# THE UNIVERSITY OF ZAMBIA

## SCHOOL OF MEDICINE

### DEPARTMENT OF PHYSIOTHERAPY

# EXPLORING THE EXPERIENCES OF PATIENTS WITH TOTAL HIP REPLACEMENT AFTER DISCHARGE FROM HOSPITAL AT ZAMBIAN- ITALIAN OTHOPAEDIC AND THE Beit CURE INTERNATIONAL HOSPITALS


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THIS DISSERTATION IS SUBMITTED TO UNIVERSITY OF ZAMBIA IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE DEGREE IN PHYSIOTHERAPHY

## DECLARATION

I hereby declare that "exploring the experiences of patients with THR after discharge at the ZIOH and BCH in Lusaka Zambia." is my own work that it has not been submitted, or part of it, for any degree or examination in any other University, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Vuniwe Sakala

Signature: .....

Date: 23rd June, 2014

Witness: .....

**APPROVAL**

On behalf of the University of Zambia (UNZA), I wish to confirm that I supervised .....dissertation, I further wish to state that to the best of my knowledge, I believe that the said student actually conducted this work. I therefore approve that this dissertation by.....be submitted in the partial fulfilment for the award of the .....

.....

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## ABSTRACT

The aim of the study was to explore the experiences of patients with THR after discharge at the ZIOH and BCH in Lusaka Zambia. The objectives were: 1. to explore patient's experiences in their homes after THR. 2. To identify the precautions that are given to patients on discharge. 3. To understand how the surgery has affected their activities of daily living

**Design:** A qualitative explorative study. Data was collected using an interview guide and was recorded using a recorder; responses from participants were transcribed, reviewed and double checked for accuracy. Themes were developed from the respondent's responses and coding was done. Participants were interviewed on different days after being discharged. Thematic analysis of the transcripts was used.

**Sample:** Six patients were recruited who underwent THR from the two hospitals.

**Findings:** Participants reported dramatic improvements in pain and disability. Some participants suffered from distress over body image related to the artificial joint and had difficulties coping at home with activities of daily living. This report also suggests possible interventions to deal with these problems.

**DEDICATION**

I dedicate this work to my daughters, Ndinawe and Dalani, for your tolerance of my absence from home, enabled me complete this work.

## LIST OF ABBREVIATIONS

| | |
|---|---|
| ADL..... | Activities of Daily Living |
| AHRQ..... | Agency for Healthcare Research and Quality |
| BCH..... | Beit-CURE Hospital |
| CINAHL..... | Cumulative Index to Nursing Allied Health Literature |
| DVT..... | Deep Vein Thrombosis |
| FWB..... | Full Weight Bearing |
| INR..... | International Ratio |
| IV..... | Intravenous |
| MRI..... | Magnetic Resonance Imaging |
| OCED..... | Organisation for Economic Co-operation and Development |
| PACU..... | Post Anaesthesia Care Unit |
| PT..... | Physiotherapist |
| ROM..... | Range of Motion |
| THR..... | Total Hip Replacement |
| UK ..... | United Kingdom |
| UNZA ..... | University of Zambia |
| UNZABREC ..... | University of Zambia Biomedical Research Ethics Committee |
| USA..... | United State of America |
| WBAT..... | Weight Bearing as Tolerated |
| ZIOH..... | Zambian-Italian Orthopaedic Hospital |

DEFINATION OF TERMS

| | |
|---|---|
| Rehabilitation | a set of measures that assist individuals who experience, or are likely to experience, disability to achieve and maintain optimal functioning in interaction with their environments |
| Experience | Is a particular instance of personally encountering or undergoing something |
| Osteoarthritis | Is a degenerative non inflammatory joint disease characterised by distraction of articular cartilage and formation of bone spurs at the joint surfaces and margins |
| Discharge | Allow (a patient) to leave hospital because they are judged fit: |

**KEY WORDS**

Experience

Rehabilitation

Discharge

Osteoarthritis

## ACKNOWLEDGEMENTS

First and foremost, all praise is due to my God for the grace and faithfulness to complete.

I also want to extend my thanks to the following:

- My colleagues, friends and family who have helped me with this research,
- My supervisor, Mr Moses Mwango for his guidance,
- The ZIOH and Beit CURE Hospitals administration for the use of their patients,
- My Pastor and Mentor, Pastor J, for the guidance, wisdom and encouragement.,
- My husband Livas Mwanza and our daughters, Ndinawe Mwanza and Dalani Mwanza for being supportive of my work and studies,
- My father Jackson Sakala - for your faith, trust, unconditional love and the gift of life and
- Lillian and Oswald Bwanga for being there for me

**DISSERTATION**

This dissertation by Vuniwe Sakala is submitted to the University Of Zambia in partial fulfilment of the requirements for the award of Bachelor of Science degree in Physiotherapy.

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# CHAPTER ONE

# INTRODUCTION

## 1.1 BACKGROUND

Total hip replacement (THR) has matured into a routine operation for the relief of hip pain and disability due to hip arthritis, giving some of the greatest quality of life increases of the all medical procedures. Many patients get a good result from surgery but do not reach their greatest potential due to lack of follow-up rehabilitation on the immediate post-operative period. Post-operative rehabilitation is of the outmost important following total hip replacement in order to ensure pain free function of the joint and improve the patients' quality of life.

Many studies on the quality of life after total hip replacement have focused on the functional improvement and pain reduction. An Australian study described the patients' view of nurses during hospitalization (Kralik et al., 1999). While a Canadian study described patient's relationship with profession personnel during the post-operative at home (Loft et al., 2003). A study conducted in New Zealand explored the patients' satisfaction around the time of discharge and identified problems with care coordination (Feilden et al., 2003). In Japan, a study was done by Fujita (2006) patients disclosed that they had problem coping at home after total hip replacement.

Heiberg (2012) highlights that, in the field of rehabilitation, patients are supposed to be experts of their own lives, but the patient's own experiences in this respect are often not reported. Taking into account the experiences of patient with (THR) this is important because their views or

experiences will help form a more complete picture of how patients with THR fair in their homes and what is needed to enhance rehabilitation of the these patients.

Hip replacement is one of the most common operations for individuals with hip impairment due to variety of conditions (McHugh., 2012) and is one of the most successful orthopedic procedures performed today. It relieves pain, restores function and improves quality of life. Sir Charnley, a British Orthopedic Surgeon, developed the fundamental principles of the artificial hip and is credited as the father of THR. He designed a hip prosthesis in the mid to late 1960's that still sees use today. According to the Agency for Healthcare Research and Quality's (AHRQ), it is estimated that over 300,000 THR are performed each year in the United States.

Significant advances in surgical treatment have provided effective options to reduce the pain and disability associated with certain musculoskeletal conditions. Joint replacement surgery is considered the most effective intervention for severe osteoarthritis, reducing pain, disability and restoring patients to near normal.

There is considerable variation across countries in the rate of hip replacement. Germany, Switzerland and Austria have high rates of hip replacement (Organization for Economic Cooperation Development, 2010).These variations in the rate of hip include the differences in the capacity to do the operation. The incidence of THR in the United States (US) is at rate of 1 in 2,266 (National Institute of Arthritis and Musculosketal and Skin Disease., 2009). In 2003, there were 200,000 total hip replacements performed, 100,000 partial hip replacements and 36,000 revision hip replacements (Chunliu et al., 2007). The purpose of a hip hemiplasty, THR, and hip resurfacing is to improve biomechanics of the hip joint by replacing the damaged joint with a

prosthetic implant, re-aligning of the soft tissues, and eliminating structural and functional deficits.

The growing volume of THR contributes to health expenditure growth as these are expensive interventions. In 2007, the average estimated price of THR was more than USD 17 000 in the United States, about USD 16 000 in the Australia and between USD 11,000 and 12,000 in Canada, France and Sweden (Koechlin et al., 2010).

In Africa the total numbers of total hip replacement varies. Lubenga (2009) completed a study in Malawi on the current epidemiologic increase in joint replacement surgery in Africa, the fact that there was a difference in age and indication for THR between patients in developed and developing world and stresses the need for proper audits of joints replacement surgery in Africa bearing in mind that many new centers with variable standards of care and training of the surgeons are performing these procedures. A study in Kenya by Mulimba (2006) suggested the future of this surgery in the region is bright and already a number of countries in the region have started it in small measures. Mulla et al (2010) in a study done in Zambia reports that patients are educated on the need to avoid postures that could predispose to dislocation before discharge from hospital but are not provided with a toilet 'raise' as is said to be routinely done for those in squat toilets in Malawi.

## 1.2 STATEMENT OF THE PROBLEM

Most of the information about Total hip replacement has been obtained in Western countries, especially in the European population (Organisation for Economic Cooperation and Development ., 2010).In Europe; the various researches on the topic have resulted in guidelines

on the diagnosis and management of the condition being formulated. It should be mentioned that western rehabilitation guidelines may not be applicable to the Zambian local conditions. In Zambia, there is little information about the problem of patient's experiences once discharged. The patient will be seen by the surgeon after two weeks after discharge. What goes on between discharge and review is unknown. Thus a need arises to explore the patients' experiences in their home after been discharged. Mostly patient will wait for the review date given even if there is problem. This is one of the reasons why the researcher embarked on carrying out this research.

The research will help to find out how total hip replacement patient cope in their homes and those who undergo major surgery in Zambia. In establishing the experiences of patients with total hip replacement face will help to provide a foundation for development of prevention strategies based on local conditions. The research will also give insight into the kind of limitations the total hip replacement patients have in performing activities of daily livings (ADLs). Most patients with total hip replacement have considerable disability in that they have difficulties in performing certain ADLs due to the precautions given upon discharge (Rasch et al., 2009). Therefore, carrying out this research will create more awareness of the need to do prior assessment to patients homes before the elective surgery is done there improving the quality of life in patients with THR and health care professionals. Therefore, carrying out this research will help formulate strategies on how this condition can be well managed thereby helping to improve quality of life for the affected patient and improvement in their management. The research can also help to create a foundation for further studies to be done in Zambia. The research will give direction on policy.

## 1.3 JUSTIFICATION

In exploring the experiences of patients with THR after discharge from hospital, it will be easier to structure a more effective post THR management. Once patients have been discharge from hospital, they have to wait for two weeks to come for review at the hospital. What are their experiences while at home is known when they come for review. Upon discharge the patient will be issued with the precautions of total hip replacement. These precautions become real in the home environment. It is at this time that patients end up with hip dislocation and other complications. Some will wait until the review date and notify the health personnel of the complications and challenges they experienced at home.

This research will be of benefit not just to THR patients but even patients who have had major surgery on how they cope in the home environment. It will not only add to body of knowledge but will also influence policy makers. After a person has undergone a THR, they will usually be discharged from hospital after 4 to 5 days and sent home. Getting into the car, is most challenging for the patient. Upon arriving home, the home environment is quite different from that of the hospital. The hospital has bars or rails to hold onto, toilet seat raisers or commode in the bathroom or toilet. While at home these are not there. The patient with THR gets around their home environment by trial and error during this period. Mostly patients are anxious or worried on sitting and standing by themselves, for fear of dislocating the hip prosthesis. Prior to the procedure, and after, the patients are informed about the risks and these risks are real post-operatively. The views of their experience will be in use in the pre-admission and post discharge care plans. The aim of the study is to explore patients' experiences after total hip replacement in order to have a better understanding of their experiences in their homes as patients are the key

stakeholders in the modern health care delivery. Many studies have being done on the quality of life after THR, have focused on the functional improvement and pain reduction. In Japan a study was done by Fujita (2006), patients disclosed that they had problems coping at home after THR. The problems identified initiated the researcher carry out this study.

## 1.4 RESEARCH QUESTION

Patients that have undergone THR what are the challenges/experiences encountered after hospital discharge?

## 1.5 OBJECTIVEOF STUDY

The main aim of the study is to explore the patients' experiences in their homes after Total Hip Replacement (THR).

### 1.5.1 SPECIFIC OBJECTIVES

1. To explore patients experiences in their homes after THR
2. To identify the Precautions that were given to the patients on discharge.
3. To understand how the surgery has affected their activities of daily livings (ADLs).

## 1.6 STRUCTURE OF THE THESIS

This thesis to explore the experiences' of patients with total hip replacement after discharge from hospital consists of six chapters. The first chapter is the introductory chapter which covers the background, statement of a problem and justification of the study.The second chapter is the literature review, covering the current body of knowledge on THR. The third chapter discusses

the research methodology and methods employed in this study. The fourth chapter presents study findings using explorative study design. The main topic of chapter five is data analysis and discussion of research findings. The study ends with sixth chapter which is conclusions and recommendations.

## CHAPTER TWO

## LITERATURE REVIEW

### 2.1 OVERVIEW

A literature review was carried out to ascertain the current body of knowledge on THR. A literature search was done in both paper based and electronic sources. These included Physiotherapy and Orthopedic text books, University of Zambia online library, Professional websites and healthcare data bases such as PubMed and Cumulative Index to Nursing and Allied Health Literature (CINAHL). A range of articles were retrieved using 'experiences of patients who underwent a total hip replacement' as the keywords. Little research was found in this area in the Zambian hospital clinical context.

### 2.2 RELEVANT CLINICAL ANATOMY

The hip is one of the human joints that allow the greatest mobility. It is characterized by intrinsic stability too, thanks to the concave shape of the Acetabulum and to the presence of the bony rim on the superior, posterior and anterior aspects and the femoral head is hinged with it an medial anterior and cranial orientation (Curry., 2010). The human hip joint is well constructed for its intended use; standing and walking. It is an outstanding example of the congruous joint (American Medical Association., 2012). The hip is an enathrosis-type of joint which means a kind of ball-socket fitting, composed by the Acetabulum and by the femoral head, lending a high level of stability and congruence. The Acetabulum concavity is developed by the presence of femoral spherical head (American Academy of Othopaedic Surgeons., 2011).

This ball and socket design is what allows the poly-axial movement seen at the hip. The hip is made up of the pelvis and the femur. The pelvis is formed by 3 bones; the ischium, ilium and pubis. The femur is the longest and strongest bone in the human body (Callaghan et al., 2007). The acetabulum is cup-shaped providing the articular surface for the head of femur to move within. The head of the femur is gripped by the acetabulum beyond its maximum diameter. The caput of the femur and the inside of the acetabulum are covered with a layer of hyaline cartilage (Meyers., 1985).

As with articular surfaces of all ball-and-socket joints, the hip joint surface is covered with articular cartilage, a smooth tissue that cushions the ends of the bones and enables them to move easily. A thin tissue called synovial membrane surrounds the hip joint. In a healthy hip, this membrane makes a small amount of synovial fluid that lubricates the cartilage and eliminates almost all friction during hip movement. Ligaments connect the ball to the socket and provide stability to the joint. The femoral head ligament is found within the hip joint and goes from acetabular pit to femoral fovea at medial plane of femoral head a little posterior and inferiorly to the center. The purpose of the femoral head is not well established. Some authors find that it helps on providing hip stability because, when ruptured, symptoms of instability and pain may be present (Selder et al., 2001).

## 2.3 ETIOLOGY OF HIP REPLACEMENT

THR is a frequently done procedure (Gremeauxet al., 2010; Jan et al., 2011; Stockton et al., 2003; Rahnmann et al., 2005). Hip replacements are used to repair hip fractures, caused by trauma such as a fall. Osteoporosis and osteomalacia are significant factors responsible for the

high incidence of hip fractures within the elderly population. Arthritis is a common degenerative process occurring in joints within this elderly population, with osteoarthritis being the most common of the varieties. Due to the high degree of success at reinstating independence and mobility of osteoarthritis sufferers, total hip replacement procedures has become a well accepted treatment modality for hip degeneration secondary to osteoarthritis. It is also a treatment for juvenile rheumatoid arthritis but only if all the other options have failed (Crawford et al., 2001).

## 2.4 CHARACTERISTICS

Clinical presentation of hip replacement is determined by the cause or precipitating factor for the surgery. Below are some examples:

### 2.4.1 Preoperative clinical features

- Hip fracture: Often unable to walk, complains of vague pain in the knee, thigh, groin, back or buttock and difficulty of weight bearing (Batra et al., 2010).
- Osteoarthritis: Crepitations are sensible or audible when the hip is moved, inability to assume the neutral anatomical position.
- Rheumatoid arthritis: Range of all hip movements is impaired; movement is painful, pain and stiffness when the activity is resumed after resting (Crawford et al., 2001).

### 2.4.2 Postoperative

Because patients with a hip replacement have muscular atrophy and loss of muscle strength, particularly in the gluteus medius muscle and ipsilateral quadriceps, it may be good to consult a physiotherapist after surgery. The result of the loss of strength is that the elderly are less independent (Gremeaux et al., 2010). Stockton et al., (2010) report that early postoperative rehabilitation after total hip replacement, focuses on restoring mobility, strength, flexibility and reducing pain. According to Jan et al., (2011), patients with total hip replacement often present with a gradual decline in hip muscle strength two to three years after the operation. Their research has also shown that when the hip abductors are weak after surgery there is a major risk associated with joint instability and prosthetic loosening. Rahnmann et al., (2005) however suggest that a gait dysfunction may persist for many months after joint replacement.

## 2.5 APPROACHES

There are several different incision defined by their relation to the gluteus medius knowing which approach was used in addition to the specifics of the patient's operating room report will help guide the therapist in post operative rehabilitation management.

### 2.5.1 Anterior

The most commonly used approaches are the anterolaterol modified Watson-Jones (Watson-Jones. 1935). And the posterior southern, Moore, Gibson or posterolateral approaches. According to Weber and Ganz (2002) the anterolaterol approach was first described by the Von SpregelBardenheuer. The approach takes the advantage of the intermuscular plane between the

tensor fascia lata and the gluteus medius (Hoppenfeid et al., 2003). Which are supplied by the superior gluteal nerve. Adequate exposure of the Acetabulum necessities leads to neutralizing of the abductor mechanism either by performing a trochanteric osteotomy a by partial detachement of the anterior portion of the gluteus medius and mininus of the greater trochanter (Mullar., 1987).

### 2.5.2 Posterior

The posterior approach which was described initially by Von Langenback uses a gluteus maximus splint and remains posterior to the gluteus medius and minimus (Robert.,1984). The posterior hip capsule is divided and external rotators (piriformis, superior and inferior gemelli and obturator internus) are detached (Masons., 2002).

Both of these approaches have merits and limitation. The anterior approach has decreased incidences of dislocation (Woo et al., 2002) and providing good exposure of the Acetabulum. The disadvantage is that the anterior part of gluteus medius can limit the proximal femoral exposure, necessitating tenotomy of these fibers. The inferior branch of the superior gluteus nerve is also vulnerable to damage.

Both of these approaches cause abductor weakness (Barrack.,1999) and this in turn can lead to an increased incidence of the patient having postoperative limp (Vicar., 1994).

## 2.6 INDICATIONS FOR SURGERY

The most common condition for which total hip replacement is done is in severe osteoarthritis of the hip accounting for 70% cases inflammatory arthritis both seropositive and sero negative, is

an important is an indication for total hip replacement and offers tremendous improvement in the quality of life even the very young this is from un published data. The primary indication for this procedure is severe pain and limitation in activities of daily living that it causes to warrant doing total hip replacement. Pain and loss of mobility are the most common preoperative complaints of patients with a total hip replacement (Brunner et al., 2003). According to Meyers (1985), pre-existing hip disease is a valid indication for primary total hip replacement. Pain must be refractory to conservative measures, such as oral non steroidal anti-inflammatory (NSAID) medication, weight reduction, activity restriction and the use of supports such as a cane.

It is generally preferred that hip total hip replacement be done in patient older than 60 years because at this age, the physical demands on the prosthesis tend to be fewer and the longevity of the operation approaches. The statistics obtained at the Zambia Italian Orthopedic Hospital (ZIOH) for the patient's age ranged from the 28 to 88 years old from the year 2008 to 2012. At ZOIH the common indication was neck of femur fractures while the Beit CURE it was avacular necrosis.

Other condition for which the procedure may be indicated and which predispose to the development of secondary osteoarthritis include developmental dysplasia of the hip, Paget's disease, trauma and osteonecrosis of the femoral head; patients with rheumatoid arthritis, other collagen diseases such as systematic lupus erthrothematosus and ankylosing spondylities may benefit as well. Selected patients achieve complete pain relief and notable improvement in function (Munin ., 2000).

When there are complications with the internal fixation of a fracture to the femoral neck, in particularly if articular cartilage in the acetabulum is lost or when endoprosthesis have failed in acute fractures, a total hip replacement is a good solution.

Fractures of the neck of the femur caused by an underlying pathology for example Paget's disease in older patients are generally treated with a total hip replacement (Kingma et al., 1983). When a patient is suffering from a rapidly destructive hip disease, a rapid destruction of the femoral head or the pubic ramus is observed on the radiographs, therefore a total hip replacement should be the only option (Crawford .,2001).

Important considerations before choosing for a total hip arthroplasty are age, activity status, the patients' expectations and medical conditions based on radiological disorders (Trudelle-Jackson., 2010).Orthopedic surgeons are cautious with performing a total hip replacement. It's only used when all other options have failed. In the end it's the surgeon who decides if a total hip replacement is the best solution for the patient.

### 2.6.1 Pain

Pain is the principle indication for hip replacement and is reliably relived as early as one week after surgery. Pain from an arthritic hip is classically located in the groin and buttock. Radiating into the thigh and at times pain in may occur and at times pain may present in, or even below the knee. The pain is usually described as a dull ache that is difficult to localize. Activity aggravates the pain while rests relieves it. Night pain is distressing to the patient and an important surgical indication.

## 2.7 DIAGNOSTIC PROCEDURES

There is no specific way to diagnose if a patient is in need of a total hip replacement. This is because there are multiple possible disorders where a total hip replacement is recommended. When a patient is complaining about hip pain this is notoriously misleading, for often it is referred from the spine or pelvis and so it has no connection to the hip joint itself (Crawford ., 2001). There are ways to see if the patient has the conditions in which either a total or hemi hip replacement can be required like a hip x-ray, a Magnetic Resonance Imaging (MRI) scan and a physical examination.

### 2.7.1 Clinical Examination

The task of a Physical Therapist consists of seeing the patients before the operation, to investigating the muscular state (force, volume), Range of motion (ROM) and the circulatory state of the injured as well as the healthy limb (Raymond ., 2004). This gives an idea of the preoperative state of the patient.

The general physical and psychological state of the patient should also be taken care of. For example explaining the surgical technique and the therapeutic monitoring after surgery can help lowering the patient's anxiety. Explaining how to use a walker or with crutches properly can also make the patient more self-confident when entering the postoperative stage of the therapy.

## 2.8 IMPLANTS

The prosthetic implants used in hip replacement consist of different parts, the acetabular cup, the femoral component and the articular interface (Bal., 2006). Options exist for different patients and indications. Correct selection of the prosthesis is important.

### 2.8.1 Acetabular Cup

The Acetabular cup is the component which is placed into the Acetabulum (hip socket). Cartilage and bone are removed from the acetabulum and the acetabular cup is attached using friction or cement. Some acetabular cups are one piece, while others are modular (Ling., 2009). One piece (monobloc) shells are either polyethylene or metal, they have their articular surface machined on the inside surface of the cup and do not rely on a locking mechanism to hold a liner in place.

### 2.8.2 Femoral Component

The femoral component is the component that fits in the femur (thigh bone). Bone is removed and the femur is shaped to accept the femoral stem with attached prosthetic femoral head (ball). There are two types of fixation: cemented and uncemented (Della ., 2009). Cemented stems use acrylic bone cement to form a mantle between the stem and to the bone. Uncemented stems use friction, shape and surface coatings to stimulate bone to remodel and bond to the implant.

### 2.8.3 Articular Interface

The articular interface is not actually part of either implant; rather it is the area between the acetabular cup and femoral component. The articular interface of the hip is a simple ball and socket joint. Size, material properties and machining tolerances at the articular interface can be selected based on patient demand to optimize implant function and longevity whilst mitigating associated risks (Carrington., 2009). The interface size is measured by the outside diameter of the head or the inside diameter of the socket. Common sizes of femoral heads are 28 mm, 32 mm and 36 mm.

## 2.9 PATIENT MANAGEMENT

### 2.9.1 Anticoagulation Therapy

Patients undergoing THR are often started on anticoagulants such as warfarin, heparin, and low Molecular heparin (Lovenox), or aspirin the night before surgery. The dose is adjusted after Surgery depending on the patient's international ratio (INR) hematology values. At the time ofdischarge, patients who are at a high risk for Deep Vein Thrombosis (DVT) will remain on anticoagulation therapy for 4-6 weeks . High-risk patients include those who have undergone bilateral THR, have a history of prior DVT, are on estrogen therapy, have a recent history of Cancer, or have undergone THR secondary to hip fracture (McCaffery., 2008).

### 2.9.2 Pain Management

The modes of analgesia pump (PCA). Once the patient is brought to the post anesthesia care Unit (PACU), a nurse starts the PCA pump with an intravenous (IV) narcotic. This most often contains Morphine or Dilaudid. Most often, these pain management methods are discontinued

on post-operative day 1 and the patient is then transitioned to oral (PO) pain medication. Short-acting narcotics such as Oxycodone or oral Dilaudid are used as needed for breakthrough pain control. If necessary, IV infusions of Morphine or Dilaudid are also provided to the patient for additional breakthrough pain relief (McCarthy., 2008).

### 2.9.3 Rehabilitation Management

The typical length of stay for patients following THR is three days excluding the day of Surgery. Due to the short length of stay following THR, the focus of physical therapy (PT) Management begins on first day post operation with initial evaluation. The evaluation includes patient education, mobility, functional training, as well as increasing ROM and motor control of the articular and peri-articular structures of the hip joint. It is important to keep in mind THR ROM, along with proper soft tissue balance is required to ensure proper biomechanics in the hip joint. Therefore, the Physiotherapist must address both impairments in order to ensure good outcomes (Stewart., 2011).

### 2.9.4 Precautions

The following post-operative activity recommendations are often included in the physical Therapy consults for patients following THR in the acute care setting (Sharma ., 2009):

O Posterior Precautions: No hip flexion greater than ninety degrees, no hip adduction or internal rotation beyond neutral, and none of the above motions combined.

O Anterior Precautions: No lying flat, no prone lying, no bridging and no hip external rotation.

O Lateral Precautions: The patient will likely have hip abduction restrictions.

O Global Precautions: Global precautions are most often ordered for a patient following a hip resurfacing surgery. This set of precautions is a combination of both posterior and anterior dislocation precautions. This is due to the large incision into both the posterior and anterior hip capsule to expose the femoral head.

• If a trochanteric osteotomy is performed the orders may include restrictions for hip abduction. It may be stated as, "passive abduction only" or "functional abduction only." (Kralik., 1997) This is to allow for bone healing and to prevent a non-union.

• Positioning of the operative extremity. Positioning recommendations may include:

Positioning the operative extremity in neutral rotation with a towel rolled proximal to the knee to prevent external rotation, locking the foot of the bed in extension to prevent the operative knee from resting in a flexed position, use of a hip abduction pillow or folded pillow between the patients lower extremities to prevent the operative extremity from adducting.

## 2.10 COMPLICATIONS

It is important to recognize signs and symptoms of early post-operative complications and consult with other appropriate health care providers as appropriate. The common acute care complications of THR according to British Orthopaedic Association (2006) are following:

• Blood loss requiring transfusion

• Deep vein thrombosis (DVT)

• Pulmonary embolism

• Excessive joint bleeding

• Hematoma

• Joint infection

• Joint dislocation

• Sciatic nerve injury

If a patient presents during the first few days post-operatively with increased pain, excessive swelling, decreased muscle strength or sensation along a motor and/or sensory nerve distribution, sudden shortness of breath and decreased oxygen saturation along with increased resting heart rate, Physical Therapy interventions must be stopped, and the medical team consulted.

**2.10.1 Late- complications following THR may include:**

According to Crawford (2001) the late complications of THR include:

• Skin necrosis requiring drainage and potentially surgery to correct the defect.

• Persistent joint drainage in the week's onset following THR. This complication is often treated with joint aspiration, antibiotics, and at times, debridement and joint lavage. A wound vacuum may be placed.

• Large hematoma formation. Patients are often advised by the surgeon to rest the hip joint, use ice to help decrease the size of the hematoma, and stop taking anticoagulants.

If the hematoma does not resolve, patients may need surgical evacuation.

• Wound healing complications in the first few weeks after surgery. This typically occurs in patients who are on chronic steroids or chemotherapy, have rheumatoid arthritis, obesity, diabetes, or are active smokers. The signs and symptoms include increased joint swelling, pain, and redness in the joint or at the site of the incision.

• Dislocation: the rates of hip dislocation vary depending on the surgical approach; anterior lateral, 70 %, lateral 28 %, and posterior lateral with soft tissue repair 1%, respectively (Standard of Care., 2010).

• Heterotrophic ossification: Extra bone growth that can cause stiffness.

## CHAPTER THREE

## METHODOLOGY

### 3.1 Overview

In this third chapter, the researcher explains the general plan of how the research question was answered. This includes the study design, research setting, study population and sampling, data collection tool, data analysis and ethical consideration, which were employed in conducting this study.

### 3.2 STUDY DESIGN

This was a qualitative explorative study. According to Parahoo (2006) the design selected for research should be the one most suited so as to achieve an answer to the proposed research question. For the purpose of the research question the researcher had chosen to carry out an explorative qualitative research design in the hope of exploring the patient's experiences after discharge from hospital.

Qualitative research is a systematic subjective approach to describe life experiences and give them meaning (Burns., 2009). Qualitative studies allow researchers to explore behaviors, perspectives, feeling and experiences in depth, quality and complexity of a situation through a holistic framework (Holloway., 2002).

Explorative design aims to explore the essential findings in a rigorous way that is free from distortion and bias (Brabury-Jones et al., 2010). Explorative design help discover new meaning, describe what currently exists, verify the rate at which something occurs and categories the information.

### *3.3 STUDY SITES*

The study took place at the Zambian-Italian Orthopaedic Hospital (ZIOH) located in Lusaka, Zambia. It has the 20 beds for children and 7 beds space for private patients (both children and adults).

The Beit CURE Hospital (BCH) is located in Lusaka, Zambia. It has 45 patient's beds in the children's ward and 16 beds in the private ward. The both hospitals provide free treatment to disabled children and at a fee to private patients – (children and adults).

### 3.4 DESCRIPTION OF THE POPULATION

The study population included all patients who underwent total hip replacement operation at the ZIOH and BCH.

### 3.5 SAMPLE SIZE AND SAMPLING PROCEDURE

In this study, convenient purposive sampling method was employed. The study recruited six patients from the ZIOH and Beit CURE hospital in Lusaka who had total hip replacements. Cormack (2000) suggests that's qualitative researchers use a small selective sample, because of the in-depth nature of the study and analysis of data required. In order to acquire a purposive sample there were inclusion and exclusion criteria applied.

### 3.6 INCLUSION CRITERIA

- Patients with immediate post discharge.
- Patients with Primary Total hip replacement.

- Patient with Hemiplasty.
- Those above the age of 18.
- Those who consented

### 3.6.1 EXCLUSION

- Patients with bilateral hip replacement.
- Patients with hip revision.
- Patients below the age of 18
- Those who did not consent

## 3.7 DATA COLLECTION TOOLS

In this study, semi-structured interviews were employed to gather data by using a scheduled interview guide. Open-ended interviews allowed participants to discuss their opinions and feelings. This allowed researcher to observe non-verbal communication. The interview guide consisted of six open ended questions uniquely developed for the sole purpose of this study (Appendix 3). The interviews were recorded using a recorder.

## 3.8 DATA COLLECTION PROCEDURE

In this study, recorded in - depth interviews lasting between 45 and 60 minutes were utilized. Interviews highlighted the insights, experiences which of patients with THR. The interviews were audio-taped with permission from the participants to ascertain an accurate account of the interview which was replayed for analytic purposes and anonymity was assured during the course of the recording. Participants were reminded of their right to withdraw from the study or

terminate the interview at any time before commencing the session. To ensure participants anonymity and privacy during the interview, this was done in the privacy of their homes. The interviews were conducted between 17th March and 11th April 2014 on different days after discharge.

### 3.9 DATA ANALYSIS

Data from the recordings was transcribed, reviewed and double checked for accuracy with the help of an experienced Qualitative researcher. Themes were developed from the respondent's responses and coding was done according to the variety of the responses from the participants. The established themes were transcribed verbatim. Thematic analysis was used.

### 3.9 ETHICAL CONSIDERATION

The researcher obtained permission from the University of Zambia Biomedical Research Ethics Committee (UNZABREC) to conduct the study. The study only commenced once ethical approval was obtained. Permission to conduct the interviews was also obtained from ZIOH and Beit-CURE Hospital administration offices. Signed consent was obtained before the interviews were done from all participants that took part in the study and all information obtained was treated with utmost confidentiality. The information collected from participants will be destroyed upon completion of the course.

# CHAPTER FOUR

# RESULTS OF THE STUDY

## 4.1 Overview

This chapter presents the results that were obtained from the interviews that were conducted on experiences of patients with total hip replacement after discharge from hospital.

## 4.2 PROFILE OF PARTICIPANTS

Six participants were recruited for the study. Ten semi-structured interviews were conducted with six participants. Two were female and four were male postoperative patients from the Beit CURE and Zambian Italian Orthopaedic hospitals. The sample was selected on the basis of those who recently had the operation (1-10 days) and all participants' indicated pain as the main complaint after the operation. The age range of participants were from 41 to 81 making a mean age of 51.The occupation of participants also varied from the Environmental Health Inspector, Banker, Pastor, Soldier, and Business Woman to a farmer. A detailed demographic profile of the participants is shown below.

| ID NO | AGE (years) | GENDER | INDICATION FOR OPERATION | OCCUPATION | NO. OF INTERVIEWS | DAYS OF INTERVIEWS (At home after discharge) |
|---|---|---|---|---|---|---|
| 001 | 41 | Male | Pain | Environmental Health Inspector | 2 | 3rd ,8th |
| 002 | 53 | Male | Pain | Pastor | 2 | 4TH ,7TH |
| 003 | 45 | Female | Pain | Banker | 2 | 5TH ,9TH |
| 004 | 81 | Male | Pain | Farmer | 2 | 3rd ,6th |
| 005 | 45 | Male | Pain | Soldier | 1 | 4th |
| 006 | 43 | Female | Pain | Business Woman | 1 | 6th |

## 4.4 EXPERIENCES OF PATIENTS WHO UNDERWENT TOTAL HIP REPLACEMENT

The subthemes which emerged from the participants' experience with THR which are:

Life with less pain, life restricted by precautions and adaptation to life with prosthesis.

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### 4.3.1 LIFE WITH LESS PAIN

This category was derived from participants' experience with progressive degeneration of the hip joint, worsening pain, and disability. This category comprised of two subcategories: pain getting less and no disability.

**Pain getting less:** The majority of the participants stated that in the initial stage, the pain was triggered by exercise or moving around the house. After few days the pain was getting less from day to day:

*"I started using strong pain killers as pain was getting worse each day. Initially, I used them several times in a day that was before the operation, now I use them once a day in order to follow the doctor's instructions. People could tell that my hip joint had a problem as I was unable to take normal steps but now am using one crutch taking almost normal steps (P003)."*

*"From the time I had the accident, despite the earlier operation, I was in constant pain despite the Physiotherapy and using crutches for walking and now the pain is much less now. The pain am feeling is from the wound now (P001)."*

### 4.3.2LIFE RESTRICTED BY PRECAUTIONS

The participants were discharged home when there were able to ambulate with a walker. While in hospital instructions were given verbally or written on the precautions of THR.

**Verbally:** The Participants were given precautions of total hip replacement by their Physiotherapists. Most of the participants stated that:

*"I was not given any restrictions other than to avoid certain movements like crossing my legs. One thing I forget to ask the Physiotherapist if this was for life or just for now (P005)."*

*The precautions that Physiotherapist told me only become real at home and I am afraid of going to the toilet, I might just dislocate my hip as it is low (P002)*

**Written:** The majority of the Participants were not given written precautions by their Physiotherapists.

*"My Physiotherapist told me about the precautions of my operation, then I downloaded them from the internet myself to have a written document* (P006)*"*

### 4.3.3 FREEDOM FROM RESTRICTIONS

Five subthemes emerged from this category. These are improvement in pain and locomotion, expectations for improvement, trial and error at home, distress over body image, and anxiety over the prosthesis.

**Improvement in pain and locomotion:** Majority of the participants reported dramatic improvements in pain and locomotion in accordance with their expectations. They enjoyed freedom from chronic pain:

*"Now that I do not have any pain at all, I do really appreciate THR. I am glad that I chose to undergo surgery. I am recommending THR to other people. No pain! Now, I am able to walk smoothly, and I have become cheerful. The pain I have is from the operation and it can't be compared to pain I was going through (P004)."*

**Expectations for improvement:** Most of the participants felt that they were regaining their physical functions and expected to enjoy further improvement. During this phase, they were highly motivated to undergo rehabilitation:

*"I have started to feel like trying everything. I want to get better soon. I used to enjoy farming and I went to get back to it (P005)."*

**Trial and error at home:** Majority of the participants after they were discharged, they found that their home environment was quite different from that of the hospital. They experienced many unexpected difficulties at home, such as not having bars or rails to hold onto in the bathroom or toilet. Therefore, the participants tried to get used to their home environment by trial and error during this period:

*'I use a walker. My housekeeping is being done by my maid even bathing my legs. I worry about sitting and standing by myself. I feel anxious when I have to get up from a sitting position to standing as I have no dining chairs as advised (P006)."*

*"My worst nightmare is getting to bed at night as the mattress is on the floor, so two people have to assist me getting on the mattress (this is my aunt's place) (P001)."*

**Distress over body image:** Most of the participants were generally satisfied with the procedure's outcome though they felt a loss of their own leg and some felt strange about the artificial joint:

*"It was my leg, even though it was a bad one. It bothers me that I have something artificial in my body (P003)."*

***Anxiety over prosthesis*:** Majority of the participants started to worry about the risk of dislocation and the limited durability of the prosthesis. Prior to the procedure, they were informed about these risks. During the postoperative period, these risks seemed more realistic, which led to growing anxiety:

*"While I was hospitalized, I had a toilet seat raiser and wheelchair for bathing but at home I have none of those things. I have not had a bath since I was discharged am worried I may dislocate my hip. (P001)."*

**4.3.4 DIFFICULTIES WITH ACTIVITIES DAILY LIVING**: Most of the participants experienced difficulties in activities of daily living in their homes.

*"I am managing to do jobs and housekeeping even though I experience pain. I lean on the sink to do some cooking, but I am unable to stand for an extended period of time because of pain. I have difficulties in using the bathroom. I cannot bend my right hip joint, and I have to remain half-standing while urinating as I have no toilet seat (P006)."*

*"The most difficult thing for me is the sleeping position! It's the most unpleasant thing and I dread the nights (P002)."*

# CHAPTER FIVE

# DISCUSSION

## 5.1 Overview

This chapter discusses the results of the study that were obtained from patients experience with Total Hip Replacement (THR) after discharge from hospital. The results will be discussed in relation to the objectives of the study and relevant literature.

The general objective of the study was to explore the patients' experiences in their homes after Total Hip Replacement (THR).

The specific objectives were to explore the experiences of Total Hip Replacement in their homes, to explore the precautions that were given to patients upon discharge and to understand how the surgery has affected their Activities of Daily Living.

## 5.2 EXPERIENCES OF PATIENTS WHO UNDERWENT TOTAL HIP REPLACEMENT

This study identified three distinct coping phases: The time from the postoperative period was characterized as "life with less pain." It comprised two phases: one was "life restricted by precaution" during the immediate postoperative period and the other was "adaptation to life with a prosthesis", lasting from the time of the surgery. The dramatic improvements in pain and functional levels following THR were similar experiences as reported by previous quantitative studies Jones et al., 2000; Knutsson et al., 1999; Fortin., 1999. However, this study revealed that

participants experienced less pain after the operation as compared to the pain they were undergoing before the operation.

Biomedical outcomes pain, physical function, stiffness improved significantly in patients post-operatively. Previous studies have shown improvements in pain and physical function following hip replacement, with one study showing that greatest improvement in pain, physical function and stiffness following THR occurred by three months (Baird., 2000).

Besides the experiences of the core of the recovery, the knowledge generated from this study demonstrates that there are several ways of influencing the post-operative recovery process, such as support and encouragement from staff and family, being given the time to recover. This knowledge could be used to outline strategies for support and follow up activities during the post-operative recovery.

Previous quantitative studies mainly reported the positive aspects of THR (Jones et al., 2000, Knutsson et al., 1999 , Fortin et al., 1999). while this study sheds light on participants' negative, as well as positive, feelings about the procedure during the postoperative period. For example, the Scottish study found that the anxiety levels of the participants decreased from the pre-operation period until 3 months after surgery (Orbell et al., 1998). This study, however, found that participants' anxiety was heightened around the time when they were home of because worries about dislocation and living at home with the prosthesis.

## 5.3 PRECAUTIONS

The initial 3 months of postoperative care, when the threat of dislocation is greatest, has traditionally included many restrictions on patient activity and range of motion as a preventive measure (Philips et al., 2003). Some of these guidelines included: limiting flexion of the operative hip to <90°, sleeping in the supine position with an abduction pillow between the legs, using an elevated toilet seat and hip chair, and avoiding automobile transportation to limit excessive bending encountered on entering or exiting the vehicle. Still, the overall rate of dislocation was 2% to 4% in a study done by Lubbeke (2009). In this study the participants received verbal hip precautions and lived a life with restrictions when they were discharged from hospital. McQueen et al. (2009) conducted a national United Kingdom (UK) survey of precautions, the results showed that 20% of patients were not taught precautions.

Written information is a key means of informing, educating and involving patients (Coulter et al., 2007) and enhances communication between healthcare professionals and patients. Providing good patient information is recognized as an important part of enhanced or rapid recovery programme (Griffin et al., 2006) and that written information should be combined with verbal information (Johnson et al., 2003). Although this point is well made, the fact remains that, because of reduced length of stay, patients have to take more responsibility for their own rehabilitation and consequently written literature is increasingly important in recovery. Most information on total hip replacement on precautions was obtained from leaflets and booklets. These ranged from hospital publications which were professionally printed to those produced by individual departments.

Participants also expressed anxiety and strange feelings about the prosthesis. This is probably related to the fact that participants tend to express only positive feelings about THR when they talk to their Physicians and Physiotherapist. Patients' feelings about prostheses have not been well-documented, with only one study briefly reporting on patients' attitudes toward surgery, which was characterized as one of "aversion" among postoperative patients with moderately severe osteoarthritis Karlson et al (1997). Among the participants in this study, "distress over body image" tended to wear off as they became accustomed to the prosthesis.

One more negative aspect of THR identified in our study was the limited range of motion of the new joint, similar to that briefly mentioned in a French study Pacault-Legendre &Courpied (1999). Although quantitative studies yield only the mean subscale scores for health-related quality of life (Mahomed et al., 2002; Nilsdotter et al., 2001; Soderman, (2000); Rorabeck et al .,1994).This study disclosed the process of coming to terms with new disabilities, which constitute the trade-off for increased mobility and subsequent increase in social activities.

In order to alleviate anxiety about surgery, descriptions of participants' positive experiences could be used as reading material for postoperative patients. Such materials also are useful for THR patients before discharge so they can gain a better understanding of the problems that patients might face at home. The THR patients could serve as volunteers, sharing their experience with preoperative patients.

For a realistic view of surgery outcomes, patients need to be informed of the negative aspects of THR, such as distress over body image and limited range of motion. Although some patients might experience distress over body image, they need to be assured that this is likely to disappear

when they get used to the prosthesis. As for limited flexion, patients are informed about the problem during preoperative orientation, but they might not be fully aware of the consequences. Health-care professionals thus need to assess patients' lifestyle and activities and discuss what they might have to give up after undergoing THR.

## 5.4 ACTIVITIES OF DAILY LIVINGS

Most patients complained on how they had difficulties in getting to and out of the vehicle just from the hospital. This was similar to a study done by Crag et al, (2008) which reported on out-patient review most patients complained how they had difficulties in getting to and out of the vehicle just from the hospital.

Mulla et al (2010) in a study conducted in Zambia highlights on that patients are educated on the need to avoid postures that could predispose to dislocation before discharge from hospital but are not provided with a toilet 'raise' as is said to be routinely done for those in squat toilets in Malawi. Expect from one participants that had toilet seat raiser, the rest were discharged home with no toilet seat raiser. A study by Lubbega (2007) in Malawi indicated that patients that had undergone a THR were discharged home with toilet seat raiser, which made their ADL's easier. The findings of this study are consistent with other studies done.

## CHAPTER SIX

## CONCLUSION, RECOMMENDATIONS, LIMITATIONS OF THE STUDY

### 6.1 Overview

This last chapter concludes the study and makes recommendations based on the findings by the researcher. The chapter also covers the limitations of the study.

### 6.2 CONCLUSION

The findings of this study reveal that patients who underwent THR postoperative period were characterized as "life with less pain." It comprised two phases: one was "life restricted by precaution" during the immediate postoperative period and the other was "adaptation to life with a prosthesis", lasting from the time of the surgery.

### 6.3 RECOMMENDATIONS

In view of population ageing and the increase in road traffic accidents in Zambia, THR incidence is on increase. Patients are referred to Physiotherapy as in-patients, in order to improve the quality of life of all individuals. The researcher recommends the following:

- There is need to do prior assessment to patients homes before the elective surgery is done thereby improving the quality of life of patients with THR and those go have had major operations by health care professionals. THR patients are better managed with prompt identification and together with assessment and appropriate treatment recovery will be achieved.

- The patients, who are undergoing THR, should be seen by Physiotherapist (PT) pre-operatively. This will allow the PT to go through all the precautions with patients and give them written instructions.

- Further research is needed to explore the experiences of patients with total hip replacement from the preoperative to the postoperative period using well-established scales to determine the validity of findings.

- Prior to surgery, the patient's expectations should be clearly communicated to them and discussed with surgeon and Physiotherapist.
- The health care professional should develop a plan for addressing post-acute pain management, psychological distress and sleep disturbances that follow for several weeks after the operation.
- PT should use strategies that enhance self-efficacy and empower patients to adopt a positive attitude and take an active role in their own rehabilitation. Rehabilitation should not be left surgeons as PT is in charge.
- The Physiotherapist should incorporate efficient approaches to optimize health professional support and follow-up care beyond three months after THR
- The family members to be engaged in peer education, counseling and exercise instruction as to establish continuation of rehabilitation at home.
- Home assessment, adaption and visit to be done the Physiotherapist to make the necessary changes needed in the home.

- All patient that have undergone THR to be discharged with toilet sit-raisers as all convectional toilets are not ideal for patients with THR.
- Health professionals should offer accurate verbal and written information to all people with THR to enhance understanding of their condition and it is management as it is not everyone has access to internet service.
- This was a small scale study, thus the researcher would like to recommend that this research be done on a larger scale to find out the experiences of patients post discharge.

### 6.4 Study limitations and need for further research

Only six patients were interviewed for this study; therefore, the study results might not be applicable to other populations. Further research is needed to explore the experiences of patients with total hip replacement from the preoperative to the postoperative period using well-established scales to determine the validity of findings.

The other thing is that the sample obtained may not fully reflect the experiences of patients with total hip replacement after discharge from hospital. This was the first time the researcher was carrying out a study and it was a learning process. Despite the limitations, the researcher believes that this study makes a valuable contribution to existing literature.

In summary, patients who underwent THR postoperative period were characterized as "life with less pain." It comprised two phases: one was "life restricted by precaution" during the immediate postoperative period and the other was "adaptation to life with a prosthesis", lasting from the time of the surgery.

## 6.0 REFERENCES


Agency for Healthcare Research and Quality's (**AHRQ**), (2002). Inpatient quality indicators technical specifications. Rockwill (MD)

American Academy of Orthopaedic Surgeons, (2011).**Guidelines on Preventing Venous Thromboembolic Disease in Patients Undergoing Elective Hip and Knee Arthroplasty** (available at http://www.aaos.org/research/guidelines/VTE/VTE_guideline.asp and accessed on 12/05/13)

American Academy of Othopaedic Surgeons (2012). (http://www.nlm.nim/medineplus/hipreplacement. html. accessed on 21/06/13)

Baird C. L. (2000).**Living with hurting and difficulty doing: older women with osteoarthritis.** Clinical and Excellence for Nurse Practice Journal. 4:231-237.

Bal B. S., Haltom D., Aleto T., Barret M (2006).**Early complications of primary total hip performed with a two incision minimally invasive technique.** Journal of Bone and Joint Surgery. AM. 88;

221-35

Barrack R. Kerschbaumer F. Poisel S. Oberthaler W. (1999). **The transgluteal approach to the hip joint.** Journal of Archives of Othopaedic and Trauma Surgery. 95; 47-49.

Batra S.,Batra , M., McMuritrie, A., Sinha. A.K, (2010). **Rapidly destructive osteoarthritis of the hip joint: a case series** Journal of Othopaedic Surgery and Research. ( accessed: 2013-12-05)

Bradbury-Jones C., Irvine F., Sambrook S. (2010).**Phenomenology and synthesis of Hip replacement.** Oxford. Blackwell.

British Orthopaedic Association (2006). Primary total hip replacement: a guide to good practice. London: BOA

Brunner L. C., Eshilian-Oates L, Kuo T. Y., (2003).**Hip Fractures In Adults.** Journal of American Academy Family Physician. (Checked 2013 10-15)

Burns, N. & Grove, S.K. (2009).**The Practice of Nursing Research: Appraisal, Sythesis and generation of evidence**. 6th ed .Sauders, USA

Callaghn J.J., Roseberg A.G., Rubash H.E., (2007).**The Adult Hip.**2nd. Philadephia. Lippincott Williams.

Carrington N.C., Sierra R.J., Gie G.A. (2009). **The Exeter Universal cemented femoral component at 15 to 17 years: An update on the first 335 hips**. Joint Bone Surgery journal. 91:730-737

Chunliu Z., Kaczmarek R., Loyo-Berrios N., Sangi J., Bright A.R., (2007*).***Incidence and Short-Term outcomes of Primary and Revision Hip Replacement in the United State.** Journal of Bone and Joint Surgery. 89:3

Cormack D. (2000).**The Research Process in Nursing.**4th edn. Blackwell Science. London

Coulter A, Ellins J, (2007).**Effectiveness of strategies for informing, educating, and involving patients.** British Medical Journal ,335:24-27.

Craig P, Dieppe P, MaCintryre S, Michie S, Nazareth I, Peiticrew M., (2008). **Developing and Evaluating Complex Interventions: the New Medical Research Council Guidance** .British Medical Journal. 337: a1655

Crawford A.J., Hamblen D.L., (2001). **Outline of Orthopaedics.** Thirteenth ed, London Churchill Livingstone.

Della Valle C.J., Mesko N.W., (2009). Primary total hip arthroplasty with a porous-coated Acetabular component. A concise follow-up, at a minimum of twenty years, of previous report. Joint Bone journal 91:1130-1135

Fielden J. M, Scot S., Horne J. A., (2003) **An investigation of patient satisfaction following surgery after total hip replacement Surgery.** Journal of Orthopaedic Nursing. 22: 429-436

Fortin P.R., Clarke A. E., Joseph L. (1999). **Outcomes of total hip and knee replacement.** Journal of Arthritis and Rheumatology. 421722-1728

Fujita K, Makimoto K, Hotokebachi T. (2006*).***Qualitative study of osteoarthritis patients experience before and after total hip arthroplasty in Japan** .Nursing & Health Sciences. **8** (2): 81-87

Geerts W.H., Samama C.M. (2008). Prevention of venous thromboembolism: American college of chest physicians evidence-based clinical practice guidelines (8th edition)''chest, vol.133 no.6 supplement

Gillaspie M. (2010). Better pain management after total joint replacement surgery: a quality improvement approach. Othopaedic Nursing journal. 29:1

Green J. &Thoroggod N. (2004*).***Qualitative methods for health research.** 2nd ed. SAGE Publication Ltd, London

Gremeaux V, Renault J. Pardon L, Deley G, Lepers R., Casillas J (2010). **Low frequency of electric muscle stimulation combined physical therapy after arthroplasty for hip osteoarthritis in eldely patients: randomized controlled trial.** Archives of Physical Medicine and Rehabilitation.

Griffin J, McKenna K, Tooth L (2006). **Discrepancy between older clients' ability to read and comprehend and the reading level of written educational materials used by occupational therapists.** Journal of Occupational Therapy (1):70-80.

Hardinge K. (1982). **The direct lateral approach to the hip.** Journal of Bone and joint surgery. 64:17-19.

Heiberg K. E., EkelandA andMenshoel A.M (2013). **Functional improvement desired by patients before and the first year after total hip arthroplasty.** Archives of Physical Medicine and Rehabilitation**94** (7): 135-139.

Holloway I and Wheeler S. (2009). **Action research in action: Reflections on a project to introduce clinical practice facilitators to an acute hospital setting.** Journal of Advanced Nursing. 33 (5,) 652-659.

Holloway I. & Wheeler S. (2002).**Qualitative Research in Nursing.**2nd edn. Oxford: Blackwell

Hoppenfeld S. deBoer P (2003). **Surgical Exposures in orthopedics: the Anatomic Approach**. 3rd ed. Philadephia, PA. Lippincott Williams and Walkins

Jan, M., Hung, J., Lin, J.C., Wang, S., Liu, T. Tang, P., (2011). **Effects of a home program on strength, walking speed, and function after total hip replacement, journal of Advanced Nursing.** (Accessed: 2013-10-25)

Johnson A, Sandford J, Tyndall J: (2003). **Written and verbal information versus verbal information only for patients being discharged from acute hospital settings to home.** Journal of advanced Nursing. 45: 33-56.

Kelly, K., & Simpson, S. (2001). **Action research in action: Reflections on a project to introduce clinical practice facilitators to an acute hospital setting.**Journal of Advanced Nursing. 33(5), 652-659.

Kenon R. E., keggi M.J., Keggi K.J., (2006). **The minimary invasive anterior approach to hip arthroplasty**. Journal of Othapaedic. 35; 731-7

Kolber M.J., Brueilly K. (2001).**Artthrofibrosis following total hip arthroplasty: considerations for the acute care physical therapist.** Acute care perspectives. Winter: 11-16

Kralik D., Koch T, Wotton K., (1997). **Engagement and detachment: understanding patients experiences with nursing.** Journal of Advanced Nursing. 26: 399-407

Krippendoff K. (1980*)*. **Content Analysis: an introduction to its methodology**. Newsbury Park, CA: Sage.

Ling R.S., Charity J., Lee A.J. (2009). The long-term results of the original Exeter polished cemented femoral component: A follow-up report. Joint Arthroplasty Journal. 24:511-17

Loft M, McWilliam C, Ward-Griffin C. (2003).**Patient empowerment after total hip and knee replacement.** Journal of Orthopaedic Nurse. 22: 42–47.

Lubbeke A, Suva D, Perneger T, Hoffmeyer P. (2009). **Influence of preoperative patient education on the risk of dislocation after primary total hip arthroplasty. Journal of Arthritis** and Rheumatology. 61(4):552-558.

Lubega N, Mkandawire NC, Sibande G.C., Norrish A.R., and Harrison W.J. (2009*)*.**Establishment of a National Joint registry.** British Editorial Society of Bone and Joint surgery.

McCaffery M., Pasero C. (2008). Pain:Clinical manual (2nd ed). St Louis, MO: Mosby. http://www.nursingcenter.com/lnc/cearticle?tid=973293#P18 retrived on13/04/13

Mahomed N. N., Liang M. H, Cook E. F. (2002). **The importance of patient expectations in prediction functional outcomes after total joint arthroplasty.** Journal of Rheumatology. **29**: 1273-127

Mallory T. H., Lambardi A. V., Jr. Fada R.A., Herrington S.M., Eberle R.W .(1999).**Disclocation after total hip arthroplasty using the anterolateral abductor split approach** . Clinical Othopaedic and Related Research. 358; 166-173

Mancuso, C. Ranawat, C. Esdale, J. Jonson, W. and Charlson, M. (1996).**Iindication for total hip and knee arthroplasty.** Journal of Arthroplasty. 11:34-46.

Marx H., Dreinhofer K., Schrader G., Puhl W., (2003).**International variation in hip replacement rates**. Annals of Rheumatic. **62**:222-226

Masons J.L., Bourne R.B., (2002). **Surgical approach in abductor function and total arthroplasty dislocation.** Clinical Othopaedic and Related Research. 405, 46-53

Mayo Clinic, (20th May 2013). **Total Hip Replacement**. www.mayoclinic.org/tests-/hip replacement-surgery/basic/definition/prc-20019151

McHugh G.A., and Luker K.A., (2012). **Individuals' expectations and challenges followings total hip replacement a qualitative study:** Disability and Rehabilitation. 34; **16**:1351-1357

McQueen J, Nivison C, Balance F, Fairbairn P, Clyde D, Murray E (2009). **Hip precautions following hemiarthroplasty: a UK study of occupational therapists**. International Journal of Therapy and Rehabilitation, *16(3),* 147-53.

Meyers, H. M., (1985). **Fractures of the hip,** Chicago: Year of the book medical publishers Inc.

Morse J. M., Field P. (1995).**Qualitative Research Methods for Health professionals,** 2nd ed. Newsbury Park, CA: Sage

Mulimba J.A.O. (2006). **Is hip arthroplasty viable in a developing world?**African journal of surgery: 12 (1): 30-32

Mulla Y. Munthali J., Makasa E.Kanyumba K., (2010). **Joint replacement in Zambia: a review of Hip and Knee Replacement surgery done at the Zambian-Italian Orthpaedic Hospital.** Medical Journal of Zambia. Vol 37 NO 3

Mullar M. E. (1997). **Total hip prosthesis.** Clinical Othopaedic and Related Research. 72: 46-68.

Munhall, P.L. (2001). **Nursing research: A qualitative perspective**. 3rd ed. Jones and Barlet, Sudbury, MA.

Munin M .C., Rudy T.E., Glynn N.W., Crossett L.S., Rubash H.E: (2000). **Early inpatient rehabilitation after elective hip and knee arthroplasty.** Journal of American Medicine Assocition. **279**(11):847-852.

National Center for Health Stastistics.(2002). **1991 to 2000 National Hospital Discharge Survey.** Rosemont, IL: National Center for Health Stastistics.

**NHS Institute for Innovation and Improvement**. (www.nhs.uk/conditions/hip-replacement/pages/indication-95px. accessed 26 May 2014)

Orbell S. Espley A, Johnston M, Rowley D. (1998). **Health benefits of joint replacement surgery for patients with osteoarthritis: Prospective evaluation using independent assessment in Scotland.** Journal of Epidemiology and Common Health. 52: 564-57

Parahoo K. (2006). **Nursing Research: Principles, Process and Issues.**2nd edn. Palgrave Macmillan. London, UK.

Peak EL, Parvizi J, Ciminiello M, (2005). **The role of patient restrictions in reducing the prevalence of early dislocation following total hip arthroplasty.A randomized, prospective study**. Journal of Bone Joint Surgery. Am 87(2):247-253.

Philips CB, Barrett JA, Losina E, (2003). **Incidence rates of dislocation, pulmonary embolism, and deep infection during the first six months after elective total hip replacement.** Journal of Bone Joint Surgery. Am. 85(1):20-26.

Polit D. F, Hungler B. P., (1999).**Nursing Research. Principles and Methods,** 6th ed. New York, Lippincott.

Polit D. F. & Beck C. T. (2008). **Nursing research: Generating and Assessing Evidence for nursing practice.** 8th ed. Lipponcott, Williams & Wilkins.London

Rahmann, A.E, Brauer, S.G.,Nitz, J.C., (2005). **A specific inpatient aquatic physiotherapy program improves strength after total hip or knee replacement surgery: a randomized controlled trial,** (http//: www.ncbi.nlm.nim.gov/pubmed/1940629. accessed: 2014-04-25)

Rao J. Zhou X.Y. Villar. R.N (2001). **Injury to the ligamentumteres.Mechanism, findings and results of treatment.** Clinical Journal of Sports Medicine. 20.791-9

Rarabeck C. H. Bourne R. B. Laupacis. (1994). **A double-blind study of 250 cases comparing cemented with cementless total hip arthroplasty. Cost-effectiveness and its impact on health-related quality of life.** Clinical Othopaedic and Related Research. 298:156-164

Rasch A, Bystrom A.H., Dalen N., Martinez-carrariza N., Berg H.E. (2009). **Persisting muscle atrophy two years after replacement of the hip.** Journal of Bone and Joint surgery. 91: 583-588

Restrepo C., Rothman R.H (2011). **Hip dislocation: are hip precautions necessary in anterior approaches**. Clinical Othopaedic and Related Research. 496(2) 417-22

Ritter M.A. Harty L.D. Keating M.E. Faris P.M. Meding J.B. (2001) **A clinical comparison of the anterolateral and posterolateral approaches to the hip.** Clinical Orthopaedic and Related Research. 385; 95-99

Roberts J.M, Fu FH, Mclain E.J , Fergusion A.B Jr (1984). **A comparison of the posteriorolateral and anterolateral approaches to total hip arthroplasty.** Clinical Orthopaedic and Related Research.187; 205-210

Roos E.M. (2003). **Effectiveness and practice variation of rehabilitation after joint replacement.**Current opinion in Rheumatology.**15**: 160-162

Salaffi F, Carott M, Grassi W. (2005). **Health related quality of life patients with hip or knee osteoarthritis: comparison of generic and disease specific instruments.** Journal of Clinical Rheumatology. **24**: 27-37

Seldes R. M, Tan V, Hunt J, Katz M, Winiarsky R, Fitzgerdg R.H Jr (2001). **Anatomy histological features and Vascularity of the adult Acetabular labrum.** Clinical Orthopaedic Related and Research. (382). 232-40

Sharma V, Morgan P.M, Cheng E.Y. (2009). **Factors influencing early rehabilitation after THA: a systematic review.** Clinical Orthopaedic Related and Research. 467(6):1400-1411.

Soderman P. Malchau H. Herberts P. Johnneu O. (2000). **Are the findings in the Swedish national total hip arthroplasty Register valid? A comparison between the Swedish National total hip arthroplasty Register, and the National death Register.** Journal of Arthroplasty. 15:884-889

Soderman P. (2000). **On the validity of the results from the Swedish national total hip arthroplasty register**. Scandinavian Orthopaedic Association 1-33

Spirakis, A., Learmonth, L., Maver, P. (2009). **A 5-year profile of the incidence of total joint replacement in South Africa (1985 – 1989)** South Africa Medical Journal 183:260-262

Standard of Care (2010): **Total Hip Arthroplasty**. The Brigham and Women's Hospital, Inc., Department of Rehabilitation Services.

Stewart L.S.P., McMillan I.R., (2011). **How necessary are hip restrictions for avoiding dislocation following hermiarthroplasty or total hip arthroplasty in older patients with a hip fracture?** British Journal of Occupational Therapy. 74 (3). 110-18

Stockton, K.A., Mengersen, K.A., (2010). **Effects of multiple physiotherapy sessions on functional outcomes in the initial postoperative period after primary total hip replacement:**

**a randomized controlled trial.** (www.ncbi.nlm.nim.gov/pubmed/19801052. accessed: 2013-12-25)

Trudelle-Jackson, E., Smith, S.S., (2009). **Effects of a late-phase exercise program after total hip arthroplasty: a randomized controlled trial.** Archives of Physical Medicine and Rehabilitation. www.ncbi.nih.gov/pubmend/15241750 (accessed 2013-12-20)

Vicar A.J. Coleman C.R. (1994). **A comparison of the anterolateral transtrochanteric and posterior surgical approaches in primary total hip arthroplasty.** Clinical Orthopaedic and Related Research. 188:152-159

Watson- Jones R. (1935). **Fractures of neck of the femur.** Britih Journal of Surgery. 23-787

Weber M. Ganz R (2002). **Modified Smith Petersen approach and its possibilities for extension.** Journal of Orthopaedic and Traumatology surgery and research. 2002:10;245-257

Westby M.D., Kennedy D. (2008). **Post acute Physiotherapy for primary total hip arthroplasty (protocol).** Cochrane database system

Woo R Y. Morrey B. F., (1982). **Dislocations after total hip arthroplasty.** Journal of Bone and joint surgery. AM 64:1295

Zambia Health Research Act (2013). www.parliament.gov.zm/index.phd?option=com_docum& task.

**APPENDIX 1**

**Copy of Letter to Participants**
University of Zambia
School of Medicine
Department of Physiotherapy
P.O. Box 50110
**Lusaka**
**Date:**.....

Dear participant

I am a fifth year Physiotherapy student undertaking a research on 'Exploring the experiences of patients with total hip replacement after discharge from Hospital at the Zambia Italian Orthopedic Hospital and Beit CURE International Hospital. This research is mandatory for me as a student to undertake and the information generated from this research will give insight into the magnitude of this problem for better management and planning of care.

**Be informed that the study will involve making audiotapes of the interviews**

**Confidentiality:** You will not be identified by name and the information will be corded and secured by a password.

**Risks**: There are no known risks to your participation in this study.

**Benefits**: There are no monetary benefits associated with your participation in this study. However, your participation is important for medical personnel to understand the experiences, add to the body of knowledge and will influence policy.

**Participation**: participation in this study is voluntary and you may withdraw from the participation at any stage without giving reasons for your action to the researcher. If you need further clarification on this study, contact;

The Chairperson
Biomedical Research Ethics Committee
*University of Zambia*
P.O. Box 50110
**Lusaka**

**Supervisor**
Mr. M. Mwango
University of Zambia
School of Medicine
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**Researcher**
VuniweSakala
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P.O. Box 50110
Lusaka
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**APPENDIX 2**

**Copy of Consent form**

**Re: Exploring the experiences' of patients with total hip replacement after discharge from hospital**

The study has been described to me in the language that I understand and I freely and voluntary agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.

**I have also been informed that the study will involve making audiotapes of me.**

I agree to be audio taped during my participation in this study.....

I don't agree to been to be audio taped during my participation in this study.....

Participants' name: .....Date.....

Participants signature/ thumb print: .....Date.....

Witness:.....Date.....

Researcher .....Date.....

**APPENDIX III**

**INFORMED CONSENT FOR TAPING FOR THE INTERVIEW TWO**

The purpose of taping-recording this interview and the use, storage and final destruction of the tapes has been explained to me and I understand the explanations. I have been offered to answer any of my questions concerning the procedures involved in the recording of the interview and I have been given a copy of this form to keep.

Participants name.....Date of Birth.....

Signature of participant.....Date.....

Only if verbal consent is provided, the interviewer must sign below in the presence of the participant and a witness.

Signature of interviewer certifying that informed consent has been given verbally by respondent.

Witness signature.....

**APPENDIX 3**

**Copy of Interview Guide**

1. In your own words describe your experiences with the operation
   **Probes:** improvement in pain and locomotion. What does this mean to you?

2. Can you tell me in your own words your experiences when you
   Discharged?

   **Probes:** were you given precautions to follow? Written or oral? Getting in and out of the car? Getting into your home? How was your first night at home?

3. In your own words, have you felt overwhelmed when you got home?
   **Probes:** what supports were you sent home with? How are you managing with the supports?

4. How has this operation affected your activities of daily living?
   **Probes:** bathing toilet, stair climbing if any

5. Have you experienced any challenges or complications?

   **Probes:** what coping strategies have you employed? In your opinion how can these challenges or complications be are addressed?

6. Have you continued the rehabilitation program you given upon discharge?

# THE UNIVERSITY OF ZAMBIA

## BIOMEDICAL RESEARCH ETHICS COMMITTEE

Telephone: 256067
Telegrams: UNZA, LUSAKA
Telex: UNZALU ZA 44370
Fax: + 260-1-250753
E-mail: unzarec@zamtel.zm

Ridgeway Campus
P.O. Box 50110
Lusaka, Zambia

Assurance No. FWA00000338
**IRB00001131 of IOR G0000774**

28th February 2014

Sakala Vuniwe
Department of Physiotherapy
UNZA-SOM

Dear Sakala Vuniwe

SUBJECT: PROPOSAL ENTITLED "**EXPLORING THE EXPERIENCES OF PATIENTS WITH TOTAL HIP REPLACEMENT AFTER DISCHARGE FROM HOSPITAL AT THE ZAMBIAN ITALIAN ORTHOPEDIC HOSPITAL (ZIOH) AND BEIT CURE HOSPITAL.**"

The above revised proposal was presented to the University of Zambia Undergraduate Research and Ethics Committee on 25 February 2014.

**We are satisfied with the corrections. This proposal is now approved and you may proceed to conduct your study.**

**The approval is only for this proposal and if you need to change methodology or study you will need to get approval of UNZASOMUREC. Remember to share the findings of this study with this committee.**

Dr Bellington Vwalika
**CHAIRPERSON- UNZASOMUREC**

CC: HOD- Department of Physiotherapy

Mission Granted! Sr. Mwaba
Mrs. Daka to help please

# THE UNIVERSITY OF ZAMBIA
## SCHOOL OF MEDICINE
## PHYSIOTHERAPY DEPARTMENT

Telephone: 260-1-257938
Telegrams: UNZA, LUSAKA
Telex: UNZALU ZA 44370
Fax: + 260-211-257938

Dean's Office
P.O. Box 50110
Lusaka, Zambia

Your Ref: Our Ref:

3rd October, 2013

The Senior Medical Superintendent
University Teaching Hospital
P/Bag RW 1X
**LUSAKA**

Dear Sir/Madam,

**RE: REQUEST FOR PERMISSION TO ALLOW SAKALA VUNIWE COLLECT DATA FOR HER STUDY**

Reference is made to the subject above.

We write to introduce to you the above named 5th year student pursuing a Bachelor of Science in Physiotherapy. She is required to carryout a Research Project in partial fulfillment of the requirements for the award of the Bachelor of Science Degree in Physiotherapy.

Her proposed study is: **"A Study To Determine Environmental Challenges Experienced By Post Total Hip Replacement Attending Outpatients Physiotherapy At Zambian Italian Orthopaedic Hospital, Beit Cure And UTH."** Vuniwe is still in her preliminary stages of the research and the title may change in due course.

We are therefore seeking permission from your office to enable her access data related to her research. The data collected will be for academic purposes only and will be treated as confidential.

Thanking you for your constant support.

Yours faithfully,

Dr. Banda M.C.
**BSc (Hons) PT, Dip.TechEd., Dip Soc, MSc MedSc (Rehab), Pg Dip HRL UNZA, PhD UQ**
**HEAD - DEPARTMENT OF PHYSIOTHERAPY**