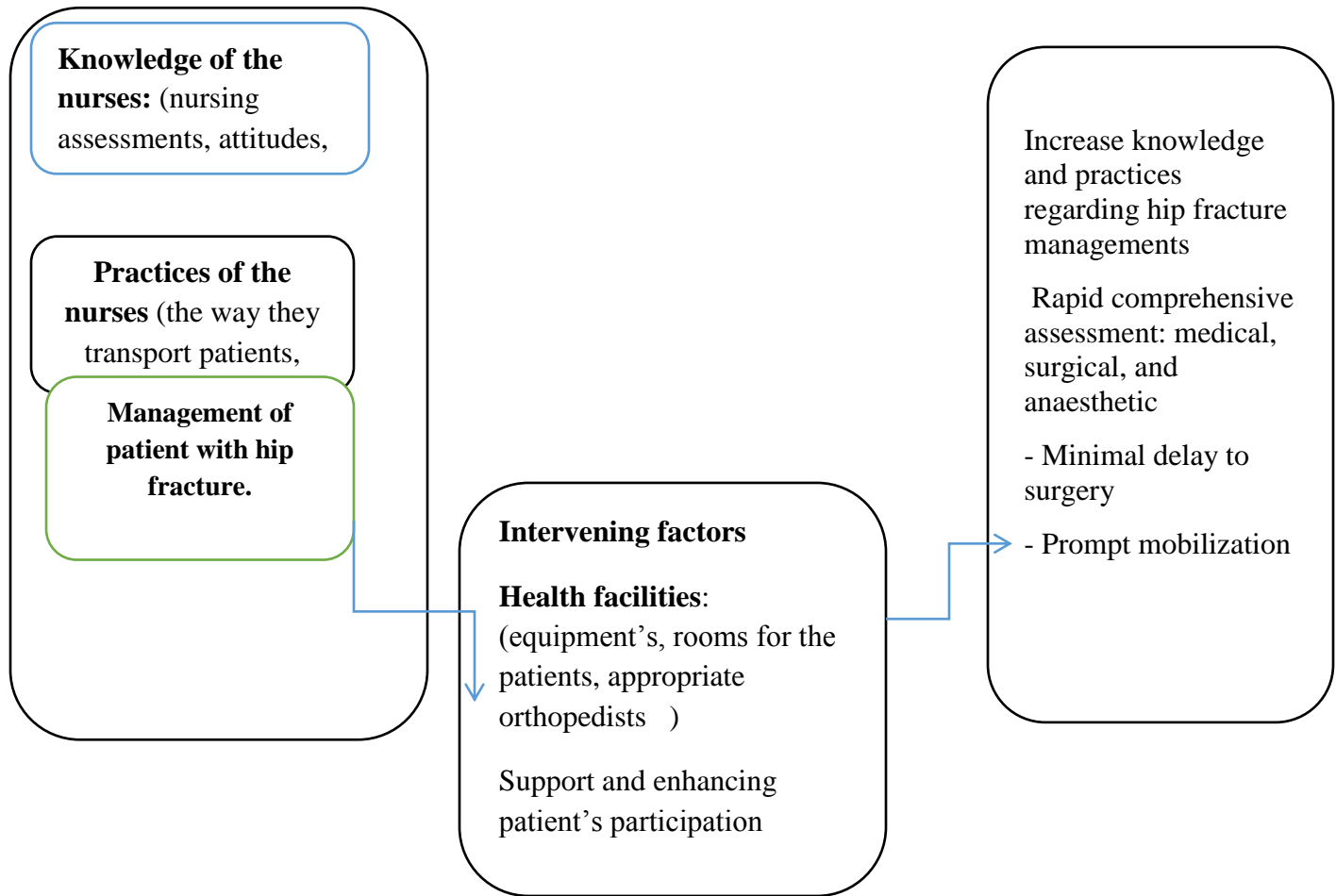
Hip fractures are a major health care problem in developed countries, being associated with significant mortality, disability and reduced quality of life (Pioli et al., 2010).

This conceptual framework was laid on the social cognitive nursing theory (SCT) based, structured hip fracture prevention, as it was said by Barker et al., 2010.

Figure 2: Conceptual Framework.

Dependent variables

OUTCOME



Sources: Researcher compilation, 2022

Nursing assessments, misconduct, behaviors and malpractices that the nurses can have, they make management of patient with hip fracture better or wrong due they lead to mistreatment, that is appropriate to the condition of the patients and make the condition of the patient to be aggravate (Ikpeze et al., 2017)

Residential of the patients, knowledge that the patients have about hip fracture, household factors, and socio-demographic related factors affect the management of hip fracture, for instance, the elderly people due to their bones are more fragile, so they are poor prognosis of the patients when you compare with the younger people; when the patients do not have knowledge

about the hip fracture even after being hospitalized, the problem continue to aggravate due to unawareness of positioning and other related factors (Gunnarsson, 2014).

Shortage of the health facilities' equipment, inappropriate orthopedists lead to mismanagement of hip fracture for instance, the health settings have no enough movable beds to transport the patient, this make the delay of having quick and immediate interventions and worsen the problem (Ikpeze et al., 2017).

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 INTRODUCTION

This chapter describes the research setting, design, and study population and how they were selected. The sampling technique used and the sample size are also given. Inclusion and exclusion criteria are listed. Research methods used, data collection procedures, pilot study, methods used in data analysis and ethical issues are elaborated on.

3.1 RESEARCH APPROACH AND DESIGN

In this research, non-experimental quantitative approach was used to determine nurse's knowledge and practices in managing hip fracture. Quantitative methods emphasize objective measurements and the statistical, , or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Quantitative research focuses on gathering numerical data and generalizing it, across groups of people or to explain a particular Phenomenon.

To meet the research objectives, a quantitative research approach and cross-sectional design was used. This is a design whereby data are collected at one point in time (or multiple times in a short time period,) for describing phenomena at a fixed point. (Polit and Beck, 2014).

3.2 TARGET POPULATION

Study population refers to a group of individuals taken from the general population who shared a common characteristic, such as age, sex, or health condition (Kishoyian et al., 2017). The target population refers to the entire group of individuals to which researchers are interested in generalizing the conclusions. While the accessible population refers to the population in research in which the researchers can apply their conclusions and it is a subset of the target population also known as the study population (Explorable.com, 2015). The target population of this study is all nurses working in surgical departments especially in emergency and orthopedics unity while accessible population of this study include all nurses working in surgical departments especially in emergency and orthopedics unity who met inclusion criteria and 71 nurses will be targeted from secondary data collected in data base in human resources departments in Bushenge hospitals . The study population is made by the nurses who work internal medicine, surgical service, accident and emergency, outpatient consultation at Bushenge Provincial Hospital.

Those populations were chosen due to they are the ones by which they meet with patients admitted with hip fracture, they took care of the patients from admission till the discharge.

Inclusion criteria

The inclusion criteria will consider all the nurses (RN) work in all departments at Bushenge Provincial Hospital.

Exclusion criteria

The nurses at internal medicine, surgical service, accident and emergency, outpatient consultation departments who will be absent at the time of questioning and the nurses who work in another department out of mentioned above departments and the nurses who will refuse to participate in research will be exclusion criteria.

3.3 SAMPLE SIZE

Sample size is a count of individual samples or observations in a statistical setting, like a scientific experiment or a public opinion survey (Augiani et al., 2015). According to Yamane, when the original sample collected is more than 5% of the population size the sample size is determined as follow; $n = N / \{1 + N (e)^2\}$ whereby n is the sample size, N the study population, and e is a constant equal to 0.05 (Tarleton State University, 2013).

By applying this formula, $n = 71 / \{1 + 71 (0.05)^2\}$ the study sample is approximately 60 nurses working in Bushenge district hospital

3.4 SAMPLING TECHNIQUES

The research will use convenient sampling (Haphazard sampling or accidental sampling) method; it is a type of nonprobability or non-random sampling where members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time or the willingness to participate are included for the purpose of the study (Etikan et al., 2017).

5.5 RESEARCH INSTRUMENTS

The data collection instrument was adopted from the study conducted in German by kamunge, (2013) which is similar to the present study. the researcher, expert in field and supervisor have manipulated the tool to contextualize it. The questionnaire had three sections such as section one

that talking on the socio-demographic of the respondents, section two was composed of the items to assess the knowledge of nurses and the sections three was composed of the items that identifying the practices the nurses working at Bushenge Provincial Hospital have toward the clients with hip fracture. The questions on the second section and third section were objective questions as the one of two possibilities was possible. These possibilities are answer “Yes” and “NO”.

3.6 VALIDITY AND RELIABILITY MEASURES

Reliability of an instrument refers to consistency and stability in its findings when used repeatedly under constant conditions (Brooker, 2015). The nurses were pre-tested in Bushenge provincials’ hospital through interview and questionnaire at Bushenge Provincial Hospital to assess the reliability of the research instruments Validity

An item of the questionnaire was covering all objectives of the research. A questionnaire was observed to see whether is complete; data entry was be accomplished and analyzed to see whether the aims and objectives of the study was achievable. An adjustment was made accordingly, in case required, with the guidance of the supervisor.

3.7 DATA COLLECTION PROCEDURES

After getting the approval, allow the researcher to conduct research in approved manner, the researcher will apply for permission to conduct research from Bushenge Provincial Hospital leader and Bushenge Provincial Hospital ethical committees. Once permission is guaranteed, the researcher will meet the Director of nursing to introduce him to the nurses.

The nurses were approached during their morning staff meeting; the researcher explained the research title and its main purpose as well as the inclusion and exclusion criteria to participate in the study, the consent form will be signing by each nurse who are willing to participate in the study.

The participants will be requested to individually fill in the questionnaire without consulting a third reference (colleague, book or internet) and use their free time such as lunchtime.

The researcher scheduled three days a week; Monday, Wednesday and Friday, to gather filled in questionnaires. After completing the questionnaire, the participant can ask to keep it while waiting for the researcher to come.

During the collection of the questionnaire the researcher kept confidentially the data of each and then looking through to check if all the items were answered properly.

3.8 DATA ANALYSIS

Filled in questionnaires were checked for completeness then the data was entered in MS Excel Spreadsheet. Data analysis will be using the statistical package for social science (SPSS) software version 24. Chi-square test will be done to correlate the variables at 95% CI ($P \leq 0.05$). Tables, graphs and charts will be used to present the data.

3.9 ETHICAL CONSIDERATIONS

Research looks for ethical clearance from the KP ethics review board and request permission to conduct the study before data collection took place on field, after receiving ethical clearance, researcher will proceed to *Bushenge* District Hospital where data will be gathered after being approved by the Hospital research committee, the patients, willing to participate in this research

Will give the written informed consent to sign then data collections will start. Confidentiality and anonymity were ensured by protecting the participants' identity, privacy. Self-worth and dignity were upheld by not indicating the subjects' names on the questionnaire.

CHAPTER FOUR: DATA PRESENTATION, INTERPRETATION, ANALYSIS AND SUMMARY

4.0 INTRODUCTION

This chapter presents the data gathered in BUSHENGE Provincial Hospital. It focuses on the socio-demographic characteristics of respondents and Nurses' Knowledge and Practices towards the management of the patients with suspicion of hip fracture at BUSHENGE Provincial Hospital, and the patient's level of satisfaction to hip fracture managements. Furthermore, a respondent of this study was nurses who work BUSHENGE Provincial Hospital. Thus, to test the study objectives, data was analyzed in line with answers given according to the research objectives. 60 nurses were used to filling the questionnaire in data collection. Therefore, all of them gave response at the rate of 100 percent.

4.1 SOCIODEMOGRAPHIC DATA OF PARTICIPANTS

This section focused on the Nurses knowledge and practice toward hip fracture management and patient's respondents on levels of satisfaction, t as the study set out to establish in items of age, gender, marital status, education, and occupation.

Table 1: Socio-demographic characteristic of the nurses (n=60)

Variables characteristics		Frequency(n=60)	Percent, %
Gender	Male	42	70
	Female	18	30
Age	21-30	42	70
	31-40	16	26.7
	41≤	2	3.3
Marital status	married	24	40.0
	Single	34	56.7
	Widower	2	3.3
Education	Diploma	24	40.0
	Bachelor	30	50.0

	Masters	6	10.0
Experience	0-5 years	40	66.7
	6-10 years	12	20.0
	11-15 years	4	6.7
	15 ≤	4	6.7
Working services	surgical	18	30.0
	medical	24	40.0
	Accident & emergency	14	23.3
	Maternity	4	6.7
Training time	0-5 weeks	28	46.7
	5-10 weeks	12	20.0
	none	20	33.3

Source: Primary data, 2022

The table 1 above shows that more than half 70 % (n=42) of respondents were male. The most respondents 'age ranged in the followings age category: 21-30 at the percentage of 70% (n=42). The results also showed that the majority of participants 56.7% (n=34) were single, and 40% (n=24) were married, 3.3% (n=2) was widower. 40.0 %(n=24) of respondents had advanced diploma, and 50.0 %(n=30) have bachelor degree and 10.0% (n=6) of respondents have done masters. The results showed that the majority of the nurses have the working experiences vary between 0-5 years at the rate of 66.7% (n=40), 6-10 years at 20% (n=12), others include 11-15 and above at 6.7 %(n=4) respectively, the results showed that 40%(n=24) working in medical department, 30%(n=18) in surgical, 23.3%(n=14) in accident and emergency department. The findings showed that 46.7% (n=28) of the nurses have been trained for 0-5 weeks, 20.0% (n=12) have been trained for 5-10 weeks and 33.3% (n=20) have not yet trained about hip fracture management.

The participants were generally young adults; most of them were falling in age group of 23-32 years. This is an age group of young adults who are still strong and productive. Considering the African context and particularly in Rwandan context, most of the time higher studies are completed around 23 and 34 years.

Single nurses scored higher than married nurses and widow nurses, respectively. Widow Nurses scored significantly lower than single and married nurses. This may be due to difficult living conditions including financial issues which may hinder an easy access to high education, the main source of knowledge and practices.

In addition, majority of the participants were working in the medical surgical services, while the remaining participants originated from the accident & emergency department and the maternal child health services. It due to those services mainly received those cases.

The most attained educational levels were having bachelor degree (A0) followed by the nurses who have advanced diploma (A1). These are low educational levels and the reason behind may be the cost of education in Rwanda and other non-explored socio-demographic concerns as many of the participants are young adult, married and in the reproductive age. In addition to this many of the participants had received in-service training about hip fracture management. This indicated by referring to the results founded 93.3 % (n=56), 98.3% (n=59) many of them have the knowledge and practices toward the management of the patient who have hip fracture respectively.

4.2. KNOWLEDGE OF THE NURSES ABOUT THE MANAGEMENT OF THE PATIENT ADMITTED WITH SUSPICION OF HIP FRACTURE

The analysis of nurses' knowledge about the management of the patients with hip fracture, at BUSHENGE Provincial Hospital, a total score of their knowledge was calculated by adding up the scores for 5 items, showed that 72.64%(n=44) have the knowledge about management of hip fracture. The current study had showed us the majority of the participants 79.15% (n=47) which is a total score of nurses' knowledge calculated by adding up the scores for 4 items indicate that the nurses who work BUSHENGE Provincial Hospital have the knowledge about clinical signs and symptoms associated with hip fracture.

After data correction with correct answers was *yes*, *no* answers, a total score of their knowledge calculated by adding up the scores for 8 items, found that 70.83%(n=43) of the nurses

who work at BUSHENGE Provincial Hospital have the knowledge about the nursing intervention they apply to the patients who admitted with hip fracture.

According to the current study, most participants replied the research instrument items about knowledge in good way, as they wish themselves to participate in the study, about 56 nurses scored as having good knowledge by considering that, those who got score of $9 \leq$ out of 17 were classified good level of knowledge.

Table 2: Knowledge of the nurses about the management of the patient admitted with suspicion of hip fracture (N=60)

Items	Variables	Options					
		Yes		No		I don't know	
		FR	%	FR	%	FR	%
Risk factors/ causes	Old age	50	83.3	8	13.3	2	3.3
	Bone fragility	56	93.3	2	3.3	2	3.3
	Fall down	50	83.3	8	13.3	2	3.3
	Bone anatomy (geometry of bone)	36	60.0	12	20.0	12	20.0
	Certain medications	26	43.3	22	36.7	12	20.0
Clinical signs of hip fracture	Severe pain in your hip/ groin	50	83.3	6	(10.0)	4	6.7
	Stiffness, bruising and swelling in and around your hip area	48	80.0	10	16.7	2	3.3
	Turning outward of your leg on the side of your injured hip	42	70.0	12	20.0	6	10.0
	Inability to move immediately after fall	50	83.3	10	16.7	0	0.0

Source: Primary data, 2022

Items	Variables	Options					
		Yes		No		I don't know	
		FR	%	FR	%	FR	%
Management of hip fracture	effective management for a patient who has confirmed hip fracture is based on the location of the fracture	50	83.3	8	13.3	2	3.3
	The basic intervention for the patient with hip fracture	42	70.0	10	16.7	8	13.3
	The best priority for a patient who has hip fracture with , is to start with unpatented airway rather than fracture management	34	56.7	22	36.7	4	6.7
	Vitamin D supplements prevent hip fractures	42	70.0	13.3	13.3	10	16.7
	Orthopedic surgery emergency	42	70.0	14	23.3	4	6.7
	Daily physical activity that would be important in patients with hip fracture	46	76.7	6	10.0	8	13.3

Source: Primary data, 2022

The current study showed the results founded, a total score of the nurses' knowledge calculated by adding up the scores for all items, divide the total numbers of all items and multiply with 100% to get the overall knowledge grading

The current study had showed that nurses working at BUSHENGE provincial hospital have good knowledge at rate of 93.3% were (n=4) at rate of 6.7% were have poor knowledge either is due to continue education and training, Nurses They found in high level of knowledge related to osteoporosis and also its prevention they can offered osteoporosis education to community people on behalf of their higher scores knowledge regarding osteoporosis (Chen et al, 2005).

4.3 Practices of the nurses towards the management of the patient admitted with real or suspicion of hip fracture.

Table 4.3 below describe the results found about the practices of the nurses at associated with hip fracture management, so the results founded show that 87.24% (n=52) nurses apply nursing practices towards the patients admitted with hip fracture.

The results obtained from 3 combined items showed that 53.37% (n=32) apply the best way to take care for patient admitted with real /suspicion hip fracture

The results score of 3 items combined indicate that 83.34% (n=50) apply preventive measure associated with hip fracture.

According to the results founded, a total score of the nurses' practices calculated by adding up the scores for 3 items, showed that 89.7% (n=54) apply immediate action as first aids for the patients admitted with a real or suspicion hip fracture.

The current study revealed that nurses had between moderate and very high level of practice according to Mc Donald classification, where this study classified as good and poor practices.

However, the nurses at have good level of practices towards the management of the patient with hip fracture at 98.3% (n=59) of total participants this indicated that the more the nurses had knowledge to manage the cases the more they apply what they know in practices.

Table 3: Practices of the nurses towards the management of the patient admitted with real or suspicion of hip fracture

Items	Variables	Options					
		Yes		No		I don't know	
		FR	%	FR	%	FR	%
Nursing practices to the patient with or suspicion of hip fracture	Immobilization	52	86.7	8	13.3	0	00
	Maximize patient safety	54	9.00	6	10	0	00
	Monitoring patient closely	54	9.0	4	6.7	2	3.3
	Drugs administration	47	78.3	20.0		1	1.7
	Ensure patients	54	90.0	2	3.3	4	6.7
	Taking vital signs	54	90.0	6	10.0	0	00
The best way to transport the patient admitted with suspicion of hip fracture	Lateral position	22	36.7	36	60.0	2	3.3
	Supine position	46	76.7	12	20.0	2	3.3
	Prone position	28	46.7	32	53.3	0	00
Patient best practices to prevent hip	Eating balanced diet	54	90.0	6	10.0	0	00
	Regular exercises	52	86.7	2	3.3	6	10.0
	Tobacco withdrawing	46	76.7	10	16.7	49	6.7
Nurses Practice	ABCD assessment strategy for the patient admitted with or suspicion of hip fracture	56	93.3	4	6.7	0	0.0
	The nurses conduct second survey, after the patient have been becoming stable	48	80.0	10	16.7	2	3.3

The immediate actions to be taken	Stop any bleeding	100	100	0	00	0	00
	Immobilize the injured area	54	90.0	6	10.0	0	00
	Apply ice packs to limit swelling and relieve pain	52	86.7	4	6.7	4	6.7

Source: Primary data, 2022

4.2 SUMMARY OF THE STUDY

The study on the nurses' knowledge and practices about the management of the patient with suspicion of hip fracture, admitted in surgical department with the objectives of assessing the knowledge and practices of the nurses for the management of the patient admitted with suspicion of hip fracture at BUSHENGE provincial hospital, the study objectives were achieved.

The knowledge of the nurses was 93.3% and their practices were 98.3%, we found that level of education, working experiences, working services, being trained about hip fracture management are significantly influencing the management of patient with suspicion or real hip fracture.

4.3 DISCUSSION OF FINDINGS

4.3.1. Social demographic characteristics of the respondents

The current study had shown that more than half 70 % (n=42) of respondents were male, the similarly study conducted in American by had shown that more than half of the respondents was male Overall, men with hip fracture are younger, and has higher incidence of fracture in men than others. The most respondents 'age ranged in the followings age category: 21-30 at the percentage of 70% (n=42) this current study contradict for the study conducted in Europe showed that the majority of the respondents was Men are younger (by 3–6 years) and sicker (more comorbidities or higher ASA score) than women who fracture, and African Americans and Hispanics are younger and sicker than whites who fracture (Walker & Rohan, 2019) .The results also showed that the majority of participants 56.7% (n=34) were single, and 40% (n=24) were married, 3.3% (n=2) was widower this study contradict the current study by showing that Overall, individuals living alone, especially those aged 60-69 years, compared to those being married/cohabiting, tended to have a higher hip fracture risk. 40.0 % (n=24) of respondents had advanced diploma, and 50.0 % (n=30) have bachelor degree and

10.0% (n=6) of respondents have done masters. Other study had showed that Individuals with higher education, compared to those with low education, had lower hip fracture risk [hazard ratio (HR) = 0.84, 95 % confidence interval (CI) 0.72-0.95](Walker & Rohan, 2019). Respective HRs were 0.97 (95 % CI 0.82-1.13) for men and 0.75 (95 % CI 0.65-0.85) for women. The results showed that the majority of the nurses have the working experiences vary between 0-5 years at the rate of 66.7% (n=40), 6-10 years at 20% (n=12), others include 11-15 and above at 6.7 % (n=4) had more experience. Similarly study conducted by had showed that working experience for nurses with less than 3 years' experience in fracture treatment had a small increased risk of reoperation(Walker & Rohan, 2019). The study indicates that experienced nurses should manage displaced Femoral Neck Fractures, and fractures operated.(Walker & Rohan, 2019)

The current study continue to show that 40 %(n=24) working in medical department, 30 %(n=18) in surgical, 23.3 %(n=14) in accident and emergency department. Other study doesn't contradict with the current study because for examples in the emergency department, a 'FastTrack' protocol should ensure rapid access to imaging, analgesia and identification of a bed on an orthopedic ward. Many patients who present with a suspected hip fracture will have comorbidities such as ischemic heart disease, hypertension, chronic kidney disease and dementia (Shah et al, 2014). Patients should be cannulated when they arrive in the emergency department and an electrocardiogram and baseline blood tests (full blood count, urea and electrolytes, coagulation screen) should be obtained. The findings showed that 46.7% (n=28) of the nurses have been trained for 0-5 weeks, 20.0% (n=12) have been trained for 5-10 weeks and 33.3% (n=20) have not yet trained about hip fracture management. Study conducted in Egypt had showed that had more than 7 years of nursing experience. The study showed 67.1% don't receive any training program and 32.9% receive training program on care of patient with hip fracture our study contrast with study conducted in Egypt by fatma mahrous 2020. In which the participants were patient but in our study the most of participants were nurses.(Walker & Rohan, 2019)

4.3.2 Knowledge of the nurses about the management of the patient admitted with suspicion of hip fracture (N=60)

The current study had showed that nurses working at BUSHENGE provincial hospital have good knowledge at rate of 93.3% were (n=4) at rate of 6.7% were have poor knowledge either is due to continue education and training, Nurses They found in high level of knowledge related to osteoporosis and also its prevention they can offered osteoporosis education to community people on behalf of their higher scores knowledge regarding osteoporosis (Chen et al, 2005).

Other study contradicts with the current study because the study results indicate that the most of the nurses' knowledge for management of fractures is poor at general mean of score. (1.45). these results agreed with Sathiya *et al.*, (2015) and Al-Barwari, et al., (2016) reveals in their studies that most of the nurses' knowledge for management of fractures is poor less than 6.7%. The orthopedic nurses have inadequate knowledge in some aspects for management of fractures.(Ali, 2019)

4.3.3 Practices of the nurses towards the management of the patient admitted with real or suspicion of hip fracture

The current study showed the results founded, a total score of the nurses' practices calculated by adding up the scores for 3 items, showed that 89.7% (n=54) apply immediate action as first aids for the patients admitted with a real or suspicion hip fracture. The current study revealed that nurses had between moderate and very high level of practice according to Mc Donald classification, where this study classified as good and poor practices. However, the nurses at have good level of practices towards the management of the patient with hip fracture at 98.3% (n=59) of total participants this indicated that the more the nurses had knowledge to manage the cases the more they apply what they know in practices.

A similarly study have agree in regarding level of practice show the study group of practice post intervention of the program. The study showed 68.6% does the practice correctly and 30% done with error and 1.4% just not done. So the performance of practice was become very good after intervention of the program regard care of patient with hip fracture.(Ali, 2019)

Other study continue to show that the study group of practice pre intervention of the program. The study showed 17.1% just done correctly and equal done with error and not done by 41.4% in pre-test. These indicate the majority of sample does practice with error or not done so the performance of practice is poor regard care of patient with hip fracture.(Ali, 2019)

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.0 INTRODUCTION

This chapter is made of summary, conclusions that are drawn from the findings of this study. In addition to that, recommendations to the nursing practice, nursing education and nursing research are made.

5.1 CONCLUSION

Knowledge of the nurses regarding to management of the patient admitted with suspicion of hip fracture was good according the results founded and also the nurses had good practices toward the patient with hip fracture, and patient's dissatisfaction to hip fracture management.

5.3 RECOMMENDATIONS

The purpose of this study was to assess the knowledge and practices of the nurses for the management of hip fracture at BUSHENGE Provincial hospital,

The study will now make recommendations to the:

Researchers: Further interventional study to enhance Nurses' knowledge to generally improve the practice in regard to the management of hip fracture is needed as a non-negligible number has low level of practice. \For the next research it would be better if practices are assessed through observation to reduce possible bias from self-report while using a self-administered questionnaire.

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It is highly recommended to conduct continuous professional development (CPD) and monitor its effectiveness on a regular basis. Protocols, guidelines and assessment tools are also needed and should be availed in services and be taught to nurses for their best utilization and ultimately for the best nursing care in regards to management of hip fracture which will lead to the best patients' outcome. Interprofessional collaboration is another option to enhance patients' care in regards to their management.

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APPENDICES

Appendix 1: Questionnaire in English

Section A

Socio-demographic characteristics

1. Gender: Male Female
2. What is your age? :
3. What is your marital status? :
4. What is your higher level of education?
5. What is your working years of experience?
 0-5 6-10 11-15 15+
6. Working service...
7. How long have you been trained about hip fracture management.....

Section B

Knowledge of the nurses about the management of the patient with hip fracture

Multiple Choice questions: **YES/NO / DON'T KNOW**: For each statement, please tick where appropriate for your best answer.

KNOWLEDGE

Read clearly the item, after understanding the concern; choose the appropriate answer by ticking in provided space

No	Knowledge items	yes	no	I don't know
1.	Causes/ risk factors of hip fracture			
	Old age			
	Bone fragility			
	Fall down			
	Bone anatomy (geometry of bone)			
	Certain medications			
2.	Clinical signs of hip fracture			

	Severe pain in your hip/ groin			
	Stiffness, bruising and swelling in and around your hip area			
	Turning outward of your leg on the side of your injured hip			
	inability to move immediately after fall			
Nursing intervention of patient with hip fracture				
3.	Do you know that effective management for a patient who has confirmed hip fracture is based on the location of the fracture?			
4.	Do you know the basic intervention for the patient with hip fracture or suspicion of hip fracture who admitted at the Accident and Emergency department can last no more than 48 hours.			
5.	Do you know that the best priority for a patient who has hip fracture with , is to start with unpatented airway rather than fracture management			
6.	Do vitamin D supplements prevent hip fractures?			
7.	Hip fracture in the elderly is considered an orthopedic surgery emergency. Is urinalysis needed in the preoperative evaluation?			
8.	Are there any inputs on changes in daily physical activity that would be important in patients with hip osteoarthritis?			
9.	Does rotation of the hip (internal or external) change the anatomical relationship between the psoas tendon and the anterior aspects of the hip joint?			
10.	Do the patients with little or no synovial fluid are at risk of			

	developing hip fracture?			
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PRACTICES

NO	Practice items	yes	no	I don't know
	Nursing practices to the patient with or suspicion of hip fracture			
1.	Immobilization			
	Maximize patient safety			
	Monitoring patient closely			
	Drugs administrations			
	Taking vital signs			
	Ensure and teach the patients about the conditions and its preventive measures			
2.	The best way to transport the patient with hip fracture			
	Lateral position			
	Supine position			
	Prone position			
3.	Patient best practices to prevent hip fracture			
	Eating balanced diet			
	Regular exercises			
	Tobacco withdrawing			
4.	Do the nurses practice ABCD assessment strategy for the patient admitted with or suspicion of hip fracture to prioritize care?			
5.	Do the nurses conduct second survey, After the patient have been becoming stable?			
6.	The actions to be taken immediately while waiting for medical help			

	Stop any bleeding			
	Immobilize the injured area			
	Apply ice packs to limit swelling and relieve pain			

Appendix 2: MANAGEMENT OF HIP FRACTURE

1. Have you ever diagnosed for hip fracture

Yes
 No
 I don't know

2. Have you receiving bisphosphonate therapy at the time of the follow up

Yes
 No
 I don't know

3. Have you received a bone density assessment within 6 months?

Yes
 No
 I don't know

4. Have you received calcium/ vitamin at the time of the follow up?

Yes
 No
 I don't know



5. Have you recommended some type of exercise program?

Yes
 No
 I don't know


6. Have you offered some other type of treatment or intervention related to their hip fracture?

Yes
 No
 I don't know

Appendix 3: RESEARCH LETTER

 **KIBOGORA POLYTECHNIC** 

RESEARCH LETTER



9th August, 2022

To whom it may concern:

We write this letter to humbly request y to allow Ms **MUTUYIMANA Emima. No. 1900398** and **NZAYIRATA BAHUFITE Cecile Reg.No:1900404** conduct a research in your organization /institution, territory entity.


The above mentioned are bonafide students of Kibogora Polytechnic pursuing Bachelor's degree in General Nursing Department


These students are currently conducting a research topic **“KNOWLEDGE AND PRACTICES IN THE MANAGEMENT OF THE PATIENTS WITHY HIP FRACTURE AT BUSHENGE PROVINCIAL HOSPITAL ‘**

We are convinced that your organization /institution ,territorial entity will constitute a valuable source of information pertaining to their research ,the purpose of this letter is to humbly request you to avail them the with pertinent information they may need .we pledge to ensure that all provided information will be confidential and used in the strict academic purpose .

Any assistance rendered to the candidates will be highly appreciated.

Yours,

 **Dr NDABARORA Eleazar, PhD**
Dean of Health Sciences Faculty
Kibogora Polytechnic



Granted Accreditation and Legal Personality by The Ministerial Order N° 7/2015 Official Gazette N° 03 of 19/01/2015
P.O.Box: 50 Nyamasheke-Rwanda Tel (+250).788742655 E-mail:info@kp.ac.rw. Website : www.kp.ac.rw

Appendix 4: Plagiarism checking report



Plagiarism Checker X Originality Report

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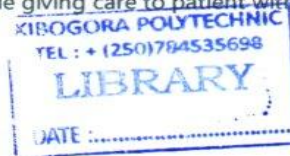
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/ FACULTY OF HEALTH SCIENCES DEPARTMENT OF GENERAL NURSING RESEARCH
PROJECT: ASSESSMENT OF NURSES'S KNOWLEDGE AND PRACTICES IN THE
MANAGEMENT OF THE PATIENTS WITH HIP FRACTURE AT BUSHENGE PROVINCIAL
HOSPITAL Case study: Bushenge Provincial Hospital Period: From (2021-2022) A
research project presented in partial fulfillment of the requirement for the degree of
bachelor with honor in nursing with health science.

PREPARED BY: EMIMA MUTUYIMANA REG N: 1900398 BAHUFITE NZAYIRATA CECILE
REG N: 1900404 SUPERVISION: NSENGIYUMVA Jean Paul Kibogora.....2022
DECLARATION Declaration by the candidate We, EMIMA MUTUYIMANA and BAHUFITE
NZAYIRATA CECILE hereby declare that this is our own original work and does not a
duplication of any similar academic work. It hasn't been submitted to any other
institution of high learning.

All material listed in this paper which are not our own have been duly acknowledge
Names: EMIMA MUTUYIMANA Signed.....
Date..... Names: BAHUFITE NZAYIRATA CECILE
Signed..... Date..... Declaration by the
Supervisor I declare that this research thesis was submitted for examination with my
approval as KP supervisor. Supervisor' name: Signed.....
Date.....

ABSTRACT Background: hip fractures are an acute and worsening public health problem;
they mainly affect elderly people, a population group that is highly vulnerable to disease
and accidents and to falls in particular. (Guerado et al., 2016), nurses have a great role
and many responsibilities while giving care to patient with fracture.



checked and signed
on behalf of Librarian
08/09/2022 TUGILEER
Emmanuel